5TH WORLD CONGRESS OF PEDIATRIC SURGERY

World Federation of Associations of Pediatric Surgeons

ABSTRACT BOOK

OCTOBER 8 – 11, 2016 | WASHINGTON, DC

WOFAPS 2016

Re-Imagining Children's Surgery through Global Innovation & Integration

HOSTED BY

Children's National

Sheikh Zayed Institute for Pediatric Surgical Innovation

Part of the Children's National Health System

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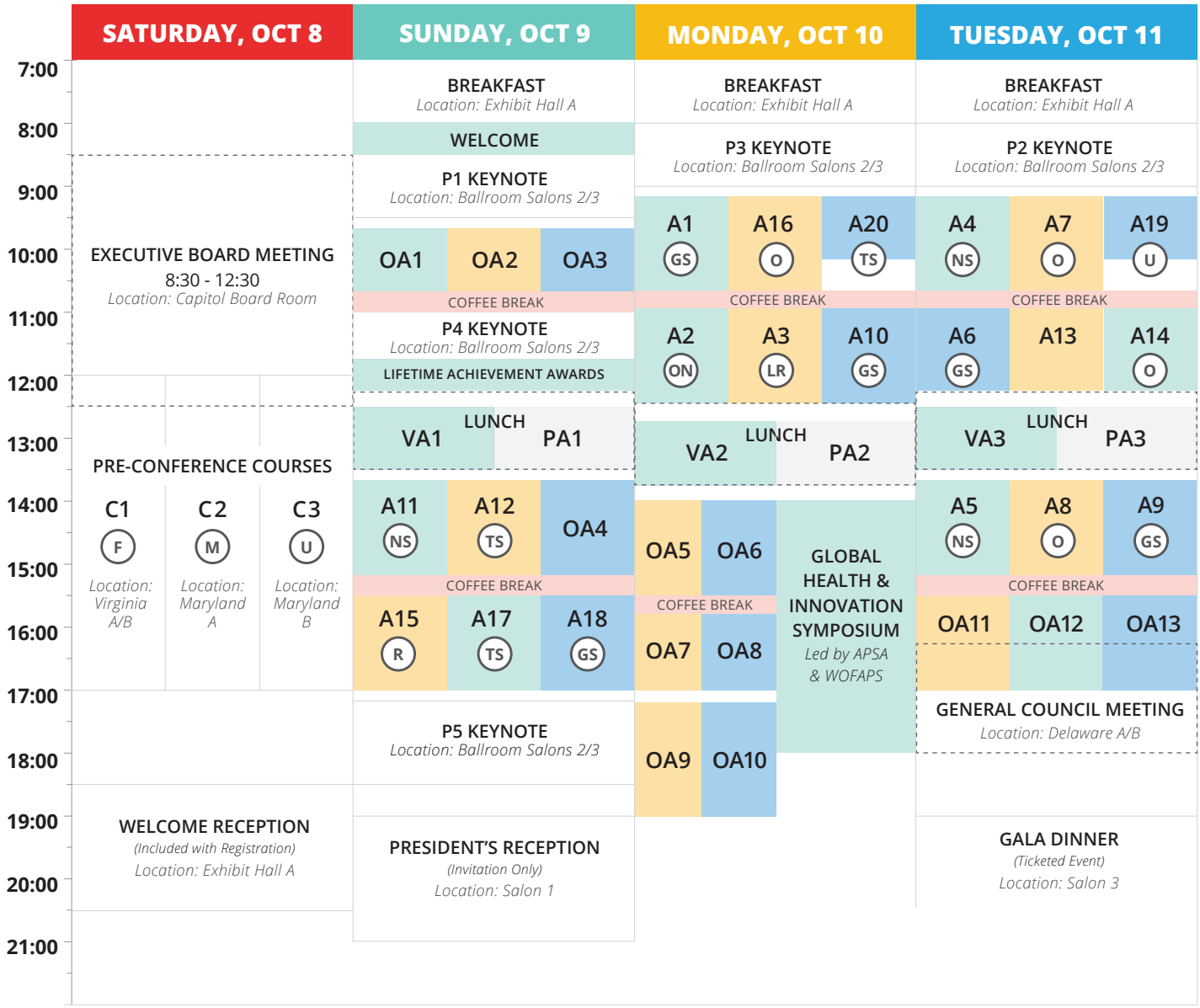
Disclosure: The text of this section is largely unedited and printed as submitted by applicants. Abstracts withdrawn after August 2016 may still be listed.

WOFAPS PROGRAM OVERVIEW



CATEGORIES

- (F) Fetal Surgery
- (GS) General Surgery
- (HS) Hepatobiliary Surgery
- (LR) Laparoscopy & Robotics
- (M) Minimally Invasive Surgery
- (NS) Neonatal Surgery
- (ON) Oncology
- (O) Other
- (R) Research
- (TS) Thoracic Surgery
- (U) Urology

KEY

OA = Oral Abstracts
VA = Video Abstracts
PA = Poster Abstracts

ROOMS

- Exhibit Hall A
- Marriott Ballroom Salons 2/3
- Maryland A/B
- Virginia A/B
- Delaware A/B

REGISTRATION HOURS
Saturday: 10:00 - 19:00
Sunday: 7:00 - 17:00
Monday: 7:00 - 17:00
Tuesday: 7:00 - 17:00

LUNCH Lunch served in Delaware A/B & Exhibit Hall A.

OA1. ORAL ABSTRACTS

Sunday, October 9 | 9:40 – 10:40 | Marriott Ballroom Salons 2/3

MODERATORS: DEVENDRA K. GUPTA, KURT NEWMAN

001 - OA

Title: AMNIOSEAL: Biomimetic Adhesives to Preseal Fetal Membranes for Prevention of PPROM after Fetal Intervention

Authors: Claire E Graves, MD(1), Anupama Arun, PhD(2), Juneyoung Lee, PhD(3), Dillon Kwiat, MS(4), Robert Grubbs, PhD(5), Michael R Harrison, MD(6)

Institutions: University of California, San Francisco(1, 2, 4, 6), California Institute of Technology(3, 5)

Category: Fetal Surgery

Keywords: PPROM, fetal, adhesive

Aim of the Study: Preterm premature rupture of membranes (PPROM) is a common problem after fetoscopy and remains the “Achilles Heel” of fetal therapy. We hypothesize that pre-sealing the amniotic membrane prior to amniotomy will prevent PPROM. Our aim is to develop a biomimetic polymer adhesive that can be delivered through a needle to the fetal membranes prior to fetal therapy, forming a strong and insoluble bond in the aqueous environment. **Methods:** We synthesized iterations of N-methacryloyl-3,4-dihydroxyl-L-phenylalanine (MDOPA)-based polymers that mimic the adhesive properties of mussels’ attachment to wet rocks. We tested the polymers’ ability to seal human amniotic membranes in a bench top model and tested biocompatibility in tissue culture and a rabbit model. **Main Result:** A copolymer with acrylic acid and MDOPA showed good adhesive and sealing properties when tested on human membranes. However, the acrylic acid component proved to be cytotoxic in L929 (ATCC cell line CCL 1, NCTC clone 929) mammalian fibroblast cells culture and toxic in our rabbit model. MDOPA was then copolymerized with polyethylene glycol methyl ether acrylate (PEGA) to yield non-cytotoxic polymer. However, this polymer slowly hydrolyzed in an aqueous environment. Moreover, adhesion to the human membranes was less strong compared to the acrylic acid and MDOPA copolymer. Since the long polyethylene glycol chain from the PEGA decreased viscosity and adhesion to human membrane, shorter ethylene glycol (triethylene glycol methyl ether methacrylate, TEGMA) was used to synthesize a new polymer, p(TEGMA-co-MDOPA). To prevent hydrolysis in an aqueous environment, a cross-linking agent was added. When p(TEGMA-co-MDOPA) was cross-linked with NaIO4, two pieces of kimwipes were adhered for over a month in physiological buffer and temperature. **Conclusion:** The search for a biomimetic polymer adhesive that is biocompatible, adhesive in aqueous tissue, and malleable enough to be delivered through a needle has narrowed to a cross-linkable MDOPA-based polymer.

004 - OA

Title: Impact of Chromosomal Variants of Unknown Significance (VUS) on the Outcomes of Neonates with Congenital Diaphragmatic Hernia

Authors: Stephanie M Cruz, MD(1), Adesola C Akinkuotu, MD(2), Darrell L Cass, MD(3), Patricio E Lau, MD(4), Weijie Lin, BS(5), Timothy C Lee, MD(6), Rodrigo Ruano, MD PhD(7), Stephen E Welty, MD(8), Daryl A Scott, MD(9), Oluyinka O Olutoye, MD PhD(10)

Institutions: Baylor College of Medicine/ Texas Childrens Hospital(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Category: Fetal Surgery

Keywords: CDH,Genetic anomaly,Fetal Therapy

Aim of the Study: The aim of this study was to evaluate the clinical outcomes of congenital diaphragmatic hernia (CDH) patients with genetic anomalies associated with known syndrome and isolated cases in comparison to those with chromosomal variants of unknown significance (VUS). **Methods:** A retrospective review was performed on all patients evaluated for CDH at a Fetal Center from Jan 2004-Jan 2015. Anomalies were identified based on chromosomal microarray analysis (CMA), Fluorescent in-situ hybridization (FISH), karyotype, serum based non-invasive prenatal testing (NIPT) and inpatient genetic consults. Under the guidance of a geneticist, VUS were classified as either “likely pathogenic” or likely benign”. **Main Result:** Of 214 CDH patients, genetic testing was conducted prenatally in 62 patients (29%), and postnatally in 109 (51%). Fifty-eight (27%) were confirmed to have either a genetic syndrome (n=21) or VUS (n=36). Out of the 36 patients identified with CNV’s, 20 (56%) were classified as having a VUS “likely to be pathogenic”, 14(39%) as “likely to be benign”, and 2 patients were excluded due to having undergone FETO. Mortality rate at 6 months for the VUS group was 33% in comparison to the 18% in the isolated CDH patients and 43% in those CDH patients with genetic syndromes (p=0.02). CDH patients with VUS “likely to be pathogenic” had a significantly higher mortality rate at 6 months in comparison to those “likely benign” (45% vs 20%, p=0.005). VUS “likely benign” had a statistically higher supplemental oxygen requirement at 1 year in comparison to isolated CDH (45% vs 12%, p<0.001). No difference was noted in oxygen requirement at 1 year among both VUS group and CDH with genetic syndrome. **Conclusion:** CDH patients with a VUS have poor outcomes than would be expected. Prenatal CMA should be considered and interpreted with caution when evaluating candidates for fetal intervention.

042 - OA
Title: Robotic versus open pyeloplasty: a prospective study with fifty patients in either arm with a minimum follow-up of six months.
Authors: Sujit Chowdhary, FRCS(1), Deepak Kandpal, MS, MCh(2), A Vasudev, MD(3), R Srivastava, FRCP(4)
Institutions: Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi (1, 2), Indraprastha Apollo Hospital, New Delhi (3, 4)
Category: Laparoscopy and Robotics
Keywords: Robotic pyeloplasty,open pyeloplasty,
Aim of the Study: To report our experience with first 50 cases of robotic pyeloplasty and compare results with open pyeloplasty. **Methods:** Consecutive patients who underwent robotic pyeloplasty from January 2013 were prospectively enrolled into the study until fifty cases were reached. The control group consisted of age matched open pyeloplasty done during the preceding fifty cases of open pyeloplasty. DJ stent removal was done at four weeks and they were followed up at 3, 6 months and one year. DTPA scan and USG were done at 6 months. Open and the robotic groups were compared for operative time, postoperative morphine requirement, hospital stay, complications and long term outcomes. **Main Result:** The mean age at the time of surgery in robotic and open group was 6.5 and 6 years respectively. The associated renal anomalies were horse shoe kidney, ectopic kidney, malrotated kidney, anterior crossing lower pole vessels and renal calculus with PUJ obstruction. The mean operating time in the robotic group was 120 minutes with a range of 90 to 180 minutes. There were no operative or perioperative complications and no conversion to open surgery. The mean operative time for open pyeloplasty was 75 minutes with a range of 60 to 90 minutes. The average morphine requirement in the postoperative period was 1.25 mg/kg in the open pyeloplasty group as compared to 0.5 mg/kg in the robotic group ($p<0.05$). Mean hospital stay was 2 days for robotic pyeloplasty as compared to 3 days for open pyeloplasty ($p>0.05$). One child in the robotic group underwent redo-pyeloplasty and another remains with DJ stent (dilated renal pelvis AP diameter >10 cm) due to poor drainage. None of the patient in open pyeloplasty group required a redo surgery. **Conclusion:** Robotic pyeloplasty is a safe, efficacious and elegant procedure for children with comparable post-operative results as open approach.

050 - OA
Title: Transanal Swenson pull-through as a rescue procedure in Hirschsprung´s Disease and its use in other colorectal conditions.
Authors: KARLA A SANTOS-JASSO, MD(1), LUIS DE LA TORRE-MONDRAGON, MD(2)
Institutions: NATIONAL INSTITUTE OF PEDIATRICS(1), CHILDREN´S HOSPITAL OF PITTSBURGH(2)
Category: Misc
Keywords: HIRSCHSPRUNG´S DISEASE,RECTAL STENOSIS,SWENSON PROCEDURE
Aim of the Study: To show the use of the transanal Swenson pull-through (TASwPT) for complicated or unsuccessful operations for Hirschsprung's disease (HD) and for other colorectal problems. **Methods:** This retrospective review included 13 patients operated on from May 2014 to May 2016 at two Colorectal Centers that underwent a TASwPT to treat postoperative complications (12), or a congenital condition (1). Descriptive statistics were utilized, analyzing categorical variables. **Main Result:** The age ranged from 9 months to 16 years. The TASwPT was the primary rectal operation in three patients, one with rectal atresia, and two with rectal stenosis after the resection of a sacrococcygeal teratoma (SCT). In nine patients the operation was a rescue procedure after poor results with a Soave pull-through (SoPT), with its different approaches, for HD. In four of them there was a persistent functional obstruction, due to the muscular cuff, after a properly done operation. Five had technical defects that led to either residual aganglionosis (2), stenosis (2), or rectal prolapse (1). The remaining patient also had HD, and developed rectal stenosis after a posterior myectomy. The problem was solved in all, and no complications were observed. Four patients had permanent fecal incontinence due to a previously damaged dentate line. **Conclusion:** The SoPT, with its different approaches, has demonstrated to be a good treatment option for HD; nevertheless, poor outcomes can occur even in a properly done operation due to a hypertonic muscular cuff. For these patients and for those with technically deficient operations, the TASwPT is good option for rescue. It can be used as a rescue procedure in other rectal complications, and it is too a good option as a primary operation, mainly for HD, but also for some other rectal conditions. To achieve continence, ether in primary procedures or reoperations, preservation of the dentate line is mandatory.

060 - OA
Title: Maternal risk factors for the development of neonatal necrotizing enterocolitis: A meta-analysis
Authors: Hiromu Miyake, MD(1), Yong Chen, MD(2), Agostino Pierro, MD(3)
Institutions: The Hospital for Sick Children(1, 2, 3)
Category: Neonatal Surgery
Keywords: NEC,necrotizing enterocolitis,maternal factor
Aim of the Study: Necrotizing enterocolitis (NEC) is one of the most devastating gastrointestinal diseases in preterm infants. Although few postnatal risk factors have been identified, maternal risk factors for the development of NEC in neonates are largely unknown. We performed a meta-analysis to delineate which maternal factor increases the risk of developing NEC in neonates. **Methods:** Studies published from 1979 to 2016 were searched from the MEDLINE and

Cochrane databases. Cohort and case control studies that reported the incidence of neonatal NEC and various maternal factors were included. A meta-analysis was performed to identify the following five maternal risk factors: obesity, diabetes, smoking, HIV infection and cocaine exposure. As NEC is mostly seen in preterm neonates and in neonates admitted to NICU, we included only studies on these patients. **Main Result:** We included 2 studies on maternal obesity, 6 studies on maternal diabetes, 3 studies on smoking, 4 studies on HIV infection and 4 studies on cocaine exposure. Of these 5 maternal factors, obesity and cocaine exposure were significant risk factors for the development of neonatal NEC (Obesity (2 studies 1367 mothers): pooled odds ratio (OR)= 1.70, 95%CI 1.03-2.81, p=0.04. Cocaine (4 studies 2386 mothers): OR=4.83, 95%CI 3.16-7.39, p<0.001). The other maternal factors were not significant (Diabetes 6 studies 50048 mothers): OR=1.04, 95%CI 0.81-1.33, p=0.77. Smoking (3 studies 28961 mothers): OR=1.53, 95%CI 0.90-1.22, p=0.16. HIV (4 studies 1048 mothers): OR=1.74, 95%CI 0.81-3.73, p=0.15). **Conclusion:** Obesity and cocaine abuse are maternal factors that increase the risk of developing NEC in the neonatal periods. Further large-sized studies are needed to investigate on large scale other maternal risk factors for the development of NEC.

061 - OA

Title: The evaluation of the predictors of a successful outcome in patients with short bowel syndrome – A 30-year single institution experience -

Authors: Tatsuru Kaji, MD(1), Kazuhiko Nakame, MD(2), Takafumi Kawano, MD(3), Waka Yamada, MD(4), Kouji Yamada, MD(5), Shun Onishi, MD(6), Koushirou Sugita, MD(7), Tomoe Moriguchi, MD(8), Motoi Mukai, MD(9), Satoshi Ieiri, MD(10)

Institutions: Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, (1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Category: Neonatal Surgery

Keywords: short bowel syndrome,intestinal failure,predictor

Aim of the Study: Pediatric patients with short bowel syndrome (SBS) suffer from extensive morbidity and mortality. We aimed to determine the predictors of survival and weaning off parenteral nutrition (PN) in pediatric SBS patients. **Methods:** We retrospectively reviewed the medical records of 16 pediatric SBS patients who were treated at our institution over 30 years. SBS was defined as a residual small bowel length following surgery of <75cm. The loss of the ileocecal valve, cholestasis (D-Bil>2.0mg/dl), enterostomy, and the residual bowel length were evaluated as predictive factors. A Kaplan-Meier analysis was used to analyze predictors of survival and weaning off PN. P values of < 0.05 were considered to indicate statistically significant differences. **Main Result:** The etiologies of SBS were midgut volvulus (n=6), intestinal atresia (n=4), necrotizing enterocolitis (n=3), and other (n=3). The residual small intestinal length was 6.5–73 cm (mean ± SD, 42.35±24.23 cm). Six of 16 patients died (37.5%, causes of death: catheter-related blood stream infection (CRBSI) [n=3], intestinal failure-associated liver disease [IFALD] [n=2], cardiac arrest due to hypokalemia [n=1]), 9 patients were weaned off PN (56.3%). There were significant differences in cholestasis (p<0.05), enterostomy (p<0.05), and residual small bowel length <30cm (p<0.05) as predictors of survival. There were significant differences in cholestasis (p<0.01), loss of the ileocecal valve (p<0.05), and residual small bowel length <20cm (p<0.01) as predictors of weaning off PN. **Conclusion:** CRBSI and IFALD are lethal complications in SBS patients. We can improve the prognosis of SBS patients by preventing cholestasis, preserving the ileocecal valve and performing enterostomy closure as quickly as possible. In the cases in which the residual small bowel length is <20 cm, bowel lengthening would be effective.

063 - OA

Title: FACTORS DETERMINING MORTALITY IN CHILDREN WITH ESOPHAGEAL ATRESIA

Authors: Abhishek Gupta, MCh(1), Shilpa Sharma, MBBS, M.Ch, Ph.D(2), Prabudh Goel, MBBS, M.Ch(3), Sandeep Agarwala, MBBS, M.Ch(4), Minu Bajpai, MBBS, MS, MCh(5), M Srinivas, MBBS, MS, MCh(6), Veereshwar Bhatnagar, MBBS, MS, MCh(7), Devendra Kumar Gupta, MBBS, MS, MCh, FAMS(8)

Institutions: All India Institute of Medical Sciences, New Delhi (1, 2, 3, 4, 5, 6, 7, 8)

Category: Neonatal Surgery

Keywords: ESOPHAGEAL ATRESIA,MORTALITY,AGE AT PRESENTATION

Aim of the Study: To study the factors determining mortality in children with esophageal atresia with/without trachea-esophageal fistula (EA±TEF) at a single tertiary care centre. **Methods:** A retrospective review of EA±TEF patients admitted from Jan 2011-Dec 2015 was done. Mortality was correlated with age at presentation, gestational maturity, birth weight, pre-operative pneumonitis, associated anomalies, time gap between admission and surgery, transport time, gap between esophageal ends. **Main Result:** : Of 242 patients, 147 (60.6%) patients presented at <48 hours age. Average age at presentation in patients with mortality;survival was similar 2.16; 2.03 days. The mortality was 29.9; 31.58% among those who presented at <48; >48 hours age. Mortality rate was 47.2; 25.9 in preterm (n=53); term neonates (n=189). Mortality was 47.8; 28.8% in children weighing <1.5(n=23); >1.5(n=219) kg at birth. Pre-op pneumonitis was present in 33.5%. It was 26.2; 50% in patients travelling a distance of <100 km; >100 km to hospital. The mortality was higher in patients with pneumonitis, 32.1; 29.8%. Mortality was 27.92; 31.6% in patients who underwent surgery in <48 ; >48 hours after admission. Mortality rate in those with cardiac anomaly (n=176) was 29.8% where it was 32.4% in those without any associated cardiac anomaly (n=75). 34.6% (n=82) with patients had wide gap,

out of which 18 had pure EA, 38 underwent primary repair, 10(12.2%) had leak who were diverted and 4(4.8%) ultimately expired. **Conclusion:** Mortality was observed to be higher in patients who presented at older age (>48 hours), preterm, birth weight <1.5 kg, pre-op pneumonitis and those operated after 48 hours of admission. Patients covering longer distance (>100 km) to reach hospital had a greater incidence of pneumonitis and consequently, higher mortality rate.

067 - OA
Title: Prenatally diagnosed congenital diaphragmatic hernia: Optimal Mode of Delivery?
Authors: Carmen Mesas Burgos, MD(1), Frenckner Björn, MD(2), Luco Matias, MD(3), Matthew T Harting, MD(4), Pamella A Lally, MD(5), Lally P Kevin, MD(6)
Institutions: Karolinska Institutet (1, 2), Pontificia Universidad Católica(3), McGovern Medical School at UT Health and Children's Memorial Hermann Hospital (4, 5, 6)
Category: Neonatal Surgery
Keywords: congenital diaphragamtic hernia,delivery mode,congenital diaphragmatic hernia study group
Aim of the Study: To re-evaluate if the delivery mode of infants with prenatally diagnosed CDH affects outcome. **Methods:** Information from the CDH Study Group database between 2001-2015 was used. Infants with prenatal diagnosis were included and divided into 4 groups according to the mode of delivery: vaginal spontaneous, vaginal induced, elective caesarean (CS) section, emergent caesarean section. The delivery mode groups were further analyzed in relation to the time of day of delivery and the gestational age at birth. **Main Result:** A total of 6023 cases of CDH were entered in the registry between October 2001 and September 2015, with an overall survival of 71%. Of those, 65% were prenatally diagnosed, with a lower survival rate of 64%. Thirty percent of patients had a spontaneous vaginal delivery, 20% vaginal induced, 29% elective CS and 21% emergent CS. No difference in the trends of delivery mode during the study period was identified. There were no differences in the rates of inborn cases, gender, side, BW, GA, associated anomalies, defect size, liver position, patch repair, ECMO, rate of non-repairs, LOS, length of intubation, need of O2 at 30 days or overall survival. The time of day at birth did not affect outcome. There was no difference in outcome between the different delivery modes at similar GA at birth, with worse outcomes at lower GA. Among patients who died within hours of birth, very few cases were outborn and only 3% received ECMO. **Conclusion:** Neither the mode nor time of delivery seem to affect the overall outcome for patients with prenatally diagnosed CDH. Outcome is strongly associated with the GA at birth. The results of our study highlight an existing hidden mortality among outborn cases with CDH and strengthen recommendation of delivery at tertiary center with ECMO availability.

076 - OA
Title: Long-term outcomes of infants with H-type tracheo-esophageal fistula
Authors: Augusto Zani, MD, PhD(1), Luai Jamal, MD(2), Giovanni Cobellis, MD(3), Justyna M Wolinska, MD(4), Samuel Fung, MD(5), Evan J Propst, MD, MSc(6), Priscilla P Chiu, MD, PhD(7), Agostino Pierro, MD(8)
Institutions: The Hospital for Sick Children(1, 2, 3, 4, 5, 6, 7, 8)
Category: Neonatal Surgery
Keywords: Esophageal atresia,H-type,Long-term outcome
Aim of the Study: To evaluate outcomes following repair of H-type tracheoesophageal fistula (TEF). **Methods:** Retrospective chart review of infants with H-type TEF treated at our institution between 2000 and 2014. Patient demographics, surgical management, and postoperative function were evaluated. **Main Result:** Of the 268 patients with esophageal atresia/TEF treated at our centre, 16 (6%) had a H-type TEF (10 males). Thirteen (81%) had associated anomalies. All patients were symptomatic: chocking and sputtering was the commonest presentation (n=10, 63%). Diagnosis: Age at diagnosis was 8 days (1 day – 34 months). All patients were diagnosed based on a single esophagram. Prior to surgery, 12 (75%) patients underwent bronchoscopy and 11 underwent canulation of the TEF tract. Surgery: All patients underwent open repair but one whose case was started thoracoscopically but was converted to open due to esophageal seromuscular injury. Repair was achieved in all patients via a transcervical approach (right sided incision in 15). One patient had an unsuccessful prior attempt at repair using tissue glue. Following TEF division, 11 patients had tissue interposition grafts placed (9 muscle, 2 fat). Postoperative course: Eight (50%) patients had postoperative vocal cord paresis (6 right sided, 2 bilateral). A patient developed recurrent TEF 78 days postoperatively that was subsequently repaired. Follow-up: at 41 months (8-143), there were no mortalities, all cases of vocal cord palsy resolved spontaneously, 9 (56%) patients had gastro-esophageal reflux requiring treatment. Indirect laryngoscopy showed cord motion recovery in only 3 of 8 patients. **Conclusion:** This large, single-centre series demonstrates that H-type TEF can be diagnosed with esophagogram at an early age. Postoperative recurrent laryngeal nerve paresis and gastroesophageal reflux disease are common following repair. Although most patients with vocal cord paresis eventually become asymptomatic, two thirds do not regain vocal cord function. This reinforces the importance of routine examination of vocal cord movement following H-type TEF repair.

OA2. ORAL ABSTRACTS
Sunday, October 9 | 9:40 – 10:40 | Maryland A/B

MODERATORS: ALASTAIR J.W. MILLAR, MARSHALL SCHWARTZ

010 - OA
Title: Transcending dimensions in surgical education: a comparative analysis of 2-D and 3-D cloacagrams in advancing the surgical trainee experience
Authors: Alessandra Gasior, DO(1), Carlos Reck, MD(2), Victoria Lane, MBSS(3), Richard Wood, MD(4), Jeremy Patterson, Team lead (5), Robert Strouse, Team Lead (6), Simon Lin, PhD(7), Jennifer Cooper, PhD(8), Marc Levitt, MD(9)
Institutions: Center for Colorectal and Pelvic Reconstruction, Department of Pediatric Surgery, Nationwide Children's Hospital (1, 2, 3), 4, Research Information Solutions & Innovation (RISI), The Research Institute at Nationwide Children's Hospital (5, 6, 7), Senior Research Coordinator, The Research Institute at Nationwide Children's Hospital (8), Surgical Director, Center for Colorectal and Pelvic Reconstruction, Department of Pediatric Surgery, Nationwide Children's Hospital, Columbus, Ohio, (9)
Category: General Surgery
Keywords: pediatric colorectal surgery, cloaca, 3D innovation
Aim of the Study: Surgical trainees have a steep learning curve to analyze 2D images provided by conventional cloacagrams.Imaging advances now allow for 3D reconstruction and 3D models; but, no evaluation of these techniques exists.Therefore, we sought to determine if advances in 3D imaging would benefit trainees by leading to accelerated learning and improved understanding for operative planning of a cloaca reconstruction. **Methods:** Questionnaires were used to assess understanding of 2D and 3D images by pediatric surgery trainees.2D contrast study cloacagram,3D model CT scan reconstruction,software enhanced 3D video animation, and printed physical 3D cloaca model were employed.Experienced pediatric surgery attendings were studied for comparison.Logistic mixed effect models assessed whether the proportion of questions answered correctly differed by imaging modality, and whether the proportion answered correctly differed between trainee and attending surgeons for any particular modality. **Main Result:** 29 pediatric surgery trainees and 30 faculty members participated.For trainees, the percentage of questions answered correctly was:2D 10.5%,3D PACS 46.7%,3D Enhanced 67.1%, and 3D Printed 73.8%. For attendings the total percentage of questions answered correctly was: 2D 22.2%, 3D PACS 54.8%, 3D Enhanced 66.2%, 3D printed 74.0%.The differences in rates of correctness across all four modalities were significant in both fellows and attendings($p < 0.001$), with performance being lowest for the 2D modality, and with increasing correct answers with each subsequent modality.The difference between trainees and attendings in correctness rate was significant only for the 2D modality, with attendings answering correctly more often.The 2D cloacagram, as the least complex model, was the most difficult to interpret. The more complex the modality, the more correct responses were obtained from both groups. **Conclusion:** Mental visualization skills of anatomy and complex 3D spatial arrangements may take years of experience to accomplish.Novel surgical education resources of a 3D cloacoagram may allow for more quickly advancing this skill.

012 - OA
Title: The optimal procedure of modified Rex shunt for the treatment of extrahepatic portal hypertension in children
Authors: jinshan zhang, DO(1), long li, MD(2)
Institutions: Capital institute of pediatrics (1, 2)
Category: General Surgery
Keywords: Portal hypertension,children,Rex shunt
Aim of the Study: To identify the optimal procedure of modified Rex shunt in our hospital. **Methods:** From February 2008 to March 2016, 101 patients with extrahepatic portal hypertension underwent the Rex shunt, in which 48 children underwent gastric coronary vein-left portal vein shunt (CV - LPV), 26 patients underwent main portal vein-left portal vein shunt with interposition of portal vessels (iPV - LPV), 5 children with proximal splenic vein-left portal vein shunt (SV - LPV), 6 patients with splenic vein-left portal vein with interposition of portal vessels (iSV - LPV), 2 patients with inferior mesenteric vein-left portal vein shunt (IMV - LPV), 4 patients with double gastric coronary vein-left portal vein bypass (dCV - LPV), 4 cases with right gastric vein-left portal vein bypass (RGV - LPV), 4 cases with right gastroepiploic vein-left portal vein bypass (RGEV - LPV). The surgical operation time, postoperative portal vein pressure, the size of spleen, postoperative hospital stay, postoperative rebleeding rate, the diameter and blood flow of bypass vein are compared among the methods of Rex shunt. **Main Result:** The Rex shunt were successfully performed in 101 patients. Operation time: CV - LPV is significantly higher than iPV - LPV ($P = 0.036$). Postoperative mesenteric venous pressure: iSV - LPV is significantly higher than iPV-LPV, dCV-LPV and RYV - LPV ($P < 0.05$). Postoperative rebleeding incidence is 18.8% in all patients, CV - LPV is 22.9%, iPV - LPV is 11.5%, SV - LPV is 20% , iSV - LPV is 0%, IMV - LPV is 50%, dCV - LPV is 25%, RGV - LPV is 0% RGEV - LPV is 50% and RYV - LPV is 0%. There was no significantly difference among Rex shunt groups in postoperative rebleeding incidence ($P = 0.420$). **Conclusion:** The main portal vein-left portal vein

bypass (iPV-LPV) is the optimal procedure of Rex shunt.

019 - OA
Title: Solid Pseudopapillary Neoplasm in Children and Adults: A National Study of 369 Patients
Authors: Harold J Leraas, MA(1), Jina Kim, MD(2), Zhifei Sun, MD(3), Brian Ezekian, MD(4), Elisabeth Tracy, MD(5)
Institutions: Duke University School of Medicine (1), Duke University, Department of Surgery (2, 3, 4, 5)
Category: General Surgery
Keywords: Solid Pseudopapillary Neoplasm,Pancreatic cancer,Frantz Tumor
Aim of the Study: Solid pseudopapillary neoplasm of the pancreas (SPN) is a rare tumor in children, with current evidence limited to single-center studies. Therefore, we used a national cancer dataset to examine treatment strategies and clinical outcomes for pediatric and adult SPN. **Methods:** The 2004 – 2013 National Cancer Data Base was queried to identify all patients diagnosed with SPN. The cohort was stratified by age into two groups: pediatric and adult, defined as < 18 years and ≥ 18 years, respectively. Baseline characteristics and unadjusted outcomes were compared using the Kruskal-Wallis test for continuous variables and Pearson $\chi 2$ test for categorical variables. **Main Result:** We identified 21 pediatric and 348 adult patients with SPN (Table). Pediatric and adult patients had a median age of 15 years and 36 years, respectively ($p < 0.001$). In both groups, patients were more likely to be female (90.5% vs. 85.9%, $p = 0.56$) and Caucasian (66.7% vs. 68.3%, $p = 0.74$). Median tumor size was similar between children and adults (59 vs. 49 cm, $p = 0.41$). For both groups, partial pancreatectomy was the most common surgical resection strategy (71.4% vs. 53.1%, $p = 0.80$), followed by pancreaticoduodenectomy (9.5% vs. 19.0%, $p = 0.80$). Children and adults had similarly favorable long-term survival (100.0% vs. 92.9% at 5 years, $p = 0.31$). **Conclusion:** To date, this study provides the largest comparison of pediatric vs. adult SPN. Children with SPN have similar disease severity at presentation, receive similar treatments, and demonstrate equivalent post-operative outcomes when compared to their adult counterparts.

028 - OA
Title: Epidemiological Comparison of Choledochal Malformations and Biliary Atresia.
Authors: Kathryn Ford, MBChB(1), Jessica Burns, MBChB(2), Mark Davenport, ChM FRCS(3)
Institutions: Kings College Hospital, London (1, 2, 3)
Category: Hepatobiliary Surgery
Keywords: biliary atresia,choledochal malformation,
Aim of the Study: Epidemiological characteristics of biliary atresia (BA) and choledochal malformations (CM) have not been not well-described due to their rarity. We aimed to investigate both groups using a defined time-period and referral pool. **Methods:** Review of a prospective database of children with BA and CM referred to a single tertiary hepatobiliary referral centre and born from 1999-2014. BA and CM were compared for variables which included: geographical origin, gender, antenatal events, consanguinity and ethnicity. Chi2 tests were used as appropriate. P value of <0.05 was considered statistically significant. **Main Result:** There were 353 and 113 children with BA and CM respectively during the 16-year period. There was no difference in geographical origin (P=0.54); or seasonality (P=0.32). There was significant predominance of females in the CM group (54% vs. 74%; P=0.0001) and variation in racial composition [White (BA 76% vs CM 68%) vs. Asian (16.7% vs. 17.9%) vs. black (5.5% vs.13%); P =0.03]. There were 6 consanguineous parents (all in BA cohort). Abnormal antenatal events [e.g. In Vitro Fertilisation (n = 6); maternal diabetes (n = 18), maternal hypothyroidism (n = 5), twins (n = 10) were similarly exclusive to the BA cohort (P=0.0001)]. Detection of a cyst on maternal ultrasound was more common in the CM group (23% vs. 5%; P < 0.0001). **Conclusion:** Clear epidemiological differences exist between BA and CM with both racial and gender variation. Furthermore both groups show evidence of abnormal (but completely distinct) antenatal pathology.

034 - OA
Title: Clearance of jaundice after Kasai operation as an early predictive indicator of prognosis in biliary atresia. The last quarter-century experience in a children's hospital.
Authors: Masato Shinkai, MD(1), Norihiko Kitagawa, MD(2), Kyoko Mochizuki, MD(3), Hidehito Usui, MD(4), Hiroshi Take, MD(5), Etsuko Osawa, MD(6), Takashi Hosokawa, MD(7), Kazuki Yoshizawa, MD(8), Youkatsu Ohhama, MD(9)
Institutions: Kanagawa Children's Medical Center (1, 2, 3, 4, 5, 6, 7, 8, 9)
Category: Hepatobiliary Surgery
Keywords: biliary atresia,clearance of jaundice,native liver survival
Aim of the Study: Long-term native liver survival has recently been improved in patients with biliary atresia (BA). However, to deliberately deal with portal hypertensive sequelae and timely switch to liver transplantation (LT), early prediction of their prognosis is mandatory. Herein, we analyzed recent outcome of Kasai operation (KO) and usefulness of clearance of jaundice (CJ) as a prognostic indicator. **Methods:** From 1989 to 2013, 97 children with BA who underwent KO and had been followed up at our hospital were retrospectively reviewed. Demographics, pre- and post-KO laboratory data, outcome, and sequelae were analyzed. Patients were divided into three groups. Early CJ: those with first CJ (total bilirubin <1 mg/dl) within 4 months of KO, Late CJ: those with first CJ later than 4 months after KO, Non CJ: those without CJ after KO. **Main Result:** Types of BA were I cyst in 4, II in one, and III in 92 patients. Age at Kasai operation was 65 (18~141) days. At the last follow-up, 66 patients were alive with native livers, 21 patients alive

after LT, 6 died without LT, and 4 died after LT. Overall 10- and 20-year native liver survival rates were 69% and 65%. Early CJ, Late CJ, and Non CJ groups included 55 (56%), 18 (19%), and 24 patients (25%), respectively. Ten- and 20-year native liver survivals of Early CJ and Late CJ were 97.7 and 94.4%, 63.2 and 54.1%, respectively. Non CJ group achieved <12.5% 5-year native liver survival. Portal hypertensive sequelae occurred in 22% of Early CJ, and 71% of Late CJ. **Conclusion:** At present, >60% of children with BA can survive 20 years with native livers. CJ within 4 months of KO may be an important signpost to give us a fundamental perspective of their prognosis and to help determine the management of BA.

038 - OA
Title: Degree of liver fibrosis in biliary atresia with ductal plate malformation
Authors: Juma Obayashi, MD(1), Kunihide Tanaka, MD(2), Kei Ohyama, MD(3), Shutaro Manabe, MD(4), Hideki Nagae, MD(5), Hideki Shima, MD(6), Hideaki Sato, MD(7), Shigeyuki Furuta, MD(8), Kohei Kawaguchi, MD(9), Munechika Wakisaka, MD(10), Junki Koike, MD(11), Masayuki Takagi, MD(12), Hiroaki Kitagawa, MD(13)
Institutions: Division of Pediatric Surgery, St. Marianna University School of Medicine, Kawasaki, Japan(1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13), Department of Pathology, St. Marianna University School of Medicine, Kawasaki, Japan(11, 12)
Category: Hepatobiliary Surgery
Keywords: biliary atresia,ductal plate malformation,liver fibrosis
Aim of the Study: Several investigators have reported ductal plate malformation (DPM) in the liver as characteristic of persistent embryonal ductular strictures and the embryonic subtype of biliary atresia (BA). We hypothesized that the degree of liver fibrosis might differ depending on the time of BA onset. **Methods:** Thirty-two BA cases underwent Kasai operation from 1976 to 2009. We compared two groups, Group A had DPM and Group B didn't. Biopsies at the initial Kasai procedure were histologically analyzed the degree of Portal-portal bridging (P-P bridging) and the existence of portal-central vein bridging (P-C bridging). The degree of P-P bridging was defined as Grade 1, P-P bridging < 50%; Grade 2, > 50% without nodular architecture; Grade3, > 50% and nodular architecture. We also evaluated the number of patients who didn't become jaundice free (JF; total bilirubin < 2.0 mg/dl), and the time taken to become JF. Statistical comparisons of the multiple data were evaluated by Cochran-Armitage trend test, Chi-square test and Student T test. Regression analysis with $P < 0.05$ was considered significant. **Main Result:** There were 10 patients in Group A and 22 patients in Group B. For P-P bridging, in Group A there were 2 patients with Grade 1, 4 with Grade 2 and 4 with Grade 3. In Group B, there were 6 patients with Grade 1, 11 with Grade 2 and 5 with Grade 3 ($p=0.373$). Seven patients had P-C bridging in Group A and 8 in Group B ($p=0.077$). Four patients in Group A and 10 in Group B didn't become JF ($p=0.773$). The time taken to JF was 65.4±43.9 days in Group A and 39.2±24.0 days in Group B ($p=0.195$). **Conclusion:** DPM tended to having P-C bridging. DPM being the embryonic subtype of BA appears to be a factor in progressive liver fibrosis.

133 - OA
Title: Growth following gastric transposition for oesophageal atresia and caustic/peptic strictures
Authors: Marcia A Matias, MD(1), Andrea Zanini, MD(2), Agostino Pierro, MD(3), David P Drake, MD(4), Kate MK Cross, MD(5), Joe I Curry, MD(6), Edward M Kiely, MD(7), Paolo De Coppi, PhD(8), Simon Eaton, PhD(9), Lewis Spitz, PhD(10)
Institutions: (1), (2), (3), (4), (5), (6), (7), (8), UCL Institute of Child Health(9), (10)
Category: Thoracic Surgery
Keywords: Gastric transposition,Oesphageal atresia ,Growth
Aim of the Study: Gastric transposition (GT) for oesophageal replacement has good long term outcome but growth of these children is poorly documented. Our aim was to compare growth in children undergoing GT for either oesophageal atresia (OA) or caustic/peptic strictures (CPS). **Methods:** A retrospective case note review of weight and height at the time of surgery and throughout follow-up (minimum 3 months) in children undergoing GT in the period 1981-2013 was performed and body mass index (BMI) calculated, together with standard deviation scores (SDS) scores. Data are mean±SEM and compared by Mann-Whitney test. **Main Result:** Growth data were available in 75 children undergoing GT for either OA (n=64) or CPS (n=11) at 7.1±0.7 years following GT. Weight SDS score following GT was significantly lower in the OA group (-1.9±0.2) compared with CPS group (-1.4±0.7), $p=0.045$. Height SDS score was not different between the two groups (OA: -1.4±0.2; CPS -1.2±0.5); $p=0.87$. BMI SDS score was significantly lower at follow-up in the OA group (-1.3±0.2) than the CPS group (-0.1±0.2), $p=0.006$. **Conclusion:** Children grow adequately following GT, but weight and BMI are lower following GT for OA than GT for CPS, probably because growth before GT may have been significantly impaired since birth in the OA group. A long-term follow-up of these patients is warranted to determine consequences of these findings.

139 - OA
Title: Thoracoscopic Lobectomy in Children; The New Gold Standard
Authors: Steven S Rothenberg, MD(1)
Institutions: Rocky Mountain Hospital For Children(1)
Category: Thoracic Surgery

Keywords: Lobectomy,Thoracoscopy,CPAM
Aim of the Study: This study evaluates the safety and efficacy of thoracoscopic lobectomy in infants and children **Methods:** From January 1994 to June 2015, 496 patients underwent video-assisted thoracoscopic lobe resection. All procedures were performed by or under the direct guidance of a single surgeon. Patients' ages ranged from 1 day to 18 years, and weights ranged from 2.6 to 78 kg. Preoperative diagnosis included sequestration/congenital pulmonary airway malformation (n=440), severe bronchiectasis (n = 36), congenital lobar emphysema (n = 16), and malignancy (n = 4). **Main Result:** Of the 496 procedures, 493 were completed thoracoscopically. Operative times ranged from 35 minutes to 240 minutes (average, 115 minutes). Average operative time when a trainee was the primary surgeon was 160 minutes. There were 107 upper, 33 middle, and 256 lower lobe resections. There were four intraoperative complications (1%), 3 requiring conversion to an open thoracotomy. The postoperative complication rate was 3.1%, and 3 patients required re-exploration for a prolonged air leak. Hospital length of stay (LOS) ranged from 1 to 16 days (average 2,6). In patients < 5 kg and < 3 months of age, the average operative time was 78 minutes, and the LOS was 1.8 days. **Conclusion:** Thoracoscopic lung resection is a safe and efficacious technique. With proper mentoring it is an exportable technique, which can be performed by pediatric surgical trainees. The procedures are safe and effective even when performed in the first 3 months of life. Early resection avoids the risk of later infection and malignancy.

141 - OA
Title: RESULTS OF A MIDTERM REVIEW OF AIRWAY ASSESSMENT FOR OESOPHAGEAL ATRESIA - A PROSPECTIVE STUDY.
Authors: Leel Nellihela, MS,FRCS(Ed)(1), Andrew Durward, FCP(South Africa)(2), Conal Austin, FRCS (Ed), FRCSI, FRCS CTh(3), Dorothy Kufeji, FRSCS (Paeds),FRCS (Eng),PGCAP(KCL)(4), David P. Drake, MA,MB,BChir,FRCS,DCH(5), Iain E Yardley, FRCS (Paeds)(6), Manasvi Upadhyaya, FRCS (Paeds)(7)
Institutions: Evelina London Children's Hospital, Guy's & St Thomas' NHS Foundation Trust, London (1, 2, 3, 4, 5, 6, 7)
Category: Thoracic Surgery
Keywords: Oesophageal atresia ,Tracheomalacia,Airway assessment
Aim of the Study: Patients with oesophageal atresia (OA) can have life threatening tracheomalacia. In up to 10-15% of OA cases an airway procedure then becomes necessary. Our aim was to assess the outcome of systematic airway assessment (AA) for OA patients. **Methods:** Prospective review of all patients who underwent repair of OA between 2013 and 2016. AA consisted of dynamic flexible bronchoscopy and contrasted CT chest (CCTC), if vascular compression suspected. Severity of tracheomalacia was classified on bronchoscopic estimates of the degree of narrowing of the trachea: mild (50-75%), moderate (75-90%) and severe (over 90%). **Main Result:** 29 consecutive neonates with OA were reviewed. 20/29 had AA, either before or after the OA repair. All had symptoms, ranging from severe respiratory distress worsening with bronchiolitis to acute life threatening events (ALTE). In 9/29 AA was not undertaken as patients died (n=2, extreme prematurity) or were asymptomatic till follow up. In the patients undergoing AA, 9/20 did not have significant tracheomalacia. Severity of tracheomalacia was mild in 1, moderate in 4 and severe in 6. The proximal trachea was affected in 3, the middle in 6 and the distal in 2. Bronchomalacia was seen in 2 (one bilateral). External pulsatile compression was seen in 6: 2 proximal, 3 mid and 1 distal. 14/20(70%) had CCTC. 11/14 had significant compression due to vessels: Innominate artery (6), aberrant right subclavian artery (2), aorta (2) and right brachiocephalic (1). Treatment: 11/20(55%) underwent either vascular or tracheal pexy (or both) depending on the anatomy and vessels involved. 2 procedures failed and were redone. On follow up none required ventilatory support or had any further ALTE. **Conclusion:** A more proactive approach to airways has lead to increased surgery for airways. We would recommend early airway MDT for this subgroup of patients to identify high-risk patients.

OA3. ORAL ABSTRACTS
Sunday, October 9 | 9:40 – 10:40 | Virginia A/B

MODERATORS: DAVID SIGALET, ADIL ASLAM

102 - OA
Title: Patient Specific Esophageal Epithelial Cells for Esophageal Tissue Engineering
Authors: Todd J Jensen, MSC(1), Foster Christopher, MSC(2), Charles Drinnan, PhD(3), Adam Mitchell, PhD(4), Sajey Wael, MD(5), Christine M Finck, MD(6)
Institutions: Uconn Health (1, 2, 3, 4), Connecticut Children's Medical Center(5, 6)
Category: Research
Keywords: Tissue Engineering,Autologous,Esophagus
Aim of the Study: Esophageal atresia occurs in 1 in 3000 births. Typically, surgical repair includes reconnection of the esophagus or in cases where the esophagus cannot be reconnected, interposition of a piece of stomach or intestine. These surgical options have significant morbidity, therefore, a tissue engineered esophagus offers a new therapeutic

option. Utilizing autologous esophageal cells as a source for engineering a synthetic scaffold would abrogate the need for immune suppression and optimize scaffold function. **Methods:** Esophageal biopsies were obtained from pediatric patients undergoing routine endoscopy (CCMC IRB: 13-094). Biopsies were dissociated and cells were plated onto an irradiated feeder layer of 3T3 cells in medium containing ROCK inhibitor (Y-27632). Cells were expanded for 3 passages and analyzed via flow cytometry and qRT-PCR. Electrospun PLGA/PCL scaffolding was coated, seeded and cultured in vitro and in vivo for up to 14 days. Cellular viability, phenotype and in vivo durability was evaluated. **Main Result:** Esophageal epithelial cells maintained viability and phenotype over time in culture. In addition, there was significant expansion of cells enabling seeding of a synthetic scaffold. Furthermore, laminin and fibronectin coating of the scaffold appeared to enhance cellular adhesion and growth and correlated with expected findings from integrin profiling. **Conclusion:** The technique for obtaining and expanding a patient's specific esophageal epithelial cells for use as a cell source in tissue engineering prevents the need for immune suppression and allows for the epithelium to develop on the correct anatomic surface. Furthermore, scaffolding coated with laminin and fibronectin promotes increased adhesion and cell morphology. Currently we are exploring a swine model to obtain porcine esophageal epithelial cells, growth of tissue engineered scaffold, and subsequent implantation.

103 - OA

Title: Effect of small-conductance calcium-activated potassium channel 3 (SK3) in Hirschsprung's disease patients following pull-through procedure

Authors: . Gunadi, PhD(1), Alvin Kalim, B.Med(2), Mukhamad Sunardi, MD(3), Nova Budi, B.Med(4), Andi Dwihantoro, MD(5)

Institutions: Pediatric Surgery Division, Department of Surgery, Faculty of Medicine, Universitas Gadjah Mada/Dr. Sardjito Hospital(1, 5), Molecular Biology Lab, Faculty of Medicine, Universitas Gadjah Mada(2, 3, 4)

Category: Research

Keywords: SK3,appropriate pull-through,persisten bowel symptoms

Aim of the Study: Some Hirschsprung's disease (HSCR) patients showed persistent bowel symptoms after an appropriately pull-through procedure. Recently, the small-conductance calcium-activated potassium channel 3 (SK3) expressions has been shown to be reduced in the ganglionic intestines of HSCR patients. In this study, we wished to investigate the effect of SK3 expression in Indonesian HSCR patients following pull-through surgery. **Methods:** Ganglionic and aganglionic colon specimens were collected at pull-through operation from ten HSCR patients, while control colon specimens were obtained at colostomy closure from five anorectal malformation (ARM) patients. Quantitative real-time polymerase chain reaction (RT-PCR) was performed to analyze the SK3 expression. Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) was used as a reference gene. The Livak (2-ΔΔCT) method was utilized to determine the SK3 expression level. **Main Result:** RT-PCR showed that the SK3 expression was significantly lower (64 times) in aganglionic colon group compared to control group (10.9 ± 4.6 vs. 4.9 ± 3.6) with p-value of 0.025 (95% CI = 0.9 – 11.1). The expression of SK3 in the ganglionic colon group was also lower (21 times) compared to control group (9.3 ± 5.8 vs. 4.9 ± 3.6), however, did not reach a significant level (p-value = 0.145; 95% CI = -1.7 – 10.6). **Conclusion:** Our study shows that the SK3 expression is reduced in ganglionic intestines and it might cause the persistent bowel symptom following a properly pull-through technique in HSCR patients.

104 - OA

Title: Altered expression of IL36gamma, IL36 recepter and IL36 antagonist in the colon of patients with Hirschsprung's Disease

Authors: Christian Tomuschat, MD(1), Anne Marie O'Donnell, PhD(2), David Coyle, MD(3), Prem Puri, MS, FRCS, FRCS (ED), FACS, FAAP (Hon.), D.Sc.(Hon)(4)

Institutions: National Children's Research Centre, Our Lady's Children's Hospital, Crumlin, Gate 5, Dublin(1, 2, 3, 4)

Category: Research

Keywords: Hirschsprung's Disease,Hirschsprung's-associated enterocolitis (HAEC),IL36?

Aim of the Study: Hirschsprung's disease-associated enterocolitis (HAEC) is the most common cause of morbidity and mortality in Hirschsprung's disease (HSCR). Altered intestinal epithelial barrier function and an abnormal microbiota are implicated in the pathogenesis of HAEC. IL-36gamma, a member of the IL-1 superfamily, is involved in host defence and contributes to proinflammatory responses and development of inflammatory diseases. The IL36 receptor (IL1RL2) as well the IL36 antagonist (IL36RN) are important mediator molecules in the inflammatory response. Animal data suggests that IL1RL2 is involved in mucosal healing. We designed this study to investigate the hypothesis that the IL-36gamma axis is altered in HSCR. **Methods:** We investigated IL-36gamma, IL1RL2 and IL36RN expression in ganglionic and aganglionic bowel of HSCR patients (n=10) and controls (n=10). qPCR, Western blotting and confocal immunofluorescence were performed. **Main Result:** qPCR and Western blot analysis revealed that IL-36gamma is strongly expressed in the aganglionic and ganglionic colon of patients with HSCR. ILR1L2 and IL36RN expression was significantly decreased in HSCR specimens compared to controls ($p < 0.05$). Confocal microscopy revealed a markedly increased expression of IL36gamma in the colonic epithelium of patients with HSCR compared to controls. IL1RL2 was localised in colonic epithelium, interstitial cells of Cajal (ICCs) and enteric nerve cells and showed a markedly decreased expression in all HSCR specimens. IL36RN was localised in the colonic epithelium with a markedly decreased

expression in all HSCR specimens compared to controls. **Conclusion:** To our knowledge, we report for the first time expression of IL36gamma, ILRL2 and IL36RN in the colon of patients with HSCR. The increased expression of IL36gamma and the markedly decreased expression of IL1RL2 and IL36RN in the aganglionic and ganglionic bowel in HSCR may result in an increased inflammatory response and altered mucosal response healing leading to the susceptibility to develop HAEC.

105 - OA

Title: Neuroplastic changes induce functional repercussions in the remaining "healthy' bowel in Hirschsprung's disease.

Authors: Anne Dariel, MD(1), Lucie Grynberg, MS(2), Charlène Brochard, MD(3), Etienne Suply, MD(4), Philine de Vries, PhD(5), Marc-David Leclair, PhD(6), Guillaume Levard, PhD(7), Guillaume Podevin, PhD(8), Françoise Schmitt, PhD(9), Sabine Irtan, PhD(10), Benoit Parmentier, MD(11), Hubert Lardy, PhD(12), Cécile Muller, MD(13), Sabine Sarnacki, PhD(14), Michel Neunlist, PhD(15)

Institutions: Pediatric Surgery Department, University Hospital of Nantes(1, 6), Inserm U913, University Hospital of Nantes (2, 3, 15), Pediatric Surgery Department,(4), Pediatric Surgery Department, University Hospital of Brest(5), Pediatric Surgery Department, University Hospital of Poitiers(7), Pediatric Surgery Department, University Hospital of Angers(8, 9), Pediatric Surgery Department, Trousseau Hospital, Paris(10, 11, 13), Pediatric Surgery Department, University Hospital of Tours(12), Pediatric Surgery Department, Necker Hospital for Sick Children, Paris(14)

Category: Research

Keywords: Hirschsprung's disease,Motility disorders,Enteric nervous system

Aim of the Study: In Hirschsprung's disease (HD), postoperative course remains unpredictable, with enterocolitis occuring in one third and intestinal dysmotility in half. There is a lack of biomarkers to predict these complications. The aim was to characterize the enteric nervous system (ENS) phenotype in the 'healthy' ganglionic zone of resected colon in HD. **Methods:** We developed a multicenter, translational and prospective study, which included full term neonates with HD and control patients (anorectal malformations) their first year of life. Samples of resected bowel were collected. Whole mounts of colonic myenteric plexus were stained with antibodies against calretinin, neuronal nitric oxide synthase (nNOS), and HuC/D (pan-neuronal marker). To determine the functional repercussion of the neuroplastic changes on neuromuscular transmission, functional ex vivo analysis of motility were performed on fresh muscular strips. Colonic contractile response induced by electrical field stimulation (EFS) was investigated in absence or presence of N-nitro-L-arginine methyl ester (L-NAME) (inhibitor of NO production) and atropine (cholinergic receptor antagonist). **Main Result:** Sixteen HD patients without stoma and 13 control patients were included with a comparable median age of 55 days and 99 days respectively. The density of ENS structures (ganglia and interganglionic fiber strands) was significantly lower in the 'healthy' bowel in HD as compared to control (p=0,0003). In addition, the number of HuC/D neurons per ganglia was lower (p=0,0002), especially for nNOS-immunoreactive (IR) neurons (p=0,0003) but not for calretinin-IR neurons. EFS-induced contractile responses were similar in HD as compared to control. However, the L-Name sensitive component of EFS induced response was reduced in the 'healthy' bowel in HD in comparison to control (p=0,02), but no difference was reported for the atropine sensitive one. **Conclusion:** Our data suggest the occurrence of neuroplastic changes in neuronal subpopulations. In particular, reduced nNOS expression could reflect ENS immaturity or dysmaturity and contribute to complications observed in HD.

106 - OA

Title: Hyperosmolar formula feeding induces hypoxia in the intestinal epithelium during experimental necrotizing enterocolitis

Authors: Yong Chen, MD(1), Yuhki Koike, MD(2), Hiromu Miyake, MD(3), Bo Li, PhD(4), Carol Lee, ScD(5), Agostino Pierro, MD(6)

Institutions: The Hospital for Sick Children(1, 2, 3, 4, 5, 6)

Category: Research

Keywords: Necrotizing enterocolitis ,Feeding,Hypoxia

Aim of the Study: Formula feeding is a risk factor for necrotizing enterocolitis (NEC) which is characterized by ischemic necrosis. The aim of this study is to investigate whether formula feeding induces intestinal hypoxia in NEC. **Methods:** Following ethical approval (N 32238), 4 groups of C57BL/6 mice were studied between postnatal day 5 (P5) and 9 (P9). Group A(N=9): breast feeding; Group B(N=8), breast feeding + oral lipopolysaccharide (LPS, on P6 and P7); Group C(N=9), gavage feeding hyperosmolar formula + LPS; Group D(N=10), Hypoxia (5% O2 for 10 minutes, 3 times a day)+gavage feeding + LPS. Pimonidazole, a hypoxia marker, was injected intraperitoneally at P9. Ileum, heart, liver and kidney tissue were subsequently harvested for HE, immunohistochemical (IHC) staining and real-time RT-PCR studies. Statistical analysis was done using ANOVA and Mann-Whitney U test. **Main Result:** Intestinal damage (NEC score) was significantly higher in Group C (2.05±0.46) and D (2.10±0.32) compared to A (0.19±0.37) and B (0.63 ±0.58) ($P<0.01$). IHC staining showed that pimonidazole accumulated in the intestinal mucosa in group C and D but not A and B. Expression of intestinal hypoxia-related genes were higher in group C and D compared to group A ($P<0.05$): hypoxia-inducible factor 1a group C (1.58±0.37), group D (2.03±0.76), group A (1±0.22); glucose transporter 1 group C (2.29±1.24), group D (2.79±1.19), group A (1±0.23); prolyl-4-Hydroxylase 3 group C (1.88±0.38), group D (2.51 ±1.07), group A (1±0.14). The inflammation marker, IL6 was raised in group C (14.11±11.60), group D (15.32±9.28) and group

B (1.76 ±0.49) compared to group A (1±0.15; P<0.05). There is no difference in hypoxia-related genes expression in liver, kidney and heart among 4 groups. **Conclusion:** Hyperosmolar formula feeding induces intestinal hypoxia and inflammation in NEC. Future investigations are needed to avoid the deleterious effects of formula feeding in premature infants and prevent the development of NEC.

118 - OA
Title: EP2 Receptor Blockade Decreases the Incidence and Severity of Experimental Necrotizing Enterocolitis
Authors: Jamie Golden, MD(1), Laura Illingworth, BS(2), Patil Kavarian, BS(3), Jordan Bowling, MD(4), Nicole Jones, BS(5), Brandon Bell, BS(6), Mubina Isani, MD(7), Oswaldo Escobar, BS(8), Christopher Gayer, MD, PhD(9), Anatoly Grishin, PhD(10), Henri Ford, MD(11)
Institutions: Children's Hospital Los Angeles(1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11)
Category: Research
Keywords: Necrotizing Enterocolitis,EP2 receptor,Cyclooxygenase 2
Aim of the Study: High levels of cyclooxygenase-2 (COX-2) and prostaglandin E2 (PGE2) have been implicated in the pathogenesis of necrotizing enterocolitis (NEC). PGE2 acts through 4 receptors (EP1-4). Previous work in our lab has shown that COX-2 is induced by PGE2 via activation of pro-inflammatory prostanoid receptor, EP2. This positive feedback induction likely contributes to the high levels of COX-2 seen in NEC. Therefore, we hypothesized that selective EP2 inhibition, but not COX-2 or EP1 inhibition, would decrease the incidence and severity of experimental NEC.
Methods: Neonatal rat pups were subjected to a regimen of formula feeding and hypoxia three times daily for 4 days. Formula contained a known NEC pathogen, Cronobacter muytjensii (CM), at 10^7 CFU with or without a COX-2 inhibitor (Celecoxib 0.1mg/kg/day), EP2 antagonist (PF-04418948 10mg/kg/day), or EP1 antagonist (ONO-8711 10mg/kg/day). Terminal ileum was harvested on day of life 4 for NEC scoring, real time PCR analysis, and histological staining. A score of 2 or greater was considered NEC. **Main Result:** Treatment with a COX-2 inhibitor or EP1 inhibitor increased mean NEC score from 1.2 to 1.4 and from 1 to 1.2 and increased the incidence of NEC by 17% and 16% respectively. However, treatment with an EP2 antagonist decreased mean NEC score from 1.5 to 1 ($p<0.05$) and decreased the incidence of NEC by 34% ($p<0.05$). EP2 inhibition decreased COX-2 protein expression on histologic staining and decreased COX-2 mRNA expression to 0.37 fold control levels ($p<0.05$). **Conclusion:** EP2 receptor inhibition, but not COX-2 or EP1 inhibition, decreases the incidence and severity of experimental NEC and decreases COX-2 levels in the intestine. This suggests that blocking EP2 specific effects of COX-2 may inhibit the inflammatory cascade seen in NEC while maintaining the homeostatic properties of COX-2. An EP2 receptor antagonist may have important therapeutic implications in the treatment of NEC.

119 - OA
Title: CELL ENGINEERING WITH GLYCOGEN SYNTHASE KINASE-3 BETA INHIBITOR-LOADED SYNTHETIC NANOPARTICLES ENHANCES HEMATOPOIETIC ENGRAFTMENT OF BONE MARROW HEMATOPOIETIC STEM CELLS FOLLOWING IN UTERO TRANSPLANTATION
Authors: Camila G Fachin, MSC(1), Stavros Loukogeorgakis, PhD(2), Andre IBS Dias, PhD(3), Haiying Li, BS(4), Li Tang, PhD(5), Aimee G Kim, MD(6), Jesse D Vrecenak, MD(7), Ilana Nissim, BS(8), Itzhak Nissim, PhD(9), Paolo De Coppi, PhD(10), William Peranteau, MD(11), Darrell J Irvine, PhD(12), Alan W Flake, MD(13)
Institutions: Center for Fetal Research at the Children's Hospital of Philadelphia(1, 2, 3, 4, 6, 7, 11, 13), The David H. Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology, Boston, MA, USA(5), Division of Child Development and Metabolic Disease, The Children's Hospital of Philadelphia, Philadelphia, PA, USA(8, 9), Stem Cells and Regenerative Medicine, Institute of Child Health, University College London, London, United Kingdom(10), Department of Material Science and Engineering, Department of Biological Engineering, Massachusetts Institute of Technology, Boston, MA, USA(12)
Category: Research
Keywords: In utero transplantation,Synthetic nanoparticles,GSK3 beta inhibitor
Aim of the Study: In utero hematopoietic cell transplantation (IUHCT) clinical application has been limited by low engraftment levels, mainly due to the proliferative advantage of fetal stem cells. Glycogen synthase kinase-3 beta (GSK3β) inhibition has been shown to enhance repopulating capacity of hematopoietic stem cells (HSC). We have developed a strategy that allows targeted, sustained delivery of a GSK3β inhibitor to donor cells by conjugating nanocarriers to the cell surface with the aim to enhance long-term hematopoietic engraftment following IUHCT.
Methods: Donor bone marrow mononuclear cells (MNC) were isolated from 6-week old C57BL/6TgN(act-EGFP)OsbY01(GFP+) mice and conjugated with synthetized GSK3β inhibitor (CHIR99021) loaded multilamelar lipid vehicles (MLV). IUHCT was performed in Balb/c mice at E14 and 107 MNC were injected intravenously into each fetus. Compared groups: animals receiving untreated MNC (control), MNC conjugated with inhibitor-loaded MLV (MLV-CHIR99021), and MNC co-injected with a bolus dose of inhibitor equivalent to that loaded in MLV (bolus-CHIR99021). **Main Result:** MLV had a diameter of 489±8nm. Inhibitor release was gradual, with 92.7±0.2% of the encapsulated mass released within 7 days. Sustained in vivo release of the inhibitor in MLV-CHIR99021 animals resulted in increased donor cell engraftment at 4 weeks of age (52.9±2.8%) that was 3 times greater to that observed in control animals (15.4±1.4%; $p<0.0001$). Bolus CHIR99021 administration had no effect on engraftment (10.5±2.0%; $p=0.6$ vs. control). Engraftment

levels were lower at 24 weeks in control and bolus-CHIR99021 groups (control: 3.4±0.7%, bolus-CHIR99021: 2.9±0.9%; p<0.001 vs. 4 weeks), but maintained in CHIR99021-MLV offspring (48.5±3.1%; p<0.0001 vs. control and bolus-CHIR99021). **Conclusion:** Cell engineering with GSK3β inhibitor-loaded nanoparticles enhances hematopoietic engraftment of BM-MNC following IUHCT. Prolonged retention of the nanocarriers on donor cell surfaces enables sustained CHIR99021 release, allowing pseudo-autocrine bioactivity. Conjugation of drug-loaded particles directly to donor cells allows targeted augmentation of HSC function, and could markedly increase the therapeutic potential of IUHCT.

121 - OA

Title: Comprehensive analysis of SEMA3 rare and common variants in patients with Hirschsprung disease

Authors: . Gunadi, MD(1), Nova Budi, B.Med(2), Alvin Kalim, B.Med(3), Mukhamad Sunardi, MD(4), Kristy Iskandar, MD(5), Akhmad Makhmudi, MD(6)

Institutions: Pediatric Surgery Division, Department of Surgery, Faculty of Medicine, Universitas Gadjah Mada/Dr. Sardjito Hospital(1, 6), Molecular Biology Laboratory, Faculty of Medicine, Universitas Gadjah Mada, Yogyakarta, Indonesia(2, 3, 4), Department of Child Health, Faculty of Medicine, Universitas Gadjah Mada/UGM Hospital(5)

Category: Research

Keywords: Hirschsprung,Semaphorin 3,Indonesia

Aim of the Study: Hirschsprung disease (HSCR) is a neurocristopathy characterized by absence of intramural ganglion cells along variable lengths of intestines in neonates. The Semaphorin 3 (SEMA3) genes are implicated in development of enteric nervous system (ENS), and seem to contribute by both common and rare variants. Here, we investigated three common variants, rs1583147, rs12707682, and rs11766001, within locus on 7q21.11 containing the SEMA3A, SEMA3C, and SEMA3D genes, and rare variants in SEMA3D gene to determine their potential contributions to susceptibility of Indonesian HSCR patients. **Methods:** Sixty isolated HSCR patients and 118 ethnicity-matched controls were ascertained for the SEMA3 common variants study. The three genetic markers were examined using TaqMan Genotyping Assays in genomic DNA for association studies. To identify rare variant of SEMA3D gene in forty HSCR patients, Sanger sequencing method was performed. **Main Result:** There was a frequency difference in risk allele of SEMA3 rs12707682 (allele C) and rs1583147 (allele T) between HSCR cases and controls (53% vs. 42% and 23% vs. 13%, respectively). However, these differences did not reach a significant level with p-value of 0.06 and 0.023, respectively. These case-control analyses were consistent with transmission disequilibrium test (TDT) results with p-values of 0.041 and 0.11 for rs12707682 and rs1583147, respectively. Moreover, the frequency of SEMA3 rs11766001 risk allele (C) in HSCR cases and controls were 1.7% and 0.8%, respectively. We were unable to find any rare variant in the first five exon of SEMA3D. **Conclusion:** SEMA3 rs12707682 and rs1583147 variants might not have a significant effect for HSCR in Indonesia. A founder effect might be the cause of the rarity of SEMA3 rs11766001 polymorphism in Indonesian population. In addition, the impact of SEMA3D rare variant in Indonesian HSCR could not be concluded since the sequencing analysis was not finished yet due to time constraint.

125 - OA

Title: GENE REGULATION OF BILE ACID HOMEOSTASIS IN INTESTINAL FAILURE AND ASSOCIATED LIVER INJURY

Authors: Annika Mutanen, MD(1), Jouko Lohi, MD(2), Päivi Heikkilä, MD(3), Antti Koivusalo, MD(4), Jalanko Hannu, MD(5), Mikko Pakarinen, MD(6)

Institutions: Section of Pediatric Surgery, Pediatric Liver and Gut Research Group, Children's Hospital, Helsinki University Central Hospital, University of Helsinki, Helsinki, Finland(1, 4, 6), Department of Pathology, HUSLAB, Helsinki University Central Hospital, University of Helsinki, Helsinki, Finland(2, 3), Department of Pediatric Nephrology and Transplantation, Children's Hospital, Helsinki University Central Hospital, University of Helsinki, Helsinki, Finland(5)

Category: Research

Keywords: Intestinal failure,Liver Disease,Bile Acids

Aim of the Study: Severely compromised bowel function in intestinal failure (IF) disrupts bile acid homeostasis and predisposes to liver disease, which is a major complication of IF. Deranged bile acid metabolism associates with liver injury. We studied liver gene regulation of bile acid synthesis and transport in pediatric onset IF. **Methods:** Liver histology and RNA (qt-PCR) expression of genes regulating synthesis (CYP1A7, CYP27A1, CYP8B1), basolateral uptake (SLC10A1, SLCO1B1, SLCOB3) and export (ABCC3, ABCC4, SLC51A, SLC51B) and canalicular export (ABCB11, ABCC2) and their nuclear receptors FXR and LXR were analyzed from liver biopsies in 49 IF patients at median age of 3.5 (IQR 1.1-11) years and five age-matched control donor livers. Gene expression was quantified using ddCt method. **Main Result:** In IF patients, the genes regulating bile acid synthesis (CYP1A7, CYP27A1) and basolateral uptake (SLC10A1, SLCO1B1, SLCOB) were significantly overexpressed, whereas those regulating basolateral (ABCC3, SLC51B) export were downregulated, when compared to controls. The increase was greatest for CYP1A7 (66-fold; P=0.001). Current delivery of parenteral nutrition (PN) decreased expression of genes regulating synthesis (CYP1A7, CYP27A1, CYP8B1), basolateral uptake (SLC10A1, SLCO1B1) and basolateral (ABCB3) and canalicular (ABCB11) export of bile acids. Presence of histologic portal inflammation and/or cholestasis significantly decreased expression of genes encoding for nuclear receptors FXR and LXR and genes regulating synthesis (CYP1A7, CYP27A1, CYP8B1),

basolateral uptake (SLC10A1, SLCO1B1) and canalicular (ABCB11, ABCC2) export of bile acids, but increased expression of SLC51B regulating basolateral export of bile acids. **Conclusion:** Our findings suggest that CYP7A1 mediated bile acid synthesis and basolateral uptake is upregulated, whereas basolateral export is downregulated in IF patients. Current delivery of PN and presence of histologic portal inflammation and cholestasis may decrease synthesis, basolateral uptake and canalicular export of bile acids, which may have implications in IF associated liver disease.

OA4. ORAL ABSTRACTS

Sunday, October 9 | 13:40 – 15:10 | Virginia A/B

MODERATORS: DANIEL VON ALLMEN, SEUNG HOON CHOI

081 - OA
Title: Pancreatoblastoma: A single-center analysis of survival and systematic review of the literature
Authors: Enrico Danzer, MD(1), William J Hammond, MD(2), Daniel Rhee, MD(3), Benjamin A Farber, MD(4), Anita P Price, MD(5), Alexander J Chou, MD(6), Todd E Heaton, MD(7), David S Klimstra, MD(8), Michael P La Quaglia, MD(9)
Institutions: Memorial Sloan Kettering Cancer Center(1,2 3, 4, 5, 6, 7, 8, 9)
Category: Oncology
Keywords: pancreatic tumor,survival,Whipple procedure
Aim of the Study: Pancreatoblastoma (PB) is an exceptionally rare pediatric malignancy, with few published analyses of outcome data. In this study, we report our institutional experience with PB and systematically review the literature to analyze survival and define the associated prognostic indicators. **Methods:** With IRB approval, we retrospectively reviewed records of all pediatric and adolescent patients with PB that were treated at our institution between 1967-2016. In addition, Embase and PubMed were searched using the terms “pancreatoblastoma,” “pancreoblastoma,” and “pancreaticoblastoma.” Bibliographies of the articles obtained from the search were examined to identify additional reports. Reports on patients younger than 22 years were included. Abstracts, reviews, and non-English manuscripts were excluded. Kaplan-Meier distributions were analyzed using the log-rank test, with significance defined as $P<0.05$. **Main Result:** Twelve patients (median age at diagnosis: 4.3 years) with PB were treated at our institution, four (33%) of whom presented with metastatic disease. Ten patients (83%) underwent surgical resection (Whipple procedure, n=5; distal pancreatectomy, n=1; distal pancreatectomy and splenectomy, n=3; resection of anterior surface of pancreas, n=1). Six (60%) subsequently developed metastatic disease or local recurrence despite aggressive multimodal adjuvant therapy. The 5-year survival rate for our cohort was 46%. Our literature search identified 325 citations, of which 150 met inclusion criteria (n=288). The overall published 5-year survival was 59%. R1 resection ($P=0.0003$), distant metastasis at initial presentation ($P=0.0001$), and positive lymph node status ($P<0.0001$) were associated with significantly lower survival. R1 resection ($P=0.007$) and positive lymph node status ($P=0.0002$) remained independent predictors of lower survival in multivariate analysis. Location (head, body, tail of pancreas) and gender were not associated with adverse outcome. **Conclusion:** Our analysis of patients with pancreaticoblastoma indicates that R0 resection and positive lymph node status are independent predictors of survival. Because of its rarity, statistically robust clinical trials will require international collaboration.

084 - OA
Title: Preoperative imaging studies are inaccurate at detecting gonadal neoplasms in females with XY or XY/XO gonadal dysgenesis
Authors: Venkata R Jayanthi, MD(1), Molly Fuchs, MD(2), Justin Indyk, MD(3), Nahata Leena, MD(4), Geri Hewitt, MD(5)
Institutions: Nationwide Children's Hospital(1, 2, 3, 4, 5)
Category: Oncology
Keywords: gonadal tumors,ultrasound,gonadal dysgenesis
Aim of the Study: Females with retained gonads and XY cell lines are at risk of neoplastic degeneration. Little is known as to the incidence of these tumors and the ability of imaging studies to detect these neoplasms prior to exploration. **Methods:** We retrospectively reviewed all patients who underwent gonadectomy by our division with either XY or XY/XO gonadal dysgenesis since 2003. **Main Result:** The series consists of 11 patients, mean age 12.7 years (2.5 - 18.5) with varied presentations. These included amenorrhea (5), clitoromegaly (2) and screening karyotyping (4). Five of the patients had XY and 6 had XY/XO gonadal dysgenesis. Ten of them underwent preoperative imaging studies. Ultrasonography (US) did not visualize the gonads in 7. In 2 the gonads were felt to be normal. One had areas suspicious for teratoma but a subsequent MRI was normal. Another patient had a normal US but was detected as having a neoplasm on a follow up MRI. All patients underwent outpatient laparoscopic gonadectomy. The patient who did not have any imaging was a 17.5 year old with 46XY gonadal dysgenesis, and was found to have unilateral dysgerminoma with focal gonadoblastoma. Of the remaining 10 patients, 4 were diagnosed as having tumors: 3 had dysgerminoma and one had pure gonadoblastoma. Overall 5/11 (45%) had a tumor diagnosed on final pathology. The

mean age of the girls who developed tumors was 15.8 years although one prepubertal patient had dysgerminoma at 10.5 years of age. **Conclusion:** Imaging studies are very inaccurate at detecting tumors in females with XY or XY/XO gonadal dysgenesis. This suggests that the use of imaging for surveillance may give a false sense of security. Consideration should be made to removal as soon as the diagnosis is made, at last prior to puberty. Proper diagnosis is critical, as 46XY Complete Androgen Insensitivity Syndrome carries a much lower risk.

089 - OA
Title: Use of ultrasound in diagnosis of postoperative small bowel intussusception in pediatric surgical oncology patients: A single center retrospective review.
Authors: Lisa VanHouwelingen, MD(1), Lucia Ortega-Laureano, MD(2), Aaron D Seims, MD(3), Jamie Coleman, MD(4), Beth McCarville, MD(5), Andrew M Davidoff, MD(6), Isreal Fernandez-Pineda, MD(7)
Institutions: St. Jude Children's Research Hospital(1, 2, 3, 4, 5, 6, 7)
Category: Oncology
Keywords: Postoperative,Intussusception,Ultrasound
Aim of the Study: Postoperative intussusception (POI) can be a complication of abdominal surgery and often poses a diagnostic dilemma. The purpose of this study was to evaluate the utility of ultrasonography in the diagnosis of intussusception in our pediatric solid tumor population who have undergone resection of the primary tumor. **Methods:** A retrospective review of all pediatric surgical oncology patients undergoing laparotomy for excision of an abdominal tumor at our institution from 1995-2015 was performed. Those with documented POI were reviewed. In addition, the radiology database was searched for all ultrasounds requested to rule out POI during our study interval. Variables analyzed included demographics, primary diagnosis, surgical procedure, presentation, diagnostic investigations, and definitive treatment. **Main Result:** 852 laparotomies for abdominal tumor resection were performed during the study period resulting in 10 POI (1.2% of cases), of which half were following neuroblastoma resection and the other half following nephrectomy for Wilms tumor. POI was suspected if the patient had increasing nasogastric output, abdominal distension, or feeding intolerance. Ultrasound was used to diagnose intussusception in 9/10 cases, on post-operative day 6 (SD 5.64), on average, with a sensitivity of (8/9 – one false-negative) 89% and a specificity of (96/96 – no false positives) 100%. Characteristic features of POI on U/S include evidence of small bowel obstruction, solid mass with hypoechoic rim and hyperechoic center, pseudo-kidney and doughnut sign. **Conclusion:** The use of ultrasound was highly accurate in diagnosing POI in the setting of patients who underwent resection of retroperitoneal tumors.

091 - OA
Title: Liver transplantation for pediatric and adolescent hepatic cancers with extrahepatic lesions; a single center experience
Authors: Tatsuo Kuroda, MD(1), Ken Hoshino, MD(2), Yasushi Fuchimoto, MD(3), Naoki Shimojima, MD(4), Yohei Yamada, MD(5), Nobuhiro Takahashi, MD(6), Teizaburo Mori, MD(7), Takahiro Shimizu, MD(8), Hideo Ishihama, MD(9), Kiyotomo Abe, MD(10), Masahiro Shinoda, MD(11), Yuko Kitagawa, MD(12)
Institutions: Keio University, School of Medicine(1, 2, 3, 4, 5, 6, 7, 8, 9, 10), Keio University, School of Medicine, General Surgery(11, 12)
Category: Oncology
Keywords: hepatic cancer,liver transplantation,clinical outcome
Aim of the Study: To assess the efficacy and the risk factors of tumor relapse in liver transplantation for pediatric and adolescent hepatic cancers with extra hepatic lesions. **Methods:** Clinical records of 9 patients with hepatic cancers who underwent living related liver transplantation at our center between 2007 and 2016 (median age 44 months, follow up period ranged from 1 month through 4.8 years) were retrospectively reviewed and analyzed. **Main Result:** The pathological diagnosis includes hepatoblastoma (fetal type (n=5), poorly differentiated type (n=2), mixed type (n=1)) and transitional liver cell tumor (n=1). Three patients had lung metastasis that disappeared after chemotherapy, and 4 patients had the suprahepatic extension of tumor in IVC. Liver transplantation was performed as the primary radical surgery in 6 patients, while transplantation was performed as the rescue surgery after conventional hepatectomy in 3 patients. All patients are alive except for a patient who had a residual tumor in suprahepatic IVC even after transplantation and died of the tumor relapse 4 years after transplantation. Other 2 patients developed tumor relapse confirmed by radiological images, one of whom had a radical resection of the relapsed tumor in the graft. Overall 77.8% (7/9) of the patients are in the complete remission state at present. Tumor relapse was not associated with lung metastasis and the extension of the tumor in IVC before transplantation, but was highly associated with residual tumor after transplantation. **Conclusion:** Hepatic tumor seen in the adolescent ages may include pathologically transitional type that is insensitive to the chemotherapy. So far as the tumor growth and dissemination are well controlled, both primary and rescue liver transplantation could be an effective option even in the cases with tumor extension in IVC and/or history of lung metastasis.

093 - OA
Title: Retrospective Analysis of Ganglioneuroma: No Progression with Observation Alone
Authors: Daniel Rhee, MD(1), Enrico Danzer, MD(2), William J Hammond, MD(3), Benjamin A Farber, MD(4), Todd E Heaton, MD(5), Anita P Price, MD(6), Brian Kushner, MD(7), Michael P La Quaglia, MD(8)
Institutions: Memorial Sloan Kettering Cancer Center(1,2, 3, 4, 5, 6, 7, 8)
Category: Oncology
Keywords: Ganglioneuroma,prognostic factors,observation
Aim of the Study: Ganglioneuroma, a benign tumor representing the most mature form of peripheral neuroblastic tumor, is often assumed to be histologically heterogeneous and is therefore managed with surgical resection. Due to possible operative morbidity, we elect to observe selected patients. We retrospectively analyzed our experience with histologically verified ganglioneuroma, with particular focus on patients managed with observation alone. **Methods:** With IRB approval, we searched our database for all patients diagnosed with a pathologically confirmed pure ganglioneuroma from 1985-2015. Fifty-one patients were identified; four were excluded for lack of follow-up. Patient and tumor characteristics, treatment, change in tumor size, and outcomes were recorded. Patients managed with observation only underwent periodic MRI, CT, or ultrasound surveillance to evaluate for disease progression. Changes in tumor size were compared using Wilcoxon signed-rank test (2-tailed, $p<0.05$). **Main Result:** Our cohort included 47 patients with a median age of 12 years. Twenty-five underwent primary resection while 22 were managed with observation alone. Tumors were located in the abdomen (n=29; 61.7%), mediastinum (n=11; 23.4%), and pelvis (n=7; 15%). Pain (n=21; 45%) and palpable mass (n=14; 30%) were the most common presentations. Median tumor size at diagnosis was 7.8 cm in the primary resection group and 9.0 cm among observation-only patients (p=0.27). In the observation-only group, the median tumor size did not change significantly between diagnosis and last follow-up (9.0 vs 9.4 cm, p=0.09; median follow-up: 3 years). Three of 22 patients initially managed with observation eventually underwent resection to facilitate scoliosis repair (n=1), for pain which persisted after surgery (n=1), and to resolve diagnostic uncertainty (n=1). No resections were performed for tumor progression or development of new tumor-related symptoms. **Conclusion:** In patients with ganglioneuroma, no significant progression in size or symptoms occurred over 3 years. These data suggest that resection of histologically verified ganglioneuroma is unnecessary in most patients.

097 - OA
Title: Trend Analysis of Abdominal NIRS Predicts the Onset of Necrotizing Enterocolitis in Piglets
Authors: Stephanie M Cruz, MD(1), Adesola C Akinkuotu, MD(2), Barbara Stoll, PhD(3), Ling Yu, BS(4), Doug G Burrin, PhD(5), Oluyinka O Oolutoye, MD PhD(6)
Institutions: Baylor College of Medicine/ Texas Children's Hospital(1, 2, 3, 4, 5, 6)
Category: Research
Keywords: Necrotizing Enterocolitis,NEC,NIRS
Aim of the Study: The purpose of this study was to develop a computational algorithm that would detect variability trends of abdominal tissue saturation (aStO2) in premature piglets. **Methods:** Thirty-three piglets were delivered 12 days preterm (term: 115 days) by cesarean section. They received parenteral nutrition for 48-hours followed by enteral feeds given every three hours until death or euthanasia at 96-hours. NIRS device (FORE-SIGHT, CASMED) was utilized to measure aStO2 continuously. NEC was determined using a clinical assessment score and confirmed histologically. The piglets were divided into two groups and analyzed based on the presence of necrotizing enterocolitis (NEC) on final pathology. An algorithm in MATLAB© was designed to detect and retrospectively analyze time periods at which poor intestinal oxygenation occurred and calculate aStO2 variability. **Main Result:** Nineteen of the 33 piglets (58%) had confirmatory diagnosis of NEC. Using ROC curve, the variability threshold for events of interest was 12.5% with 99.1% sensitivity and 99% specificity. From 34 hours of life, the recovery time (RT) to baseline aStO2 was longer for the piglets who developed NEC, suggesting initial loss of autoregulation. This prolonged RT was statistically significant after the first feed (hour 48), and the mean time of detection was hour 65 of life (p=0.016). The increase in variability and a prolong recovery time were noted 12 hours prior to the clinical evidence of NEC, with an area under the curve of 0.92, 100% sensitivity and 86% specificity. **Conclusion:** We have designed a computational algorithm that can be used prospectively to predict the risk of developing NEC and aid in the management of this disease. Such an algorithm can have a profound impact in predicting neonates who will develop NEC.

099 - OA
Title: Quantifying the pediatric surgical need in low-income countries
Authors: Emily R Smith, PhD(1), Neereja Nagarajan, MD(2), Tu Tran, MSC(4), Barclay Stewart, MD(5), Elissa Butler, MD(6), Michael M Haglund, MD(7), Adam Kushner, MD(8)
Institutions: Duke University(1), Johns Hopkins Surgery Center for Outcomes Research(2), (4), (5), (6), (7), Johns Hopkins University(8)
Category: Research
Keywords: Global surgery,Pediatric surgical burden,Low and middle income countries

Aim of the Study: According to recent estimates, at least 11% of the total global burden of disease is attributable to surgically-treatable diseases. In children, the burden is even more striking with up to 85% of children in low-income countries (LIC) have a surgically-treatable condition by age 15. Using population data from four countries, we estimated pediatric surgical needs amongst children residing in LICs. **Methods:** A cluster randomized cross-sectional countrywide household (Surgeons OverSeas Assessment of Surgical Need) was done in four countries (Rwanda, Sierra Leone, Nepal and Uganda) and included demographics, a verbal head to toe examination, and questions on access to care. Global estimates regarding surgical need among children were derived from combined data, accounting for country-level clustering. **Main Result:** A total of 13,806 participants were surveyed and 6,361 (46.1%) were children (0-18 years of age) with median age of 8 (4-13) years. Overall, 19% of children had a surgical need and 62% of these needs were unmet. The highest percentage of unmet surgical conditions included head, face, and neck conditions, followed by conditions in the extremities. Over a third of the untreated conditions were masses except were attributed to masses. The overwhelming majority of treated conditions in all countries were for wounds or burns. Of 738 pediatric deaths, 30.9% were associated with a surgically-treatable proximate cause of death. **Conclusion:** The number of children living with a surgical need in LICs is estimated at 3.7 million (95% CI: 3.4, 4.0 million), based on our study. Surgery has been elevated as an “indivisible, indispensable part of health care” in LMICs and the newly formed 2015 Sustainable Development Goals are noted as unachievable without the provision of surgical care. Given the large burden of pediatric surgical conditions in LICs, scale-up of services for children are an essential component to improve pediatric health in LICs.

109 - OA

Title: DECREASED ENDOGLIN EXPRESSION IN THE PULMONARY VASCULATURE OF NITROFEN-INDUCED CONGENTIAL DIAPHRAGMATIC HERNIA RAT MODEL

Authors: Julia Zimmer, MD(1), Toshiaki Takahashi, MD(2), Alejandro D Hofmann, MD(3), Prem Puri, MS, FRCS, FRCS (ED), FACS, FAAP (Hon.). DSc (Hon)(4)

Institutions: National Children’s Research Centre, Our Lady’s Children’s Hospital, Crumlin, Dublin, Ireland(1, 2), Department of Paediatric Surgery, Hannover Medical School, Germany and National Children’s Research Centre, Our Lady’s Children’s Hospital, Crumlin, Dublin, Ireland(3), National Children’s Research Centre, Our Lady’s Children’s Hospital, School of Medicine and Medical Science and Conway Institute of Biomedical Research, University College Dublin, Ireland(4)

Category: Research

Keywords: congenital diaphragmatic hernia,pulmonary hypertension,endoglin

Aim of the Study: Pulmonary hypertension (PH) remains a therapeutical challenge in neonates born with congenital diaphragmatic hernia (CDH). Endoglin (Eng), a receptor component of the transforming growth factor ß (TGFß) signalling pathway, is expressed by vascular endothelial and vascular smooth muscle cells and has been found to be involved in angiogenesis and vascular remodelling. Genetic studies have linked TGFß and Eng mutations to human arterial PH and other cardiovascular syndromes. Eng signals via its interaction with the TGFß receptors 1 and 2 (Tgfßr1, Tgfßr2). We designed this study to investigate the hypothesis that Eng is altered in the pulmonary vasculature of rats in the nitrofen-induced CDH. **Methods:** After ethical approval (Rec 913b), time-pregnant Sprague Dawley rats received nitrofen or vehicle on gestational day (D9). The fetuses (n=22) were sacrificed and divided into CDH and control group on D21. Gene and protein expression of Eng, Tgfßr1 and Tgfßr2 were assessed via qRT-PCR and western blotting. Their localization in the pulmonary vasculature was detected by laser scanning confocal-microscopy. **Main Result:** Relative mRNA levels of Eng, Tgfßr1 and Tgfßr2 were significantly downregulated in CDH lungs compared to controls (Eng CDH 0.34+/-0.022, Eng Ctrl 0.471+/-0.031, p=0.0015; Tgfßr1 CDH 0.161+/-0.008, Tgfßr1 Ctrl 0.194+/-0.01, p=0.0114; Tgfßr2 CDH 0.896+/-0.099, Tgfßr2 Ctrl 1.379+/-0.081, p=0.0006) Western blotting confirmed the reduced pulmonary protein expression of these three proteins in the CDH lungs. A markedly diminished expression of Eng, Tgfßr1 and Tgfßr2 in lungs of nitrofen-exposed fetuses compared to controls was seen in confocal-microscopy. **Conclusion:** This study demonstrates for the first time a markedly reduced expression of Endoglin in the pulmonary vasculature of nitrofen-induced CDH. Dysregulated Eng/Tgfßr1/Tgfßr2 signalling may result in abnormal proliferation of pulmonary artery smooth muscle cell mass, leading to the development of PH in model.

110 - OA

Title: The potential benefit of early remote ischemic conditioning in necrotizing enterocolitis

Authors: Yuhki Koike, MD(1), Bo Li, PhD(2), Carol Lee, ScD(3), Shigang Cheng, MD(4), Qi Li, MD(5), Hiromu Miyake, MD(6), Yong Chen, MD(7), Alison Hock, Bachelor of science(8), Augusto Zani, MD(9), Agostino Pierro, MD(10)

Institutions: Division of General and Thoracic Surgery, The Hospital for Sick Children, University of Toronto(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)

Category: Research

Keywords: Necrotizing enterocolitis,remote ischemic conditioning,neonate

Aim of the Study: Remote ischemic pre-conditioning (RIC) protects the heart from ischemic events. We hypothesized that early RIC can prevent the development of necrotizing enterocolitis (NEC). **Methods:** Following ethical approval (n.32238), 3 groups of C57BL/6 mice were studied. NEC was induced using gavage feeding of hyperosmolar formula,

hypoxia and 4mg/kg lipopolysaccharide from postnatal day 5 to day 9 (P5-P9). RIC consisted of 4 cycles (5 minutes each) of hind limb 5 minutes ischemia with an intervening 5 minutes of reperfusion. The 3 experimental groups were: (i) breastfeeding (BF, n=4); (ii) NEC (n=10); (iii) NEC + early RIC (n=10): RIC was performed before and after induction of NEC on P5 and P7. Pups were euthanized on P9 and distal ileum was harvested and analyzed for severity of bowel damage (hematoxylin and eosin), inflammation (quantitative PCR for IL-6 and TNF-a, and myeloperoxidase, MPO), and oxidative stress (inducible nitric oxide synthase, iNOS). Data were compared using one-way ANOVA with Bonferroni post-test. **Main Result:** Intestinal injury was more severe in NEC mice compared to BF mice (NEC vs. BF: 2.0±0.66 vs. 0.25±0.5) whereas RIC prevented mucosal injury (0.5±0.53). Inflammatory cytokines IL-6 and TNF-a and MPO were higher in NEC mice compared to control BF mice (NEC vs. BF: 5.36±5.08 vs.0.39±0.16, 2.98±2.55 vs.0.25±0.21, 82.1±31.4 vs.57.3±9.12, respectively). RIC was associated with control level of these inflammation markers (IL-6: 0.56±0.49, TNF-a: 0.46±0.6, MPO: 56.3±11.1). iNOS activity was higher in NEC mice compared to BF mice (NEC vs. BF: 4.32±0.97 vs. 2.87±0.45) and RIC; there was no difference between BF and RIC (BF vs. RIC: 2.87±0.45 vs. 2.84±0.47). **Conclusion:** Early RIC improved intestinal injury, inflammation, and oxidative stress during experimental NEC. This study proves the principle that early RIC can be a novel therapeutic option to prevent the development of NEC in neonates at risk.

112 - OA
Title: Variety of inpatient pediatric surgical problems and management- 10 years survey in Dhaka Shishu (Children) Hospital.
Authors: Md Shahjahan, MS(1), Saiful Islam, MS(2), Md Abdul Aziz, MS(3)
Institutions: Dhaka Shishu (Children) Hospital.(1, 2, 3)
Category: Research
Keywords: Surgical problems,Management,Dhaka Shishu (Children) Hospital
Aim of the Study: To find out and assessment of pediatric surgical problems & management in Bangladesh to achieve better health of the nation. **Methods:** This retrospective study was carried out in the department of pediatric surgery, Dhaka Shishu (Children) Hospital. A total number of 24398 patients, aged 0-12 years were admitted during the period of January 2006 to December 2015. **Main Result:** Total study patients were 24398. Male patients were 59%, female 41%. Among them 29% were of age below 1 year, 43% from 1 year to 5 years, 28% were above 5 years. Gastrointestinal disorders was the commonest problem observed- constituting 44.93% of cases, urogenital 16.20%, facial & orthopedics disorders 9.62%, malignant diseases 2.60% and miscellaneous 26.65%. Among the patients, 70% were treated operatively and 30% were treated conservatively. **Conclusion:** This is the number of pediatric surgical patients only in free standing Dhaka Shishu (Children) Hospital. Other children's unit within adult hospital, general hospital also admit & manage pediatrics surgical problems in Bangladesh. From this study report we can asses pediatric surgical patient volume in Bangladesh. Such data may influence the distribution of pediatric surgeons, number of trainees & training curriculum for pediatric surgeons, develops infrastructure for complex surgical procedure.

124 - OA
Title: Lactobacillus Murinus Protects Against Necrotizing Enterocolitis in the Neonatal Rat Model.
Authors: Mubina Isani, MD(1), Jordan Bowling, MD(2), Jamie Golden, MD(3), Melissa Elizee, MD(4), Brandon Bell, BS(5), Laura Illingworth, BA(6), Anatoly Grishin, PhD(7), Henri Ford, MD(8)
Institutions: Children's Hospital of Los Angeles(1, 2, 3, 4, 5, 6, 7, 8)
Category: Research
Keywords: necrotizing enterocolitis,lactobacillus,microbiome
Aim of the Study: Necrotizing enterocolitis (NEC) is a devastating disease that affects premature infants. Lactobacillus biotics have been shown in a number of studies to protect against NEC. However, results of trials remain inconclusive due to the use of different species and doses. An important question of whether the lactobacilli are colonizing the intestine remains unanswered. We propose that an efficient biotic strain is naturally occurring and should not only protect the intestine against NEC, but should be capable of colonizing the GI tract. **Methods:** Animal experiments were approved and neonates were obtained from timed- pregnant rats and subjected to formula feeding and hypoxia for 4 days. Rat pups were sacrificed on day 4. To enumerate and isolate the lactobacilli, large intestine was plated on agar. After incubation at 37oC, colonies were classified according to morphology and Gram stain. Species identity was established by 16S rRNA sequencing. Three species were identified: L.reuteri, L.murinus, and L.acidophilus. Lactobacillus reuteri was re-introduced to newborn rats at 107 and 108 CFU/animal. Dosage for colonization was determined based on titers of L.reuteri in the large intestine. Next, all three species of Lactobacillus were introduced to neonatal rats at the 107 and 108 CFU/animal. Terminal ileum sections were stained with H&E and examined to determine NEC score. **Main Result:** Three species of lactobacilli were isolated from neonatal rat intestine: L.reuteri, L.murinus, and L.acidophilus. Upon re-introduction of L.reuteri at various dosages, we achieved colonization at 107 (p=0.006) and 108 (p=0.0146) CFU/animal. All three species were able to colonize the intestine. However, NEC scores were only lower in groups that received L.murinus (p= 0.0484 at 107 CFU/animal n=25 and p=0.0310 at 108 CFU/animal, n=35). **Conclusion:** L.murinus is a naturally occurring species that is able to colonize the intestine and

protect against NEC.

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Title: Primary versus staged cystoscopic valve fulguration in posterior urethral valves- lessons learnt form 250 patients
Authors: Tanvir Khan, MCh(Pediatric Surgery)(1), Ashish Wakhlu, MCh(Pediatric Surgery)(2), Anshuman Sharma, MCh(Pediatric Surgery)(3)
Institutions: King George's Medical University(1, 2, 3)
Category: Urology
Keywords: Posterior urethral valves,Cystoscopic fulguration,Staged Management
Aim of the Study: The study has been done to determine the comparative analysis between primary and staged valve fulguration in patients of posterior urethral valves (PUV). **Methods:** The study was a retrospective and prospective analysis of the treatment offered to the patients of posterior urethral valves for a period of 10 years. All patients records were evaluated regarding the presentation, imaging findings and the type of surgical intervention offered (primary fulguration, vesicostomy followed by valve fulguration or ureterostomy followed by valve fulguration). Patients were followed-up and evaluated on clinical findings, urinary tract ultrasonography (USG), urine analysis and serum creatinine. Isotopic renography was performed in select patients. **Main Result:** 250 patients were included in the study. Out of these 228 were strictly followed-up. Age of presentation ranged from 1 month to 14 years. Primary fulgration was done in 116 patients(51%) and staged fulguration was done in 112(49%) patients. Vesicoureteric reflux(VUR) was present in 184(73%). Preoperatively raised serum creatinine(>1mg/dl) was found in 60 patients(51%) in primary fulguration group, while it was raised in 95 patients(85%) in staged fulguration. Postoperatively the decline in the raised creatinine to less than 1 mg/dl after 1 year of follow-up was 95 %(90/95) in patients with staged valve fulguration while it was 80%(48/60) In primary fulguration group. However the patients with staged management had more incidence of incomplete bladder evacuation and poor stream than those underwent primary valve fulguration(21% and 7%). **Conclusion:** Primary valve fulguration remains the treatment of choice for patients of PUV, however urinary diversion and staged valve fulguration results in stabilization of patients presenting with poor general condition and urosepsis and gives good postoperative control of raised serum creatinine

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Title: How long should one follow up children following Pyeloplasty for Congenital pelviureteric junction obstruction?
Authors: Shilpa Sharma, M Ch, PhD(1), Devendra Gupta, M Ch, FRCS, D Sc(2)
Institutions: All India Institute of Medical Sciences, New Delhi(1,2)
Category: Urology
Keywords: pelviureteric junction,pyeloplasty,renal scan
Aim of the Study: To evaluate the outcome following pyeloplasty for pelviureteric junction obstruction (PUJO) and to determine the length of follow-up required with postoperative renal scans **Methods:** A retrospective review of patients who had undergone pyeloplasty between 1992 and 2008 was done. The post-operative recovery of renal functions noted at 3, 24, 60 and 120 months using renal scans were analyzed. Renal Clearance was recorded and a difference in split renal function of 5% or more from the previous values was taken as a change and analyzed **Main Result:** 179 children with PUJO underwent pyeloplasty. 76 children were excluded due to incomplete records. Remaining 103 children underwent 115 pyeloplasties, with simultaneous bilateral in 12. Three had solitary functioning kidney. 85 (84%) were symptomatic, 18 were diagnosed antenatally. There was a significant improvement in 106/115 units ($p<0.001$) in the post-operative renal scans at 3 months. 3 renal units did not show any change while six showed deterioration with very poor function before surgery. Two of these underwent redo pyeloplasty, 2 underwent nephrectomy, while one remained static after initial fall, and one improved subsequently. At 2 year post-operative scans, 11 renal units (10.7%) showed improvement over the values at 3 months post-operative scans, though not significantly ($p=0.0526$). When the 5 year scan was compared with those at 2 year, and the 10 year scans were compared with those at 2 year and 5 year, no renal unit showed any significant change in the pattern of clearance and split renal function ($p=1.000$). **Conclusion:** Pyeloplasty is a safe and effective treatment of PUJO in children, with good long term outcome. Follow-up renal scans done beyond 2 years showed no significant change in renal functions, thus there is no need to repeat the renal scan beyond this period.

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Title: OVOTESTICULAR DISORDERS OF SEX DEVELOPMENT: SURGICAL DIAGNOSIS AND MANAGEMENT WITH LONG FOLLOW-UP OF 36 CASES
Authors: Nabil Dessouky, MD(1)
Institutions: Cairo University(1)
Category: Urology
Keywords: disorders of sex development,ovotesticular,management
Aim of the Study: The study reported 36 cases with the aim of evaluating their clinical, hormonal, genetic spectrum with discussion of their management and long follow up . **Methods:** Thirty-six cases with OT-DSD were diagnosed and surgically managed in Cairo University-Pediatric Hospitals over a period of 32 years (1984 – 2016). Their ages ranged

between one month and 27 years with a mean of 3.8 years. After full clinical examination, cytogenetic, hormonal and radiological studies were accomplished, abdominal exploration with gonadal biopsies were performed via open surgery in the early phases of the study (till 1990) then laparoscopic approach became the standard approach afterwards. Surgical reconstruction was performed as a one-stage procedure in most cases including various techniques for genitoplasty, excision of contradictory internal genitalia, or tumors and surgery for gynecomastia. **Main Result:** Genital ambiguity with predominance of the male phenotype was the most frequent complaint (77.7%).Twenty one patients were raised as males at the time of presentation The most frequent karyotype was 46,XX in 77.68.% of patients. The prevalent gonad was ovotestis (OT=40.82%), followed by ovary (OV=31.48. %) then the testis (TT=27.7% and the prevalent gonadal associations were OV+TT (40.74%)[lateral], OT+OV (25.9%), OT+TT (18.56%) {unilateral], and OT+OT (14.8%) [bilateral]. Bilateral OT were always located intra-abdominally. six OT were located in labio-scrotal folds .All OT were preferred to be excised.Six patients developed dysgerminoma and gonadoblastoma was reported at the ages of 3 months and 2.5 , 14, 16 ,17and 20 years . Follow-up ranged between 8 months and 28 years. **Conclusion:** OT-DSD is a phenotypically and genetically a heterogeneous condition. Early diagnosis and sex assignment are essential to avoid psychological and social problems. Laparoscopy has an important role in surgical diagnosis and management of such cases. Scrotal gonads should be carefully studied. OT is preferably to be excised.

OA5. ORAL ABSTRACTS

Monday, October 10 | 14:00 – 15:30 | Maryland A/B

MODERATORS: DAVID SIGALET, YUKO TAZUKE

094 - OA

Title: EXPRESSION OF T-BOX TRANSCRIPTION FACTORS 2, 4 AND 5 IS DECREASED IN THE BRANCHING AIRWAY MESENCHYME OF NITROFEN-INDUCED HYPOPLASTIC LUNGS

Authors: Toshiaki Takahashi, MD(1), Julia Zimmer, MD(2), Florian Friedmacher, MD(3), Prem Puri, MS, FRCS, FRCS (ED), FACS, FC Paed Surg (SA) (Hon)(4)

Institutions: National Children's Research Centre, Our Lady's Children's Hospital, Dublin, Ireland(1, 2, 3, 4)

Category: Research

Keywords: T-box transcription factors,Pulmonary hypoplasia,Congenital diaphragmatic hernia

Aim of the Study: Pulmonary hypoplasia (PH), characterized by smaller lung size and reduced airway branching, remains a major therapeutic challenge in newborns with congenital diaphragmatic hernia (CDH). T-box transcription factors (Tbx) have been identified as key components of the gene network that regulates fetal lung development. Tbx2, Tbx4 and Tbx5 are expressed throughout the mesenchyme of the developing lung, regulating the process of lung branching morphogenesis. Furthermore, lungs of Tbx2-, Tbx4- and Tbx5-deficient mice are hypoplastic and exhibit decreased lung branching, similar to PH in human CDH. We hypothesized that expression of Tbx2, Tbx4 and Tbx5 is decreased in the branching airway mesenchyme of hypoplastic rat lungs in the nitrofen-induced CDH. **Methods:** Following ethical approval (REC668b), time-mated rats received either nitrofen or vehicle on gestational day 9 (D9). Fetuses were sacrificed on D15, D18 and D21, and dissected lungs were divided into control and nitrofen-exposed specimens (n=12 per time-point and group, respectively). Pulmonary gene expression of Tbx2, Tbx4 and Tbx5 was investigated by qRT-PCR. Immunofluorescence-double-staining for Tbx2, Tbx4 and Tbx5 was combined with the mesenchymal marker Fgf10 to assess protein expression and localization in branching airway tissue. **Main Result:** Relative mRNA levels of Tbx2, Tbx4 and Tbx5 were significantly reduced in lungs of nitrofen-exposed fetuses on D15 (0.32±0.26 vs. 1.17±0.68, 0.43±0.27 vs. 0.86±0.56 and 0.21±0.12 vs. 0.44±0.13; each $p<0.05$), D18 (0.65±0.22 vs. 0.99±0.56, 0.59±0.24 vs. 0.99±0.59 and 0.68±0.17 vs. 1.05±0.63; each $p<0.05$) and D21 (0.67±0.23 vs. 1.37±0.72, 0.78±0.28 vs. 1.12±0.50 and 1.02±0.62 vs. 1.71±0.78; each $p<0.05$) compared to controls. Confocal-laser-scanning-microscopy showed markedly diminished immunofluorescence of Tbx2, Tbx4 and Tbx5 in mesenchymal cells surrounding branching airways of nitrofen-exposed fetuses on D15, D18 and D21 compared to controls. **Conclusion:** Decreased expression of Tbx2, Tbx4 and Tbx5 in the pulmonary mesenchyme during lung development may lead to decrease or arrest of branching and result in PH in the nitrofen-induced CDH.

095 - OA

Title: AN ORIGINAL NOVEL SUCCESSFUL APPROACH FOR CUTANEOUS INFANTILE HAEMANGIOMAS (CIH) WITH SILICONE GEL SHEETS - OUR FIRST WORLD ANNOUNCEMENT

Authors: Antun Kljenak, PhD(1), RENATO IVELJ, MD(2), Domagoj Pešorda, MD(4)

Institutions: CHILDREN'S HOSPITAL ZAGREB, ZAGREB UNIVERSITY MEDICAL SHOOL(1, 2, 3, 4)

Category: Research

Keywords: cutaneous infantile haemangiomas (CIH),silicone gel sheets ,original novel approach

Aim of the Study: The choice of the best treatment modalities for cutaneous infantile haemangiomas (CIH) has always been a matter of controversy. Use of propranolol can be associated with the wide side effects: bradycardia ,

hypotension, bronchspasm , peripheral vasoconstriction, weakness and fatigue, sleep disturbance, hypoglycaemia, gastrointestinal disturbances etc. Laser or other surgical approaches are limited due to needs of one or multiple general anaesthesia in a fragile period of child developement. Does a use of silicone gel sheets change our old conservative“ wait and see“ paradigm and lead to increasing success compared with other techniques in the treatment of CIH? **Methods:** Our original novel approach with local application of the silicone gel sheets were topically applied. A retrospective chart review was performed. Treatment benefit was measured by subjective assessment of lesion regression by the medical team at clinic review. Improvement was documented objectively by serial photography providing a permanent record for parents and staff of the improvement in size, shape, colour, contour and residual deformity of lesions. Outcome graded into five classifications by the patient's parent and operator independently based on photographic records: clear, marked improvement, partial response, poor response, and no change or worsening were measured after 3, 6, 9 and 12 months of the treatment. **Main Result:** Silicone gel sheets treatments were performed for our 120 patients with CIH (78 female, 42 male). Infant age at start of treatment ranged from 2 weeks to 17 months. There was a 92% clinical clear or marked improvement seen after 12 or less months of the treatment. **Conclusion:** The traditional surgical or conservative therapeutic arsenal for haemangiomas in early childhood can now be considered to include silicone gel sheets as painless, safe and low-cost approach with very effective endpoint.

096 - OA

Title: TGF-ß1 CONCENTRATION IN PLEURAL FLUID DETERMINED BY REPEAT THORACENTESIS IN A RAT MODEL OF INDUCED EMPYEMA

Authors: Samanta Sarmento da Silva, MD(1), Guilherme Peterson, MD(2), Sergio Amantéa, PhD(3), Patricia Miorelli, MRS(4), Jane Kulczynski, PhD(5), Eliane Roesch, PhD(6), José Carlos Fraga, PhD(7)
Institutions: Universidade Federal do Rio Grande do Sul(1), (2), (3), (4), (5), (6), (7)

Category: Research

Keywords: Pleural Empyema,TGF-beta,

Aim of the Study: The concentration of transforming growth factor-beta 1 (TGF-ß1) in pleural empyema has been associated with the development of pleural fluid loculation and thus with poorer prognosis. Objective: To test a rat model of empyema induced by inoculation of bacteria or turpentine using thoracentesis with intrapleural pressure monitoring, and to investigate the feasibility of performing repeat ultrasound (US)-guided thoracentesis to study the behavior of TGF-ß1 levels over time in the same animal. **Methods:** Thirty-nine Wistar rats were divided into three groups: Staphylococcus aureus (Group SA, n=17); Streptococcus pneumoniae (Group SP, n=12); and turpentine (Control, n=10). Pleural fluid was collected through ultrasound-guided thoracentesis 12h, 24h, and 36h after instillation of bacteria or turpentine. TGF-ß1 concentration was analyzed in pleural fluid using an enzyme-linked immunosorbent assay kit (ELISA -KIT ABCAM ab119558). **Main Result:** At 12h, mean TGF-ß1 concentrations were 5.3450 pg/mL (95%CI: 5.3449-5.3451) in Group SA, 5.3449 pg/mL (5.3449-5.3450) in Group SP, and 5.3450 pg/mL (5.3949-5.3451) in Controls. At 24h, mean TGF-ß1 concentrations were 4.6700 pg/mL (95%CI: 4.6699-4.6700) in Group SA, 4.6700 pg/mL (4.6699-4.6701) in Group SP, and 4.6700 pg/mL (4.6700-4.6702) in Controls. At 36h, mean TGF-ß1 concentrations were 4.6699 pg/mL (95%CI: 4.6699-4.6700) in Group SA and in Controls (4.6699-4.6702). No measures were available for Group SP at 36h because all animals died before this time point. No difference was observed among the groups in mean TGF-ß1 concentration ($p=0.12$); however, a significant intragroup reduction in mean TGF-ß1 was observed between 12 and 24h ($p<0.01$). **Conclusion:** TGF-ß1 concentrations were not different in this rat model of empyema and sterile effusion. This suggests that TGF-ß1 is not useful for diagnosis of pleural empyema, at least in experimental settings.

098 - OA

Title: Creation of an Animal Model for Long Gap Pure Esophageal Atresia

Authors: Ian C Glenn, MD(1), Nicholas E Bruns, MD(2), Gabriel Gabarain, MD(3), Domenic R Craner, BA(4), Steve J Schomisch, PhD(5), Todd A Ponsky, MD(6)
Institutions: Akron Children's Hospital(1, 2, 3, 4, 6), Case-Western Reserve University School of Medicine(5)

Category: Research

Keywords: Esophageal atresia,Pediatric surgery,Animal model

Aim of the Study: Long gap pure esophageal atresia (LGPEA) is a congenital disorder in which the esophagus is in discontinuity, and the proximal and distal ends are not able to be anastomosed in a primary fashion. No animal model for pure esophageal atresia exists. Here we describe the creation of a survival animal model for LGPEA which will ultimately serve to test novel devices and techniques to restore continuity. **Methods:** A non-survival study was first conducted in six rabbits in order to refine a protocol for the survival model. An open gastrostomy tube was placed, followed by a partial esophagectomy. Next, a survival study was performed with seven rabbits in which the same procedures were performed. Finally, the procedure was optimized in domestic swine. **Main Result:** Despite developing the techniques and gaining valuable information in the non-survival study, none of the rabbits in the survival portion of the study thrived beyond post-operative day four. Due to this complication with the rabbit model, the LGPEA model was attempted in a porcine model. The pig proved much more robust, surviving to post-operative day ten. Furthermore, the animal was healthy enough to be used for further study. **Conclusion:** A porcine model of long gap pure esophageal

atresia was developed which is effective and feasible to be used for testing new methods of treatment of LGPEA.

100 - OA
Title: ALTERED EXPRESSION OF BK CHANNELS IN HIRSCHSPRUNG'S DISEASE
Authors: Anne Marie M O' Donnell, PhD(1), Prem Puri, MD(2)
Institutions: National Children's Research Centre, Our Lady's Children's Hospital Crumlin, Dublin(1, 2)
Category: Research
Keywords: Enteric nervous system,Hirschsprung's Disease,Smooth muscle
Aim of the Study: Large-conductance Ca2+-activated K+ (BK) channels have been implicated in a variety of physiological processes ranging from regulation of smooth muscle tone to modulation of hormone and neurotransmitter release. BK channel knockout mice showed impaired propulsive motility in the distal, but not proximal colon. We designed this study to investigate the expression of BK channels in the normal human colon and in Hirschsprung's disease (HSCR). **Methods:** HSCR tissue specimens (n=10) were collected at the time of pull-through surgery, while colonic control samples were obtained at the time of colostomy closure in patients with imperforate anus (n=10). Immunolabelling of BK channels was visualized using confocal microscopy to assess the distribution of immunoreactive cells, while Western blot analysis was undertaken to quantify BK channel protein expression. **Main Result:** Confocal microscopy revealed BK channel expression on cells within the myenteric plexus, as well as within the smooth muscle in normal controls and ganglionic HSCR, with a marked reduction in BK channel expression in aganglionic HSCR. Western blotting revealed high levels of BK channel protein expression in normal controls and ganglionic HSCR, while there was a striking decrease in BK channel protein expression in aganglionic HSCR specimens. **Conclusion:** These findings suggest that altered distribution of BK channels may contribute to motility dysfunction in the aganglionic bowel in HSCR.

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Title: Effect of miRNA-21 on liver fibrogenesis in biliary atresia patients
Authors: Akhmad Makhmudi, PhD(1), Alvin Kalim, B.Med(2), Nova Budi, B.Med(3), Mukhamad Sunardi, MD(4), . Gunadi, PhD(5)
Institutions: Pediatric Surgery Division, Department of Surgery, Faculty of Medicine, Universitas Gadjah Mada/Dr. Sardjito Hospital(1, 5), Molecular Biology Lab, Faculty of Medicine, Universitas Gadjah Mada(2, 3, 4)
Category: Research
Keywords: biliary atresia,miRNA-21,liver fibrogenesis
Aim of the Study: Biliary atresia (BA) is characterized by rapid and progressive liver fibrosis. Recently, miRNA-21 has been shown to be up regulated in liver BA patients. We wished to investigate the role of miRNA-21 on liver fibrogenesis in Indonesian BA patients. **Methods:** We obtained eleven liver samples from BA patients and three liver specimens from non-BA controls. The expression of miRNA-21, phosphatase and tensin homolog deleted on chromosome ten (PTEN), and α-smooth muscle actin (α-SMA) in liver tissue were determined using quantitative real-time polymerase chain reaction (RT-PCR). The Livak method was used to analyze the miRNA-21, PTEN and α-SMA expression level. U6 small nuclear RNA (snRNA) served as a control for analysis of miRNA-21 expression, while glyceraldehyde-3-phosphate dehydrogenase (GAPDH) was utilized as a reference gene for analysis of PTEN and α-SMA expression. **Main Result:** RT-PCR showed that the miRNA-21 expression was up-regulated (10 times) in liver BA specimens compared to liver control specimens (-6.5 ± 2.5 vs. -3.2 ± 6.1), but did not reach significant level (p-value = 0.16; 95% CI = -8.1 – 1.5). In contrast, the PTEN expression was significantly decreased (~4 times) in the BA group compared to the control group (-0.2 ± 0.9 vs. -2.0 ± 2.1), with p-value of 0.018 (95% CI = -3.3 – [-0.4]). Furthermore, there was no significantly difference in α-SMA expression between both groups (12.9 ± 3.7 vs. 12.1 ± 2.0; p = 0.69, 95% CI = -5.0 – 3.4). **Conclusion:** Our study shows that the miRNA-21 might have an impact on the liver fibrosis process in Indonesian BA patients.

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Title: Cytomegalovirus infection associated with NEC but not FIP in preterm newborns.
Authors: Anna-Katharina Winkler, MD(1), Katharina Schöpp, MS(2), Uwe Knippschild, PhD(3), Doris Henne-Bruns, MD(4), Alexandre Serra, MD PhD(5)
Institutions: Department of Surgery, University of Ulm(1, 2, 3, 4, 5)
Category: Research
Keywords: Necrotizing enterocolitis,cytomegalovirus infection,focal intestinal perforation
Aim of the Study: Necrotizing enterocolitis (NEC) is a dramatic disease that affects newborn and premature babies with an incidence inversely related to birth weight and age, and characterized by a postnatal inflammation of the intestine leading to death in 15 to 30% of affected children. The etiology of NEC and FIP (focal intestinal perforation) are still largely unknown. A ischemia/reperfusion (I/R) injury mediated by reactive oxygen species (ROS) may be key to the development of NEC, which can be initiated by cytomegalovirus (CMV), an opportunistic infection in immunocompromised patients such as premature newborns. We aimed to investigate through tissue imaging and expression studies CMV infection and the occurrence and/or intensity of NEC in premature newborns. **Methods:** We have studied through semi-quantitative Immunohistochemistry (IHC) and real-time PCR (light-cycler qPCR) intestinal samples from children with NEC (n=24) or FIP (n=9), comparing to control samples (n=16). The primary antibody was a

monoclonal Mouse Anti-CMVpp65 at 1:1500 (Novocastle Laboratories, UK) for IHC. **Main Result:** We have observed a significantly higher incidence of CMV infection in children with NEC (66,29%) but not in children with FIP (10,56%) ($P < 0.05$), suggesting that CMV infection is associated with the former but not with the later. The staining was more intense in children with more several clinical courses, suggesting that the viral load is linked to the severity of NEC. Preliminary qPCR data tend to confirm these findings. **Conclusion:** Our data suggest an association between the development of NEC and CMV infection in preterm newborns. Additionally, the viral load seem to play a role in the severity of the NEC. CMV may be delivered through breast milk and induce a significant immune response, leading ultimately to NEC possibly due to I/R mediated by ROS. This hypothesis is currently under investigation by our group.

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Title: The use of bipolar electrostimulation in the treatment of anorectal malformations
Authors: Igor Kirgizov, PhD(1), Sergei Minaev, PhD(2), Ilya Shishkin, PhD(3), Svetlana Aprosimova, PhD(4), Vadim Dudarev, PhD(5), Filipp Kirgizov, Medical student(6)
Institutions: (1), (2), (3), (4), (5), (6)
Category: Research
Keywords: medical-diagnostic platform,bipolar myostimulator,during surgical treatment and subsequent rehabilitation
Aim of the Study: Our aim was to develop a medical-diagnostic platform, bipolar myostimulator, that allows to carry out surgical treatment and rehabilitation of patients with anorectal malformations. **Methods:** Based on the experience of surgical treatment of 500 children with anorectal malformations, we have developed and using a medical-diagnostic platform – bipolar pacemaker of Dr Kirgizov. **Main Result:** Number of unsatisfactory results of surgical treatment of anorectal malformations is from 10-60%. In the result of research we developed a medical-diagnostic platform - pacemaker of Dr Kirgizov, which is used by the surgeon, and by doctors and parents during patient's stage of rehabilitation. Bipolar pacemaker of Dr Kirgizov is used in operations for anorectal malformations: due to the fact that the device have comfortable working part. The device is safe and works from accumulators, what eliminates the possibility of damaging patient by electrocution. The small size and ease of management determines it's mobility while working in various operating rooms. Based on our experience, device's scale allows to regulate the strength of current from 1-200mA and has a variable pulse rate from 1-50Hz, which allows verification of even small muscle fibres and split sphincters. It is absolutely necessary during operations on anorectal malformations. The device is used by parents at the stage of rehabilitation in the special mode "Rehabilitation". We use the following schemes of electrostimulation. Begin at 3 months after operation for 10 sessions, with courses every 3 months during first 3 years. Current strength selected individualy. The frequency also varies and is chosen individualy for each patient. This research was performed on 500 patients with anorectal malformations, and proved its high clinical efficiency during surgery and subsequent rehabilitation of patients. **Conclusion:** Thus, developed medical-diagnostic platform - bipolar myostimulator of Dr Kirgizov, proven it's safety and efficiency during surgical treatment of children, and subsequent rehabilitation of anorectal malformations in children.

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Title: CONSTIPATION AND FECAL INCONTINENCE IN CHILDREN DO NOT DISAPPEAR BUT EXACERBATE AFTER TRANSITION TO ADULTHOOD
Authors: Marjolijn Timmerman, Bsc.(1), Monika Trzpis, PhD(2), Paul Broens, MD, PhD(3)
Institutions: University of Groningen, University Medical Center Groningen(1, 2, 3)
Category: Research
Keywords: Constipation,Fecal incontinence,Transition period
Aim of the Study: Currently, it is unknown how symptoms associated with constipation and fecal incontinence (FI) change during the transition from child to adult. We aimed to study this possible change in constipation and FI, by comparing prevalence rates, help seeking behavior and symptoms between children and young adults. **Methods:** A cross-sectional study was performed in the Dutch population. 240 children (8-17 years old) and 189 young adults (18-29 years old) filled out the Groningen (Pediatric) DeFeC Questionnaire. **Main Result:** The prevalence of constipation (18% versus 26%) and FI (9% versus 11%) increased not significantly in young adults compared to children. In case of constipation, 23% of children and 51% of young adults did not seek help (P=0.005). In case of FI, 48% of children and 43% of young adults did not seek help (P=0.99). Furthermore, the symptoms 'feeling of incomplete defecations' and 'having to defecate again within one hour after defecation' were significantly more frequent in constipated young adults than children (36% versus 69%, P=0.017 and 9% versus 26%, P=0.016, respectively). In case of FI, the following symptoms occurred significantly more often in young adults: 'loss of large amounts of solid stool without feeling urge' (19% versus 67%, P=0.001), 'strong urge but unable to reach toilet in time' (19% versus 71%, P=0.012), 'accidentally loss of stool shortly after defecation' (10% versus 57%, P=0.003), and 'need to change underpants/trousers due to accidentally lost stool' (19% versus 52%, P=0.019). **Conclusion:** Although the prevalence of neither constipation nor FI significantly increased after transition to adulthood, their symptoms did significantly exacerbate. Thus, since these symptoms do not disappear during the transition period, it is important to diagnose and treat constipation and FI as soon as possible, preferably during childhood. Furthermore, the taboo of defecation disorders should be abolished, since

most people do not seek help.

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Title: Stress of Profession Choice Among Female Pediatric Surgical Consultants and Residents With Perceived Obstacles to Successful Career: Survey From a Developing Country
Authors: Jamshed Akhtar, MBBS, FCPS, FRCS (Glasgow)(1), Tayyaba Batool, MBBS, FCPS, FEBPS(2)
Institutions: National Institute of Child Health, Jinnah Sindh Medical University Karachi(1, 2)
Category: Research
Keywords: Women pediatric surgeons , Career satisfaction,Gender issues
Aim of the Study: With deeply rooted cultural and religious norms, female gender faces many challenges in Pakistani society. Large number of female medical students becoming doctors does not enter into clinical practice. The number of female residents entering into surgical specialties is limited. Of these few choose pediatric surgery as their future profession. This survey was conducted to find out if career choice lead to stress on their personal and professional life and what are the perceived barriers for future progress. **Methods:** A cross sectional study was conducted at Karachi Pakistan. Maslach Burnout Inventory (MBI) was used to determine the risk of burnout. Fifteen obstacles identified in two previous surveys conducted in US and UK among females in pediatric surgery were used for current study. Descriptive statistics were used in presenting data. **Main Result:** Survey was sent to 26 female pediatric surgeons and residents. The response rate was 73.0% (n=19) which was comparable with survey conducted in US (79% - n=75) and UK (82% - n=27). Respondents included fourteen (73.6%) fellows and 5 (26.4%) residents. For section A of MBI (depressive anxiety syndrome) only two (10.5%) had scores indicating high burnout. For section B (Depersonlization – loss of empathy) four (21.0%) had scores under category of high-level burnout. In section C (Personal achievement) six (31.5%) had high-level burnout. In relation to obstacles for future progress, six areas identified by most included excessive clinical workload, inadequate secretarial support, insufficient research time, poor planning and poor allocation of time their time, and excessive on-call duties. **Conclusion:** Female pediatric surgeons were found to be very well adjusted to their specialty of choice and seek further progress in the field.

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Title: Is surgery always necessary in children with acute appendicitis? Even interval appendectomy is not needed in majority of patients-Five years follow up
Authors: Abdul Hanif, MD(1), Kaniz Hasina, MD(2), SM Sabbir Enayet, MD(3)
Institutions: Dhaka Medical College(1, 2, 3)
Category: Research
Keywords: interval appendectomy ,acute appendicitis,complicated appendicitis
Aim of the Study: Aim of study was to reduce surgery, surgery related morbidity, hospital stay, cost and emotional stress of pediatric patients presented with acute appendicitis. **Methods:** This prospective study was conducted in department of Pediatric Surgery in Dhaka Medical College Hospital, Bangladesh, from July 2009 to June 2011. Among total number of 296 patients with age range from 2 years to 15 years; (mean age 5 years ± 3 months), 234 children of either sex diagnosed as cases of acute appendicitis on basis of modified Alvarado scoring system and ultrasonography were included in study (Group A). Other 62 patients of recurrent appendicitis, appendicular abscess, perforation and fecalith/worm in appendicular lumen were excluded and operated (Group B). Group A patients were treated by NPO, intravenous fluid and antibiotics (ceftriaxone and metronidazol), analgesics where required, closely monitored every six hours. Appendectomy was done in clinical deterioration. Patients improved clinically, were discharged without any advice for interval appendectomy and followed up both clinically and radiologically after first, third and sixth month for feature of inflammation and instructed for immediate hospitalization in recurrence. **Main Result:** In Group A, 208 (89%) patients out of 234 responded well and were discharged within next 5 days. Mean hospital stay was 3 days±14 hours and average hospital cost was Tk.1500 (USD 18). Mean hospital stay of Group B was 6 days±11 hours and average hospital cost was Tk. 5000 (USD 62). On subsequent follow up for six months, 17 (8.13%) patients developed recurrence, 3 (1.44%) patients appendicular lump, 4 (1.92%) patients had sonographic features of appendicitis with no clinical presentation. **Conclusion:** Immediate appendectomy is not always essential in all children presented with acute appendicitis. Most cases can be managed conservatively. Interval appendectomy is not necessary in majority of cases which reduces surgery and surgery related complications, hospital stay, cost, patients/parental anxiety and apprehension regarding surgery.

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Title: Lipocalin-2 Expression Increases Following Extensive Small Bowel Resection in a Mouse Model of Short Bowel Syndrome
Authors: Ailan Zhang, MD, PhD(1), Menghan Wang, MS(2), William Fulton, MS(3), Thomas Prindle, BS(4), Hongpeng Jia, PhD(5), Chinder Sodhi, PhD(6), David J Hackam, MD, PhD(7), Samuel M Alaish, MD(8)
Institutions: Johns Hopkins University School of Medicine(1, 2, 3, 4, 5, 6, 7, 8)
Category: Research
Keywords: Short Bowel Syndrome,Lipocalin-2,Bacterial overgrowth

Aim of the Study: Short bowel syndrome (SBS) is a malabsorptive condition which predisposes patients to considerable morbidity from recurrent infectious complications and cholestasis, the stagnant flow of bile from the liver into the intestine. Cholestasis can result in liver damage as well as in the loss of intestinal barrier function, leading to increased systemic infection from bacterial translocation. Lipocalin-2 (LCN2) is an iron-sequestering protein in the antibacterial innate immune response. LCN2 binds to siderophores and prevents bacterial iron uptake, thus controlling the bacterial growth. We have previously shown increased LCN2 gene and mRNA expression in the small intestine following cholestasis in a bile duct ligation model. We hypothesize that LCN2 expression will increase as a host defense mechanism in both the intestine and liver following massive small bowel resection. **Methods:** Under an ACUC-approved protocol, we performed a 75% small bowel resection on C57BL/6J mice, which mimics the resection seen in SBS patients. Sham-operated C57Bl/6J mice served as controls. One week later, the mice underwent euthanasia, and liver and intestinal tissue were collected. LCN2 mRNA and protein expression were determined using standard real time quantitative-PCR and Western blot techniques. Statistical analyses were done using ANOVA with $p<0.05$ considered significant. **Main Result:** LCN2 mRNA expression in the liver and the intestine rose 3-fold and more than 15-fold, respectively, following massive small bowel resection, as compared to their sham counterparts. In concordance, LCN2 protein expression increased significantly ($p<0.05$) in both the liver and the intestine, as compared to the sham animals. LCN2 mRNA and protein expression were higher in the jejunum and ileum than in the colon. **Conclusion:** Following an extensive small bowel resection, host LCN2 expression increases as a defense mechanism in both the liver and the intestine. Augmentation of this defense mechanism may strengthen the intestinal barrier in children with SBS and reduce their morbidity from sepsis.

123 - OA

Title: Tissue-engineered small intestine: A novel therapeutic approach for the treatment of short bowel syndrome

Authors: Laura Y Martin, MD(1), Chhinder P Sodhi, PhD(2), Hongpeng Jia, MD(3), Peng Lu, PhD(4), Yukihiro Yamaguchi, PhD(5), Diego Nino, MD(6), Jungeun Sung, PhD(7), Misty Good, MD(8), Qinjie Zhou, PhD(9), William Fulton, MS(10), Thomas Prindle, MS(11), David J Hackam, MD/PhD(12)
Institutions: Johns Hopkins Hospital(1, 2 3, 4, 5, 6, 7), (8), (9), (10), (11), (12)

Category: Research
Keywords: artificial intestine,short bowel syndrome,tissue engineering

Aim of the Study: Infants and children with short bowel syndrome (SBS) suffer extensive morbidity and mortality. We propose a porcine model to test the feasibility and functionality of implantation of tissue-engineered intestine using auto-transplanted stem cells on a 3-dimensional scaffold for the treatment of SBS. **Methods:** Intestinal stem cells were isolated from infant mice and piglets by mucosal stripping and cellular disaggregation and cultured in Matrigel™ and on a polyethylene vinyl acetate (PEVA) scaffold with serum and growth factors at 37oC. Scaffolds were prepared using a serial fabrication technique, in which laser indentation in agarose gel was used to create microvilli. Growth was evaluated using live cell imaging, PCR, and immunohistochemical staining. In parallel, piglets underwent laparotomy with small bowel resection (10cm ileal resection 30 cm proximal to the cecum), with or without scaffold implantation. Post-operative piglets were evaluated in parallel with non-operative controls by physical exam, enteral intake, bowel movements, temperature, and weight gain. **Main Result:** Enteroids were successfully grown in culture from mice and piglets, evidenced by live cell imaging, PCR and immunohistochemical staining for proliferation and differentiation. Evaluation of enteroid-impregnanted scaffold at 2 weeks revealed good coverage of the villi. PCR and immunohistochemical staining confirmed proliferation and differentiation. Piglets tolerated surgery well, eating, ambulating, and off of pain medication by 12 hours. All piglets maintained growth curves in line with highest industry standards, with no difference between post-operative and control piglets. **Conclusion:** We have demonstrated successful in vitro growth and differentiation of intestinal stem cells from mice and pigs and maintenance on a novel scaffold for prolonged periods of time. Our previous work in dogs demonstrated ability of the scaffold to support en vivo growth. Using this porcine model, we will now re-implant these cell-based scaffolds into piglets in order to evaluate feasibility and functionality of autologous tissue-engineered intestine in the treatment of SBS.

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Title: Retinoic Acid Administration Improves Incidence and Severity of Necrotizing Enterocolitis by Modulating Lymphocyte Balance and Repopulation of Lgr5+ Intestinal Stem Cells

Authors: Diego F Niño, MD, PhD(1), Chhinder P Sodhi, PhD(2), Charlotte E Egan, PhD(3), Qinjie Zhou, PhD(4), Joyce Lin, MD(5), Peng Lu, PhD(6), Yukihiro Yamaguchi, PhD(7), Honpeng Jia, MD(8), Laura Y Martin, MD(9), Misty Good, MD(10), William B Fulton, MS(11), Thomas Prindle, BS(12), John A Ozolek, MD(13), David J Hackam, MD, PhD(14)
Institutions: Johns Hopkins University School of Medicine(1, 2, 4, 6, 7, 8, 9, 11, 12, 14), University of Pittsburgh(3, 5), Children's Hospital of Pittsburgh of UPMC(10, 13)

Category: Research
Keywords: Necrotizing enterocolitis,T lymphocytes,Intestinal stem cells

Aim of the Study: Lgr5+Intestinal-stem-cells (ISCs) are essential for intestinal homeostasis. Necrotizing enterocolitis (NEC), characterized by ISCs apoptosis, is the most devastating gastrointestinal disease of the premature infant. We recently showed that NEC arises from T cell imbalance (increased pro-inflammatory CD4+Th17cells and reduced anti-

inflammatory Foxp3+regulatory Tcells–Tregs) within the premature small intestine of mice and humans. We now hypothesize that Tregs induction by all-trans retinoic acid (ATRA) can improve the incidence and severity of the disease by preventing ISCs loss. **Methods:** NEC was induced in neonatal (7day-old) wild-type C57Bl6 and Foxp3DTR mice by formula-feeding and hypoxia with/without ATRA (50µg/mouse PO,qd,4days). NEC severity assessed by histology and qRT-PCR cytokine profile. Tregs and Th17cells isolated from ileum-lamina propria of mice and infants with NEC were analyzed by flow cytometry. Tregs were depleted in Foxp3DTRmice, which express human diphtheria-toxin (DT)-receptor under the Foxp3 gene promoter, by administration of DT (100ng/mouse IP,qd,4days). Apoptosis (TUNEL) and proliferation of ISCs (BrDU/Ki67) were evaluated by immunohistochemistry and confocal microscopy. Intestinal enteroids incubated with Th17cells or recombinant-IL17 (rIL17). **Main Result:** Mouse and human NEC displayed significant increase in Th17cells and reduction of Tregs within the lamina propria. ATRA significantly reduced NEC severity increasing Tregs and preventing Th17cell infiltration. Th17cells/rIL17 caused increased enteroid apoptosis and impaired ISCs proliferation. Treg depletion by DT (Foxp3DTRmice) led to increased ISCs apoptosis evidenced by colocalization of Lgr5 and TUNEL staining, linking Tregs with a stable ISCs pool. Strikingly, ATRA prevented ISCs loss evidenced by preserved levels of Lgr5+ ISCs within intestinal crypts and intestinal enteroids. **Conclusion:** NEC results from an imbalance between Th17 and Treg lymphocytes, which results in significant loss of ISCs. Strikingly, ATRA protects against NEC by restoring Tregs and preventing ISCs apoptosis. These findings suggest the exciting possibility that dietary manipulations could prevent and treat NEC by modulating lymphocyte balance and ISCs homeostasis within the newborn small intestine.

OA6. ORAL ABSTRACTS

Monday, October 10 | 14:00 – 15:30 | Virginia A/B

MODERATORS: DANIEL VON ALLMEN, SEUNG HOON CHOI

002 - OA

Title: Urinary Bladder Evisceration and Upper Tract Dilatation in Gastroschisis: Prevalence, Mechanisms and Implications for Antenatal Care

Authors: Aniruddh V Deshpande, PhD, FRACS(1), Syed Rizvi, MBBS(2), Wendy Carseldine, MPH, FRANZCOG(3)
Institutions: Dept of Paediatric Urology and Surgery, John Hunter Children's Hospital, Newcastle(1, 2), Maternofetal Medicine Unit, John Hunter Hospital, Newcastle(3)

Category: Fetal Surgery

Keywords: gastroschisis,urinary bladder evisceration,clinical implications

Aim of the Study: This study looks at two recent cases in authors' unit and recent literature to discuss clinical implications of urinary bladder involvement in gastroschisis and make management recommendations. **Methods:** 1. Records of 57 pregnancies with gastroschisis were screened to identify cases of urinary bladder involvement. Relevant urological and obstetric data were collected and antenatal images were examined.2. Electronic search was carried out for larger datasets to identify trends in demographics and time of diagnosis of urinary bladder evisceration in gastroschisis. Hypotheses for possible mechanisms were developed. **Main Result:** Case 1. Bladder evisceration was noted at 30 weeks in a female foetus with gastroschisis. Hydronephrosis progressed rapidly between 30-32 weeks (25mm pelvic diameter bilaterally) however, severity of changes reversed between 32-34 weeks. Caesarean section was performed for foetal distress at 36 weeks and upper tract dilatation reversed after 48 hours of reduction of contents. Case 2. Upward displacement of the urinary bladder was noted at 30 weeks in a female fetus with gastroschisis with development of mild hydronephrosis. Delivery was at 37 weeks with no progression of hydronephrosis.Sixteen cases from a comprehensive search revealed a female predominance (n=14). All diagnoses were made ≥ 30 weeks. Urgent delivery was recommended in two cases. In the remaining fourteen cases, no detrimental effect on the urinary tract was seen postnatally despite persistent dilatation of one (n=5) or both (n=2) upper tracts. Careful evaluation of MRI scans revealed differences between bladder to defect distances between genders. **Conclusion:** Screening and counselling for UB evisceration maybe beneficial in female foetuses around 30 weeks. Although a significant proportion develop hydronephrosis (15-75%), there are no long term urological consequences even when delivered close to 37 weeks. The mechanisms behind the increased prevalence in females and the timing of evisceration needs clarification.

003 - OA

Title: Effect of In-Utero Surgery on Anesthesia Induced Neuroapoptosis in the Mid-gestation Fetal Ovine Brain

Authors: Stephanie M Cruz, MD(1), Oluyinka O Olutoye, MD PhD(2), Adesola C Akinkuotu, MD(3), Fariha Sheikh, MD(4), Irving J Zamora, MD(5), Adekunle Adesina, MD(6), Olutoyin A Olutoye, MD(7)
Institutions: Baylor College of Medicine/ Texas Children's Hospital(1, 2, 3, 4, 5, 6, 7)

Category: Fetal Surgery

Keywords: Fetal Surgery,Sheep,Neurotoxicity

Aim of the Study: The purpose of this study was to evaluate the effect of fetal surgical stimulation on anesthesia-induced neuroapoptosis in mid-gestation sheep. **Methods:** At 70 days gestation (G70, term=145 days), isoflurane was administered to ewes at 2% for 1 hour (2%Iso x 1°) or 4% for 3 hours (4%Iso x 3°) to simulate anesthetic exposure during in-utero fetal procedures. Following induction and endotracheal intubation, a subgroup underwent a midline laparotomy and small hysterotomy were performed. Fetal surgical stimulation was performed on the hind limb of the fetal sheep via a femoral vessel cut down and the incision was completely closed. Following the anesthetic exposure, the animals were euthanized, fetal brains harvested and processed for histology. Neuroapoptosis was detected by immunohistochemistry using anti-caspase-3 antibodies. Gestational age (GA) matched fetuses not exposed to anesthesia served as controls. Data were analyzed using ANOVA with post-hoc analysis as appropriate. **Main Result:** Twenty-nine fetal sheep brains were evaluated in this study. A significant decrease in neuroapoptosis was observed in the dentate gyrus of sheep that received 4%Iso x 3° with surgical stimulation compared to control fetuses (9.26x105 vs 1.83x106 nuclei/mm3, p=0.04) and those that received 4%Iso x 3° without surgical stimulation (vs 1.91 x 106 nuclei/mm3, p<0.001). All animals that had surgical stimulation with 2%Iso x 1° and 4%Iso x 3° demonstrated a significant decrease in neuroapoptosis in the pyramidal lobe compared to the treatment groups that did not undergo surgical stimulation (p<0.001, p=0.01) and the control group (p=0.015, p=0.03). No significant difference was noted in the frontal cortex, endplate and caudate. **Conclusion:** In contrast to unchallenged anesthetic exposure, surgical stimulation under anesthetic exposure results in decreased neuroapoptosis in the fetal sheep brain in the dentate gyrus and pyramidal lobe. Studies of neurodevelopmental outcomes of children who underwent in-utero intervention will be needed to evaluate long-term effects of anesthesia and surgery.

128 - OA
Title: Is there a place for thoracoscopic lobectomy after severe pulmonary infections?
Authors: Karim Khelif, MD(1), Gregory Rodesch, MD(2), Henri Steyaert, MD(3), Corina Zamfir, PhD(4)
Institutions: (1), (2), (3), (4)
Category: Thoracic Surgery
Keywords: Thoracoscopy,Lobectomy,Infection
Aim of the Study: The benefit of early lung resection in recurrent infections is nowadays widely accepted. In the last years thoracoscopy gained ground in the treatment of pulmonary malformations, diaphragmatic hernias, oesophageal atresias or complicated pneumonias with empyema. We propose to investigate the place and the feasibility of thoracoscopy in difficult lobar resections after severe chronic pulmonary infections. **Methods:** This a retrospective study from 2005 to 2015 based on patients' records operated on thoracoscopically. There were analysed the: aetiology, exams, surgery (duration, type of intubation, conversion), pathology, complications and follow-up. **Main Result:** Out of 154 patients who underwent 184 thoracoscopic procedures, we identified 13 patients who had pulmonary resections after infectious diseases. There were 4 girls and 9 boys. The age varied from 13y9mo to 4y9mo with a median age of 4y5mo. The lesions were localised as follows: 1 left upper lobe, 2 right upper lobes, 4 left lower lobes, 4 right lower lobes, 1 right middle lobe and 1 azygos lobe. Operative time varied from 90 to 240 minutes with a median of 160. In one case, because of lack of view the surgery was turned in VATS by a small thoracotomy. Thoracic drains were left in place in 6 patients for 2-7 days. The hospital stay varied from 6 to14 days. The follow-up was done regularly by a multidisciplinary team from 1 up to 10 years. In one patient a pneumothorax was diagnosed one month after surgery and was treated by a thoracic drain. No other surgical complications were noticed. **Conclusion:** Although it is a challenging procedure, in selected cases, in the hands of experienced surgeons, thoracoscopic lobectomies after recurrent infections appear feasible and safe. Thoracoscopy has the advantage of an earlier mobilisation, less postoperative pain and faster recovery. More studies with greater number of patients are needed to prove it.

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Title: Foker technique in the management of pure esophageal atresia
Authors: Michal Rygl, MD, PhD(1), Jitka Styblova, MD(2), Jiri Snajdauf, Prof, MD, DrSc(3)
Institutions: Department of Paediatric Surgery, Charles University in Prague, 2nd Faculty of Medicine, Motol University Hospital, Prague(1, 2, 3)
Category: Thoracic Surgery
Keywords: pure esophageal atresia,Foker technique,delayed anastomosis
Aim of the Study: Long-gap is expected in the case of pure esophageal atresia (PAE = esophageal atresia without tracheoesophageal fistula). The aim of study was analysis of morbidity and outcome of PAE patients with a special focus on Foker technique. **Methods:** Retrospective analysis of hospital records of 140 consecutive neonates with esophageal atresia (EA) operated on in 2009-2015 was performed. The collected data included demographic data, type of AE, surgical technique, complications and outcome. The surgical techniques used in PAE was initially gastrostomy and delayed anastomosis after a period of a spontaneous growth or after growth stimulation by internal or external traction (Foker technique). **Main Result:** Of 140 infants with EA, 13 (9%) had pure EA (gestational age range 30-37weeks, birth weight range 1200-3050g). Delayed anastomosis after a period of spontaneous growth was successfully created in 3 PEA infants (age range 62-78 days), after a period of growth stimulation by internal traction in 3 pts (age range 116-132days), and by external traction (Foker technique) in 6 pts (age range 56-152days). Creation of anastomosis required

1 to 4 prior adjustment of traction, the most common complication of traction was leak of upper pouch in 66%. Anastomotic stricture requiring dilation developed in 56% of infants treated with any type of traction technique. Significant symptoms of GER were diagnosed in 100% infants, surgical treatment for GER was performed in 33%. Delayed anastomosis was not possible in one patient suffering severe NEC, and he underwent colonic replacement later. There was no mortality in study group. **Conclusion:** Foker technique is associated with significant morbidity and repeated surgeries, nevertheless the preservation of native esophagus can be achieved in majority of pure esophageal atresia cases. Esophageal replacement is nowadays an alternative reserved for the most complicated cases.

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Title: Early Myotomy and Fundoplication in Achalasia in Childhood: A Single Centre Experience for 22 Years
Authors: Basak Erginel, MD(1), Feryal Gun Soysal, MD(2), Erbug Keskin, MD(3), Alaaddin Celik, MD(4), Tansu Salman, MD(5)
Institutions: (1), (2), (3), (4), (5)
Category: Thoracic Surgery
Keywords: Achalasia,Pediatric,Myotomy
Aim of the Study: The aim of this study was to review a single institution's experience with surgical interventions in children with achalasia and to determine treatment strategies for this rare disorder. **Methods:** This study is a retrospective analysis of 22 cases of childhood achalasia from 1991 to 2013. The patients were evaluated in terms of age, symptoms, interventions, intraoperative complications and recurrent dysphagia. **Main Result:** There were 13 boys and 9 girls (7 months to 17 years old). The clinical symptoms were vomiting (68 %), dysphagia (36 %), wheezing (18 %), coughing (13 %) and weight-loss (13 %). The mean duration of symptoms was 2,4 years (1 month to 6 years). A barium contrast X-ray study was performed in all of the patients. Oesophageal manometry was performed in eight patients. Six patients underwent multiple oesophageal dilatations (ED) as a first intervention. A Heller myotomy (HM) and fundoplication were performed in all of the patients except two patients who recovered with dilatation. In the long term, one patient had a stricture due to the operation and had to undergo a reoperation. Of the Heller myotomy patients, one had a recurrent stricture that responded to dilatation. No other complications were present. All of the patients are now asymptomatic. **Conclusion:** Early diagnosis and prompt surgical treatment is important to prevent growth impairment in childhood achalasia cases. A Heller myotomy followed by a partial anti-reflux procedure is an effective treatment for achalasia in children. Based on our experience, it is superior to oesophageal dilatation therapy.

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Title: Disease – Specific Quality of Life outcomes after the Nuss procedure: tertiary single-center experience
Authors: Laura Lukosiene, MD(1), Vidmantas Barauskas, PhD(2)
Institutions: Lithuanian Univeristy of Health Sciences Medical Academy(1), Lithuanian Univeristy of Health Sciences Medical Academy(2)
Category: Thoracic Surgery
Keywords: Nuss procedure,quality of life ,pediatric patients
Aim of the Study: The purpose of this study was to evaluate the disease – specific quality of life outcomes of pediatric patients and their parents after the Nuss procedure. **Methods:** From 2012 to 2015 tool called the Pectus Excavatum Evaluation Questionnaire (PEEQ) was administered to patients and parents. 55 patients and 52 parents completed the preoperative questionnaire, and 41 patients and 39 parents completed the postoperative questionnaire. Responses used a Likert-type scale of 1 to 4. **Main Result:** The mean age of patients was 14.16 ± 2.64 years at the time of the Nuss procedure. The pre-op surveys were given just before the surgery. The post-ope surveys were completed 13.22 ± 5.20 months after surgery. Patients and their parents reported improved postoperative changes. Significant improvements occurred in psychosocial quality of life and physical functioning after surgery. All 9 psychosocial questions and 2 physical functioning questions asked of the patients showed significant improvement after surgery ($p<0.05$). Postoperatively 87.80% patients indicated that chest looks much better, 73.17% feels much better and 75.61% were very happy that they had undergone the surgery. The parents survey indicated significantly improved their child's fatigue, frustration and anxiety, social self–consciousness, and decreased concern about the effects of pectus excavatum ($p<0.05$). **Conclusion:** The Nuss procedure significantly improved disease – specific quality of life in many areas. Improvements occurred in physical and psychosocial functioning, self-consciousness and a more favorable body image.

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Title: CLINICAL OUTCOMES OF PATIENTS WITH CONGENIATL HEART DEFECTS AND CONGENITAL DIAPHRAGMATIC HERNIA
Authors: Leel Nellihela, MBBS,MS,FRCS Ed(1), Nordeen Bouhadiba, FRCS (Paeds)(2), Manasvi Upadhyaya, FRCS (Paeds)(3), Ahmed Said, FRCS(4), catherine Richards, FRCS (Paeds)(5), Dorothy Kufeji, FRSCS (Paed),FRCS (Eng),PGCAP(KCL)(6), Alireza Keshtgar, BSc,MBBS,FRCSI,FRCS(Paed),PhD(7), Meena Agrawal, MBBS,MS,FRCS(Edi),FRCS(Eng)(8)

Institutions: Evelina London Children's Hospital, Guy's and St Thomas' NHS Foundation Trust, London (1, 2, 3, 4, 5, 6, 7, 8)
Category: Thoracic Surgery
Keywords: Congenital diaphragmatic hernia ,Diaphragmatic eventration ,Congenital heart defects
Aim of the Study: To evaluate the impact of congenital heart defects (HD) on outcomes of infants born with congenital diaphragmatic hernia (CDH) and diaphragmatic eventration (DE) in our institution. **Methods:** Retrospective review of case notes from 2010 to 2015. The study cohort was divided into two groups (GRP): GRP 1, CDH/DE with HD; GRP 2, CDH/DE with no reported HD. **Main Result:** Total of 47 patients were identified, 21 in GRP 1 and 26 in GRP 2. 27 were males and 20 females. 44% had associated heart defects. Left side CDH/DE was the predominant side in both groups (57% in GRP 1, 65% in GRP2). 66% in GRP1 and 65% in GRP2 had prenatal diagnosis. Chromosomal abnormalities were higher in GRP1 (33% vs 15%). Median gestational age in both groups were comparable (37 vs 38 weeks). Mean birth weight was 2.7Kg (1.2 -3.1) in GRP1 and 3Kg (0.7-3.8) in GRP 2. Atrial septal defect and ventricular septal defect (VSD) (42%) were the commonest types of congenital heart defect in our series. Hypoplastic left heart (HLH) was noted in 2 (9.5%). Cardiac ECMO was used in one patient with HD. Use of prostaglandin, surfactant, sildenafil and inhaled nitric oxide therapy was more prevalent in CDH with HD group. Only 1 infant had both CDH and HD repair at the same time. Infants with HD had longer hospital stays (median, 14 days vs 6days). Patients with large VSD and HLH had higher mortality (28%). One patient with HD required respiratory support and long-term care. One patient with DE died prior to surgery due to extensive NEC. **Conclusion:** In our series CDH with large VSD and HLH had higher mortality. Survival is significantly lower in patients with CDH and major heart defects (54%) compared with patients with no heart defects (88%). Mortality was mainly related to complex cardiac problems.

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Title: PECTUS CARINATUM, OVERVIEW AND RESULTS OF ORTHOTIC BRACING THERAPY
Authors: zacharias A zachariou, MD(1)
Institutions: University of Cyprus, Nicosia, Cyprus(1)
Category: Thoracic Surgery
Keywords: Pectus carinatum,bracing,child's self-image
Aim of the Study: Pectus carinatum may occur alone or together with other congenital disorders. Patients with pectus carinatum are generally asymptomatic however the deformity may induce lung and cardiac dysfunction. Pectus deformities can also have an impact on a child's self-image and self-confidence. The aim of our study was to investigate efficiency of orthotic bracing. **Methods:** Between 2007 and 2014 we treated 65 children (22 girls and 43 boys) with orthotic bracing. The mean age was 13.2 years and the treatment duration for each child was 12 months whilst the mean follow-up was 4.5 years. A standard protocol was applied consisting of a self-adjustable, low-profile bracing system applied in 2 phases. The initial phase involved 24 h/d bracing for 6 months followed by a maintenance phase of another 6 months, during which the brace was worn only at night. We developed a questionnaire with 10 questions regarding the convenience of the brace therapy as well as compliance and complications. **Main Result:** Orthotic bracing with the correct compression resulted in a significant improvement in the appearance of the patients. However, patient compliance and diligent follow-up appear to be paramount for the success of this treatment. The response to our survey was 93% reviling very good results as 85% of the parents and 68% of the children reported that they would repeat the treatment.There was no evident recurrence of pectus carinatum, however minimal recurrence occurred in 4 patients who omitted the maintenance phase. **Conclusion:** Our results are very promising with improvement of reported symptoms and patient's quality of life especially for the personality development of these children. Therefore, according to our results we currently offer this approach as a first-line treatment as it is effective under the condition that the patients and parents compliance is high.

135 - OA
Title: Paediatric Empyema: Does VATS really reduce length of stay?A tale of two cities 2000km apart in Australia
Authors: Nikhil m Mirajker, nil(1), claire furyk, MD(2), kristen tuffin, MD(3), harry stalewski, MD(4), BRUCE WHITEHEAD, MD(5), rajendra kumar, FRACS(6)
Institutions: John Hunter Children's hospital(1, 5, 6), townsville base hospital , townsville(2, 3, 4)
Category: Thoracic Surgery
Keywords: empyema,VATS,Thorocotomy
Aim of the Study: 1) To compare the role of video assisted thoracic surgery (VATS) vs. thoracotomy in the current management of empyema 2)to determine causative organisms to assess whether current antibiotic recommendations are still applicable **Methods:** Retrospective analysis of all cases coded as paediatric empyema at two tertiary paediatric surgical hospitals (Hospital A and B) 2000 km apart, between April 2008 and April 2015 (7 years), and September 2009 and April 2015 (5.6 years) respectively. 127 children with empyema were included. Patients between the two hospitals were compared and statistical analysis using non parametric t-testing was performed. **Main Result:** The two populations were similar in sex distribution but patients treated at hospital A were much older (mean (SD) 11.3 (4.6) yrs vs 3.5 (3.3) yrs). The children in hospital A were all treated by VATS where as nearly 80% of the children in hospital B by convention open technique. Children undergoing VATS had a significantly shorter length of admission when compared to open

thoracic procedure (median (IQR) 9 (8-14) vs 13.5 (10-17.3) days for hospital A vs hospital B respectively; p= 0.001). Patients undergoing VATS had less frequent admission to the paediatric intensive care unit compared to open procedure (36 vs 59 patients in hospital A vs hospital B respectively were admitted). Currently Methicillin-resistant Staphylococcus aureus (MRSA) and Streptococcus pneumonia are the most common organisms cultured in children. Antimicrobial susceptibilities of the pathogens of empyema demonstrate current initial antibiotic recommendations at both centres would cover the majority of pathogens, although MRSA is a significant contributor particularly at hospital A. **Conclusion:** VATS in paediatric empyema is associated with a significantly reduced length of admission and PICU admission rate. Long term outcomes are unclear. Current antibiotics are still applicable although MRSA is emerging as a worrying contributor to empyema in children.

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Title: Follow-up of Congenital Diaphragmatic Hernia: necessity for routinary Gastro-Esophageal Reflux assessment
Authors: Francesco Macchini, MD(1), Andrea Zanini, MD(2), Antonio Di Cesare, MD(3), Irene Festa, MD(4), Valerio Gentilino, MD(5), Giorgio Farris, MD(6), Ernesto Leva, MD(7)
Institutions: Department of Pediatric Surgery - Fondazione IRCCS Ca' Grande Ospedale Maggiore Policlinico Milano (1, 2, 3, 4, 5, 6, 7)
Category: Thoracic Surgery
Keywords: Congenital Diaphragmatic Hernia,Gastro Esophageal Reflux,Esophageal Atresia
Aim of the Study: To study gastroesophageal reflux (GER) in patients treated for congenital diaphragmatic hernia (CDH) and to determine whether a routinely investigation should be considered crucial in their follow-up. **Methods:** A 24-h-pH-metry was performed at 1-year of age in all patients treated for CDH between January 2014 and April 2015. Clinical and surgical data were retrospectively collected. We compared ph-metric results in these patients (Group 1) with those of other two age-matched groups: patients treated for Esophageal Atresia (EA, Group 2) in the same period, and normal babies who required a ph-metry for presenting typical symptoms (Group 3). Reflux index (RI), number of reflux (NR), time of the longest reflux (LR) and numer of refluxes longer than 5 min (R>5) were analyzed. Intra-group analysis were performed in Group1. **Main Result:** Twenty-two patients were enrolled in Group1, 24 in Group2 and 21 in Group3. In Group1 patients were divided according to the dimension classification: 9 defect “A”, 7 “B”, 4 “C” and 1 “D”. Defect C and D needed a patch to be repaired. Three fetuses underwent FETO procedure. Only 2 children were symptomatic. Mean value for Group 1,2,3 were respectively: RI 4,3; 5,1 ; 3,9 ; NR 79,5;88,8;88,7 ; R>5 1,7;2,3;1,47 ; LR 11,4;13,3;8,6. No significant differences were found between Groups. Intra-population analysis in Group1 revealed a significant higher RI in patients who required patch (8,5 vs 2,98 p=0,03). Excluding the only defect D, the worse was the defect the worse were the pH-metric results, even if not significantly (RI: A3,09; B3,15; C9,1). No significant differences were found between symptomatic and asymptomatic patients. **Conclusion:** We believe that CDH is to be considered, as EA and typical symptoms, as a major indication for pH-metry after 1 year of age. Thus we believe that routine GER assessment should be performed in CDH follow-up.

137 - OA
Title: Hookwires guided thoracoscopic resection of congenital cystic adenomatoid malformation in patient with absence of lung fissure: a novel technique
Authors: CT Lau, MBBS, FRCSEd(Paed)(1), KKY Wong, FRCS, PhD(2), Paul Tam, FRCS, MS(3)
Institutions: (1), (2), (3)
Category: Thoracic Surgery
Keywords: thoracoscopy,congenital cystic adenomatoid malformation,novel technique
Aim of the Study: Thoracoscopic resection is being used more commonly for the treatment of congenital cystic adenomatoid malformation (CCAM) in neonates and infants. However in the rare case of CCAM with congenital absence of lung fissure, thoracoscopic lobectomy cannot be performed safely. Moreover if the lung lesion is deep-seated and cannot be visualized on the pleural surface wedge resection may result in residual lesion. Here we reported our novel technique of thoracoscopic resection under hookwire guidance to tackle this problem. **Methods:** Patient with incomplete pulmonary fissure who was deemed not suitable for thoracoscopic lobectomy was applied with this novel technique. Hookwires were placed at the superior and inferior borders of the lung lesion under CT guidance to mark its extent. Thoracoscopic resection of the CCAM was then performed using the hookwires as landmarks during the same operative session. The specimen was removed en bloc with the hookwires at the end of the resection. **Main Result:** Thoracoscopic wedge resection was performed uneventfully under 2 hours. There was no air leak after the operation and chest drain was removed 2 days later. Final pathology confirmed the diagnosis of CCAM with clear margin. **Conclusion:** Hookwires guided thoracoscopic resection of CCAM is feasible and safe. It may become an invaluable tool for resection of deep-seated lung lesion in the absence of lung fissure.

138 - OA
Title: Is Thoracoscopic Approach Justified in Pediatric Pulmonary Hydatid Cyst Treatment?
Authors: Zafer Dokumcu, MD(1), Serkan Arslan, MD(2), Emre Divarci, MD(3), Ata Erdener, MD(4), Coskun Ozcan, MD(5)

Institutions: Ege University Faculty of Medicine Department of Pediatric Surgery (1, 2, 3, 4, 5)
Category: Thoracic Surgery
Keywords: Hydatid cyst,Thoracoscopy,Child
Aim of the Study: There are recent reports on thoracoscopic management of pediatric pulmonary hydatid cyst (PHC). We aim to review our results and evaluate the efficiency of this approach in our patients. **Methods:** Hospital records of patients with PHC who were surgically treated through 2005-2015 were reviewed. Demographics, cyst characteristics and operative/postoperative data were compared between thoracoscopically treated patients (Group 1) and patients that underwent thoracotomy (Group 2). Chi-square and t-test were used for statistical analysis where appropriate. **Main Result:** Twenty-six consecutive children (14 girls, 12 boys) with a mean age of 9.4±2.7 were included. Except 2 incidentally diagnosed patients, all were symptomatic, 4 had multifocal lesions and multi-organ involvement was detected in 11. Thoracoscopy was performed in 10 patients of whom conversion was necessary in 2. Group 1 included 8 thoracoscopically-treated patients and remaining patients constituted Group 2 (n=18). Comparison of preoperative characteristics of the groups was insignificant whereas overall complication rate (residual bronchial fistula, prolonged air leak, pneumothorax, and localized air cyst) and median hospital stay duration were significantly higher in Group 1. There was no mortality and no recurrence at postoperative follow-up of 37.4 months. **Conclusion:** Routine thoracoscopic hydatid cyst treatment is yet far from being gold standard in children with its high conversion and morbidity rates. Randomized controlled studies and patient selection criterias are needed.

140 - OA
Title: BRONCHOGRAPHY IN PATIENTS WITH COMPLEX AIRWAY MALFORMATIONS
Authors: PATRICIO VARELA, MD(1), CARMEN GLORIA IBANEZ, MD(2), EDUARDO LEOPOLD, MD(3), ALVARO PACHECO, MD(4), CRISTINA PALOMARES, MD(5)
Institutions: Hospital Calvo Mackenna, Universidad de Chile, Clinica Las Condes Medical Center(1), (2), (3), (4), (5)
Category: Thoracic Surgery
Keywords: Bronchography,Tracheal stenosis,Airway
Aim of the Study: Report our initial experience using bronchography with isoosmolar contrast in airway malformations. **Methods:** Five patients with complex tracheobronchial pathology underwent intraoperative bronchography between October 2015 and May 2016. Isoosmolar contrast was used for airway study: visipaque™ 270 and omnipaque™ 240. Contrast was introduced directly in airway through tracheal tube or tracheostomy. Patients had the following diagnosis: Case 1: Male, 8 years old with right pulmonary agenesis and intrathoracic tracheal compression. Case 2: Female, 2 months old with right pulmonary agenesis and congenital tracheal stenosis. Case 3: Male, 4 days newborn with long congenital tracheal stenosis and tracheostomy. Case 4: Female, 4 months old with distal short segment congenital tracheal stenosis and postoperative pneumothorax. Case 5: Male, newborn underwent esophageal atresia repair with postoperative pneumothorax suggesting anastomosis leaking. **Main Result:** Bronchography studies were performed without complications and findings are described below. CASE 1: Bronchography showed remanent of a right lung. Previous tomography study showed a complete right pulmonary agenesis. CASE 2: Patient in PICU with critical tracheal stenosis. Bronchography certified right pulmonary agenesis and a long segment congenital tracheal stenosis. CASE 3: Patient with congenital tracheal stenosis underwent a partial tracheo-carinal resection. On third postoperative day XR shows a huge subcutaneous emphysema and pneumo-mediastinum, suggesting suture dehiscence. Bronchography dismissed leaking. CASE 4: A four days newborn with Fallot Tetralogy, with tracheostomy tube and a suspected critical airway stenosis. Laryngotracheoscopy couldn’t show intrathoracic trachea. Bronchography by tracheostomy showed critical long congenital tracheal stenosis and a right tracheal bronchus. CASE 5: Postoperative pneumothorax was found two days after esophageal atresia repair. Bronchography and Upper GI study was negative for leaking. **Conclusion:** Bronchography using isoosmolar contrast is a useful study tool for diagnosis on patients with tracheal and esophageal malformations.

142 - OA
Title: A NOVEL THORACOSCOPIC TRANSDIAPHRAGMATIC RETROPERITONEOSCOPIC EXPOSURE OF THE THORACIC AND LUMBAR SPINE FOR FUSIONLESS ANTERIOR VERTEBRAL BODY TETHERING FOR IDIOPATHIC SCOLIOSIS IN CHILDREN
Authors: Harsh Grewal, MD(1), Matt McLarney, BS(2), Mari L Groves, MD(3), Joshua M Pahys, MD(4), Amer F Samdani, MD(5)
Institutions: Cooper University healthcare and Shriner's Hospital for Children(1), Temple University school of Medicine(2), Johns Hopkins medical center(3), Shriner's Hospital for Children, Philadelphia(4, 5)
Category: Thoracic Surgery
Keywords: Thoracoscopic transdiaphragmatic surgery,Idiopathic Scoliosis,Retroperitoneoscopic surgery
Aim of the Study: To report for the first time a minimally invasive approach for a fusionless therapy, anterior vertebral body tethering of the spine, for idiopathic scoliosis in children, utlizing a thoracoscopic transdiaphragmatic retroperitoneoscopic approach for exposure and instrumentation of the thoracic and lumbar spine. Anterior vertebral body tethering is a new fusionless growth- and motion-sparing technique for the treatment of skeletally immature children with idiopathic scoliosis. Instrumentation of the thoracic and lumbar spine has required an additional open

lumbar incision. We have developed a novel minimally invasive thoracoscopic retroperitoneoscopic approach to expose and instrument the thoracic and lumbar spine when the curve encompasses this region, utilizing three 5mm and 2-3 15mm ports and incising the diaphragm to create a retroperitoneal working space contiguous to the hemi-thorax . **Methods:** Study design-Retrospective analysis of children with idiopathic scoliosis undergoing anterior vertebral tethering of the thoracolumbar spine (T5 to L3) at a single institution utilizing a novel thoracoscopic transdiaphragmatic approach. After obtaining IRB approval records of all children undergoing anterior vertebral body tethering for idiopathic scoliosis in skeletally immature children were reviewed. Pre-operative, operative and post-operative records of children undergoing thoracoscopic transdiaphragmatic tethering of the thoracic and lumbar spine (T5 to L3), were abstracted. **Main Result:** N=12, age 12.7 yrs, 2:10 m/f, skeletal immaturity scores (Risser 0.4 and Sanders 2.9). 8.3 vertebral levels tethered, operative time 157 minutes, median estimated blood loss 242ml, PICU stay 2 days, hospital stay 5.4 days. Mean thoracic curve correction was 77% and lumbar curve correction of 96%. There were three complications (respiratory insufficiency secondary to fentanyl, hypertrophic scar, transient thigh numbness). **Conclusion:** Anterior vertebral tethering of the thoracic and lumbar spine including the thoracolumbar junction (up to L3) can be safely performed using a novel thoracoscopic transdiaphragmatic approach with minimal morbidity and excellent results at mean 19.5 month follow-up.

OA7. ORAL ABSTRACTS

Monday, October 10 | 15:45 – 17:00 | Maryland A/B

MODERATORS: PHILIP GUZZETTA, ROBERT C. SHAMBERGER

005 - OA

Title: The Pediatric Appendicitis Score (PAS): A Tool for Risk Stratification or a Diagnostic Tool in Itself?

Authors: Sohail R Shah, MD(1), Stephanie B Theut, DO(2), Kathy M Johnson, RN(3), Huirong Zhu, PhD(4), Shawn D St. Peter, MD(5), Kelly A Sinclair, MD(6)

Institutions: (1), (2), (3), (4), (5), (6)

Category: General Surgery

Keywords: Quality Improvement ,Pediatric Appendicitis ,Ultrasonography

Aim of the Study: As part of a multidisciplinary quality improvement initiative to decrease CT utilization for diagnosing appendicitis in an academic children's hospital emergency department (ED) we created a diagnostic algorithm that utilized the PAS in the initial evaluation. The purpose of this project was to evaluate the PAS itself in diagnosing pediatric appendicitis. **Methods:** Data were captured from 8/1/2014 – 7/31/2015 on ED patients with suspected appendicitis. ED providers risk stratified patients using the PAS. The algorithm recommended low-risk patients (1-3) be discharged home or evaluated for alternative diagnoses. Intermediate-risk (4-6) initiated ultrasonography and high-risk (7-10) triggered pediatric surgical consultation. Patients discharged from the ED received telephone follow-up. **Main Result:** There were 840 patients seen in the ED with suspected appendicitis, of which 490 were evaluated using the diagnostic algorithm. Risk stratification resulted in 65 (13.3%) low-risk, 255 (52.0%) intermediate-risk, and 170 (34.7%) high-risk patients. For the high-risk group the sensitivity was 57% (95% CI, 49%-65%), specificity was 78% (95% CI, 73%-82%), positive predictive value was 59% (95% CI, 51%-66%), and negative predictive value was 77% (95% CI, 72%-81%). For the intermediate- and high-risk groups combined the negative predictive value was 92% (95% CI, 86%-99%), which could have resulted in five patients in the low-risk group with missed appendicitis. The receiver operator characteristic (ROC) curve for the PAS had an area under the curve of 0.70. The diagnostic algorithm as a whole had a sensitivity of 98.6% and specificity of 94.4%. **Conclusion:** These data suggest that the PAS should not be used alone as a diagnostic tool for pediatric appendicitis. The PAS may serve a role in risk stratification of patients with suspected appendicitis as a component of a more complete diagnostic algorithm; however, providers should be cautioned about discharging patients home in the low-risk group if clinical suspicion remains high.

006 - OA

Title: Protocol based management of 154 cases of pediatric liver abscess

Authors: Subhasis Roy Choudhury, MD(1), Niyaz Ahmed Khan, MS(2), Rahul Saxena, MS(3), Jigar Patel N, MS(4), Rajiv Chadha, MS(5)

Institutions: Lady Hardinge Medical College and Kalawati Saran Children's Hospital, New Delhi-110001, India.(1, 2, 3, 4, 5)

Category: General Surgery

Keywords: Liver abscess,Children,Per cutaneous drainage

Aim of the Study: Liver abscess (LA) is prevalent worldwide; however, there is paucity of data regarding the protocol of management for LA in children. The aim of this study was to analyze the outcome of a protocol based management of pediatric LA from a single institution. **Methods:** This was a prospective observational study conducted in a tertiary care children's hospital including all patients with liver abscess. Detailed clinical, laboratory, microbiological and imaging

parameters were recorded and the patients were treated according to a management protocol. Small abscesses (<5 cm) and solid appearance on initial ultrasonography were started with antimicrobial therapy only. Liquefied appearance of abscess on imaging was additionally subjected to ultrasound guided percutaneous needle aspirations (PNA). Large abscess pointing to the surface was treated by percutaneous tube drainage (PCD). Ruptured LA, abscess inaccessible to image guided drainage and those non responders to other modes of treatment were subjected to open surgical drainage (OSD). Pleural collections were treated by aspirations or intercostals tube drainage. The outcome parameters in terms of duration to recovery and complications including mortality were analyzed. **Main Result:** A total number of 154 patients were treated over a 5 year period. The mean age of patients was 6.76 years with male: female being 1.26:1. Medical management alone, PNA, PCD and OSD was successful in 38(24.6%), 76(49.3%), 11(7.14%) and 29(18.8%) cases respectively. Pleural collections responded to observation and aspirations/drainage in 24/43(55.8%) and 19/43(44.2%) cases respectively. The mean duration of hospital stay was 20.67±9.52 days. Overall mortality was in 6(3.8%) cases due to continued sepsis, rests of the patients were doing well on follow-up. **Conclusion:** Ultrasonography was useful for the initial diagnosis, monitoring the progress and management of LA in children. The outcome of a protocol based management of LA in children was favorable.

007 - OA

Title: Radiation exposure in the diagnosis of childhood appendicitis: an opportunity for statewide improvement

Authors: Shannon M Koehler, MD(1), Lindsey Zimmerman, MD(2), Laura Cassidy, PhD(3), David M Gregg, MD(4), Marjorie Arca, MD(5), Casey Calkins, MD(6), David Gourlay, MD(7), Dave Lal, MD(8), Keith T Oldham, MD(9), Thomas T Sato, MD(10)

Institutions: Children's Hospital of Wisconsin (1, 4, 5, 6, 7, 8, 9), Medical College of Wisconsin (2, 3), Medical College of Wisconsin (3), Children's Hospital of Wisconsin - Pediatric Surgery Department (10)

Category: General Surgery

Keywords: appendicitis,radiation exposure,access to care

Aim of the Study: Appendicitis remains one of the most common, urgently treated pediatric surgical conditions in the United States. The American College of Radiology (ACR) guidelines recommend ultrasound as the first line radiologic procedure in children under 14 years of age with suspected appendicitis. Compliance with ACR guidelines is one metric of appropriate resource utilization. Considerable variation exists in the use and type of adjunctive diagnostic imaging studies between hospitals. We sought to evaluate differences in resource utilization and radiation exposure in the diagnosis of childhood appendicitis. **Methods:** This retrospective case series evaluated all children treated for appendicitis at a children’s hospital from November 2012 through October 2013. Children undergoing interval appendectomy, appendectomy in conjunction with another procedure, or with a histologically normal appendix were excluded. Using weight and age, three distinct methods were used to estimate radiation exposure. The highest estimated dose was compared to the actual dose. Statistical analysis was performed using a chi-square test with statistical significance at $p < 0.05$. **Main Result:** Two hundred and ninety-nine appendectomy cases were identified and 249 children met inclusion criteria. Age and ASA were not different between those transferred to the tertiary center and those who initially presented to the tertiary center. Transfer patients were less likely to be Caucasian or undergo ultrasound evaluation, but more likely to have government insurance and receive CT imaging. Transfer patients were also exposed to significantly higher radiation levels than would have been predicted at the tertiary center. **Conclusion:** Prior to transfer to a children’s hospital for surgical care, children with suspected appendicitis are more likely to undergo CT scan imaging in non-children’s hospitals, with significantly higher radiation dosage and exposure. Pediatric-specific guidelines for the diagnosis and management of pediatric appendicitis should be utilized by all hospitals providing care for children.

008 - OA

Title: SENSITIVITY AND SPECIFICITY OF C.T SCAN IN THE DIAGNOSIS OF SMALL BOWEL OBSTRUCTION IN CHILDREN

Authors: Huma Halepota, MBBS, FCPS(1), Muhammad Arif Mateen, MBBS, FRCS(2)

Institutions: aga khan Hospital(1, 2)

Category: General Surgery

Keywords: C.T Scan,small bowel obstruction,Exploratory Laparotomy

Aim of the Study: sensitivity and specificity of C.T scan to diagnose small bowel obstruction in children while taking surgical diagnosis as gold standard. **Methods:** Retrospective cross sectional study carried out at The Aga Khan University Hospital, Karachi from the year of 1998 to 2015. Patients who were diagnosed with small bowel obstruction on the operation table but had previous surgery or patients who were diagnosed as small bowel obstruction but didn’t undergo surgery were excluded. Data was analyzed via SPSS software version 19. **Main Result:** A total of 300 Children were included.The average age of the patients was 7.67 ±4.33 years similarly average duration of symptoms was 2.84 ±1.17 (days). Out of 300 children 195 (65.0%) were male and 105 (35.0%) female. 233 (77.6%) children had obstruction at the level of ileum and 67 (22.3%) were at the level of jejunum. The causes of obstruction identified were T.B in 186 cases (62.0%), adhesions in 102 (34.0%) cases and the rest were 6 cases each of volvulus and intussusception. Out of the 300 patients 272 (90.6%) were identified as positive for small bowel obstruction on the CT scan. When all of the 300

patients were taken for laparotomy 271 (90.3%) actually had small bowel obstruction. 267 (89%) of the patients who were identified as small bowel obstruction on the CT scan actually had small bowel obstruction when seen in laparotomy.Sensitivity, specificity, positive and negative predictive value as well as accuracy of CT in the detection of small bowel obstruction was 98.2%, 83.3%, 98.2%, 83.3% and 96.8% respectively **Conclusion:** CT has a high sensitivity, specificity, and accuracy in revealing small-bowel obstructions in children, especially in children older than 2 years.C.T scan should be used as first line modality instead of oral contrast study to detect small bowel obstruction.

009 - OA
Title: Global Assessment in Pediatric Surgery (GAPS) Phase I: A systematic review of quality indicator tools for pediatric surgery
Authors: Yasmine Yousef, MD(1), Etienne St-Louis, MD(2), Emily Smith, PhD(3), Robert Baird, MD(4), Elena Guadagno, MLIS(5), Alex Amar, MLIS(6), Dickens St-Vil, MD(7), Dan Poenaru, MD(8)
Institutions: University of Montreal(1), McGill University(2), Duke Global Health Institute(3), Montreal Children's Hospital(4, 8), McGill University Health Center(5, 6), Centre Hospitalier Universitaire Ste-Justine(7)
Category: General Surgery
Keywords: Global Surgery,Quality Improvement,Systematic Review
Aim of the Study: The Lancet Commission on Global Surgery has played a crucial role in bringing attention to overall global surgical needs, but offers little insight into the specific surgical challenges of children in low-resource settings. Efforts to strengthen the quality of global pediatric surgical care have resulted in a proliferation of partnerships between low- and middle-income countries (LMICs) and high-income countries (HICs). An important aid in these partnerships are standardized tools able to reliably measure gaps in delivery and quality of care. The aim of this systematic review is to critically appraise existing quality indicator tools (QITs) focused on needs and quality assessment of pediatric surgery. **Methods:** A comprehensive search strategy of multiple electronic databases was conducted according to PRISMA guidelines without linguistic or temporal restrictions. Studies were eligible if their aim was the development of an instrument for paediatric surgical capacity assessment, they involved institutions with surgical capacities treating children, were in the form of questionnaires or surveys, and the tool had been previously validated. Articles were assessed by two independent reviewers; methodological quality of studies was appraised using the COSMIN checklist. **Main Result:** The search strategy generated 16,641 results, of which 12 articles were deemed eligible. QITs were, mostly, created by and intended for HICs. QITs were either excessively detailed or oversimplified (number of variables ranging between 13 - 128). No QIT comprehensively included measures of resources, outcomes, impact, accessibility and training. **Conclusion:** Existing QIT tools tended to be ill-suited for pediatric patients and poorly adapted to limitations of LMICs, thus identifying the need for an encompassing, simple, objective tool to assess pediatric surgical care tailored to LMICs. Creation of a new QIT, the Global Assessment in Pediatric Surgery (GAPS), will incorporate key aspects of capacity and performance specifically for children and will be undertaken in phase II of our project.

011 - OA
Title: UK PAEDIATRIC APPENDICECTOMY TRAINING. IS THE PENDULUM SWINGING TOO FAR?
Authors: Ashwath S Bandi, MRCS(1), Chandrasen K Sinha, FRCS(2), Bruce O Okoye, FRCS(3)
Institutions: St George's Hospital, London(1, 2, 3)
Category: General Surgery
Keywords: Appendicitis,Training,Laparoscopy
Aim of the Study: This study aimed to establish how the use of laparoscopic techniques for appendicectomy has impacted on trainees' experience within the UK. **Methods:** All paediatric surgery trainees that are members of the trainees in paediatric surgery (TRIPS) online forum were invited to take part in an online survey of their appendicectomy experience. Data collected were a trainee's grade, prior experience including time abroad and the numbers of open and laparoscopic appendicectomies that they had performed. We classified trainees into Junior (Specialist Training Years 1 to 3) and Senior (Specialist Training Year 4 and above). **Main Result:** 40 trainees responded to the survey. Level of training was equally distributed with 19 junior trainees and 21 senior trainees. Overall, 15 (37.5%) trainees had more laparoscopic experience, 16 (40%) had equal experience of laparoscopic and open appendicectomy and 9 (22.5%) of trainees had more open than laparoscopic experience. The preponderance of laparoscopic experience was most pronounced in the 19 junior trainees (n=19) with 10 (52.5%) having more laparoscopic experience, 4 (21%) having equal laparoscopic and open experience and 5 (26.3%) having more open experience. Senior trainees 9 (n=21) did not demonstrate such a difference in experience. 3 (14%) had more laparoscopic experience, 14 (66.6%) had equal experience and 4 (19%) more open experience. This preponderance of laparoscopic experience in junior trainees compared to senior trainees was found to be statistically significant (p=0.017). **Conclusion:** The increase in laparoscopic appendicectomy has led to the new generation of trainees having reduced experience of the open approach. This may have implications for these trainees achieving competence in the open procedure unless this is highlighted as a training need and addressed.

013 - OA
Title: Outcomes of multi-gestational pregnancies affected by esophageal atresia
Authors: Corey M Forster, BScH in progress (1), Eveline Lapidus-Krol, RN(2), Monping Chiang, RN(3), Vikki Scaini, RN(4), Beth Haliburton, RD(5), Paul Zamiara, BScH(6), Peggy Marcon, MD(7), Aideen Moore, MD(8), Priscilla Chiu, MD(9)
Institutions: The Hospital for Sick Children, University of Toronto (1, 2, 3, 4, 5, 6, 7, 8, 9)
Category: General Surgery
Keywords: Esophageal Atresia ,Outcomes,Multigestational births
Aim of the Study: The prognosis for multi-gestational vs. singleton pregnancies affected by esophageal atresia +/- tracheoesophageal fistula (EA/TEF) hass not been reported. The aim of this study is to report the mortality and morbidity outcomes for singleton and multi-gestational EA/TEF patients. **Methods:** A single institution retrospective review of EA/TEF patients from 1999 to 2013 was performed using Chi square tests, including patient demographics, gestational age (GA), birth weight (BW), associated anomalies, EA/TEF type and gap length, complications and mortality with IRB approval (#1000032265). **Main Result:** Of 236 (1%) of EA/TEF patients, 22 were from multi-gestational pregnancies; all were twin births. Compared to singletons, EA/TEF twins were significantly more premature (twin mean = 235.82 days, singleton mean = 260.97 days, $p<0.01$), had lower BW (twin mean = 1766.36 grams, singleton mean = 2695.64 grams, $p<0.01$), were more frequently affected with duodenal atresia (twins = 18.18%, singletons = 5.61%, $p<0.05$) and had higher mortality (twins = 18.2%, singletons = 5.6%, $p<0.05$). In multi-variate analysis, EA/TEF twins with low BW (< 2000g) or GA <35 weeks ($p<0.05$) were significantly more likely to require gastrostomy tube for feeds at discharge ($p<0.05$). Compared to term births, the length of hospital stay for the premature infants was significantly longer ($p<0.05$). **Conclusion:** EA/TEF infants of multi-gestational pregnancies have worse outcomes compared to singletons. Further review may provide greater insight into the underlying causes of the morbidities outlined here. Appropriate counselling to parents is needed.toneeded to inform and assist families of potential morbid outcomes.

014 - OA
Title: Morbidity and Healthcare Costs of Vascular Anomalies: A National Study
Authors: Jina Kim, MD(1), Zhifei Sun, MD(2), Harold J Leraas, (3), Uttara P Nag, MD(4), Ehsan Benrashid, MD(5), Alexander C Allori, MD(6), Waleska M Pabon-Ramos, MD(7), Henry E Rice, MD(8), Cynthia K Shortell, MD(9), Elisabeth T Tracy, MD(10)
Institutions: (1), Duke University Medical Center(2, 3, 4, 5, 6, 7, 8, 9, 10)
Category: General Surgery
Keywords: vascular anomalies,arteriovenous malformations,health care costs
Aim of the Study: With novel medical therapies, interventional procedures, and surgical techniques increasingly used to manage vascular anomalies, the quality of life for children with vascular anomalies has improved. This study aimed to define morbidities and costs related to modern-day care for children with vascular anomalies. **Methods:** We reviewed the 2003-2009 Kids' Inpatient Database (KID) for pediatric patients (age < 21 years) hospitalized with hemangiomas, arteriovenous malformations (AVM), or lymphatic malformations (LM) as a primary diagnosis. Patients were grouped by type of vascular anomaly. Patient characteristics, comorbidities, complications, and hospital charges were compared. **Main Result:** In total, 7,485 pediatric patients with vascular anomalies were identified. Within this cohort, frequently associated comorbidities included chronic anemia (4.0%), hypertension (2.4%), and coagulopathy (1.8%). They also had nontrivial rates of sepsis (4.6%) and cellulitis (1.4%) associated with hospital care. Notably, children with AVM had the highest rate of in-hospital mortality, compared to those with hemangiomas or LM (1.0% vs. 0.1% vs. 0.3%, $p < 0.001$). AVM also were associated with the highest median hospital charge, more than twice the cost for hemangiomas or LM ($45,875 vs. $18,909 vs. $18,919; $p < 0.001$). AVM care also had the greatest increase in median hospital charge (38.8%) from 2003 to 2009. **Conclusion:** We found a significant rate of morbidity in children with vascular anomalies, most often from blood loss and infection. The greater cost of AVM care may be related to the higher mortality rate, associated complications, and complexity of procedures required to treat them. Cost-effective management of vascular anomalies should target prevention and early recognition of both chronic comorbidities and acute complications.

015 – OA (Withdrawn)
Title: Primary definitive procedure versus conventional three-staged procedure for management of low anorectal malformations in females: a randomized controlled trial
Authors: Alisha Gupta, M.Ch.(1), Sandeep Agarwala, M.Ch.(2), Vishnubhatla Sreenivas, MD(3), M Srinivas, M.Ch.(4), Veereshwar Bhatnagar, M.Ch.(5)
Institutions: All India Institute of Medical Sciences, New Delhi(1, 2, 3, 4, 5)
Category: General Surgery
Keywords: Low anorectal malformations,females,comparison staged vs single stage procedures
Aim of the Study: To compare the incidence of wound dehiscence amongst girls undergoing primary definitive procedure(group I) versus those undergoing three-staged procedure(group II) for low-type anorectal malformations.

Methods: A prospective randomized controlled trial for girls <14 years with vestibular(VF) and perineal fistulae(PF) was done. Random tables were used to randomize 33 children to group I and 31 to group II. Statistical analysis was done for significance of difference($p<0.05$) in the primary outcome measure (wound dehiscence) and secondary outcomes that included immediate post-operative complications (fever/bleeding/wound erythema/pus discharge) and early complications (mucosal prolapse/stenosis/recurrence/retraction). **Main Result:** Eighty-four percent of all cases were VF. Both groups were comparable in demography, clinical profile and definitive surgery (PSARP, mini-PSARP and ASARP) performed($p=0.86$). Overall, mean age at definitive surgery was 20.2 months (range 0-156). The incidence of wound dehiscence in group I (41.9%) was significantly higher than group II (18.2%) ($p=0.04$). Six out of 13 children in group I with dehiscence (46.2%) required a diverting colostomy to be made. The incidence of dehiscence in children with VF (29.6%) was comparable to those with PF (30%) ($p=0.98$). In group I, children were kept nil by mouth for a mean duration of 5.6 days whereas those in group II were allowed orals on the same day ($p<0.01$). The incidence of immediate complications in group I (51.6%) was significantly higher than in group II (15.1%) ($p=0.02$). The incidence of early post-operative complications in group I(41.9%) was significantly higher than in group II (15.4%) ($p=0.02$). **Conclusion:** Thus, females with low type ARM treated with primary definitive procedure have a significantly higher incidence of wound dehiscence, immediate and early post-operative complications. The ultimate outcome in these children may be affected by wound dehiscence leading to healing by fibrosis and scarring. Whether this significantly affects the long-term outcomes in terms of constipation and incontinence remains to be seen.

016 - OA
Title: OVARIAN LESIONS IN INFANTS AND CHILDREN.
Authors: Udo Rolle, MD(1), Linda Novak, MD(2), Till-Martin Theilen, MD(3), Stefan Gfroerer, MD(4), Henning Fiegel, MD(5)
Institutions: Department of Paediatric Surgery and Paediatric Urology, University Hospital Frankfurt/M.(1, 2, 3, 4, 5)
Category: General Surgery
Keywords: Ovarian lesions,Ovarian neoplasms,Ovarian cysts
Aim of the Study: Ovarian lesions are found in girls with acute abdominal pain or incidentally in asymptomatic patients. Preoperative diagnostic investigations are recommended for non-acute patients because of the risk of ovarian neoplasia. Aim of this study was to retrospectively our patients with ovarian lesions and ovarian pathologies. **Methods:** We retrospectively reviewed the charts of 39 patients with ovarian lesions, aged between 2 weeks and 18 years, who were operated between 2009 and 2015. Age, history, diagnosis, histology and type of operation were assessed from the patient records. F-test and Chi-square-test were applied to identify statistical significance of cross-table analysis. **Main Result:** 7/8 patients under 2 years of age had a cystic lesion, whereas 8/31 patients over 2 years of age had a cyst and 23/31 had other lesions ($p<0.001$). We found ovarian neoplasias in 13 patients, with a predominance of teratomas. 11 patients had simple ovarian cysts. Ovarian neoplasia was not observed in patients under 2 years of age, 1/5 patient with neoplasia was found in the age group from 2 to 10 years, 12/26 patients with neoplasia were found beyond the age of 10 years ($p<0.025$). **Conclusion:** In children under 2 years of age ovarian lesions are commonly of pure cystic nature. In contrast, children beyond 10 years of age present a significant number of ovarian neoplasias. In these patients, preoperative tumor diagnostic is indicated.

148 - OA
Title: Oral cavity injuries in children treated at a pediatric emergency hospital
Authors: YASUHARU OHNO, MD(1)
Institutions: Oita Children's Hospital(1)
Category: Trauma
Keywords: oral cavity injury,toothbrush,retropharyngeal abscess
Aim of the Study: Oral cavity injuries may sometimes be fatal, but such injuries do not show a decreasing tendency. Our hospital is pediatric emergency hospital and accepts about 35,000 patients, during off hours, per year. The author herein examines the pediatric patients with oral cavity injuries during past two years at our hospital. **Methods:** Fifty-one patients visited our hospital with the chief complaint of oral cavity injuries. The average age was 2 years, consisting of 30 males and 21 females. **Main Result:** Time of visit; 10 patients visited in the daytime, while 41 visited during off hours. Injury form; 21 cases of falling with foreign bodies in the mouth (toothbrush 10, chopsticks 3, others 8), 16 cases of simple falling, and 14 others. Final diagnosis; There were 19 cases of laceration or impalement injury of the soft palate, 10 presented with a tear of the superior labial frenum, 7 cases with gingival injury, 4 cases of tooth injury, 8 others, and 3 with no injuries. Outcome; 39 cases received conservative treatment on an outpatient basis, 3 were admitted to our hospital, 9 were transferred to other hospitals (2 of which were admitted to the transferred hospitals). The type of injury in the 5 admitted patients was toothbrush injury which caused a retropharyngeal abscess and 2 of them underwent surgical drainage. **Conclusion:** 41% of the patients presenting with oral cavity injuries suffered the injury due to falling with foreign bodies in the mouth. 9.8% needed to be admitted to the hospital and all of them were associated with toothbrush injury. In conclusion, foreign body injuries may damage the main vessels and central nervous system and the author therefore would like to emphasize that these accidents should be prevented by better educating children

regarding the use of toothbrushes, etc.

OA8. ORAL ABSTRACTS
Monday, October 10 | 15:45 – 17:00 | Virginia A/B

MODERATORS: ARNAUD BONNARD, YUTAKA KANAMORI

029 - OA
Title: Variceal Bleeds in Patients with Biliary Atresia
Authors: Daan BE van Wessel, Bsc. (1), Mauri Witt, MD(2), Niels Bax, -(3), Henkjan Verkade, PhD(4), René Scheenstra, PhD(5), Ruben HJ de Kleine, MD(6), Jan BF Hulscher, PhD(7)
Institutions: University Medical Center Groningen(1, 2, 3, 4, 5, 6, 7)
Category: Hepatobiliary Surgery
Keywords: Biliary atresia,Portal hypertension,Oesophageal Varices
Aim of the Study: This study set out to describe the incidence and severity of variceal bleeding as a result of portal hypertension in patients with Biliary atresia (BA). Also, we describe characteristics of patients who experienced variceal bleeds. **Methods:** We included all infants treated for BA in our center between March 1987 and July 2015. Variceal bleeding was defined as hematemesis and/or melena with presence of varices at endoscopy. Findings at endoscopy and ultrasound, laboratory tests, clearance of jaundice, grade of fibrosis at Kasai portoenterostomy (KPE) and several varices prediction scores were documented or computed. Routine endoscopies were not performed. **Main Result:** Seventy-four patients were included. Median age at KPE was 62 days (34-128). Median follow-up was 17 months (0-346). During follow-up, 18/74 (24%) developed variceal bleeding at a median age of 9 months (4-111). Twelve patients were listed for LTx at time of bleeding. Patients who did not clear their jaundice developed variceal bleeds more often and earlier in life. Bleeds were treated with sclerotherapy (6), banding (4) or octreotide (4). Four patients did not receive treatment, since at time of endoscopy no active bleeding focus could be identified. There was no bleeding related mortality. Four patients were admitted to the ICU. Five children needed red blood cell transfusions. **Conclusion:** A quarter of the children diagnosed with BA experience a variceal bleed during follow-up, of which a majority under the age of 1 year, often while already listed for transplantation. Severity of variceal bleeding in BA patients is relatively mild.

030 - OA
Title: MANAGEMENT OF EXTRAHEPATIC PORTAL HYPERTENSION IN CHILDREN WITH ANOMALIES OF RENOCAVAL SEGMENT
Authors: Rustam Z. Yuldashev, MD(1), Makhmud M. Aliev, PhD, Prof.(2), Gulnora S. Adilova, PhD(3), Avazjon A. Dekhqonboev, MD(4)
Institutions: Republican Specialized Scientific Practical Medical Center of Pediatrics(1, 2, 3, 4)
Category: Hepatobiliary Surgery
Keywords: portal hypertension,portosystemic shunt surgery,circumaortic and retroaortic left renal vein
Aim of the Study: To study impact of various congenital and acquired conditions of renocaval segment on results of portosystemic shunting in children with extrahepatic portal hypertension **Methods:** Two hundred and ten patients who underwent portosystemic shunt surgery (PSS) between 2005 and 2016 were retrospectively reviewed. To evaluate the results of the PSS surgery and to assess left renal vein (LRV) anomalies and vena cava inferior we performed GI endoscopy, US Doppler and MSCT angiography **Main Result:** LRV anomalies were found in 14 patients (6.6%). Among them, most often revealed circumaortic LRV - 9 cases (4.3%), retroaortic LRV found in 4 patients (1.9%) and in one case we found extracaval drainage of LRV (0.5%). After various types of PSS surgery significant dilatation of LRV and its tributaries (testicular and ovarian veins), so-called nutcracker phenomenon, were found in 17 (8.1%) patients without anomalies of LRV. Most frequently noted above features found after iliacomesenterial and central splenorenal shunt surgery-5.7% and 1.5% respectively. Inadequate reduction of esophageal varices after PSS surgery was observed in 10 (4.7%) patients with congenital and acquired abnormalities of LRV. However, only one patient after distal splenorenal shunt with circumaortic LRV who developed shunt thrombosis had recurrent gastroesophageal bleeding episodes, and this patient underwent successful mesocaval shunting **Conclusion:** The frequency of anomalies LRV in children with extrahepatic portal hypertension is 6.6%. PSS surgery using abnormal LRV can cause unsatisfactory results with the development of recurrent bleeding from gastroesophageal varices. Besides a large amount of blood drained from the portal system in to left renal vein can induce nutcracker phenomenon, and as a consequence the development renal venous hypertension

031 - OA
Title: Laparoscopic Hepaticojejunostomy for Giant Choledochal Cysts: Intermediate to Long-term Follow-up Results
Authors: Mei DIAO, MD(1), Long LI, MD(2), Yan-Dong WEI, MPH(3), Mao YE, MPH(4)
Institutions: Department of Pediatric Surgery, Capital Institute of Pediatrics, Beijing, China(1, 2, 3, 4)
Category: Hepatobiliary Surgery
Keywords: laparoscopy,one-stage definitive surgery,giant choledochal cysts
Aim of the Study: Laparoscopic one-stage definitive surgery for giant choledochal cyst (CDC, diameter >= 10 cm) is challengeable because of limited working space, difficult dissection for intra-pancreatic portion of CDC and posterior cyst wall, and limited exposure of displaced portal vein, hepatic artery and surrounding tissues. We herewith modified laparoscopic cyst excision and hepaticojejunostomy techniques, and evaluate its intermediate to long-term efficacy. **Methods:** Between September 2001 and May 2016, 112 CDC patients successfully underwent laparoscopic hepaticojejunostomies. The giant CDCs were evacuated by suction to create adequate working space. To facilitate exposure, a series of trans-abdominal retraction sutures were placed through serosa of gallbladder fundus, anterior wall of proximal common hepatic duct, mid-to-distal portion of anterior cyst wall. Cyst dissections were carried out along anterior-lateral to posteriormedial direction. Ductoplasties were performed in patients combined with hepatic duct strictures or aberrant hepatic ducts. In patients with aberrant right hepatic arteries crossing anteriorly to proximal common hepatic ducts, anterior right hepatic arteries were repositioned behind proximal common hepatic ducts. Localized mucosectomies were performed in patients with occult perforations to prevent injury of adjacent structures caused by dense adhesions. **Main Result:** Mean age at surgery was 6.16 months (7 days-7.75 years). Average operative time was 3.50 hours. Postoperative hospital stay and resumption of full diet were 5.12 days and 2.50 days respectively. Drainage duration was 3-10 days. Median follow-up period was 48 months (1-176 months). No mortality or morbidities of anastomotic stricture, cholangitis, intrahepatic duct stone formation, intrahepatic reflux, pancreatic leak, pancreatic caculi formation, or carcinoma occurred. One patient encountered bile leak, and cured spontaneously by 10 days drainage. Liver function and amylase level normalized with postoperative 1 year. **Conclusion:** Laparoscopic one-stage definitive surgery for giant CDC is feasible and safe. Intermediate to long-term efficacies are satisfactory.

040 - OA
Title: Early Clinical Outcome of Staged Laparoscopic Traction Orchidopexy for Abdominal Testes
Authors: Mohamed A S Abouheba, MD(1), Sameh M Shahata, MD(2)
Institutions: Alexandria University(1, 2)
Category: Laparoscopy and Robotics
Keywords: Abdominal Testis,Laparoscopy,Traction - lengthening
Aim of the Study: To assess the short-term clinical outcome of the novel Shehata technique of laparoscopic traction - lengthening for abdominal testes in a single center over a 12 months period. **Methods:** 47 boys (3 bilateral) presented with impalpable testes making a total of 50 units of abdominal testes to a single center over 12 months. Those underwent preoperative U/S Doppler scan before laparoscopic exploraion for testicular artery & vas deferens that were traced to their meeting point to locate the abdominal testes. All 50 testes had short vessels mandating traction nearby the contralateral ASIS. After 12 weeks, all laparoscopic-assisted subdartos orchidopexy was attempted. All underwent U/S Doppler scan 3 & 6 months after orchidopexy. **Main Result:** The 47 cryptorchid boys presented at a mean age of 3 years 2 months (range: 6 months - 8 years). Out of the 50 impalpable testes, 9 were non-visualized on preoperative U/S Doppler scan & another 16 were vanishing on laparoscopic exploration. The remaining 25 testes were fixed near the contralateral ASIS. Out of which, 3 slipped traction at the 2nd stage. A pre-definitive U/S Doppler scan confirmed viability of all testes-under-traction. All 25 elongated testes were mobilized & fixed in the ipsilateral hemiscrota within subdartos pouch (of de Netto). All 25 fixed testes were confirmed viable on U/S Doppler scan 3 & 6 months. **Conclusion:** The novel staged laparoscopic traction-lengthening for abdominal testes is safe, easy and convenient as evidenced by our limited early experience. Neither internal herniation complicated the traction period nor testicular atrophy (by undue tension) complicated the traction or follow-up periods. We advocate this technique as an alternative to the de facto Fowler-Stephens staged orchidopexy that entails risky division of the testicular vessels.

041 - OA
Title: Extended experience with vesicoscopic ureteral reimplantation: highly successful at correcting primary reflux
Authors: Venkata R Jayanthi, MD(1)
Institutions: Nationwide Children's Hospital(1)
Category: Laparoscopy and Robotics
Keywords: Ureteral reimplantation,Reflux,Laparoscopy
Aim of the Study: Ureteral reimplantation is the gold standard for the surgical management of vesicoureteral reflux. There are few reports however on minimally-invasive approaches to ureteral reimplantation and herein we present our extended experience with vesicoscopic repair of primary reflux. **Methods:** We retrospectively reviewed all patients who underwent vesicoscopic ureteral reimplantation at our institution. Only patients with primary reflux with standard indications for correction requiring a nontapered reimplant were considered to be appropriate candidates. Under CO2

"pneumovesicum" a 5 mm camera port and two 3 mm working ports were placed directly into the bladder. In a manner analgous to open repair, the ureters were mobilized, submucosal tunnels were created and ureters were transposed to the contralateral side and secured. Postoperatively, the bladder was drained overnight. All patients underwent ultrasonography at 1 month and were offered cystography at 3 months postoperatively. **Main Result:** The series consists of 180 patients, 164 females and 16 boys ranging in age from 16 months to 38 years. There were 134 bilateral repairs and 46 unilateral. There were 4 open conversions. Post operative cystography was obtained in 99 patients and was normal in 93 (94%). The 6 with persistent reflux included 5 “true” failures and one who developed contralateral reflux after unilateral repair. Four of 5 true failures occurred in the first 30 patients. There has been only one positive study in the last 50 postoperative studies obtained. Complications included bladder stones in one, extraperitoneal urine leak in the first patient and ureteral obstruction in 2. The latter 2 had extrinsic compression of the ureterovesical junctions by urinomas and were managed by redo reimplantation. **Conclusion:** Vesicoscopic ureteral reimplantation is a technically challenging procedure to learn. However, after the learning curve, success rates appear to be equivalent to open repair. Vesicoscopic ureteral reimplantation is a minimally invasive procedure for the definitive repair of primary reflux.

043 - OA
Title: Laparoscopic Pyloromyotomy experience feedback
Authors: Aurelien BINET, MD(1), Clémence KLIPFEL-LHOMMET, MD(2), François BASTARD, MD(3), Pierre MEIGNAN, MD(4), Karim BRAÏK, MD(5), Anne LE TOUZE, MD(6), Caroline SZWARC, MD(7), Thierry VILLEMAGNE, MD(8), Michel ROBERT, MD(9), Hubert LARDY, MD(10)
Institutions: Universitary Hospital of Tours - Gatien de Clocheville Hospital(1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
Category: Laparoscopy and Robotics
Keywords: Laparoscopic pyloromyotomy ,pyloric stenosis ,Experience review
Aim of the Study: Laparoscopic pyloromyotomy (LP) is a minimally invasive surgical technique used in pyloric stenosis treatment. This technique is safe, effective and does not show more complications than laparotomy. However there are significantly less scars. This study evaluates surgical treatment of pyloric stenosis using Laparoscopy **Methods:** Monocentric retrospective study including 407 cases from January 1996 to January 2016. All patient data was recorded, including per-operative data (operation length and complications) and postoperative recoveries (renutrition, vomiting and complications). **Main Result:** This study confirms pyloric stenosis epidemiology: seasonality, male prevalence (4/1). All patents were significantly born at term (39±2 weeks of amenorrhea). The average age in which they received treatment was = 40±16 days, duration of pre-hospitalisation vomiting = 7±6 days. Various weight losses (97±127g). Regurgitation history is comparable to the general population (25%). Delay of renutrition = 7 hours post-operative; delay of full renutrition = 59 hours. Use of grade II analgesics in 0.7% cases. Average operation time = 24±13. Changeover in 3% cases of which 2/3 for mucosa perforation. Surgical revision in 3% of cases. The operating time is significantly bound up to the length of the pylorus and impacts significantly on the deadline of complete refeeding. The per-operative complications are significantly bound up to the sex, to the importance of the loss of weight before hospitalization as well as to the preoperative weight. **Conclusion:** Surgical treatment of pyloric stenosis by Laparoscopic pyloromyotomy is a reliable technique allowing the child to leave the hospital in average 2 days after the operation. The post-operative renutrition protocol must be adapted to the pre-hospitalisation weight loss. This technique does not provide pain and the post-operative complications are not superior to the umbilical pathway.

044 - OA
Title: Reducing the learning curve of laparoscopic appendectomy by prediction of simple appendicitis using C-Reactive Proteins
Authors: Boateng Nimako, MD(1), Alp Numanoglu, MD(2), Sharon Cox, MD(3)
Institutions: (1), Red Cross War Memorial Children's Hospital(2, 3)
Category: Laparoscopy and Robotics
Keywords: appendectomy ,laparoscopy ,CRP
Aim of the Study: We previously established that in resource limited settings complicated appendicitis rate is significantly higher than simple appendicitis. This factor discourages trainees from performing laparoscopic appendectomies, as they are reluctant to operate laparoscopically on the more difficult complicated appendicitis. This study aims to assess if it is possible to differentiate between simple and complex appendicitis using the C-reactive protein (CRP) value and subsequently reduced the laparoscopic learning curve by selectively operating on simple appendicitis. **Methods:** The recorded CRP of children under 13 years who had appendectomy at Red Cross War Memorial Children’s Hospital from 2010 to 2014 was retrospectively analyzed. The type of appendicitis (Simple or complex), method of operation (Laparoscopic, LA or Open, OA), operating time, conversion rate, and patient characteristics were recorded. CRP values were then compared with the type of appendicitis diagnosis. **Main Result:** 276 patients who had CRPs documented were analyzed; 64 (23%) had LA and 212 (77%) had OA. There were 124 (44.9%) simple and 152 (55.1%) complicated appendicitises. The operating time was longer for LA than OA in both simple and complicated appendicitis: simple (85.0±29.5 versus 42.5±16.7minutes,$p<0.0001$) and complicated (92.5±31.49 versus 57.0±23.67, $p<0.0001$). More LA were converted in the complicated than simple appendicitis (12

versus 3). CRP was statistically significantly lower in simple than complicated appendicitis (37.0±81 mg/L versus 143.5±104.5 mg/L, p<0.0001). The positive predictive value of CRP in diagnosing simple appendicitis was 95.65% (CI: 78.05% to 99.89%) and the negative predictive value 65.85% (CI: 49.41 to 79.92%). **Conclusion:** CRP greater than 37umol/l can predict simple appendicitis with specificity of 96% and sensitivity of 61%. There were missed opportunities in the use of laparoscopy for appendectomy in simple appendicitis cases. CRP could be used to identify these cases and these together has the potential of reducing the learning curve by selectively using laparoscopy for the simple appendicitis.

045 - OA
Title: SURGICAL TREATMENT OF VARICOCELE IN THE CHILDREN'S HOSPITAL ZAGREB – OUR EXPERIENCE FROM 2009 TO 2014
Authors: Fran Stampalija, MD(1), Zoran Bahtijarevic, MD(2), Mislav Bastic, MD(3), Anto Pajic, MD(4), Nikica Lesjak, MD(5), Bozidar Zupancic, PhD(6)
Institutions: (1), Children's Hospital Zagreb(2, 3, 4, 5, 6)
Category: Laparoscopy and Robotics
Keywords: laparoscopy,varicocele,Palomo
Aim of the Study: We present our varicocele treatment results using the Palomo method. We perform the procedure using the laparoscopic or open technique. **Methods:** We retrospectively analyzed all of our patients treated from 2009 to 2014. The data was collected from our Hospital Information System (HIS). We analyzed patient's age, length of hospital stay, symptoms and ultrasound (US) results, surgical method and complications. **Main Result:** We surgically treated 297 patients. Median age was 14.7 years, ranging from 9 to 19 years. Subjective complaints and testicular vein diameter >3,5 mm are relative indications for surgery. Absolute indications are reduction in testicular volume by 30% or more and pathological semen analysis results in older patients. No patients had testicular size reduction and only 27 patients had a pathological semen analysis (all 15+ years of age). We performed 33 open Palomo procedures and 264 laparoscopic Palomo procedures. Median length of hospital stay was 36 hours, ranging from 12 to 72 hours. One patient was rehospitalized due to fever and low RBC and was managed conservatively. We had no recurrences. Hydrocele was observed in 46 patients (15,5%), of which 15 patients (5,1%) required surgery for hydrocele. **Conclusion:** Absolute indications for varicocele surgery in patients younger than 18 years are still controversial and a subject of debate. We advocate surgical treatment in patients who have subjective complaints, large vein diameter on US, reduction in testicular size by 30% or more and pathological sperm analysis. Laparoscopic method is the preferred method of treatment.

046 - OA
Title: FUNCTIONAL OUTCOME AFTER LAPAROSCOPIC ASSISTED GASTRIC PULL-UP INCLUDING PYLORIC DILATATION IN LONG-GAP ESOPHAGEAL ATRESIA
Authors: Justus Lieber, MD(1), Seher Cavdar, MD(2), Florian Obermayr, MD(3), Hans-Joachim Kirschner, MD(4), Jörg Fuchs, PhD(5)
Institutions: University Children‘s Hospital, Department of Pediatric Surgery and Pediatric Urology, Tübingen, Germany(1, 2, 3, 4, 5)
Category: Laparoscopy and Robotics
Keywords: laparoscopic assisted gastric pull-up,minimal invasive surgery,long-gap esophageal atresia
Aim of the Study: We report technique and functional results after laparoscopic assisted gastric pull-up (LGPU) in patients with long-gap esophageal atresia (LGEA). **Methods:** Retrospective data analysis of 9 children with LGEA (five type II, three type IIIA, one type IIIB, three patients had VACTERL-association). Using three ports, surgical steps included releasing the gastrostomy, transumbical ante-situ section of the stomach including pyloric balloon-dilation, and transhiatal retromediastinal blunt dissection through a laparoscopic view finishing with LGPU for cervical anastomosis to the proximal esophagus. **Main Result:** All operations were performed without surgical complications, conversions, or reoperations. The average age was 166 days (range 31 – 266), the body weight 6,5kg (6 – 7,7). Mean operation time was 247 minutes (155 – 383). The time under mechanical ventilation was 6 days (1 – 24). Transanastomotic tube feeding began after 1 day, oral feeding after 12 days. Complications were transient Horner’s syndrome (2), pleural effusion requiring drainage (2), and cardial decompensation (1). After a follow-up of 72 months (6 – 130) all children have functional grafts, satisfactory weight gain (3.-11. percentile) and oral feeding without dumping or duodeno-gastric reflux. Two patients with congenital heart defects required a temporary jejunostomy. Mild anastomotic (1) or pyloric (5) stenosis was resolved with endoscopic dilatations. Lung function tests were normal in 5/9 and abnormal in 1/9 patients. **Conclusion:** Functional outcome after LGPU in patients with LGEA is good. The laparoscopic retrocardial preparation preserves vascular and nerval structures especially in patients with cardiac anomalies or previous operations. This minimally invasive technique including a pyloric dilatation instead of plasty may also prevent dumping syndrome even though additional dilatations may be required in some cases.

047 - OA
Title: Is it necessary to disconnect the hernial sac during laparoscopic repair of congenital inguinal hernia: A randomized controlled study
Authors: Essam A Elhalaby, MD(1), Hisham A Almetaher, MD(2), Amel A Hashish, MD(3), Kamal M Abou Shanab, MD(4)
Institutions: Tanta University(1, 2, 3, 4)
Category: Laparoscopy and Robotics
Keywords: congenital inguinal hernia,laparoscopy,outcome
Aim of the Study: laparoscopic repair of congenital inguinal hernia (CIH) in children has been popularised during the past decade. Different laparoscopic techniques have been described. The aim of this study was to find out if disconnection of the hernial sac at the level of internal ring during laparoscopic repair of CIH is necessary or not in terms of surgical complications and duration. **Methods:** This randomized controlled trial study included 120 children with inguinal hernia at Tanta University Hospital, Egypt, between 2013 and 2015. 86 patients had unilateral hernia , while 34 proved to have bilateral hernia. Patients were equally randomized into two groups: group I: Laparoscopic ligation of sac at the internal ring level without disconnection of the sac. Group II: disconnection of the hernial sac with closure of the internal inguinal ring. The patients were evaluated as regard to operative time, immediate postoperative course (scrotal hematoma, edema, wound infection), delayed complication up to 1 year after surgery (recurrence, hydrocele, testicular atrophy) **Main Result:** The mean operative time was significantly shorter in group I compared to group II (35.5 ± 6.5 min versus 45.5 ± 8.5 min) ($P < 0.004$). The incidence of early complications was similar in both groups (3 cases in group I and 4 cases in group II)($P = 0.55$). No late complication was observed in any group. **Conclusion:** Disconnection of the hernial sac during laparoscopic repair of congenital inguinal hernia is associated with longer operative time without added benefit in terms of minimising the incidence of recurrence or development of postoperative hydrocele.

048 - OA
Title: Comparison of combined laparoscopic and modified posterior sagittal approach with total laparoscopic approach of anorectoplasty for rectoprostatic fistula in anorectal malformation: a randomized study
Authors: VIKESH AGRAWAL, MD(1), HIMANSHU ACHARYA, MD(2)
Institutions: NETAJI SUBHASH CHANDRA BOSE MEDICAL COLLEGE JABALPUR INDIA (1, 2)
Category: Laparoscopy and Robotics
Keywords: LAPAROSCOPY,ANORECTAL MALFORMATION,ANORECTOPLASTY
Aim of the Study: To compare outcome of combined laparoscopic and modified posterior sagittal approach with total laparoscopic approach of anorectoplasty for rectoprostatic fistula in anorectal malformation. **Methods:** Patients with rectoprostatic fistula were included. Patients were randomized (with block randomization) in two groups and operated with either total laparoscopic approach or combined approach. Outcome of two approaches was compared. **Main Result:** 28 patients were included in study. 13 patients were operated with total laparoscopic approach (Group-1) and 15 patients were operated with combined approach (Group-2). Mucosal prolapse occurred in 7 patients in group-1 and 2 patients in group-2 ($p < 0.05$). Anal stenosis occurred in 3 patients in group-1 and 3 patients in group-2 ($p > 0.05$). Kelly score, visual sphincter contraction and cosmesis of anal region were assessed in patients with 6 months or longer follow up period. In group-1 Kelly score was fair in all 9 patients, while in group-2 it was good in 2, fair in 8 and poor in 1 patient ($p > 0.05$). In group-1 anal sphincter contraction was seen on crying in 8 patients and on straining in 1 patient, while in group-2 it was seen on straining in 5 patients and on tactile stimulus in 6 patients ($p < 0.05$). In group-1 cosmetic appearance of anal region was abnormal in 8 patients and near normal in 1 patient, while in group-2 it was near normal in 3 patients and normal in 8 patients ($p < 0.05$). **Conclusion:** Combined approach has statistically significant lower mucosal prolapse rate, better sphincter contraction and better cosmetic appearance of anal region compared to total laparoscopic approach. Anal stenosis rate and short term functional outcome (Kelly score) were similar in two approaches. Further study is required for long term outcome.

OA9. ORAL ABSTRACTS
Monday, October 10 | 17:15 – 19:00 | Maryland A/B

MODERATORS: HIROAKI KITAGAWA, A. ALFRED CHAHINE

059 - OA
Title: Meconium related ileus in very low birth weight infants - Its peculiarities among surgical intestinal disorders: A multi-center study
Authors: Genshiro Esumi, MD, Ph.D.(1), Tomoaki Taguchi, MD, Ph.D., F.A.C.S.(2), Satoko Ohfuji, MD, Ph.D.(3), Masahiro Hayakawa, MD, Ph.D.(4), Naoto Urushihara, MD, Ph.D.(5), Akiko Yokoi, MD, Ph.D.(6), Hiroshi Take, MD,

Ph.D.(7), Jun Shiraishi, MD, Ph.D.(8), Hideshi Fujinaga, MD, Ph.D.(9), Kensuke Ohashi, MD, Ph.D.(10), Kyoko Minagawa, MD, Ph.D.(11), Maiko Misaki, MD, Ph.D.(12), Satoko Nose, MD, Ph.D.(13), Hiroomi Okuyama, MD, Ph.D.(14)
Institutions: Department of Pediatric Surgery, Graduate School of Medical Sciences, Kyushu University, Fukuoka(1, 2), Department of Public Health, Faculty of Medicine, Osaka City University, Osaka(3), Center for Maternal-Neonatal Care, Nagoya University Hospital, Nagoya(4), Department of Pediatric Surgery, Shizuoka Children's Hospital, Shizuoka(5, 6), Department of Pediatric Surgery, Kanagawa Children's Hospital, Yokohama(7), Department of Neonatology, Osaka Medical Center and Research Institute for Maternal and Child Health, Izumi(8), Division of Neonatology, National Center for Child Health and Development(9), Department of Pediatric Surgery, Nihon University School of Medicine, Tokyo(10), Department of Pediatrics, Hyogo College of Medicine, Nishinomiya(11, 12, 13), Department of Pediatric Surgery, Osaka University Graduate School of Medicine, Suita(14)
Category: Neonatal Surgery
Keywords: meconium related ileus,neonate,very low birth weight
Aim of the Study: Meconium-related ileus (MRI) is one of the most serious surgical intestinal disorders occurring in very low birth weight infants (BW <1500g, VLBWIs). The aim of this study is to examine the peculiarities associated with this phenomenon in regard to other disorders, such as necrotizing enterocolitis (NEC) and focal intestinal perforation (FIP). **Methods:** As a retrospective multi-center study of 11 institutes in Japan, VLBWIs who underwent laparotomy for MRI, NEC or FIP for the 10-year period from 2003 were included. They were classified according to each diagnosis (MRI 54 cases, NEC 47, FIP 72). The background data and operative findings were compared. **Main Result:** The proportion of small-for-gestational-age (SGA, body weight below the 10th percentile for the gestational age) infants was significantly larger in the MRI group (MRI 62%, FIP 21%, NEC 25%, P<0.0001). Their median surgery date was in the order of FIP, MRI, NEC (5, 7, 10, respectively), and significant negative correlations between their gestational age and surgery date were found only in the MRI and FIP groups, but not in the NEC (MRI p<0.0001, FIP p<0.0001, NEC p=0.0963). Among infants with intestinal perforation, the presence of pre-operative free-air was much larger in the MRI group (MRI 95%, FIP 58%, NEC 50%, P=0.0007). **Conclusion:** The high proportion of SGA infants indicates that MRI correlated with growth retardation, not only with prematurity. The high proportion of free-air detected in MRI was thought to be due to an elevation of intestinal gas pressure that preceded the occurrence of perforation. Negative correlation between gestational age and surgery date in MRI and FIP indicates that the intestinal peristalsis might begin at a certain phase after birth in the infants of these diseases.

062 - OA
Title: Management of Congenital pouch colon: our experience.
Authors: Jiledar Rawat, MBBS, MS, MCh Pediatric Surgery(1), Sudhir Singh, MBBS, MS, MCh Pediatric Surgery(2), Ashish Wakhlu, MBBS, MS, MCh Pediatric Surgery(3), Shivnarain Kureel, MBBS, MS, MCh Pediatric Surgery(4)
Institutions: King George's Medical University(1, 2, 3, 4)
Category: Neonatal Surgery
Keywords: Pouch colon,Congenital short colon,Anorectal malformation
Aim of the Study: To present our experience of management, associated anomalies and histopathology of pouch colon
Methods: Retrospective study of 6 years duration from January 2009-15.The medical records of these patients were reviewed for demographic information, clinical features, investigations performed, operative notes, postoperative events, and surgical outcome. Follow up of patients were 6 months to 4 ½ years. **Main Result:** During study period 64 cases of CPC were managed, these comprised 10.2 % of all ARM cases and 23.7 % of high ARM cases. Male to female ratio was 7:1 (56:8). Diagnosed by plain radiography before initial surgery in 81% (48/59) cases. Primary surgery was window colostomy in 38, colostomy in 11 and ileostomy in 10cases. Five cases were referred from other centre after initial surgery. A total of 50 patients completed their all stage of surgery, 4 cases expired after initial surgery due to severe sepsis and associated severe anomalies and remaining 10 are waiting for completion of stage. In 50 patients who completed their all stage, 34 patients had complete pouch in which coloplastywas performedby our technique, in rest of 16 cases excision of CPC and colonic pull through done in view of adequate colonic length (partial pouch) for pull through. In follow up no colonic dilatation were noted. All patients had fair result of bowel control, growth and development. **Conclusion:** Management of pouch colon require experience and expertise. Excision of pouch may not be necessary in complete pouch colon. As in our experience, properly created coloplasty may fetch better result.

064 - OA
Title: OUTCOME OF STOMA REVERSAL IN BABIES WITH NECROTISING ENTEROCOLITIS – EARLY VS LATE CLOSURE
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Category: Neonatal Surgery
Keywords: NEC,Stoma,Newborn surgery
Aim of the Study: Newborns undergoing surgery for necrotizing enterocolitis (NEC) often require a stoma. Currently, present, consensus is lacking regarding the ideal timing for stoma reversal (SR). Our aim was to determine if there is

difference in outcomes of infants whose enterostomy was reversed early versus late. **Methods:** We retrospectively reviewed the medical records of all patients who had stoma formation for NEC and underwent SR between 2009 – 2015. Data collected included gestation age, birth weight, indications for laparotomy, complications due to stoma, age and weight at time of SR, ventilator support after SR, time to establish feeds and complications after SR. For analytical purposes, patients were divided into 2 groups; Early closure (n=15) with SR done within 10 weeks and Late closure (n=21) after 10 weeks. **Main Result:** Of 36 patients (18M: 18F), 30 had stoma fashioned for bowel perforation and 6 for gangrenous bowel in the initial laparotomy. Post-stoma closure, 9/15 of the early group required ventilator support while it was not required in any of the late group. Longer time to full feed (11.3 days vs 8.0 days) was noted in the early group as compared to the late group. Median postoperative hospital stay in the early closure group was 31 (18-35) days while the late closure group was 7 (4-54) days. More patients in the early group had complications (intestinal obstruction - 2 vs 1, incisional hernia - 3 vs 0, anastomotic leak - 1 vs 0, and anastomotic stricture 1 vs 0) as compared to the late group. One patient died in the early group due to Staphylococcus septicaemia. **Conclusion:** Early closure of stoma within 10 weeks after initial laparotomy was associated with higher morbidity and required a longer postoperative support. A delayed closure allowed more optimal growth and maturation of these premature babies to improve outcome.

065 - OA

Title: Impact of Fetal Counselling on outcome of Antenatal Congenital Surgical Anomalies

Authors: SHILPA SHARMA, PhD(1), Ranjana Bhanot, MSW(2), Dipika Deka, MD(3), Minu Bajpai, PhD(4), Devendra K Gupta, M Ch, D Sc(5)

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Category: Neonatal Surgery

Keywords: antenatal diagnosis,fetal counselling,congenital anomalies

Aim of the Study: To prospectively analyze cases of antenatal congenital surgical anomalies (ACSA) undergoing fetal counselling and those presenting in the post natal period following an antenatal diagnosis (PACSA). **Methods:** Pregnant ladies with ACSA dealt from April 2014 to April 2016 that presented for fetal counseling and surgical opinion following an antenatal diagnosis were analyzed for spectrum, presentation and outcome. **Main Result:** 117 cases of ACSA (68) and PACSA (49) presented to us. The gestational age of ACSA; PACSA was 17-37;17-39 weeks (median -24;32 weeks). 19 ACSA and 1 PACSA presented before 20 weeks of gestation. The antenatal diagnosis in ACSA;PACSA included urological – 26;31, congenital diaphragmatic hernia (CDH)-5; 1 , gastrointestinal – 5; 5, lung and chest anomalies-5;1, intraabdominal cysts-4; 1 , abdominal wall defects-4;0, neurological- 10; 5, tumor-3;3, limb anomaly in 1; 1, tracheoesophageal fistula- 1;1, conjoint twins 1;0, hepatomegaly1;0, cardiac anomalies 2;0. Antenatal vesicoamniotic shunt was placed in one case. One patient underwent amnioinfusion for oligohydramnios but later had an intrauterine demise. 17 ACSA and 24 PACSA cases required surgical intervention in the postnatal period in early infancy. 9 ACSA underwent medical termination of pregnancy and there were 4 intrauterine demises. Nine ACSA cases died during the neonatal period, 5 after surgery, including 2 cases of CDH, 1 gastroschisis, 1 duodenal atresia, 1 conjoint twins, 1 megacystitis with motility disorder and 3 posterior urethral valves. All cases of PACSA are alive. **Conclusion:** The most common congenital surgical anomalies diagnosed during the antenatal period are urological followed by neurological. Antenatal counseling for ACSA can be better managed with continued support from gynaecologists and ultrasonologists with intermingling parental involvement. PACSA have a better outcome as they have reached hospital tiding over the initial crucial period.

066 - OA

Title: Assessment of Renal Tissue Oxygen Saturation in Congenital Diaphragmatic Hernia patients on Extracorporeal Membrane Oxygenation

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Category: Neonatal Surgery

Keywords: Near Infrared Spectroscopy,ECMO,Congenital Diaphracmatic Hernia

Aim of the Study: To determine the utility of renal tissue oxygenation using Near Infrared Spectroscopy (rNIRS) as a surrogate for renal perfusion, and thus urine output, in congenital diaphragmatic hernia (CDH) patients that required extracorporeal membrane oxygenation (ECMO). **Methods:** Neonates with CDH who required ECMO therapy and NIRS monitoring from 2012 to 2015 were reviewed. Continuous renal NIRS measurements, mean arterial pressure (MAP) and urine output data were extracted. Periods of anuria (NU), adequate urine output >1ml/kg/hr (AU), and low urine output <1ml/kg/hr (LU) where no interventions were performed were isolated and analyzed. **Main Result:** Over 1,500 hours of continuous rNIRS were obtained from six neonates that had complete data. The average rNIRS value during AU was significantly higher than during periods of oliguria or anuria 83.93±6.26, 76.12±2.98 and 67.18±6.4 respectively ($p<0.001$). ROC curve showed rNIRS of 76% was highly predictive of adequate urine output. MAP was significantly lower during periods of anuria (36.42±10.26) compared to periods of low (42.85±7.40) and adequate urine output (42.99±5.25) ($p<0.001$). Serum lactate levels also showed a similar trend, as they were much higher during NU

(3.77±2.47) compared to AU (1.74±0.93) and LU (1.28±0.56) ($p<0.001$). There appeared to be no differences in the pH levels among the groups. **Conclusion:** NIRS measurement of renal tissue oxygenation correlates with urine production. Lower rNIRS values are noted as urine output declines and precedes a decline in MAP. Renal NIRS may be a suitable non-invasive means of determining adequacy of renal perfusion and attendant changes in urine output in neonates with complex fluid shifts.

068 - OA
Title: Risk-Factors Associated with Recurrence Following Repair of Congenital Diaphragmatic Hernia
Authors: Yangyang R Yu, MD(1), Fariha Sheikh, MD(2), Oluyinka O Olutoye, MD(3), Raheel Ali, BA(4), Timothy C Lee, MD(5), Adesola Akinguotu, MD(6), Patricio Lau, MD(7), Irving Zamora, MD(8), Darrell L Cass, MD(9)
Institutions: Texas Children's Hospital(1, 3, 4, 5, 6, 7, 8, 9), (2)
Category: Neonatal Surgery
Keywords: CDH,recurrence,patch
Aim of the Study: The purpose of this study was to examine risk-factors for recurrence following repair of neonatal CDH. **Methods:** A retrospective analysis was performed of all CDH patients from January 2004-2016. Data analyzed included: repair on ECMO, patch repair, presence of hernia sac or associated defects, prenatal markers of severity, and defect size classification (CDH study group class A-D). **Main Result:** Of 231 infants, 119 (52%) were male, 165 (71%) were diagnosed prenatally, 174 (75%) were left-sided, and 6 (3%) were bilateral. Of 203 infants (88%) who underwent surgical repair, 30 (15%) developed recurrence at median follow-up of 4.5 years (6.4 months-10.3 years). Median time of 8.3 months (1.1 months-9.3 years) lapsed between initial repair and recurrence. Only five (17%) developed a second recurrence at median of 11.8 months (2.4 months-2.3 years). Compared to class A or class B defects, class C and D defects had higher recurrence rates (0% vs. 10% vs. 21%, respectively; $p=0.01$). A patch was used in 11% of class A defects compared to 27%, 91% and 100% of classes B, C and D, respectively. For class C and D defects, patch repair led to lower recurrence (19% v. 50%, $p=0.1$). Repair on ECMO ($n=52$; 98% with a patch) resulted in 11% recurrence rate at median follow-up of 9.1 months (15 days-11 years). Prenatal lung-to-head ratio<1 ($p=0.04$) and observed/expected-total fetal lung volume<35% ($p<0.001$) were more likely to require patch repair but not associated with recurrence. Longer duration of mechanical ventilation (29 vs. 11 median days, $p<0.001$) was associated with recurrence. Presence of hernia sac led to a significantly lower recurrence rate (6%, $p=0.04$). **Conclusion:** Recurrence after CDH repair is higher in those with larger defects requiring mechanical ventilation. Patch repair in class C and D defects may decrease risk for recurrence. Repair on ECMO is not associated with increased risk for recurrence.

069 - OA
Title: SURGERY PLUS SCLEROTHERAPY AS A COMBINED APPROACH TO THE MANAGEMENT OF NEONATAL HEAD AND NECK GIANT LYMPHANGIOMAS
Authors: Vladimir Zarichansky, PhD(1), Andrey Prityko, PhD(2)
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Category: Neonatal Surgery
Keywords: lymphangiomas,neonates,face and neck
Aim of the Study: To present a preliminary review of our first experience in treatment of neonates with giant lymphangiomas of the neck and face (GLNF) using a bi-modal approach combining surgical excision with intraoperative sclerotherapy (SEIS). **Methods:** From January 2015 to April 2016, SEIS treatment of GLNF was used in 11 neonates, aged between 5 and 28 days, diagnosed on the prenatal US, symptomatic with compromised airway and difficulties in oral feeding. The SEIS procedure encompassed an open access to the cystic mass, removal of all accessible cystic components followed by sclerosing ablation of the microcysts located in the areas of difficult access and/or involving the vital anatomical structures. Tracheostomy was also carried out. The patient data were prospectively analyzed. **Main Result:** The GLNF extension as defined on the MRI was as follows: parapharengeal/paratracheal space in 8 cases, parotid region 6, oral floor and tongue base 7, face 11, skull base 9. In all cases, GLNF consisted of both macrocyst and microcystic components. All procedures were performed successfully with no intraoperative complications. Postoperatively, in all patients airway and oro-motor function were restored. Transient signs of neurapraxia of the major nerves involved were noted in 8 (72.73%) patients. These were resolved spontaneously within 1 month. At follow up from 1 to 12 months 9 (81.82%) patients showed no evidence of recurrence. In 2 (18.8%) cases there were residual/recurrent cysts at the tongue base and in the parotid region. **Conclusion:** In our experience, the SEIS appears be very efficient for management of neonatal GLNF promptly relieving symptoms of space-occupying compression to the neck, producing minimal complications and resulting in minimal reoccurrence.

070 - OA
Title: Aggressive meconium excretion at operation improves the prognosis of patients with meconium related ileus
Authors: Yuko Tazuke, MD(1), Hiroomi Okuyama, MD(2), Masahiro Hayakawa, MD(3), Satoko Ohfuji, MD(4), Jun Shirashi, MD(5), Naoto Urushihara, MD(6), Kensuke Ohashi, MD(7), Akiko Yokoi, MD(8), Kyoko Mochizuki, MD(9), Hiroshi Take, MD(10), Hideshi Fujinaga, MD(11), Kyoko Minagawa, MD(12), Taizou Furukawa, MD(13), Kouji Nagata, MD(14), Tomoaki Taguchi, MD(15)

Institutions: Pediatric Surgery, Osaka University Graduate School of Medicine(1, 2), Center for Maternal-Neonatal Care, Nagoya University Hospital(3), Public Health, Faculty of Medicine, Osaka City University(4), Neonatology, Osaka Medical Center and Research Institute for Maternal and Child Health(5), Pediatric Surgery, Shizuoka Children's Hospital(6), Pediatric Surgery, Nihon University School of Medicine(7), Pediatric Surgery, Hyogo Children's Hospital(8), Pediatric Surgery, Kanagawa Children's Hospital(9, 10), Neonatology, National Center for Child Health and Development(11), Pediatrics, Hyogo College of Medicine(12), taizow@koto.kpu-m.ac.jp(13), Pediatric Surgery, Kyushu University(14, 15)
Category: Neonatal Surgery
Keywords: meconium related ileus,surgery,prognosis
Aim of the Study: Meconium-related ileus (MRI) is characterized by functional ileus due to impaired meconium extraction not associated with cystic fibrosis. Very low-birth weight infants (VLBWIs) have a high incidence of MRI, which causes intestinal perforation and has a high mortality rate. We retrospectively examined factors which improve the clinical outcome of MRI. **Methods:** A retrospective study was conducted at 11 institutes in Japan. We reviewed VLBWIs who underwent laparotomy for MRI causing perforation or intractable ileus, between 2003 and 2012. A total of 55 MRI patients was included in this study. The patients were divided into two groups according to status of meconium extraction; 28 patients received enterostomy with aggressive meconium excretion at operation (ME group), while 27 patients received enterostomy without meconium extraction (M group). The statistical analysis was performed using the chi-square and Mann Whitney U tests, with $p < 0.05$ set as the indicator of significance. Numerical data was presented as median(range). **Main Result:** The ME and M groups were compatible in terms of gestational age(ME:28weeks[22-36 weeks] vs. M: 27weeks[22-35weeks],p=0.23) and birth weight (ME:717g(388-1372g] vs. M:602g(332-1266g),p=0.07). No significant differences were noted between the ME and M groups in terms of the age at operation, operation duration, perforation (ME:38% vs. M:37%,p=0.92), and the age at initiation of enteral feeding (ME:14 days[5-40 days], M:19 days[3-738 days],p=0.20). However, the mortality rate was significantly lower in ME group(11%) than in M group(33%)(p=0.04). Furthermore, the age of enterostomy closure was significantly younger in ME group(83 days[15-264 days])than in the M group (157 days[37-486 days]) in the survivors (p=0.017). **Conclusion:** Our data suggested aggressive meconium excretion at operation improved the mortality and brought forward the timing of ostomy closure in MRI patients. Meconium extraction at operation might improve the following clinical course of MRI.

071 - OA
Title: Decreased oxidative stress resistance and necrotizing enterocolitis development in preterm newborns.
Authors: Anna-Katharina Winkler, MD(1), Katia Fieger, MS(2), Marc Pollmeier, MS(3), Uwe Knippschild, PhD(4), Doris Henne-Bruns, MD(5), Alexandre Serra, MD PhD(6)
Institutions: Department of Surgery, University of Ulm(1, 2, 3, 4, 5, 6)
Category: Neonatal Surgery
Keywords: Necrotising enterocolitis,oxidative stress,ischemia/reperfusion injury
Aim of the Study: Necrotizing enterocolitis (NEC) is a dramatic disease that affects newborn and premature babies with an incidence inversely related to birth weight and age, and characterized by a postnatal inflammation of the intestine leading to death in 15 to 30% of affected children. The etiology of NEC and FIP (focal intestinal perforation) are still largely unknown. An ischemia-reperfusion (I/R) injury due to defective oxygenation of the intestines may be key to the development of NEC, since I/R leads to local ischemia, production and accumulation of toxic reactive oxygen species (ROS) and subsequent damage to the natural integrity of the intestinal wall. We aimed to investigate through tissue imaging and expression studies the role of I/R and ROS in NEC. **Methods:** We have studied through semi-quantitative Immunohistochemistry (IHC) and real-time PCR (light-cycler qPCR) intestinal samples from children with NEC (n=24) or FIP (n=9), comparing to control samples (n=16). The primary antibodies were monoclonal mouse Anti-SOD1 (1:50), Anti-eNOS (1:50) und Anti-iNOS (1:5) (Abcam Co., Cambridge, UK). **Main Result:** We have observed a significantly higher expression of SOD1 and eNOS (but not iNOS) in children with FIP and controls compared to NEC (p=0.003), suggesting that NEC children do not possess sufficient ROS scavengers in the event of an I/R due to hypoxia or infection. Preliminary qPCR data tend to confirm these findings. **Conclusion:** Our data suggest an association between the development of NEC and I/R mediated by ROS, possibly due to a critical window in which immature ROS scavenging systems are not yet effective. This hypothesis is currently under investigation by our group.

072 - OA
Title: Outcomes of Congenital Diaphragmatic Hernia Repair on ECMO
Authors: Jamie Golden, MD(1), Nicole Jones, BS(2), Jessica Zagory, MD(3), Shannon Castle, MD(4), David Bliss, MD(5)
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Category: Neonatal Surgery
Keywords: ECMO,Congenital Diaphragmatic Hernia,Outcomes
Aim of the Study: Extracorporeal membrane oxygenation (ECMO) is frequently applied to refractory pulmonary hypertension in congenital diaphragmatic hernia (CDH). Some advocate for early repair before or while on ECMO to improve outcomes. However, infants who are repaired post-decannulation have excellent outcomes. These infants

benefit from repair after stabilization and without anticoagulation. We evaluate outcomes of infants with CDH to determine the utility of late repair on ECMO or post-decannulation. **Methods:** Following IRB approval, records of infants (0-30 days) with CDH (2004-2014) at a pediatric hospital were retrospectively reviewed. Demographics, co-morbidities, operative records, timing of repair, ECMO use, complications, and outcomes were evaluated. **Main Result:** CDH was diagnosed in 177 infants of which 66 (37%) required ECMO. Of those infants on ECMO, 11 died prior to repair, 33 were repaired post-decannulation, and 22 were repaired on ECMO. Repair was delayed in patients who required ECMO compared with those who did not (19 versus 10 days, $p<0.001$). Patients who were repaired on ECMO had longer ECMO runs (22 versus 12 days, $p<0.001$) and higher rates of bleeding and mortality than those repaired after decannulation. Overall survival was 54% in infants who required ECMO, 65% in those who survived to CDH repair, and 85% in those who were decannulated prior to repair. 18% (N=4) of neonates who underwent late repair on ECMO died of surgical site bleeding. The remainder of the mortality in this group was accounted for by severe pulmonary hypertension or sepsis late in their hospitalization. **Conclusion:** Infants who underwent repair of CDH after decannulation had excellent outcomes and no mortalities secondary to repair. Neonates who underwent repair late in the course of ECMO had a low, though non-negligible survival rate. It remains to be defined whether this is a direct effect of operative repair or other care escalations and expectations after surgical intervention.

073 - OA
Title: Outcome of thoracoscopic repair in neonatal congenital diaphragmatic hernia with different selection criteria
Authors: Zhong Wei, MD(1), He Qiuming, MD(2), Wang Zhe, MD(3), Yu Jiakang, MD(4)
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Category: Neonatal Surgery
Keywords: congenital diaphragmatic hernia,thoracoscopy,neonate
Aim of the Study: To evaluate the outcome of thoracoscopic repair of neonatal congenital diaphragmatic hernia (CDH) with different selection criteria. **Methods:** Clinical data of 30 neonates with CDH underwent thoracoscopic repair from September 2013 to May 2016 were analyzed. Patients were divided chronologically into early group and late group according to early (from September 2013 to November 2014) and late (from December 2014 to May 2016) selection criteria. Early selection criteria: weight beyond 2.0kg; liver in the abdomen; no intestinal obstruction; no severe cardiopulmonary anomalies; no high frequency oscillatory ventilation (HFOV) or extracorporeal membrane oxygenation (ECMO) required. Late selection criteria: no severe cardiopulmonary anomalies; no HFOV or ECMO required. All patients were followed up for 22.5 months (2-32months) **Main Result:** There were two laparotomy conversion, one case in early group was converted due to spleen laceration and the other in late group due to intolerance to CO_2 pneumothorax. There was significant difference in intraoperative mean lactate (0.88±0.16 mmol/L vs 1.43±0.91 mmol/L, P=.0342) but $PaCO_2$ (48±8 mmHg vs 54±14 mmHg, P=.1856) and pH (7.30±0.06 vs 7.24±0.08, P=.0538) in arterial blood gas test did not differ between early group and late group. Shorter operation time (110±25 min vs 127±28 min, P=.1498) and longer ventilator time (230±388 h vs 118±78 h, P=.2854) were found in late group but the difference was not significant. Incidence of recurrence was 6.6% (2/30), all recurrent cases were found in late group. The overall survival rate was 100%. **Conclusion:** With certain selection criteria, thoracoscopic repair is an appropriate procedure for neonates with CDH. The conversion rate and incidence of recurrence seems low.

074 - OA
Title: Percutaneous transhepatic cholecysto-cholangiography (PTCC): a case series describing an alternative to intraoperative cholangiography in high risks infants suspect for biliary atresia.
Authors: Katrina L Weaver, MD(1), Doug C Rivard, DO(2), Ashwini S Poola, MD(3), Richard J Hendrickson, MD(4)
Institutions: Children's Mercy Hospital(1, 2, 3, 4)
Category: Neonatal Surgery
Keywords: biliary atresia,percutaneous transhepatic cholecysto-cholangiography ,neonates
Aim of the Study: Infants with cholestasis and conjugated hyperbilirubinemia persisting beyond two weeks of age must be evaluated promptly to exclude biliary atresia (BA). BA progresses to cirrhosis and liver failure if portoenterostomy is not performed in a timely fashion. The gold standard to diagnose BA is intraoperative cholangiography(IOC) via laparotomy. Neonates that are critically ill or have significant comorbidites may not be good surgical candidates. An alternative is percutaneous transhepatic cholecysto-cholangiography (PTCC). We present three infants undergoing PTCC by interventional radiology (IR) yielding patency of the biliary system without the need for IOC. **Methods:** Case 1 is a 31 week male, with coarctation of the aorta, severe pulmonary hypertension, and 2q37 deletion. At 9 weeks of life he developed cholestatic hepatitis and a direct bilirubin of 7.2mg/dL despite Actigall use. HIDA scan showed hepatic uptake without clear excretion into bowel after 24 hours. Case 2 is a 32 week male, with severe ascites of unknown etiology requiring bi-weekly paracentesis and grade 1/2 intracranial hemorrhages. At 8 weeks of life he developed cholestatic hepatitis with direct bilirubin of 3.5mg/dL, a liver biopsy was performed, with pathology concerning for BA. Case 3 is a 7 week old male, who had been jaundiced since birth requiring prolonged phototherapy. At two weeks of age, jaundice persisted with elevated liver enzymes and direct bilirubin of 5.4mg/dL. Abdominal ultrasound was unable to identify a gallbladder or common bile duct. **Main Result:** All three infants had concern for BA on their diagnostic workup and were poor surgical candidates. IR performed PTCC in all patients, using transhepatic ultrasound guided

gallbladder access and subsequent contrast injection demonstrating normal intrahepatic and extrahepatic biliary structures with transit of contrast into the duodenum excluding BA and the need for IOC. **Conclusion:** In selected high risk infants, including neonates, PTCC can help exclude BA thus avoiding surgery.

075 - OA
Title: The long term functional outcome in cloaca: a single center experience
Authors: Ling Leung, FRCS(1), Hau Yee Chan, FRCS(2), Ho Yu Patrick Chung, FRCS(3), Kak Yuen Kenneth Wong, FRCS(4), Kwong Hang Paul Tam, FRCS(5)
Institutions: (1), (2), (3), (4), (5)
Category: Neonatal Surgery
Keywords: Cloaca,Continence,Total urogenital mobilization
Aim of the Study: We aim to find out the long term urinary and anorectal functional outcome and the occurrence of complications as these patients reach adulthood. **Methods:** Records were reviewed of all patients with cloaca who received surgical interventions in our unit from 1988 to 2016. Patient demographics, surgical anatomy, type of operations, urinary and anorectal functional outcome and complications were studied. **Main Result:** A total of 10 patients with a mean age of 70 months were included. All received sigmoid colostomy in the neonatal period and 2 required vaginostomy for hydrocolpos during the first operation. Median length of the common channel was 3.25cm. Four patients with common channel longer than 3cm underwent abdominal perineal pullthrough, 4 had total urogenital mobilization (TUM). The median age at reconstruction was 9 months. Eight patients were able to void spontaneously (100% vs 50% in TUM and abdominal perineal pullthrough respectively). A total of five patients developed urinary tract infections. Two patients were diagnosed to have neurogenic bladder and both required clean intermittent catheterization. One patient progressed to stage V chronic kidney disease requiring hemodialysis. Eight (100%) patients with neoanus achieved voluntary bowel control. Two (25%) reported grade 1 soiling and three (38%) had constipation, all were grade 2 or below. Kelly score was 6 in all patients. Seven vaginoplasties were performed. Three developed vaginal stenosis and 2 required reoperations. Two patients had reached adulthood and had normal menses. The median follow up period was 30 months. **Conclusion:** Patients with cloaca can achieve urinary and bowel continence after definitive reconstruction. A comprehensive follow up program is essential to preserve renal function and to treat complications early, especially for patients with long common channels and neurogenic bladder.

077 - OA
Title: Neonatal Short Bowel Syndrome in an Asian cohort: Predictors of outcome
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Category: Neonatal Surgery
Keywords: Neonatal Short Bowel Syndrome,Parenteral Nutrition,Congenital Intestinal Dysmotility
Aim of the Study: The prognosis of short bowel syndrome (SBS) has improved significantly in recent years due to advancement in surgical, neonatal care and nutrition support. Most studies were performed in western hemisphere with scarce data in Asian countries. Our study aims to describe the characteristics and outcomes of an Asian cohort of neonatal SBS. **Methods:** Retrospective review of neonatal SBS was conducted over an eight-year period (2007-15). Inclusion criteria were neonates with <100 cm of small bowel length (SBL) diagnosed with a surgical gastrointestinal disease or congenital intestinal dysmotility (CID) requiring parenteral nutrition (PN) for at least 60 days. Primary outcome was survival and secondary outcomes were ability to wean PN, central line-associated bloodstream infection (CLABSI) and intestinal failure-associated liver disease (IFALD). **Main Result:** Twenty-nine patients [13 boys (45%); 16 girls (55%)], median gestation age 31 weeks[IQR 26-38], birth weight 1700g[IQR 830-2827] with a median follow-up of 14 months[8-39] were included. The most common diagnosis was necrotizing enterocolitis (NEC)(n=14/29[48%]) with median residual SBL of 63.5cm[58-88.5]. Nineteen (66%) had <50% of residual SBL of expected normal bowel length. Twenty-four(83%) weaned off PN at median age of 4 months. The median PN duration was 4.3 months[IQR 2.7-8.9] while 5(17%) remained on long term PN (3[60%] CID on home PN care, 1 volvulus[residual SBL=18cm] and 1 NEC[residual SBL=63.5cm] with no colon). None developed IFALD and 5(17%) had CLABSI. Overall, 27/29(93%) survived while 2/29(7%) died from pneumonia and pulmonary hypertension. The predictors of long term PN were ultra-short gut (residual SBL<20cm) and CID. **Conclusion:** Our SBS patients have low mortality rate, low CLABSI with no IFALD. Most weaned off PN despite short residual SBL. The prognosis of patients with CID was less promising with majority requiring long term/home PN. Our study has identified important predictors of outcome which may direct future management for these challenging SBS patients.

078 - OA
Title: Appropriate timing of surgery for neonatal congenital diaphragmatic hernia; Early or delayed repair?
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Category: Neonatal Surgery
Keywords: Congenital diaphragmatic hernia,Surgery,neonate
Aim of the Study: Appropriate timing of surgery for neonatal congenital diaphragmatic hernia (CDH) remains unclear. The aim of this study was to compare outcomes of neonatal CDH between early and delayed repair. **Methods:** A retrospective cohort study was performed based on a nationwide survey in Japan. A total of 477 neonates with isolated CDH were included. The patients were classified into 2 groups according to the timing of surgery: early repair (ER) (<48 hours after birth) and delayed repair (DR) (>48 hours). Timing of surgery was decided by the policy of each institute after initial stabilization. Primary outcomes included 90-day survival and treatment duration (artificial ventilation, oxygen, hospitalization). To eliminate any bias arising from preoperative patients' condition, patients were divided into 3 severities based on Apgar score at 1 minute ("mild" 8-10, "moderate" 4-7, "severe" 0-3). Comparisons of outcomes between ER and DR were made within each severity. **Main Result:** Although 90-day survival was significantly different among the three severities ("mild" 97%, "moderate" 89%, "severe" 76%, p=0.002), there were no differences in 90-day survival between DR and ER within each severity. In "mild" cases, there were no differences in the treatment duration between ER and DR with equivalent preoperative patients' condition. In "moderate" cases, the treatment duration was shorter in ER compared to DR with equivalent preoperative patients' condition (artificial ventilation 11 vs. 16 days p=0.002, oxygen 15 vs. 20days p=0.010, hospitalization 34 vs. 48days p=0.013). In "severe" cases, the treatment duration was shorter in ER than DR, while the best oxygenation index within 24 hours was higher in DR than ER. **Conclusion:** Our data suggests that timing of surgery has no influence on 90-day survival once initial stabilization has been achieved. In "moderate" cases, surgery within 48 hours might be able to shorten the duration of artificial ventilation, oxygen, and hospitalization.

079 - OA
Title: Elliptical seromuscular resection using hydrodissection and plication for tapering the proximal dilated bowel in duodenal or jejunal atresia.
Authors: ahmed sobhy, MBChB(2)
Institutions: pediatric surgery unit, alexandria university(2)
Category: Neonatal Surgery
Keywords: intestinal atresia,seromuscular stripping,hydrodissection
Aim of the Study: The author developed a surgical technique to facilitate taper the proximal dilated bowel in patients with duodenal or jejunal atresia. An appropriately wide elliptical piece of the seromuscular layer along the antimesenteric border is resected by injecting saline by syringue to separate layers , with its underlying submucosa and mucosa kept intact. The muscular margins are approximated by sutures, with the mucosa either inverted or imbricated into the bowel lumen. This technique has the advantage of avoiding infection, leakage, or protrusion of thick bowel wall into the bowel lumen, which may produce a motility disorder. **Methods:** the technique performed on 30 neonates operated in alexandria university children hospital from january 2015 to january 2016 **Main Result:** the cases showed successful stripping of seromuscular layer in all cases without perforation of mucosa and smooth postoperative course. **Conclusion:** this technique has the advantage of avoiding infection, leakage, or protrusion of thick bowel wall into bowel lumen, which may produce motility disorder.

OA10. ORAL ABSTRACTS
Monday, October 10 | 17:15 – 19:00 | Virginia A/B

MODERATORS: ALP NUMANOGLU, JOSE ROBERTO BARATELLA

185 - OA
Title: Operative Technical Innovation: Classification & Long Term Outcomes
Authors: Jennifer Bruny(1), Mortiz Ziegler(2)
Institutions: Department of Surgery, Children's Hospital Colorado (1), Cincinnati, Ohio (2)
Category: Neonatal
Key words: neonatal surgical innovation
Aim of the Study: Pediatric surgery requires preparedness for innovation: a patient necessity, a novel concept, or a disruptive technique. Patient outcomes will ultimately judge innovation success. We report 3 operative innovations of progressing technical complexity with follow-up. **Methods:** A 32 week newborn had respiratory distress and necrotizing enterocolitis followed by severe respiratory failure. Imaging demonstrated no flow in hepatic veins suggesting fatal Budd-Chiari syndrome as a cause of massive ascites. Patient size eliminated portosystemic shunt and liver transplantation. Peritoneo-venous shunting lacked a device of appropriate size. We applied a 3.1mm ventriculo-peritoneal shunt, reversed its direction, placing it from peritoneal cavity to jugular vein, facilitating drainage with chamber pumping. Cavity fluid was mobilized, the ventilator was weaned and hepatic veins re-canalized. **#2:** A newborn presented with ectopia cordis extrathoracica nuda. a completely uncovered heart. At operation a completion

sternotomy was done to identify mediastinal space in which to relocate the heart. The heart was eventually covered with skin alone to avoid great vessel kinkage. Ventilator dependence continued due to his flail anterior chest. An acrylic manubrium was inserted below the established tracheostomy, and immediate stabilization of the chest wall occurred followed by successful ventilator weaning. **#3:** After2 laparotomies a newborn was referred for presumed extensive Hirschsprung's Disease. At reoperation aganglionosis was confirmed 5cm distal to the Ligament of Treitz. At operation, an extensive myectomy/myotomy was completed for 55cm of small bowel to an end stoma The ostomy began to drain, and enteral feedings were begun. At age 34 an intestinal transplant was done. **Main Result:** All patients currently survive at 34, 39, and 34 years respectively with minimal to no morbidity. **Conclusion:** These cases represent examples of graded pediatric surgical innovation: of necessity (#1); often incremental (#2, #3); or maybe disruptive (#3), Their survival, the world's first for each condition, reflects the value of innovation.

155 - OA
Title: Epididymitis - An Analysis of 15 Years Experience From a Tertiary Center
Authors: Heba Taher, MD(1), Jade Myers, MD(2), Paul Losty, MD(3)
Institutions: Department of Paediatric Surgery Alder Hey Children's Hospital NHS Foundation Trust (1, 2), Department of Paediatric Surgery Alder Hey Children's Hospital, University of Liverpool(3)
Category: Urology
Keywords: acute scrotum ,epididymo-orchitis ,urinary tract anaomalies
Aim of the Study: We describe patient characteristics and age distribution of epididymitis cases presenting to a tertiary pediatric surgery center during a 15 year period. **Methods:** We reviewed case records of all pediatric patients diagnosed with epididymitis clinically and / or with the aid of ultrasound imaging from April 2000 - August 2014. **Main Result:** We identified a total of 218 patients. A bimodal distribution was observed with peak(s) of incidence at two years and puberty. Thirty one patients had predisposing urinary tract abnormality(s) (UTA). One hundred and eighty seven patients had no UTA. There was a strong association between symptom recurrence and UTA (RR3.6 95%CI 1.9-6.7, P<0.0001). Urine analysis was available in 136 patients and proved positive in 29 cases. A strong link between UTA and positive urine analysis was observed (RR2 95%CI 1-3.9, P=0.04). Urinary tract ultrasound was performed in 168 patients. Scrotal ultrasound was done in 105 patients. A total of 21 patients underwent voiding cystourethrography (VCUG) detecting UTA in 13 cases. Patients with UTA anomalies were more likely to undergo surgery to effectively treat epididymitis and prevent symptom recurrence (RR8.6 95% CI 5.3-14, P<0.0001). In those with no UTA - only 3 had surgery for abscess drainage. **Conclusion:** This large single center study shows that positive urine analysis is a good predictor of UTA in boys presenting with epididymitis. Recurrence and the need for surgery are also strongly associated with UTA. Urine analysis should always be undertaken in patients presenting with epididymitis. A lack of evidence based guidelines highlights a crucial need for protocol driven care pathway(s).

157 - OA
Title: Evaluation of the surgical fate following antenatally detected hydronephrosis due to pelvi-ureteric junction obstruction?
Authors: Shilpa Sharma, PhD(1), Anand Sinha, M Ch(2), Devendra Gupta, M Ch, D Sc(3)
Institutions: All India Institute of Medical Sciences, New Delhi(1), (2), (3)
Category: Urology
Keywords: antenatal hydronephrosis,pyeloplasty,surgical outcome
Aim of the Study: To evaluate the outcome in children with antenatally diagnosed pelvi-ureteric junction obstruction (PUJO). **Methods:** Retrospectively the files of children registered with a diagnosis of PUJO between January 1999 and March 2011 with an antenatal diagnosis were reviewed for indications of surgery based on renal dynamic scans and ultrasonography. Surgery was indicated if the patients developed symptoms, showed a function less than 40 %, a decline in function by 10 % or more over the preceding scans, an obstructive pattern for clearance and a cortical thinning. Ultrasonography was used to monitor the degree of pelvi-caliceal dilation and worsening of PUJO. Renal scans were done at 3 months, 2 years and 5 years post-operatively. Patients not fulfilling the criteria for surgery were followed up with regular renal scans and kept under observation. **Main Result:** 78 patients were registered with the antenatal diagnosis of PUJO. Of these, 29 of these (37.2%) underwent pyeloplasty. 8 were symptomatic (lump, pain, urinary infection) while 21 were operated on the basis of renal scan findings. There was a significant improvement in the renal functions after surgery. 4 patients developed complications (3 persistant leak and 1 hematuria).One required a redo pyeloplasty. None of the patients who were kept under observation developed a sudden fall in function. The functional recovery was remarkable even if the patients were operated after 5 years of age, following this criteria. **Conclusion:** 37% children with antenatally diagnosed PUJO required surgery. The postoperative recovery of renal functions were significant and the recovery in renal functions were noted even if the child was operated after 5 year of age.

158 - OA
Title: Single High Trans-Scrotal Incision and Classic Inguinal Incision Orchiopexy for Unilateral Palpable Undescended Testis: A Comparative Study.
Authors: Md Abdul Aziz, MS(1), Md Ayub Ali, MS(2)

Institutions: Dhaka Shishu (Children) Hospital,Dhaka.(1, 2)
Category: Urology
Keywords: Undescended testis,Single highscotal incision,Orcheopexy
Aim of the Study: This study is done to compare the outcome between single high trans-scrotal orchiopexy and classical inguinal approach orchiopexy in unilateral palpable undescended testis. **Methods:** A total of 70 male children with undescended testes were included in the study after fulfillment of inclusion and exclusion criteria from January 2014 to December 2015. They were randomly assigned to the single high trans-scrotal orchiopexy group (group 1, 35 children) and the classical inguinal approach orchiopexy group (group 2, 35 children). The comparative parameters between two groups were the operative time and post-operative complications. Position of testis, size of the testis and testicular re-ascent were assessed at the follow up evaluation at 6 months post-operatively. **Main Result:** The operation time was significantly shorter in Group-1 (35.26±5.153minutes) than Group-2 (52.46±3.86minutes) ($p<0.001$). Wound infection was found in 1 patient and 5 patients in group 1 and group 2 respectively and inguinal congestion was found in 11 patients and 13 patients in group 1 and group 2 respectively. There was no statistical significant difference in developing wound infection and inguinal congestion between the two groups. None of the patients developed scrotal hematoma, testicular atrophy and testicular re-ascent. **Conclusion:** Single high trans-scrotal incision orchiopexy technique is a simple procedure with less tissue dissection, shorter operation time and cosmetically more acceptable than the classical inguinal orchiopexy technique for unilateral palpable undescended testis.

159 - OA
Title: The role of Bosniak classification in malignancy risk assessment of renal cysts in children
Authors: Shibo Zhu, MD(1), Xiwen Chen, MD(2), Guochang Liu, MD(3), Wei Jia, MD(4)
Institutions: Guangzhou Women and Children's Medical Center(1), (2), (3), (4)
Category: Urology
Keywords: renal cysts,diagnostic imaging,classification
Aim of the Study: To evaluate the validity and reliability of the Bosniak classification in malignancy risk assessment and guide management of renal cysts in Chinese pediatric population. **Methods:** In this retrospective study, renal cysts patients were identified from the clinical database at the largest children’s medical center in south China from January 2010 to December 2015. Clinical variables, imaging characteristics, followup time and surgical resection with pathologic reports (if any) were noted. Cases with no surgery and less than six months of followup were excluded. Two radiologists blinded to clinical graded the samples according to Bosniak classification. The sensitivity, specificity, positive and negative predictive values were calculated to assess the validity of Bosniak classification as risk predictive method and to compare the results with current urologist experience-based practice. Inter-observer variability (Kappa) was calculated. **Main Result:** Renal cysts were identified in 46 children. Median age was 3 years. Mean cyst size was 55.81±46.69 mm. Surgical resection was performed in 23 and pathological evaluation revealed malignant cyst in 16 and benign 7. For 26 followups, no substantial increase of relative size (change by 10% of ratio of cyst to renal length) was observed. Malignancy results across Bosniak classes were as follows: BI (0 malignancy, 1 benign and 19 followup), BII and BIIF (0 malignancy, 3 benign and 6 followup), BIII (2 malignancy, 2 benign and 1 followup), BIV (14 malignancy, 1 benign and 0 followup). For clinical validity assessment, BIII and BIV were assumed positive test result (malignancy). The positive and negative predictive values were 100% and 80%, and sensitivity and specificity were 100% and 87.88% respectively. The Kappa was 0.65. **Conclusion:** Our data suggest the Bosniak classification as useful as a guideline to evaluate malignancy risk of renal cysts in children. But there is potential to improve the predictive accuracy of Bosniak III renal lesions.

160 - OA
Title: Posterior tibial nerve stimulation in paediatric overactive bladder: a prospective study
Authors: Virender Sekhon, MCh, Pediatric Surgery(1), Mohammad Sualeh Ansari, MCh, Urology(2)
Institutions: SGPGIMS, Lucknow(1, 2)
Category: Urology
Keywords: Posterior tibial nerve,Neuromodulation,Overactive bladder
Aim of the Study: Various methods of neuromodulation have been reported to treat refractory lower urinary tract dysfunction. Most of these techniques are invasive, hence less applicable in children.We evaluated the effectiveness and acceptability of transcutaneous posterior tibial nerve stimulation (TcPTNS)to treat overactive bladder (OAB) in children. **Methods:** This study was single-blinded, prospective, sham controlled randomized trial. 40 children with non-neurogenic OAB refractory to behavioural and anticholinergic therapy were randomized either to test group or sham group.All the children enrolled easily accepted TcPTNS in both the groups. A total of 12 sessions, 30 minutes each were performed weekly. The OAB symptoms, severity of incontinence, number of voids daily (NV), average voided volume (AVV) and maximum voided volume (MVV) were evaluated before and after the treatment. Statistical analysis was done using SPSS version 22.0. **Main Result:** On assessment of subjective improvement of OAB symptoms, 66.66% patients reported cure and 23.81% patients reported significant improvement of symptoms in test group whereas in sham group only 6.25% patients reported significant improvement. In test group 71.42% patients reported complete improvement in incontinence and 23.81% patients reported mild incontinence only, whereas in sham group only 12.5% patient reported

complete improvement. The AVV, MVV and NV improved significantly in test group (p <0.001) as compared to sham group. **Conclusion:** Transcutaneous PTNS is easily acceptable and highly effective in children with OAB refractory to behavioural and anticholinergic therapy.

161 - OA
Title: "One-Stage Urethroplasty with Tubularized Native Skin Spiral Flap (OUTNSF)" for Severe Hypospadias
Authors: Mohammed Shadrul Alam, MS, FCPS(1)
Institutions: Department of Paediatric Surgery, Shaheed Suhrawardy Medical College(1)
Category: Urology
Keywords: One-stage urethroplasty,Tubularized native skin spiral flap procedure,Proximal severe hypospadias
Aim of the Study: The purpose of this study was to establish effectiveness of this technique for the one-stage repair of all proximal hypospadias, terming it 'one-stage urethroplasty with tubularized native skin spiral flap (OUTNSF)' technique by evaluating the outcomes. **Methods:** Between January 2001 and December 2014, 64 boys with proximal hypospadias underwent primary repair using one-stage urethroplasty with tubularized native skin spiral flap (OUTNSF) procedure. Only patients with proximal hypospadias at or below the age of 14 years were included. The neourethra was constructed using the ventral (Native) skin adjacent to the meatus in one side of the shaft of the penis that tubularized over the feeding tube with 6-0 vicryl (polydiaxanone) continuous suture. Then to achieve a longer neourethra, a useful augmentation of the skin flap was created, extending it on one side by spirally towards the dorsal preputial skin. **Main Result:** The average age of the patients was 2.6 years (range age 7 months to 14 years). The overall success rate was 86 (78.12%) patients with a very good cosmetic appearing phallus including the meatus, glans, shaft and scrotum. Each of child had good urinary flow and void with a single stream in forward direction. But, 14 (21.88%) patients had major complications. Urethrocutaneous fistula was developed in 6 (9.38%) patients and Meatal Stenosis was developed in 3 (4.68%) patient. In addition, 2 (3.13%) patient had persistent chordee, 2 (3.13%) patient had distal disruption of the repair due to sloughed flaps, and 1 (1.56%) patient had proximal urethral stricture **Conclusion:** The one-stage urethroplasty with tubularized native skin spiral flap (OUTNSF) procedure can be used successfully for repair of proximal hypospadias. However, more patients with proximal hypospadias will repair using the same procedure and a longer period of follow-up are needed to confirm the effectiveness of this repair.

162 - OA
Title: Persistent Mulleian duct remnants. When to do what?
Authors: Tayyaba Batool, MBBS, FCPS, FEBPS (Pediatric Surgery)(1)
Institutions: National Institute of Child Health, Karachi(1)
Category: Urology
Keywords: Mullerian duct remnants,46 XY DSD,Hypospadias
Aim of the Study: Persistent mullerian duct remnant is a rare anomaly. It may be associated with 46 XY DSD and severe variety of hypospadias. They are challenging for the surgeons technically and in planning to remove or not to remove? The indications are well described but due to its anatomical variations and chance to damage the important structures of fertility, it is sometimes not as black and white as it is thought of. We are presenting our experience of managing such patients in our institute. **Methods:** A total of 34 patients between 1 to 14 years of age, from April 2014 to March 2016 who were diagnosed to have PMDR included into the study. Clinical presentation was Penoscrotal to perineal hypospadias and as an institutional protocol every patient was subjected to retrograde urethrogram to identify presence of Mullerian duct remnants. After grading the size of the remnants (Grade 0 to 4), surgical approach was planned as perinea.But due to fair chance of damaging important structures of fertility, the procedure was absndoned in a few patients. We then revised our protocol from excision to no excision in a few patients and/or by conservative treatment of symptoms. And later we shifted our approach to laparoscopic excision of PMDR in grades above 2. **Main Result:** Out of 34 patients, in 17, MDR were removed successfully through perineal approach. In 6 although attempt of excision was made through perineum, but due to chance of damage to vas and surrounding structures, procedure was abandoned. In 4 patients of grade 4 excision was done through abdominoperineal approach. While 7 (grade 2 to 4) were excised laparoscopically. **Conclusion:** By tailoring the approach according to the anatomical variations of the PMDR, complete excision can be made possible. And hence we are succeeded in devising a protocol at our institute.

163 - OA
Title: Mild to Severe Penile Injuries in children-reconsrtuction modility and outcomes
Authors: Kishore Panjwani, MS(2)
Institutions: Asopa Hospital Agra(2)
Category: Urology
Keywords: Penile ,Mild to severe Injuries,Management
Aim of the Study: The aim was to review our experience with mild to severe penile trauma in101 paediatric patients admitted from 2004 to 2014.management of penile truma poses diverse challanges to the recostractive surgeon as injury varies from abresion to partial to total penile amputation.emphasis was given to technique used for penile amputation to use of lateral scrotal flaps to reconstruct the penis in childhood. **Methods:** analysis of 101 patients of

penile trauma including- zip injuries,post circumcision injury,hair tie strangulation,animal bite injuries,post srteptococcal infection penile necosis.acid burn injury.mode of injury ranges from skin laccerations,skin loss, urethrocutaneous fistula,glandular trauma,urethra and penile skin loss,patial/complete penile amputation. The management includes a wide variety of surgical techniques tailored to the individual patient.the six patients who had penile amputation,lengthening of penile stump was done by dividing the suspensory ligament,lengthening the penile stump and it was covered by mobilizing therandam pattern skin flaps from lateral part of nonhair bearing area of scrotum **Main Result:** results were proising,we achieve normal like apperence of penis.these children were able to pass urine in standing position. **Conclusion:** phylloplasty using the remaining stump of the corpora cavernosa should be the first line of therapy in children in partial/complete amputation of penis.although paediatric phylloplasty has some contoveries,but penile reconsrtruction in childhood is crucial to minimise the emotional impact and prevent emotional stress to achieve genital identity

164 - OA
Title: Can New Parameters Better Predict Probability Of Surgery In Children With PUJO Type Hydronephrosis?
Authors: Vikram Khanna, MCh(1), Minu Bajpai, MCh(2), Kashish Kumar, MCh(3), Rakesh Kumar, MD(4), V Sreenivas, MD(5)
Institutions: All India Institute of Medical Sciences, New Delhi(1, 2, 3, 4, 5)
Category: Urology
Keywords: PUJO,Plasma renin activity,Pyeloplasty
Aim of the Study: To study the of probability of surgery at presentation in children with PUJO type hydronephrosis(HDN) based upon: SFU grade of HDN, t½ in diuretic renography, Plasma Renin Activity(PRA), Microalbuminuria(MA), Albumin Creatinine Ratio(ACR) and Captopril Renography(CR). **Methods:** All cases of unilateral PUJO type HDN registered in our Pediatric Urology Clinic from Jan.2006 till Dec.2011 were included and a multivariate analysis was performed to attribute probability of surgery to each parameter. **Main Result:** 120 patients with a mean age of 30 months were included in the study and 65%(78 patients) underwent surgery. Seventy percent of patients with grade 3&4 HDN underwent surgery. The mean t½, PRA, MA and ACR in the surgical group was 21.3 minutes, 10.11ng/ml, 24.71mg/l and 73.62ug/mg respectively vs. 13.4 minutes, 4.64ng/ml, 13.17mg/l and 25.75ug/mg in the non-surgical group($p<0.05$). Forty-one percent of patients with negative captopril renography still underwent pyeloplasty. **Conclusion:** High PRA levels reflect renin-angiotensin system(RAS) activation, advanced renal injury and poor recovery. The levels directly co-relate with other markers such as MA & ACR. Every 1% increase in PRA levels, decreases differential function by 0.78% and increases risk of surgery by 15%. PRA better predicts Odds of an adverse surgical outcome in PUJO patients (OR=1.56, 95% CI 1.13-1.93).

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Title: Tubularized Incised Plate Uretheroplasty in Hypospadias: Ergonomic Skin-Dartos Management Reducing the Fistula Rate to Less than 1.5%
Authors: Shiv N Kureel, MD(1), Digamber Chaubey, MD(2), Ajay K Verma, MD(3), Kanoujia Sunil, MD(4), Archika Gupta, MD(5), Anand Pandey, MD(6)
Institutions: Department of Pediatric surgery, King George's Medical university(1, 2, 3, 4, 5, 6)
Category: Urology
Keywords: Hypospadias,Tubularized incised plate urethroplasty,Neourethral cover
Aim of the Study: To report the technical nuances in hypospadias undergoing Tubularized Incised Plate uretheroplasty (TIP) that helped to reduce the incidence of fistula **Methods:** In last two years, 80 hypospadias with satisfactory glans groove and chordee correctable with degloving were selected. Technique: Standard incision for TIP was made along the urethral plate. Through the preputial edge, inner preputial skin was split off the outer preputial skin-dartos. Penis was degloved in subdartos plane with intact axial-pattern dartos vessels. Inner prepuce left attached to corona. Glans wings were raised by dissecting in subfascial plane, and release of bifurcated pillars of spongiosum.TIP and spongioplasty was completed. Inner preputial skin laid back as submucosal collar trimming the excess skin. At dorsal midline, preputial and penile skin-dartos was bifurcated and joined to subcoronal mucosal collar. Excess of skin-dartos at distal end of bifurcated skin-dartos flaps was marked by horizontal incision corresponding to subcoronal collar. Excess skin was sliced away leaving the dartos and visible axial pattern vessels. One dartos flap was anchored over the distal urethra while other placed proximally. Repair was completed with glansplasty, frenuloplasty and skin cover with creation of median raphe. Outcome was measured with success of repair without dehiscence and aesthetic appearance similar to circumcised normal penis scored as 10. **Main Result:** There was one fistula, one superficial skin necrosis, one drug-induced microvessel vasculitis, and one glans dehiscence; aesthetic score ranged 9-10 in 76 patients. On follow-up, meatal dilation for thin stream was required in 12 patients. **Conclusion:** Ergonomic skin-dartos management with preservation of axial-pattern vessels can significantly reduce the incidence of fistula with provision of good aesthetic appearance in most cases.

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Title: ENDOSCOPIC MANAGEMENT OF UTRICLE CYST IN CHILDREN: AN ALTERNATIVE TO BE CONSIDERED

Authors: Henar Souto, MD(1), Clara Rico, MD(2), Marta De Lucio, MD(3), Cristina Riñón, MD(4), Rafael Arteaga, MD(5), Manuel Espinoza, MD(6), Jorge E Rodríguez de alarcón, PhD(7)
Institutions: Hospital Niño Jesús(1, 2, 3, 4, 5, 6, 7)
Category: Urology
Keywords: Utricle cyst,Utricle deroofing,Endourology
Aim of the Study: To describe endoscopic management of Utricle Cyst, a successful technique in adults, as a real alternative in pediatric age. **Methods:** Retrospective review of patients undergoing endoscopic management in a single pediatric institution between 2007-2015. Demographic, clinical and diagnostic data were recorded as well as information regarding treatment given to each patient. **Main Result:** Eight patients (46xy), age 8,2 yo [3-18] have been included in this report. Two associated as well proximal hypospadias and three cryptorchidsm. Repeated urinary tract infection was the most associated symptom (6/8), followed by dysuria (4/8), impossible catheterization (4/8) and obstructive pattern in uroflowmetry (3/8). Preoperative diagnosis was definitive in 7/8 patients: Ultrasound was performed in all cases and voiding cystourethrogram in 6/8. All patients underwent an endoscopic section of the utricle meatus and de-roofing to avoid urine stasis. There were no intraoperative complications. Average hospital stay was 1.4 days. All patients referred disappereance of symptoms and the procedure had to be repeated in one patient. Average follow-up: 29.8 months [7-83]. **Conclusion:** 1.In our experience, endoscopic management of utricle cyst is an effective and safe option for selected symptomatic patients: UC length less than 2 cm long and narrow neck. 2. Its excellent results, minimizing perioperative risks and reducing hospital stay, makes it a real alternative in childhood. 3. Although minimum (up to 3%), the risk of malignancy has been described in adult patients. This approach does not limit the future diagnosis and treatment options in case of failure.

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Title: Randomized controlled trial comparing long term DJ stent and short term external ureteric trans-anastamotic stent and a nephrostomy in children undergoing pyeloplasty for pelviureteric junction obstruction (PUJO)
Authors: Deepak Mittal, MCh(1), S Agarwala, MCh(2), V Bhatnagar, MS, MCh(3), M Jana, MD(4), R Kumar, MD(5), AK Gupta, MD(6)
Institutions: ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NEW DELHI(1, 2, 3, 4, 5, 6)
Category: Urology
Keywords: Pelviureteric junction obstruction,Pyeloplasty,DJ STENT
Aim of the Study: To compare the change in degree of hydronephrosis. Secondary objectives were to compare improvement in renal function, improvement in drainage pattern, complications, period of hospitalization and cost of treatment. **Methods:** The study was conducted over a period of 31 months (November 2011 to June 2014). It was a randomized controlled study. Fifty patients were randomized with 25 patients in each group i.e. External stent (ES group) or DJ stent group (DJ group). Each patient had undergone pre-operative and post-operative ultrasound and renal dynamic scan. **Main Result:** Total of 50 patients were included in the study. The age range was 7 days to 144 months. Out of 50 patients; 35(70%) patients showed decrease in hydronephrosis i.e. > 50% reduction in hydronephrosis, 19(76%) in ES group and 16(64%) in DJ group. Twelve (24%) patients had stable hydronephrosis; 5(20%) in ES group and 7(28%) in DJ group. Relative risk of worsening of hydronephrosis is 1.5 times greater in DJ group than ES group. Among those with pre-operative SFU grade 4, significantly more number of patients in ES group showed reduction in hydronephrosis as compared to DJ group [RR 2.5, 95CI 0.92-6.73; p = 0.05]. Post-operative complications occurred in 17(34%) patients; 9 of 25(36%) in ES group and 8 of 25 (32%) in DJ group. The difference in the duration of stay was significant (p = 0.004). Mean cost of treatment for a patient in ES group was INR 335.60/-) and for a patient in DJ group was INR 1356.00/-. **Conclusion:** In the present study we conclude that DJ stent has no significant benefit over External stent in terms of surgical results and complications. Patients in DJ group had shorter duration of hospital stay but had significantly increased treatment cost.

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Title: Exstrophy epispadias complex and its variants: the Apollo experience of ten years.
Authors: Sujit Chowdhary, FRCS(1), Deepak Kandpal, MS, MCh(2), Anupam Sibal, MD(3), R Srivastava, FRCP(4)
Institutions: Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(1), Indraprastha Apollo Hospital, New Delhi(2), Indraprastha Apollo Hospital, New Delhi(3), Indraprastha Apollo Hospital, New Delhi(4)
Category: Urology
Keywords: Exstrophy-epispadias complex,incontinence,long-term followup
Aim of the Study: To report the experience of ten-year with sixty five exstrophy-epispadias complex patients: management strategy and long term outcomes. **Methods:** All consecutive children with exstrophy-epispadias complex and it's variants from January 2005 were prospectively recruited into the study. The treatment plan was based on a fixed clinical protocol decided by the age at presentation, number and type of previous surgeries, degree of scarring, pliability of the bladder plate, condition of upper tracts and the child and parent's motivation and expectations. **Main Result:** Sixty-five children with exstrophy epispadias were enrolled into the study from January 2005 onwards. Twelve patients had epispadias. Four patients had cloacal exstrophy. Two patients had covered exstrophy. Forty seven had classical exstrophy epispadias complex (CBE). Five underwent a primary one stage repair in the newborn period. All had either

partial or complete dehiscence over the next six to eight weeks. Delayed primary repair was done in 12 patients. Staged repair was done in 27 patients. Out of the 47 patients with CBE 20 (42%) have catheter based continence with a dry interval of 4- 6 hours. Among the patients with continent reservoir, were 11 Indiana pouch and nine augmentation ileocystoplasty with Mitrofanoff procedure. Only 8 patients out of 47 (17%) have natural voiding continence with a minimum dry period of at least 4 hours. Rest 19 patients after multiple surgeries have incontinence as a major problem with dry interval less than 2 hours. **Conclusion:** Neonatal one stage primary repair has failed in our hands and hence discontinued. Delayed one stage primary repair is an excellent option in cases with favourable anatomy. The vast majority did require augmentation, bladder neck repair and Mitrofanoff procedure to achieve dry interval of 4 hours. Indiana pouch is a reliable salvage procedure for multiple failed surgeries.

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Title: Impact of cultural, traditional, social and religious factors on sex-assignment and management of middle-eastern patients with disorders of sex development(DSD)
Authors: Nabil M Dessouky, MD(1)
Institutions: Cairo University(1)
Category: Urology
Keywords: Disorders of sex development,Religion,Culture
Aim of the Study: The study aimed to evaluate the impact of special cultures, traditions, religious factors among middle-eastern patients with DSD on its approach, decision for sex assignment and its results. **Methods:** The different factors concerning the thoughts and believes , cultures, traditions and religious impacts affecting the decisions for sex assignments and management of 2847 middle eastern patients with DSD were studied. **Main Result:** Peoples are strongly attached to their religion with total refusal of the concept of “third sex” being governed by many religious bylaws or “Fatwa”. There is a strong male-preference among the population. Families of DSD patients consider their anomaly as a “sham “trying always to disclose it. Fertility is of little concerns by the majority in their decision for sex assignment Some surgical details for genital reconstruction e.g. female circumcision, size of reconstructed clitoris are strongly influenced by social and cultural factors in the community. Virginity and presence of intact hymen is taken with very much concern and high sensitivity and comes as the first inquiry after surgery for female genitoplasty. On the contrary, future erection of the reconstructed penis to their male child as a part of male genitoplasty is taken with much more concern than the size of the penis or his future fertility. Parents are much less anxious about multiplicity of operations needed to achieve acceptable male genitoplasty than to subject their female child to several operations looking always for one-stage female genitoplasty. **Conclusion:** Middle-eastern patients of DSD has reflected the strong impact of their various cultural, traditional and religious factors peculiar to this area of the world on their management, sex assignment and modified the technical details for their surgical correction.

170 - OA
Title: Comprehensive Evaluation of the "Snodgraft Principle" in Virgin and in Redo Hypospadias Surgery
Authors: Hamed Seleim, MD(1), Yousef Abdelazeem, MBChB(2), Khaled Salah Abdul Lateef, MD(3), Mohamed Elbarbary, MD(4)
Institutions: Tanta University Hospitals, Pediatric Surgery Unit(1), Cairo University Specialized Children Hospital(2), Cairo University Specialized Pediatric Hospital(3), Cairo University Specialized Pediatric Hospital(4)
Category: Urology
Keywords: hypospadias,dorsal inlay graft,urethroplasty
Aim of the Study: The presented study aimed at comprehensive retrospective evaluation of the Snodgraft principle "dorsal inlay graft urethroplasty" among a wider scope of hypospadias cases; virgin and redo, distal and proximal. **Methods:** Over one year, a prospective randomized clinical study of 49 consecutive hypospadias patients with non-significant chordee was conducted. All cases were approached with one-stage urethroplasty using dorsal inlay graft (inner-face preputial or buccal mucosal). The medical records of those patients were thoroughly investigated with regard to functional and cosmetic outcome by the end of this work. **Main Result:** From August 2014 to August 2015, a single surgeon operated upon 49 hypospadias cases; 30 virgin cases, and 19 redo cases. The native meatus was anterior penile in 18 cases, mid-penile in 15 cases, proximal shaft in 7 cases and penoscrotal in 9 cases. Inner-face preputial graft was inlaid into the incised urethral plate in 39 cases (30 virgin and 9 redo cases), meanwhile buccal mucosa graft harvested from the lower lip was inlaid into the incised plate in 10 cases (all redo). In all studied cases, a straight penis with a vertical slit-like neomeatus positioned at the glans tip was achieved. Urethro-cutaneous fistula developed in one out of 30 virgin cases (3.3%), and in 3 out of 19 redoes (15.7%). None of included patients developed meatal stenosis. Urethroscopic examination showed excellent graft intake without urethral stricture or diverticulum along the inlaid graft. **Conclusion:** To our knowledge, this is the second study that included more proximal virgin cases and redo cases in the evaluation of the Snodgraft principle. Dorsal inlay graft is a feasible and reproducible adjunct to the popularized tubularized incised plate urethroplasty that widens its scope with a good cosmetic outcome and low risk of complications.

171 - OA
Title: THE EFFECTS OF MELATONIN AND COLCHICINE ON ISCHEMIA-REPERFUSION INJURY IN EXPERIMENTAL RAT TESTICULAR TORSION MODEL
Authors: Tamer Sekmenli, MD(1), Metin Gündüz, MD(2), Bahadır Öztürk, MD(3), Pınar Karabağlı, MD(4), Ilhan Ciftci, MD(5), Gülsüm Tekin, MD(6), Mustafa Yılmaz, MD(7)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1, 2, 5), Selcuk University Medical Faculty Department of Biochemistry(3, 6), Selcuk University Medical Faculty Department of Pathology(4), Istanbul Saglık Bilimleri University Department of Histology and Embryology(7)
Category: Urology
Keywords: Colchicine,reperfusion injury,spermatic cord torsion
Aim of the Study: The aim of the present study is to investigate the efficiency of colchicine and melatonin in an experimental rat testicular torsion model in the light of histological and biochemical data. **Methods:** A total of 34 Wistar albino male rats were randomly divided into 5 groups as: Group C (control, n=6), Group S (sham, underwent only left scrotal exploration, n=7), Group TD (torsion and detorsion - 6 hours of ischemia and 7 days of reperfusion - n=7), Group TD/M (TD+Melatonin - 6 hours of ischemia and 7 days of reperfusion and 7 days of 17mg/kg intraperitoneal melatonin per day – n=7), group TD/C (TD +Colchicine - 6 hours of ischemia and 7 days of reperfusion and 7 days of 1mg/kg oral colchicine per day – n=7). Histopathologic evaluation of seminiferous tubule deterioration was performed by Johnsen's scoring system. Total antioxidant status (TAS), total oxidant status (TOS), IL-6, TNF alpha levels were analyzed in each group. **Main Result:** The histopathologic scores, total antioxidant status (TAS), total oxidant status (TOS), IL-6, TNF alpha levels in groups C and TD/C were significantly lower than groups TD and TD/M ($P < .001$). **Conclusion:** Our study results revealed that colchicine reduced testicular ischemia–reperfusion injury in experimental rat testis torsion model. Although detorsion of testis is crucial for the preserving the testicular viability, antioxidant and anti-inflammatory treatment modalities like colchicine might help to reduce ischemia–reperfusion injury in detorsed testis.

OA11. ORAL ABSTRACTS

Tuesday, October 11 | 15:30 – 17:45 | Maryland A/B

MODERATORS: ROBERT E. KELLY, JR., ROBERT C. SHAMBERGER

018 - OA
Title: Human Pluripotent Stem Cell-Derived Enteric Neural Crest Cell Supplementation Restores Contractility in a Human Intestinal Aganglionosis Model
Authors: Christopher R Schlieve, MD(1), Kathryn L Fowler, MS(2), Ibrahim Hajjali, MBSS(3), Xiaogang Hou, PhD(4), Sha Huang, MS(5), Jason R Spence, PhD(6), Tracy C Grikscheit, MD(7)
Institutions: Children's Hospital Los Angeles(1, 2, 3, 4, 7), University of Michigan (5, 6)
Category: General Surgery
Keywords: Tissue-Engineered Intestine,Human Pluripotent Stem Cells,Enteric Neuropathy
Aim of the Study: Disruption of enteric nervous system (ENS) development and function leads to varying degrees of pathology, including Hirschsprung Disease (HD). Impaired migration of enteric neural crest (ENC) cells within the gut results in an inability to relax intestinal smooth muscle causing obstructive symptoms. Surgical resection of the aganglionic colon in HD decreases mortality, but does not completely resolve symptoms. Therefore, restoration of ENS components through cellular transplantation has become a promising area of research for treatment of enteric neuropathies. We have previously generated human pluripotent stem cell (hPSC)-derived tissue-engineered intestine (TEI) from human intestinal organoids (HIOs). However, HIO-TEI does not develop an ENS and therefore lacks proper mechanical motility. The purpose of our study was to explore hPSC-derived ENC supplementation to restore ENS components and functionality in a model of intestinal aganglionosis. **Methods:** HIOs and unsorted ENC cell spheroids were mixed and seeded onto biodegradable scaffolds, wrapped in the omentum of adult NOD/SCID mice, and allowed to mature for 3 months before surgical removal. Implants were analyzed for development of ENS cell types through immunostaining of Tuj1 (neurons) and glia (GFAP, s100b). Neurons were evaluated for expression of choline acetyltransferese (ChAT), calbindin, calretinin, and neuronal nitric oxide synthase (nNOS). Implants were imaged in ex vivo culture for spontaneous contractility by live-video microscopy. **Main Result:** The addition of human ENC cells to HIO-TEI derived from hPSCs generates TEI with mature villi, underlying smooth muscle and ganglia. Excitatory and inhibitory neurons and several glial subtypes were identified and ex vivo culture of ENS-HIO-TEI demonstrated spontaneous contractility. **Conclusion:** Our findings validate a novel approach to restoring human ENS components in HIO-TEI and the restoration of mechanical contractility through ENC supplementation derived from hPSCs. This advancement is a necessary step toward establishing tissue-engineering solutions for future human therapies in the treatment of enteric neuropathies.

020 - OA
Title: Simple Diverticulectomy is Adequate for Management of Bleeding Meckel's Diverticulum
Authors: Ian C Glenn, MD(1), Ibrahim Abd el-shafy, MD(2), Nicholas E Bruns, MD(3), Jose M Prince, MD(4), Aaron M Lipskar, MD(5), Todd A Ponsky, MD(6)
Institutions: Akron Children's Hospital(1, 3, 6), Cohen Children's Medical Center of New York(2, 4, 5)
Category: General Surgery
Keywords: Meckel's Diverticulum,Gastrointestinal bleeding,Diverticulectomy
Aim of the Study: Lower gastrointestinal bleeding (GIB) from a Meckel's diverticulum (MD) results from ectopic gastric mucosa within the MD causing ulceration and bleeding of either the diverticulum itself or the adjacent, intestinal mucosa. There has been considerable debate as to whether simple diverticulectomy, as opposed to segmental bowel resection (SBR), is adequate management for this condition, as many are concerned that ulcers in the adjacent small bowel may continue to bleed even after the source of acid in the diverticulum is removed. This study seeks to determine if simple diverticulectomy is adequate treatment for bleeding MD. **Methods:** A retrospective chart review was performed of all patients admitted to two children's hospitals from 2002 – 2015 with a diagnosis of MD, using ICD-9 code 751.0. Inclusion criteria were patients with GIB who underwent simple diverticulectomy or small bowel resection for removal of a MD. Exclusion criteria were comorbid surgical problems (such as small bowel obstruction), causes of bleeding other than MD, which included intussusception associated with MD, as well as patient's with incomplete chart information. **Main Result:** Forty-four patients who underwent surgery for GIB secondary to MD were included. Four patients were excluded due to comorbid conditions or other possible causes of bleeding and 13 were excluded due to incomplete data. There were 36 patients who underwent simple diverticulectomy. Of these, 33 had stapled diverticulectomy and 3 had sharp diverticulectomy with suture closure of the bowel. A total of 8 patients had SBR. None of the patients in either the simple diverticulectomy or SBR groups had clinically significant post-operative bleeding, re-admission, or long-term bleeding. Among all included operations, 38 (88%) were performed laparoscopically. Among the stapled diverticulectomy cases specifically, 32 of the 33 operations (97%) were performed laparoscopically. **Conclusion:** Simple diverticulectomy is likely adequate for treatment of GIB caused by MD and is comparable to SBR.

021 - OA
Title: SURGICAL TREATMENT OF CLOACA´S
Authors: Igor Kirgizov, PhD(1), Ilya Shishkin, PhD(2), Sergei Minaev, PhD(3), Maxim Aprosimov, PhD(4)
Institutions: (1), (2), (3), (4)
Category: General Surgery
Keywords: cloaca,laparotomy,surgical treatment
Aim of the Study: High forms of the persistent cloaca is one of the most rare congenital malformations of the anorectal areas. The aim of the study was to analyze the experience of surgical treatment of cloacal malformations with the length of the common channel more than 3 cm. **Methods:** In 2006-2016 32 patients were operated in our department. By the first stage all patient imposed colostoma at their residence. The main stage included laparotomy or laparoscopic and PSARP. **Main Result:** In 32,8% we used distal colon for proctoplasty, and PSARP for urethra and vagina separation. In 57,1% of patients abdominoperineal pullthrough, and vaginoplasty was made by the distal colon, in 10,1% vaginoplasty was made by ascendant colon. In most hard case, in one girl, owing to complexity of the vascular archytectonics, the vaginoplasty has made by a segment of ileum. **Conclusion:** our experience shows that cloaca´s separation with long common channel is not possible without carrying out laparotomy or laparoscopic and PSARP in a single-stage. Thus, during the laparotomic stage, due to the length of the deferent part of a colon and its features of blood supply, the question of the proctoplasty way is solved, and PSARP promotes definition of an optimum way of the uretro - and vaginoplasty.

022 - OA
Title: Paediatric Appendicitis with Critical-Care Requirements: Clinical Characteristics and Outcomes
Authors: David Coyle, MBChB(1), Melania Matcovici, MD(2), Brian T Sweeney, MD(3)
Institutions: Our Lady's Children's Hospital Crumlin, Dublin(1, 3), Temple Street Children's University Hospital, Dublin(2)
Category: General Surgery
Keywords: Appendicitis,Critical-care,Acute abdomen
Aim of the Study: Paediatric appendicitis can be diagnostically challenging, particularly in preschool years. Although paediatric appendicitis should carry a mortality approaching 0%, some patients require critical-care support. We aimed to examine the clinical characteristics of patients admitted to the national Paediatric Intensive Care Unit (PICU)/High Dependency Unit (HDU), to identify major contributory factors in their admission and to estimate the prevalence of such admissions. **Methods:** We carried out a retrospective review of the medical, laboratory and radiological records of all patients with appendicitis admitted to the national PICU/HDU of two paediatric tertiary referral centres over a 7 year period. Illness severity was graded using the PRISM score. We excluded patients whose admission resulted from a late

complication (e.g. adhesive bowel obstruction). **Main Result:** We performed 1,867 appendectomies over 7 years. We identified 19 patients (1%) requiring PICU/HDU admission between August 2009 and March 2016. The median age at admission was 7.06 years (0.04 – 13 years). The mean PRISM score was 9.5 (+/- 5.9). Median duration of symptoms at presentation was 5.5 days (2-8 days). The most common presenting features were vomiting (n=13), abdominal pain (generalised n=8, localised n=4), fever (n=7) and abdominal distension (n=6). The most common examination findings were tachycardia (n=11) and a tender distended abdomen (n=11). Pre-operative radiology (n=16) established a diagnosis of appendicitis in 6 cases (37.5%). Eighteen patients underwent emergent appendectomy. Further interventions included percutaneous abscess drainage (n=2 [10.5%]), re-laparotomy for sepsis (n=3 [15.8%]) and bowel obstruction (n=1 [5.3%]), and extra-corporeal membrane oxygenation (n=1 [5.3%]). The median hospital stay was 20 days (7-105 days). **Conclusion:** Critical-care support is required in ~1% of children with appendicitis. Prolonged history (>5 days) and clinical features of intestinal obstruction in children under 7 years old are the main indicators that such support may be required, while pre-operative radiology is often non-diagnostic.

023 - OA
Title: Perioperative determinants of transient hypocalcemia after pediatric total thyroidectomy
Authors: Yangyang R Yu, MD(1), Sara C Fallon, MD(2), Jennifer L Carpenter, MD(3), Athanassaki D Ioanna, MD(4), Mary L Brandt, MD(5), David E Wesson, MD(6), Monica E Lopez, MD(7)
Institutions: Texas Children's Hospital(1, 2, 3, 4, 5, 6, 7)
Category: General Surgery
Keywords: Hypocalcemia,Thyroidectomy,Lymphadenectomy
Aim of the Study: Thyroid disease requiring surgery in children is uncommon and few studies have examined the determinants of post-operative hypocalcemia in children. This study aims to identify risk factors associated with post-operative hypocalcemia after pediatric total thyroidectomy. **Methods:** We performed a retrospective review of pediatric patients under 21 years old who underwent a total thyroidectomy between January 2002 and January 2016. Transient hypocalcemia was defined as serum calcium <8mg/dl or ionized calcium <1.0mmol/L during the post-operative hospitalization. Perioperative risk factors for transient hypocalcemia were identified through multivariate logistic regression with p-value <0.05 considered significant. **Main Result:** Ninety-one children underwent total thyroidectomy. The average age at surgery was 13.7±4.4 years; 77% were female. Transient hypocalcemia was diagnosed in 34% (n=31) of patients, of which 39% (n=12) received intravenous calcium supplementation. Ten (32%) patients developed symptomatic transient hypocalcemia; three symptomatic patients required intravenous calcium supplementation. There was one case of permanent hypoparathyroidism. Predictors of transient hypocalcemia included age (OR 0.87, 95% CI 0.78-0.98, p=0.02), concomitant lymphadenectomy (OR 6.6, 95% CI 1.6-28.2, p=0.01), and hyperthyroidism (OR 13.3, 95% CI 0.5-342.8, p=0.01). Patients with malignancy who have therapeutic central (OR 7.1, 95% CI 1.5-33.4, p=0.01) and central plus lateral lymphadenectomy (OR 6.33, 95% CI 1.0-40.1, p=0.05) had significantly increased risk for transient hypocalcemia compared to those without lymphadenectomy (42%). Malignancy, MEN2A/B, multinodular goiter, pre-operative calcium supplementation, incidental parathyroid removal, and postoperative PTH <15pg/ml were not associated with transient hypocalcemia. **Conclusion:** Younger patients, hyperthyroidism, and patients undergoing therapeutic concomitant lymphadenectomy have a higher risk of developing transient hypocalcemia following total thyroidectomy. Malignant cases with central or central plus lateral lymphadenectomy are also at increased risk. Aggressive perioperative management of hypocalcemia should be initiated in patients with these risk factors.

024 - OA
Title: Tangential diverticulectomy for Meckel’s diverticulum: is it risky business?
Authors: Augusto Zani, MD, PhD(1), Luai S Jamal, MD(2), Erica L Schollenberg, MD(3), Gino R Somers, MBBS, PhD(4), Georges Azzie, MD(5)
Institutions: The Hospital for Sick Children(1, 2 , 3, 4, 5)
Category: General Surgery
Keywords: Meckel's,diverticulectomy ,laparoscopic
Aim of the Study: Symptomatic patients with Meckel’s diverticulum (MD) are traditionally treated with surgical excision with segmental small bowel resection (SSBR) or wedge resection (WR). Recently, laparoscopic or laparoscopic-assisted tangential diverticulectomy (TD) has become a popular alternative. The aim of this study was to investigate the outcome of patients who underwent TD. **Methods:** Following ethics committee approval, charts of patients with MD treated between 2000 and 2014 were reviewed. Patients were compared according to incidence of postoperative complications. To further analyze patients with heterotopic mucosa, pathology specimens were reviewed for location and extent of heterotopia. Data were compared using Kruskal-Wallis test and expressed as median (IQ range). **Main Result:** During the study period, 178 patients were treated for MD. Of these, 74 had SSBR, 19 WR and 85 TD. Overall complication rate was 32% for SSBR, 16% for WR, 17% for TD. Three patients (2 SSBR, 1 WR) had leaks requiring re-intervention. One patient who underwent TD developed an intestinal stricture requiring reoperation. Recurrent rectal bleeding in three patients (1 SBBR, 1 WR, 1 TD) was associated with other underlying conditions, and all these had free margins on histologic examination. Four patients (1 SBBR, 3 TD) had resection margins positive for heterotopic mucosa, but none developed postoperative complications. Length of stay was shorter in TD patients [5 days (4-9)] than in patients who had

SBBR [6 days (5-10); p=0.0227] or WR [7 days (4-13); p=n.s.]. At histology, heterotopic mucosa (present in 61% cases) was localized in MD body/fundus in 88% specimens and in the neck in 12% specimens. **Conclusion:** Tangential excision of MD is a valid alternative to other surgical approaches, with similar postoperative complication rates and shorter hospital stay. While heterotopic mucosa was found in the neck of the MD in a minority of cases, based on our experience, this was not associated with an increased risk of complications.

025 - OA
Title: Rectal mucosal punch biopsy using K-PUNCH for the diagnosis of Hirschsprung's disease: A thirty-year experience of 954 patients
Authors: Yoshimaru Dr. Koichiro, MD(1), Kinoshita Yoshiaki, PhD(2), Yanagi Yusuke, MD(3), Obata Satoshi, PhD(4), Iwanaka Tsuyoshi, MD(5), Takahashi Yoshiaki, MD(6), Miyata Junko A., PhD(7), Matsuura Toshiharu, PhD(8), Taguchi Tomoaki, PhD(9)
Institutions: Kyushu University(1, 2, 3, 4, 5, 6, 7, 8, 9)
Category: General Surgery
Keywords: Hirschsprung's disease,intestinal neuronal dysplasia,rectal mucosal punch biopsy
Aim of the Study: The rectal mucosal biopsy has been performed for the diagnosis of Hirschsprung's disease (HD) or its allied disorders at our department and the branch hospital since 1986. The aim of this study is to evaluate the efficacy of our technique. **Methods:** Patients with suspected HD or its allied disorders who underwent 'K-PUNCH' biopsy since April 1986 to March 2016 were included. The procedure of 'K-PUNCH' biopsy is as follows; 1) patients were fixed lithotomy position without using the sedative agents, except an uncooperative toddler, 2) non-specific blood-collecting tube with drilling a 6-mm hole at the top of tube was gently inserted to rectum, 3) the mucosa was grasped and pulled off by using laryngeal biopsy forceps with the operator's full view was performed, 4) the complete hemostasis using a gauze packing was finally performed. The patient backgrounds and complications (such as bleeding requiring transfusion, rectal perforation, infection and the harvesting of inappropriate specimens) were retrospectively investigated. **Main Result:** During this period, 954 patients with a median age of 4 months (range: 1 day – 73 years) underwent 'K-PUNCH' biopsy. Diagnosis was as follows: HD (n=289, 30.1%); intestinal neuronal dysplasia type B (IND-B) (n=15, 1.6%); normal study (n=569, 59.6%); undetermined (n=34, 3.6%). The definitive diagnosis could not be achieved due to the inappropriate specimen harvest (n=37, 4.1%) or the problem of the specimen transport (n=10, 1.0%). Although there were no cases of severe complications (such as biopsy-related death, rectal perforation and sepsis), one (0.1%) of the 954 cases in the early period of present study who showed liver dysfunction required transfusion due to bleeding. **Conclusion:** The rectal mucosal punch biopsy is considered to be safe and feasible thanks to extremely low rates of complications and inappropriate specimen harvesting among patients of all ages.

026 - OA
Title: Outcomes of Botulinum Toxin Treatment for Functional Childhood Constipation
Authors: Hemanshoo Thakkar, MBBS, BSc, MRCS(1), Katherine de Rome, MBBS(2), Alireza Safaei-Keshtgar, PhD(3)
Institutions: (1), (2), (3)
Category: General Surgery
Keywords: Constipation,Botulinum Toxin,External anal sphincter
Aim of the Study: Botulinum toxin (BT) is a well-recognised treatment of intractable constipation refractory to medical treatment. The aims of this study were to assess the short and long-term outcomes of BT injection into the external anal sphincter muscles (EAS) for treatment of chronic idiopathic constipation (CIC) in children. **Methods:** All patients with CIC treated with BT were included from January 2009 to December 2015. We injected BT (Dysport®) 12 units/kg (maximum 200 units) in divided doses into the EAS muscles under endosonography guidance at 3 and 9 o'clock positions. Patients had anorectal manometry and colonic transit and their demographics, co-morbidities and symptoms were recorded. Parents were asked to complete a validated Symptom Severity (SS) questionnaire pre-operatively and at 3 months. The scores included eight domains with the sum of the scores ranging from 0(best) to 65(worst). A follow-up telephone call was made by a single investigator to assess longer-term outcomes. Statistical analysis of paired data was performed using the Wilcoxon signed rank test and data presented as median (range). P-value of <0.05 was considered significant. **Main Result:** 95 patients underwent treatment with BT during the study period. The median age at presentation was 7 years (2-15.5 years). 55 (58%) patients were male and 20 (21%) had behavioural co-morbidities including Attention Deficit Hyperactivity Disorder, Autism and Asperger's. The pre-operative SS score improved significantly from median 32(13-53) to 21 (0-44) at 3 months follow up, p<0.05. The improvement in SS score was maintained at 12 months follow up, 11 (0-48), p<0.05. Two patients required a repeat injection (2%) whereas 12 (13%) required formation of an antegrade colonic enema (ACE) stoma. **Conclusion:** Botulinum toxin injection into the external anal sphincter muscles is an effective treatment of children with intractable constipation not responding to conventional treatment. In our experience 87% of patients responded to BT treatment.

027 - OA
Title: Predicting the outcome of pediatric acute pancreatitis
Authors: Hana Arbab, FCPS(1), Saqib Qazi, FACS(2), Vishal Raza, undergraduate(3)
Institutions: Aga Khan University Hospital, Karachi(1, 2, 3)
Category: General Surgery
Keywords: Pediatric acute pancreatitis,Computed Tomography Severity Index (CTSI),Serum Lipase
Aim of the Study: Our knowledge on risk stratifying pediatric acute pancreatitis is poorly understood in this group and mostly extrapolated from adult literature, predicting severe outcomes, based on scores like pediatric acute pancreatitis score (DeBanto et al), CTSI (computed tomography severity index or Balthazar) or even serum lipase levels. **Methods:** Children admitted to our institution with acute pancreatitis over 9 years were reviewed. Contrast-enhanced computed tomographic (CT) images at presentation were done and assessed for peripancreatic fluid and the extent of necrosis. Serum lipase levels at presentation were sent within first 24 hours. The ROC (Receiver operating characteristic) curve were generated to test for diagnostic test evaluation for both, alone and combined. **Main Result:** Of 115 children with acute pancreatitis, 105 underwent contrast-enhanced CT at presentation. The majority were more than 10 years of age. Etiology was idiopathic (52.4%) in most, followed by traumatic (16.2%), medication-induced (11.4%), gallstone (6.7%), choledochal cyst (3.8%), and others (9.6%). The sensitivity, specificity, positive predictive value, and negative predictive value of the CTSI (with a cutoff value at a score of 2 or more) were 45.6%, 95.8%, 92.9%, and 59.7%, respectively, which compared favorably to the results of the serum lipase levels (84.2%, 25%, 57.1% and 57.1%) with a cutoff of more than 500U/L and both combined (40.35%, 95.83%, 92%, 57.5%). **Conclusion:** Our review demonstrates that the CTSI is a clinically useful tool for predicting patients that will develop major complications, against those who will not. The serum lipase at presentation, alone, may have a better sensitivity than CTSI, but does not translate into a better positive predictive value, or a good risk stratification tool. Combining the two improved neither the sensitivity nor the specificity of CTSI alone.

032 - OA
Title: Experiences of Laparoscopic Liver Resection for Liver Tumors in Pediatric Patients: Initial 17 cases
Authors: Jungman Namgoong, MD(1), DaeYeon Kim, MD(2)
Institutions: Division of Pediatric Surgery, Department of surgery, Asan Medical Center, University of Ulsan College of Medicine(1, 2)
Category: Hepatobiliary Surgery
Keywords: Laparoscopy,hepatectomy,children
Aim of the Study: The value of laparoscopic liver resection (LLR) in children is not established. The aim of this study was to evaluate the feasibility and outcome of laparoscopic hepatectomy in pediatric patients with liver tumors.
Methods: This was a retrospective study of 17 patients under the age of 18 years old who underwent LLR for liver tumors between January 2008 and March 2016. The laparoscopic procedure was performed using three to five ports (two 10 mm and three 5 mm trocars). **Main Result:** The patient group comprised 8 females and 7 males, with a median age of 26 (range 0.3-180) months and a mean body weight of 11.2 (range 3.8-50.3) kg. The diseases of patients were hepatoblastoma (n=11), recurred neuroblastoma (n=1), focal nodular hyperplasia (n=3), biliary atresia (n=1) and liver abscess (n=1). Five patients underwent a major anatomical hepatic resection (right lobectomy and left lobectomy); the others underwent minor hepatic resections (left lateral segmentectomy, subsegmentectomies, and right-sided non-anatomical resections). Two patient required conversion to open procedure because of inadequate free surgical margins for focal nodular hyperplasia and bleeding. Transfusion of p-RBC was performed for 7 patients. Median duration of operation was 230 (range 60-320) minutes and median duration of hospitalization was 7.0 (range 3-22) days. There was no postoperative complication and perioperative mortality. **Conclusion:** LLR requires extensive experiences in hepatobiliary and laparoscopic surgery, and a limited number of cases provide insufficient opportunities for pediatric surgeons to master the surgical procedure in pediatric population. LLR, nevertheless, offers many advantages, as widely published. The authors performed laparoscopic hepatectomies for benign and malignant liver tumors with respectability. Laparoscopic hepatectomy, therefore, would be a safe and feasible option for liver tumors in children. Randomized studies will be required in the future to establish LLR as the standard procedure for liver tumor in pediatric patients.

033 - OA
Title: LAPAROSCOPIC KASAI PORTOENTEROSTOMY.
Authors: NATALYA USKOVA, PhD(1), Alexander Razumovsky, PhD(2), Abdumanap Alkhasov, PhD(3), Saidkhassan Bataev, PhD(4), Zoricto Mitupov, PhD(5), Victor Ruchkov, PhD(6), Nikita Stepanenko, PhD(7), Roman Ignatyev, PhD(8), Anatoliy Pavlov, PhD(9)
Institutions: (1), (2), (3), (4), (5), (6), (7), (8), (9)
Category: Hepatobiliary Surgery
Keywords: PORTOENTEROSTOMY,IAPOROSCOPIC ,Children
Aim of the Study: The question of feasibility of laparoscopic Kasai procedure for biliary atresia in infants has been a subject of discussion for a long time, and still remains unsolved. **Methods:** The first laparoscopic Kasai

portoenterostomy was performed in January, 2008 to a 2 month old child. Since then, portoenterostomies were performed in 42 children with biliary atresia. The age of the children varied from 50 days to 3.5 months. The mean weight of the patients was 4693±767g. 24 patients between the years 2000-2008 were operated on by conventional ("open") procedues. Excision of the fibrous biliary remnant was performed laparoscopically in all cases. The Roux loop was fashioned outside of the abdominal cavity through the umbilical incision in 23 children, and in 18 infants the Ruox loop was performed laparoscopically. Laparoscopic biliary reconstruction was performed successfully in all patients. **Main Result:** Results: 79% of children who underwent laparoscopic Kasai had a normal postoperative bilirubin level, whereas the other 9 children did not drain bile and required liver transplantation. In the "open" surgery group, 74% of patients had good results. The duration of laparoscopic Kasai procedure was significantly longer than open surgery ($p < 0.05$). There were no conversions. We observed significantly fewer complications (40%) after laparoscopic hepaticojejunostomy than after traditional hepaticojejunoduodenostomy (84.6%, $p < 0.05$). The average length of stay in the ICU, and the duration of analgesia after laparoscopy was significantly lower than after open surgery ($p < 0.05$). Cholangitis was found in 21.4% in the laparoscopic group and 25% in the open surgery group. Intraperitoneal adhesions in patients who underwent liver transplantation were less pronounced after laporoscopy, compared with open Kasai procedure. **Conclusion:** Our experience leads us to conclude that laparoscopic Kasai operations can be used as the procedure of choice in the treatment of children with biliary atresia.

035 - OA

Title: Congenital Vascular Malformation of the Liver: an Association with Down Syndrome (Trisomy 21)

Authors: Oliver Burdall, MD(1), Tassos Grammatikopoulos, MD(2), Maria Sellars, FRCR(3), Nedim Hadzic, FRCPCH(4), Mark Davenport, ChM FRCS(5)
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ategory: Hepatobiliary Surgery

Keywords: Down syndrome,vascular anomalies,liver

Aim of the Study: A link between congenital vascular malformation (CVM) of the liver and Down syndrome has been suggested. We aimed to establish the characteristics of such a relationship. **Methods:** Retrospective review of all children with Down syndrome referred for investigation of liver pathology at a specialist paediatric hepatobiliary unit (1985-2015). **Main Result:** Forty-five children with Down syndrome were identified; of which 7 (15%) had a defined CMVs (4 female). All of these infants were also diagnosed with a range of cardiac defects of which 3 required surgical correction. These were divided according to the nature of the vascular connection. Group A (n=3) - abnormal veno-venous anomaly I.e. porto-caval shunt, patent ductus venosus(PDV) (x2). One child underwent shunt closure for associated hyperinsulinaemia and hypoglycaemia. Two infants presented with failure to thrive and congestive cardiac failure due to associated cardiac anomalies. Of the PDVs; one resolved spontaneously, the other died due to multi-organ failure from other causes. Group B (n=4) - involvement of all three vascular systems; arterial, portal and systemic. Two infants had arterioportal hypertension caused by feeding hepatic arteries and a left portal vein aneurysm within the umbilical fissure. Typical symptoms included failure to establish enteral nutrition. Both ultimately came to aneurysmal resection. Both are now asymptomatic after 5 years. Two infants had more complex hepatic artery to hepatic vein shunts developing early cardio-respiratory failure with progressive jaundice, coagulopathy and thrombocytopenia. Both underwent left lateral segmentectomy despite maximal medical management, both died between 1 and 30 days post operatively. **Conclusion:** Our series, the largest to date, shows a clear association between congenital cardiac anomalies and hepatic vascular malformations in children with Down syndrome. Clinical course is dependent upon arterial involvement which was associated with increased need for intervention and worse outcomes when compared to patients with veno-venous malformations only.

036 - OA

Title: Analysis of the prognostic factors for short- and mid-term native liver survival in biliary atresia

Authors: Hideyuki Sasaki, PhD(1), Hiromu Tanaka, PhD(2), Motoshi Wada, PhD(3), Takuro Kazama, PhD(4), Megumi Nakamura, PhD(5), Hironori Kudo, PhD(6), Masatoshi Hashimoto, MD(7), Yuki Endo, MD(8), Masaki Nio, PhD(9)
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Category: Hepatobiliary Surgery

Keywords: biliary atresia,prognostic factors,optimal procedure

Aim of the Study: Controversy exists regarding the optimal Kasai procedure, and potential options include dissection to the level of the porta hepatis and anti-reflux procedures. We evaluated the relationship between surgical variations and outcomes after the Kasai procedure. **Methods:** The present study included 229 patients who underwent the Kasai procedure between 1972 and 2010. We retrospectively evaluated patient sex, the type of biliary atresia, age at the time of surgery, biliary atresia splenic malformation syndrome (BASM), and surgical procedure sub-type. The primary outcome was 5-year native liver survival (NLS), and secondary outcomes were bile drainage and cholangitis. The adjusted odds ratios (aOR) were evaluated using multivariate logistic regression analysis. **Main Result:** Of the 229 study patients, 140 (61.1 %) had jaundice-free NLS at 5 years. Thirty-one patients did not have bile secretion after the Kasai procedure, and all of them underwent liver transplantation or died within 5 years. Early performance of the Kasai operation was associated with a good outcome in terms of 5-year NLS (aOR = 1.02, $p = 0.0172$). Deep dissection and

atresia of the porta hepatis were associated with poor outcomes (aOR = 3.43, p=0.0327; aOR = 2.66, p = 0.0269, respectively). Early Kasai operation was also associated with good biliary drainage (aOR = 1.02, p = 0.0295), while shallow dissection was associated with poor biliary drainage (aOR = 5.40, p = 0.0013). Deep dissection was associated with an increased incidence of cholangitis (aOR = 5.08, p = 0.0056). The presence of an anti-reflux valve remarkably decreased the incidence of cholangitis (aOR = 13.62, p < 0.0001). BASM was not significantly associated with primary or secondary outcomes. **Conclusion:** The Kasai procedure with adequate dissection of the porta hepatis and placement of an anti-reflux valve in the conduit may lead to better outcomes in patients with biliary atresia.

037 - OA
Title: Shafiqul's procedure as a surgical treatment for portal hypertension in children
Authors: Shafiqul Hoque, MBBS,FACS,FCPS(1)
Institutions: Bangabandhu Sheikh Nujib Medical University, Dhaka(1)
Category: Hepatobiliary Surgery
Keywords: Extrahepatic portal hypertension,Shafiqul's Procedure,Shafiqul's modification of Sugiura Procedure
Aim of the Study: To find out a better non-shunt procedure for controlling variceal bleeding the new innovative technique has been undertaken **Methods:** New Surgical technique: One stage extensive gastro-esophageal devascularization preserving antral vagal nerves and hence pyloroplasty is not needed. High transaction of stomach with re-anastomosis. Partial splenectomy to preserve splenic function. Materials and methods: Forty nine children has been operated with Shafiqul's Procedure between1993 to 2015 in different hospitals of Dhaka, Bangladesh. Drain was removed on 7th post-operative day unless complicated. Normally patients were discharged between 10-14 days. **Main Result:** The ages of the patients were 6 months to 18 years. Hematemesis was the commonest presentation in all . Predisposing factors were mostly idiopathic in 33 patients followed by umbilical sepsis and severe dehydration. Splenomegaly with pancytiopenia was also common feature. Cirrhosis of liver was found in 6 patients. Partial splenectomy was failed due to tearing of venous pedicle in 2, thombosis of vein pedicle in 2 and twisting of the splenic remanant in 2 patients. One patient died on 7th post-ioperative day and other one died after 18 months. Recurrent bleeding was in 11 which were managed by sclerotherapy in all. Two had incisional hernia. Longest follow up of 17 years was in a girl of 32 years now. **Conclusion:** Author's modification of Sugiyra Procedure is an alternative modality of symptomatic treatment for bleeding esophageal varicesfrom extrahepatic portal hypertension. Shafiqul's Procedure preserves splenic function and presrves normal pylori anatomy making the surgery more anatomical and physiological.

039 - OA
Title: PORTAL HYPERTENSION IN CHILDREN: 27 YEARS' EXPERIENCE OF SURGICAL TREATMENT
Authors: Victor Mr Ruchkov, PhD(1), Alexander Mr Razumovsky, PhD(2), Saidkhassan Mr Bataev, PhD(3), Abdumanap Alkhasov, PhD(4), Zoricto Mitupov, PhD(5), Nikita Stepanenko, PhD(6), Roman Ignatyev, PhD(7), Anatoliy Pavlov, PhD(8), Sultan Ayschanov, PhD(9)
Institutions: Filatov Children's Hospital, Scientific Research Institute for Pediatric Surgery at the Pirogov Russian National Research Medical University, MOSCOW, Russia(1), (2), Filatov Children's Hospital, Scientific Research Institute for Pediatric Surgery at the Pirogov Russian National Research Medical University and SI RAS, MOSCOW, Russia(3), (4), (5), (6), (7), (8), (9)
Category: Hepatobiliary Surgery
Keywords: portal hypertension ,Surgical treatment,children
Aim of the Study: Surgical procedures are known to be most effective in preventing variceal bleeding (VB) in children with portal hypertension (PH). The quality of life, possibility of the portosystemic encephalopathy, and the deterioration of liver function after shunt procedures in children with PH are the aim of our study. **Methods:** 718 children with PH were treated in our hospital since 1989. 639 (89%) had extrahepatic PH. 577 patients underwent portal systemic shunting(PSS). In 81 children Rex-shunts were performed. In 24 patients Sugiura operations were done. Endoscopies, Duplex scanning, biochemical tests and psyhoneurological evaluation were performed after a one-year period. 172 patients were evaluated in 5-18 years after surgery to determinate the long-time results. **Main Result:** Re-bleeding occurred in 21 (3,7%) children with PPS. In the long–term period portal perfusion (PP) after PSS decreased down in 84%. No patient developed portal-systemic encephalopathy. No signs of liver function deterioration were found. The re-bleeding rate after Rex-shunt was 5,5%. In patients with Rex-shunt, a normal PP was restored in the early postoperative period. The Sugiura procedure produced the highest rate of re-bleeding – 25%. In 12 patients, we combined the Sugiura procedure with planned endoscopic sclerotherapy in the postoperative period. This decreased re-bleeding to 8,3%. **Conclusion:** The PSS is an effective and method of preventing of VB and does not seriously degrade quality of life of the child. The Rex shunt effectively restores PP in the post-operative period. In casess when shunt surgery is not possible, the Sugiura procedure is the operation of choice with endoscopic sclerotherapy for remnant varices.

049 - OA
Title: ASSESSMENT OF BOWEL FUNCTION IN PATIENTS WITH ANORECTAL MALFORMATIONS USING DIFFERENT SCORING SYSTEMS

Authors: Giulia Brisighelli, MD(1), Antonio Di Cesare, MD(2), Francesco Macchini, MD(3), Giorgio Raffaele Fava, MD(4), Anna Morandi, MD(5), Ernesto Leva, MD(6)
Institutions: Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(1), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(2), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(3), fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(4), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(5), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(6)
Category: Misc
Keywords: anorectal malformations ,fecal incontinence,scores
Aim of the Study: To evaluate bowel function in patients with anorectal malformations (ARM) comparing existing scoring systems. **Methods:** Parents of ARM patients treated at our institution were asked to fill in Holschneider, Rintala, and Krickenbeck questionnaires. Scores obtained from the questionnaires were analyzed depending on the type of ARM according to Krickenbeck classification. To be able to compare the scores, the results were expressed in part of a hundred. Patients younger than 3 years of age or with developmental delay were excluded. **Main Result:** Eighty patients (42 males) were included. Mean age was 8.4 years. Among females, 16 (42%) had perineal fistula, 15 (49%) vestibular and 7 (18%) a cloaca. Among males, 12 (29%) had perineal fistula, 13 (31%) bulbar, 7 (16%) prostatic, 5 (12%) imperforate anus without fistula, and 5 (12%) recto-bladder neck fistula. Using Holschneider, Rintala and Krickenbeck, average scores were respectively 71.8, 72.9 and 70.7 (p-value: 0.7 with Anova). Using Holschneider, females with perineal fistula scored averagely 82.1, vestibular 75.2, cloaca 64.3 (p-value: 0.074 with Anova). Males with bulbar scored 68.8, prostatic 51.4, imperforate anus 61.4 and bladderneck fistula 55.7 (p-value: 0.037 with Anova). Using Rintala, females with perineal fistula scored averagely 83.8, vestibular 75, cloaca 65 (p-value: 0.089 with Anova). Males with bulbar scored 71.8, prostatic 61, imperforate anus 53 and bladderneck fistula 57(p-value: 0.005 with Anova). Using Krickenbeck, females with perineal fistula scored averagely 76, vestibular 66.7, cloaca 67.3 (p-value: 0.042 with Anova). Males with bulbar scored 71.4, prostatic 71.4, imperforate anus 48.6 and bladderneck fistula 80 (p-value: 0.21 with Anova). **Conclusion:** Using three different scores, the overall results are similar. In our population Rintala score seems to better reflect the outcomes according to the type of ARM in males, and Krickenbeck score for females.

051 - OA
Title: Paediatric Surgical Outreach to Papua New Guinea
Authors: Rambha Rai, FAMS(1), Jack Mulu, MD(2), Anette Jacobsen, FRCS, FAMS(3)
Institutions: (1), (2), (3)
Category: Misc
Keywords: Outreach program,Papua New Guinea (PNG),Capacity building
Aim of the Study: We report our early experience in establishing a paediatric surgical outreach program in Papua New Guinea (PNG), to build capacity and improve care. **Methods:** A Singhealth paediatric surgical outreach program was initiated 3 years ago, in collaboration with the Port Moresby General Hospital of PNG. Two paediatric surgeons travel along with a multidisciplinary team. Each outreach trip lasts 4-7 days. The team supervises or performs surgeries for complex cases, conducts patient consultations and gives lectures to impart knowledge and transfer skills to the local health care community. Additionally, a 6-12 months training program for PNG doctors has been started in parallel. There is also a provision for transfer and management of complex cases under the Regional outreach to kids program. **Main Result:** There is severe shortage of trained manpower with surgical skills in PNG. Due to lack of an Intensive care facility, appropriate medications and equipments, many conditions are left untreated. This causes high morbidity and mortality among infants and neonates. To address the gaps in surgical skills, three capacity building trips have been conducted in past 3 years. Each trip has to be planned carefully with special consideration to the security of the team. PNG surgeons are now able to manage some of the Index Paediatric Surgical conditions more confidently. **Conclusion:** Singhealth aspires to achieve its humanitarian mission of promoting health equity by responding to the medical needs of PNG through training and leveraging on the strength of partnership. In addition, our doctors gain invaluable experience, as they treat diverse cases and learn to innovate while working in an environment with limited resources.

052 - OA
Title: Outcomes of intestinal rehabilitation for intestinal motility disorder
Authors: Hironori Kudo, MD(1), Motoshi wada, MD(2), Megumi Nakamura, MD(3), Hideyuki Sasaki, MD(4), Takuro Kazama, MD(5), Hiromu Tanaka, MD(6), Masaki Nio, MD(7)
Institutions: (1), (2), (3), (4), (5), (6), (7)
Category: Misc
Keywords: intestinal failure,intestinal motility disorder,intestinal transplantation
Aim of the Study: Intestinal motility disorder (IMD) is a major cause of severe intestinal failure necessitating intestinal transplantation (ITx). Therefore, this study aimed to assess the efficacy of intestinal rehabilitation (IR) that includes isolated ITx for patients with IMD. **Methods:** From 1990 to 2015, 15 patients with IMD were referred to our hospital. Diagnoses included hypoganglionosis (n=7), extensive Hirschsprung disease (n=4), chronic idiopathic intestinal pseudo-obstruction (n=2) and megacystis microcolon intestinal hypoperistalsis syndrome (n=2). Patients were treated with an IR program that included ITx. In this series, isolated ITx was performed for IMD rather than multivisceral ITx due to the

strict graft-assignment guidelines in Japan. The patients' clinical courses were retrospectively reviewed. **Main Result:** Isolated ITx was eventually indicated for 6 patients due to loss of central venous access and/or development of progressive liver dysfunction. The age at ITx ranged from 14 to 28 years (median, 21 years). Following ITx, 1 patient each died of sepsis and abdominal bleeding. Another patient underwent graft removal twice due to rejection, and is currently awaiting a third ITx. Three patients have been completely weaned off parenteral nutrition (PN) following ITx. ITx has not been indicated for 9 patients. One patient each died of liver and heart failure. The remaining 7 patients (current age: 5-15 years, median, 7 years) survived and are undergoing IR with PN at home. **Conclusion:** IR that includes isolated ITx significantly contributed to patient survival and weaning off PN in patients with severe IMD. However, uncontrollable complications leading to patient/graft loss were encountered. Further refinement of the IR program is required to achieve a higher survival rate and improve the quality of life for patients with IMD.

053 - OA

Title: An Analysis of Essential Pediatric Surgical cases encountered during a decade of Large-Scale Military Humanitarian Aid Missions

Authors: Radhames E Lizardo, MD(1), Jason B Brill, MD(2), Jonathan L Halbach, DO(3), Marion Henry, MD(4), Stephen W Bickler, MD(5), Romeo C Ignacio, MD(6)

Institutions: Naval Medical Center San Diego(1), Naval Medical Center San Diego(2), Naval Medical Center San Diego(3), Naval Medical Center San Diego(4), University of California San Diego (5), Naval Medical Center San Diego(6)

Category: Misc

Keywords: Military Humanitarian Aid Missions,Pediatric Surgery ,Disease Control Priorities, 3rd Edition

Aim of the Study: Approximately one-third of the global burden of disease can be treated surgically. Recent evidence-based guidelines, which were published in Disease Control Priorities, 3rd Edition (DCP3), outline 44 essential surgical procedures recommended for developing health care systems. The incidence of these surgical conditions seen in pediatric patients in low-and-middle-income countries (LMIC) remains unclear. Over the last decade, the USNS Mercy (T-AH 19) has led the Pacific Partnership (PP) missions and provided large-scale humanitarian aid (HA) throughout Southeast Asia. The data collected during these missions provide an opportunity to analyze the scope of the pediatric-related operations performed in limited-resource countries. **Methods:** Surgical case data were prospectively collected during the five USNS Mercy-led PP missions (2006-2015). Pediatric cases were retrospectively identified and categorized by mission year and host nation. The data collected was compared with the 44 essential operations list as described by DCP3. Standard statistical analysis was then performed to identify trends. **Main Result:** A total of 3778 major and minor operations were performed during 30 port visits within 12 countries. Pediatric cases represented 930 (24.6%) of these procedures. Based on DCP3 criteria, 741 operations (79.7%) were considered essential procedures. Four deployed pediatric surgeons performed 310 of the 930 (33.3%) cases, of which 259 (83.5%) were DCP3-aligned. The most common DCP3-aligned procedures were herniorrhaphies (253, 27.2%), cleft lip/palate repairs (143, 15.4%) and operative dental procedures (71, 7.6%). The most common index pediatric operation was anorectal malformation repair (7, 0.8%). **Conclusion:** Pediatric operations represented almost one-quarter of the surgical volume encountered by the US Navy during PP missions. The vast majority of these cases were DCP3-aligned with only a small subset requiring formal pediatric fellowship training. Future HA missions and host nations should allocate appropriate medical and educational resources to treat pediatric surgical diseases in LMIC and to maintain long-term capacity building.

054 - OA

Title: The Pediatric Surgery NaT: Using the pediatric surgery community of practice to create a global educational resource

Authors: David M Powell, MD(1), John HT Waldhausen, MD(2), Ronald B Hirschl, MD(3)

Institutions: Stanford University(1), Seattle Children's Hospital(2), C.S. Mott Children's Hospital(3)

Category: Misc

Keywords: textbook,reference,NaT

Aim of the Study: We document the process whereby a pediatric surgery community of practice was successfully developed in order to create an innovative valuable educational resource. **Methods:** In 2014, the American Pediatric Surgical Association conducted a needs assessment of practicing and in-training pediatric surgeons regarding the current state of textbooks, educational resources and references. Based on this feedback, APSA funded the development and maintenance of the Pediatric Surgery NaT (Not a Textbook) - an electronic content management system designed to optimally meet the identified needs. **Main Result:** Over three hundred pediatric surgeons are contributing to the Pediatric Surgery NaT with seventy topics, forty subtopics and sixty procedures in the current release (pedsurglibrary.com). The NaT -is evidence-based -offers both web and mobile device access -is updated and expanded quarterly -contains access to text, patient care algorithms, high resolution images and videos -integrates searching of the medical literature -encourages feedback and commentary **Conclusion:** The Pediatric Surgery NaT leverages the energy, experience and expertise of the pediatric surgery community of practice to produce an accessible electronic reference.

OA12. ORAL ABSTRACTS

Tuesday, October 11 | 15:30 – 17:45 | Virginia A/B

MODERATORS: ZACHARIAS ZACHARIOU, SHIGERU UENO

055 - OA

Title: Does outcome of liver transplantation in post kasai biliary atresia differ from non operated biliary atresia cases?

Authors: Neelam Mohan, DNB in Pediatrics (1), Arvinder Singh Soin, MS(2), Sakshi Karkra, MD(3), M Dhaliwal, MD(4), V Raghunathan, MD(5), D Goyal, MD(6), A Rastogi, MS(7), S Goja, MS(8), P Bhangui, MS(9)

Institutions: Medanta The Medicity Hospital(1), Medanta The Medicity Hospital(2), Medanta The Medicity Hospital (3), Medanta The Medicity Hospital(4), Medanta The Medicity Hospital(5), Medanta The Medicity Hospital (6), Medanta The Medicity Hospital (7), (8), (9)

Category: Misc

Keywords: Biliary Atresia,Kasai portoenterostomy ,Liver Transplantation

Aim of the Study: Aim: To analyze and compare the outcome of Liver transplant (LT) in patients of biliary atresia (BA) with / without prior Kasai portoenterostomy(PE). **Methods:** Methods: Pediatric Live Donor Liver Transplant (LDLT) from September 2004 to May 2016. The cases were divided into two groups: Group A - BA with previous Kasai PE (BA +PE); Group B: BA without previous Kasai PE (BA – PE). The short and long term complications and survival were compared in both the groups. **Main Result:** Results: Of 200 LDLTs ,71 BA ,GroupA-47 (66%), M:F 25:22; mean weight, age and pediatric end-stage-liver-disease (PELD) were 13.6Kg(4.2-44), 42(5-204months), 18(2-41) respectively. groupB 24(34%) M:F 16:8; mean weight, age and PELD were 7.7Kg (4.8-10.9), 11.6(4-24 months), 23.6(10-32). Biliary, vascular complications and gut perforation in groupA were 9 (19%), 12 (25%), 8(17%) in comparison to Group B where these were 2 (8%)(p = 0.03), 2(8%) (p value= 0.001) and 0 respectively. Mean stay was 31, 23 days in group A, B respectively. There were 3 mortality in group A and group B each, overall survival 94% and 88% (p value = >0.05) respectively over a mean follow-up 3.4 years. **Conclusion:** Conclusions: Though the patient and graft survival was not different in patients who underwent LT with or without prior PE the post-operative complications and hospital-stay was more in patients who underwent LT after PE, which would have cost implications too.

056 - OA

Title: COMPARISON IN BOWEL FUNCTION OF PATIENTS WITH ANORECTAL MALFORMATIONS AND HEALTHY CHILDREN USING DIFFERENT SCORING SYSTEMS

Authors: Giulia Brisighelli, MD(1), Anna Morandi, MD(2), Francesco Macchini, MD(3), Giorgio Raffaele Fava, MD(4), Antonio Di Cesare, MD(5), Ernesto Leva, MD(6)

Institutions: Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(1), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(2), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(3), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(4), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(5), Fondazione IRCCS Ca Granda Ospedale Maggiore Policlinico, Milano(6)

Category: Misc

Keywords: anorectal malformations ,fecal incontinence ,scores

Aim of the Study: To compare bowel function between patients with anorectal malformations (ARM) and healthy controls using existing scoring systems. **Methods:** Using Rintala, Holschneider and Krickenbeck score we analyzed the results in terms of bowel function in patients with ARM treated at our institution and compared the results to healthy children. Patients younger than 3 years of age or with developmental delay were excluded. **Main Result:** Eighty patients (42 males) with ARM and 116 healthy patients (67 males) were included. Mean age was 8.4 years in ARM and 8.5 years in healthy children (p:0.73 with t-test). Age at toilet training was 33 months in ARM patients and 27 in healthy children (p:0.0001 with t-test). Nine patients (average age: 5.9 years) in the ARM group and 2 healthy children (average age: 4.1 years) are still using diapers (p=0.0082 with Fisher test). Using Holschneider score, ARM patients scored averagely 10.1 and healthy children 13.6 (p<0.0001 with t-test). Using this score: 26 (33%) ARM patients and 99 (85%) healthy children never report soiling (p<0.0001 with Fisher test). Using Rintala score, ARM patients scored averagely 14.6 and healthy children 19.4 (p<0.0001 with t-test). Using this score: 26 (33%) ARM patients and 108 (92%) healthy children never report soiling (p<0.0001 with Fisher test) and 52 (65%) ARM patients and 108 (93%) healthy children never report fecal incontinence (p<0.0001 with Fisher test). Using Krickenbeck score, 25 (31%) ARM patients and 107 (92%) healthy children were considered completely continent (p<0.0001 with Fisher test). Using this score: 31 (39%) ARM patients and 107 (92%) healthy children never report soiling (p<0.0001 with Fisher test). **Conclusion:** Patients with ARMs potty train later than healthy children and independently from the scoring system used to assess it, bowel function in ARM patients is significantly different if compared to healthy children.

057 - OA

Title: Health conditions of child asylum seekers in Dresden, Germany

Authors: Laura F Goodman, MD(1), Joseph M Galante, MD(2), Diana L Farmer, MD(3), Stephanie Taché, MD, MPH(4)
Institutions: University of California Davis(1), University of California Davis(2), University of California Davis(3), Universitätsklinikium Dresden(4)
Category: Misc
Keywords: Global Surgery,Epidemiology,Refugee
Aim of the Study: We sought to describe the health conditions of the asylum-seeker pediatric population seen in the Dresden Refugee Clinic, including the need for pediatric surgical care. To address the acute medical needs of a rapidly increasing asylum-seeking population in Dresden, a dedicated refugee clinic was established in September 2015.
Methods: Medical diagnoses, demographic data, and insurance status were extracted from the electronic medical record of patients seen at the ambulatory Dresden Refugee Clinic between September 14, 2015 and December 31, 2016. Basic data analyses including non-parametric Wilcoxon rank-sum tests and Pearson's chi squared tests were completed using Stata version 14.0. **Main Result:** Seven-hundred forty patients <18 years were seen in the clinic within the selected time period. Of these, 465 (62.8%) were male and 275 (37.2%) were female. Twenty-eight were unaccompanied minors, of whom two were female and 26 male. The median age was six, interquartile range 3-11. There was no difference in age by gender. There were 1,664 ICD10 diagnoses recorded, with the majority being respiratory (30.4%), followed by infection (19.2%), skin or subcutaneous (6.7%), ear (4.9%), and injury or poisoning (4.6%). Boys had significantly more injury (p=0.001) diagnoses than girls, but there were no significant gender differences in the other most common categories. There were 20 pediatric general or urological surgical diagnoses in 14 patients. The most common diagnoses were abscess, furuncle, or carbuncle (5), inguinal hernia (5), hydrocele (2), and appendicitis (2). There were 18 congenital malformations in 18 patients, of which nervous system (3), cleft palate (2), Down syndrome (2), and ichthyosis (2) were the most common. **Conclusion:** The pediatric asylum-seeker population seen at the Dresden Refugee Clinic presented primarily with infectious, self-limited conditions, similar to non-asylum seeker urgent care populations, with minimal surgical needs. However, a referral system for surgical treatment is necessary.

058 - OA
Title: SURGICAL SAFETY PRACTICES IN PEDIATRIC SURGERY OPERATING ROOM IN A TERTIARY CARE HOSPITAL: ROLE OF THE SCRUB NURSE
Authors: Sharmistha Banerjee, BSc(Nursing)(1), Ravi Patcharu, MS(2), Shilpa Sharma, PhD(3), Devendra Kumar Gupta, MCh, FRCS,FAMS,DSc(4)
Institutions: All India Institute of Medical Sciences, New Delhi(1), All India Institute of Medical Sciences, New Delhi(2), All India Institute of Medical Sciences, New Delhi(3), All India Institute of Medical Sciences, New Delhi(4)
Category: Misc
Keywords: Surgical safety,protocols,Pediatric Surgery
Aim of the Study: To evaluate the outcome of surgical safety practices at Pediatric Surgery Operating Room(OR).
Methods: Study of OR records from 01 Jan 2005 to 31 Dec 2014(10 years), along with standard operating procedures(SOP) of surgical safety techniques was done to look for any adverse incidents that occurred with respect to patient identification, site and side of surgery, transfusion mismatch, sponge and needle counts. The protocols being followed in addition to the Surgical safety checklist of WHO 2007 were analysed. **Main Result:** 21073 surgeries(18642 routine, 2431 emergency) were performed during the study period. Routine surgeries were performed in a dedicated OR. Surgical safety protocols had been laid down in the OR in 1970,while the WHO surgical safety checklist was incorporated in 2009. Patient identity, site and side of proposed surgery were confirmed during pre-anesthetic check, preoperatively in the ward, and by the scrub nurse, surgeon and anesthetist before the surgery. Request for blood products was accepted at the blood bank only after verification of the signatures on the blood sample vial. Sponge and needle counts before and after the surgery were done by two nurses separately. There were no instances of wrong patient identification, side or site of surgery or transfusion mismatch. Gauze counting mismatch before wound closure occurred 36 times, which was always retrieved on searching, though this had delayed wound closure by 2-56 minutes. Accidental breakage of needles occurred 9 times, located by visual inspection 6 times and located with 'C' arm guidance before retrieval on 3 instances. **Conclusion:** Surgical safety protocols involving manual checks at multiple levels has minimalised human error and ensured patient safety in the OR. This is in addition to the WHO surgical safety checklist. Retaining the original protocols helped to avoid any mishap due to non familiarity with the new check list.

184 – OA
Title: Renovation of Alexandria pediatric surgery department
Authors: Saber M Waheeb, PhD(1), Mohamed Abdelmalak, MSC(2)
Institutions: Alexandria University(1), Alexandria University(2)
Category: Misc
Keywords: Renovation,pediatric surgery ,Developing countries
Aim of the Study: Document the renovation of Alexandria Pediatric Surgery Department to become a model for any health care setting wishing to construct a pediatric surgery department in developing countries Offer the highest standards of health care coping with the increasing number of patients To reach out to surrounding communities in

Africa **Methods:** • Secure the availability of financial support depending on donations collected via a Non-Governmental Organization •The renovation of -The surgical ICU -Wards and reception rooms -Operation theatres that match the infection control guidelines •The construction of -Day case surgery center -The administrative and educational sect or •Enrich knowledge and skills of medical team by regular scientific activities •Regular workshops held in Africa. **Main Result:** 1) Triple the amount of incubators and ventilators are added. - TPN unit construction. - Introduction of an Electronic Medical Record System. 2) 22 ward beds instead of 10 - Construction of an emergency room with an ultrasound device and a library with playing area. 3)Operating Rooms became six instead of 3, well equipped for better quality. - live transmission system from all theaters. •Construction of 1) day case surgery center to include: - 2 Outpatient clinics working 6 days a week. - 2 operation rooms with 1 recovery room. - playing area. - Breast feeding room for privacy of the mothers. 2) Administrators offices and 2 new lecture halls. •Regular weekly meeting and more than 8 workshops were done over 2 years. •Training courses are offered to doctors from different countries •The first specialized PhD in pediatric surgery in Egypt is now offered in Alexandria University. •60 children were operated upon over 2 workshops. **Conclusion:** Health care quality offered to our children was dramatically improved in a very short time which is considered one of the biggest renovation and re-modelling projects in the healthcare field in Egypt

080 - OA

Title: Vascular and cardiac extension of tumor thrombus in pediatric malignancies

Authors: Senol Emre, MD(1), ELIF KIRLI, MD(2), MEHMET ELICEVİK, Prof FEAPU FEAPS FRCS(hon)(3), Haluk Emir, Prof . FEAPU,FEAPS(4), CENK BUYUKUNAL, Prof FEAPU FEAPS FRCS(hon)(5)

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Category: Oncology

Keywords: Vascular extension of tumor thrombi,Pediatric malignancies,Oncologic surgery

Aim of the Study: To share a clinical experience with extension of cavo-atrial thrombi in pediatric malignancies **Methods:** Thirteen patients (age range:1-15 year) were analyzed retrospectively. The main diagnostic tools were MRI,CT angioraphy and Doppler USG There were 9 Wilms' ,2 hepatic tumor,1 adrenal Ca and 1 renal cell Ca. Preoperative chemotherapy(PCT) was the procedure of choice in all cases. In 2 patients with atrial thrombus (1 bilateral Wilms' tm and 1 renal cell Ca) a combined procedure with cardiac surgeons was carried on.In all other cases with intracaval thrombus,PCT was followed by en-bloc extraction of tumor+trombus. **Main Result:** PCT was highly effective in reducing the size and adherence of tumor thrombi . A 1 year-old boy with bilateral huge Wilms' tumor+completely obstructed v cava and a 9 year-old boy with nonresectable hepatocellular carcinoma and totally obstructed v cava died during PCT phase,before the surgery. A six-year-old boy with huge right anaplastic Wilms tm+right hepatic lobe involvement and caval obstruction and a 15-year-old girl with huge right renal cell ca +cavo-atrial thrombus+bilateral obstructed renal vein died postoperative period. A 3-year-old boy with bilateral Wilms' tumor+ cavo-atrial thrombi, a 1-year-old girl with huge right adrenal Ca, one hepatoblastoma patient and 6 unilateral Wilms'tumor patients with intracaval thrombus were all survived after the operation. The range for follow –up time was 1-10 year. **Conclusion:** In conclusion, surgery for chemosensitive Wilms' tumors with vascular and atrial extension of tumor thrombi is challenging ,but survival rates seems satisfactory. PCT seems useful for reduction of the size of thrombi. In chemoresistant or aggressive tumors such as anaplastic Wilms' tm, renal cell ca,hepatocellular ca and adrenal ca surgery seems the only alternative method but long-term survival rates are still far from satisfaction.

082 - OA

Title: Outcome improvement in patients with Wilms´ Tumor requiring nephron-sparing surgery. A before and after study at a comprehensive pediatric cancer center.

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Category: Oncology

Keywords: nephron sparing surgery,bilateral wilms tumor,partial nephrectomy

Aim of the Study: to analyze a cohort of patients with Wilms' Tumor (WT) requiring nephron sparing surgery in two time periods, before and after an improvement in the surgical protocol. **Methods:** All patients with WT requiring NSS from January 2000 to December 2015 were reviewed. Period from 2000 to 2007. Period 2 from 2008 to 2015. During period 2 an improved surgical protocol was implemented. Descriptive statistics were used **Main Result:** From 2000 to 2015, 206 patients with WT were treated, and 18 required NSS. Seventeen (8.2%) had bilateral WT and 1 (0.5%) had kidney fusion (horseshoe). Fifteen (88.2%) were synchronous and 2 (11.8%) were metachronous. Five (29.4%) were syndromic. One patient was excluded. Mean age was 20 months. Period 1 included 8 synchronous bilateral WT, Period 2 the rest. The NSS included partial nephrectomy on both kidneys in 6 cases (35.2%) and total nephrectomy on one and partial on the other in 8(47%), and NSS in a solitary or fused kidney in 3 (17.6%). All the NSS were in situ. The surgical

protocol routinely in period 2 included intravenous volume load, a loading dose of heparin, crushed saline ice in the operative field, avoiding clamping of the hilum vessels whenever possible, and routine use of manitol. Results for Period 1: 8 cases. Two patients died of septic complications, one in the postoperative period and associated to thrombosis. Four patients developed acute renal failure (ARF) 3 progressed to chronic failure and required renal transplantation. Three patients had persistent hypertension. Overall survival (OS) of 75%. Results for period 2: nine cases. One case of ARF that progressed to chronic failure. One patient has persistent hypertension. OS of 100%. **Conclusion:** A standardized optimal surgical protocol for NSS can improve outcomes, reducing postoperative hypertension, ARF, thrombosis and death.

083 - OA
Title: NEPHRON-SPARING SURGERY FOR PEDIATRIC RENAL TUMORS WITH APPLICATION OF HYDROJET DISSECTON, THERMOABLATION AND HAEMOSTATIC ENERGY TECHNOLOGIES
Authors: Timur Sharoev, PhD(1), Kazbek Savlaev, PhD(2)
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Category: Oncology
Keywords: nephron-sparing surgery,renal tumors,children
Aim of the Study: To demonstrate efficacy of nephron-sparing surgery (NSS) for pediatric renal tumors that we have innovated with the use of hydrojet dissection, tissue thermoablation and haemostatic energy technologies. **Methods:** From 2010 to 2015, 39 children with renal tumors, aged between 1 month and 17 years, underwent NSS of our modification. The proposed NSS technique entailed tumor resection without hillar clamping while using hydrojet dissector (Erbe), high frequency tissue thermoablation device (Erbe) and coagulation plasma device (Plasma Surgical). The patient data were retrospectively analyzed. **Main Result:** There following cases of renal tumors were presented: Wilms' tumor (WT) - bilateral (21) and unilateral (15); renal cell carcinoma (1), benign lesions (2). In 15 cases of bilateral WT there were synchronous lesions, 5 of those with an extension into the collecting system. The tumor size ranged from 4.0 to 16.0 cm at the largest dimension. The biggest tumor weight was 720 grams. All NSS procedures were effectively carried with no complications occurred. The histology showed no positive margins in any case. In all cases, at follow-up from 3 months to 5 years there was no evidence of recurrence. **Conclusion:** In our experience the evolved NSS technique is very efficacious thus achieving the best possible outcomes for the patients.

085 - OA
Title: Effect of endostatin and a new drug Terpestacin against human neuroblastoma xenograft and cell lines
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Category: Oncology
Keywords: neuroblastoma,endostatin,xenograft
Aim of the Study: Recombinant human endostatin, an antiagniogenis agent, is an effective agent against human neuroblastoma. There is a small cross reactivity of human endostatin on human and mouse arterial system. Continusous administration of human endostatin could show more significant tumor regression in the xenograft model. Terpestacin is a novel synthetic Histone deacetylase(HDAC) inhibitor that shows better pharmacological properties than known previous HDAC inhibitors. **Methods:** In the present study we identified the binding protein of Terpestacin, and clarified the cellular mechanism underlying its effects on angiogenesis. We investigated the anti-cancer activity of Terpestacin against human neuroblastoma both in vitro and in vivo. **Main Result:** Terpestacin arrested the cell cycle at the G1/S phase via p21 induction, which led to profound inhibition of cancer cell growth in vitro. In addition, Terpestacin treated cells showed markedly decreased levels of VEGF and HIF-1α than other agents when accompanied by increased histone acetylation. Terpestacin significantly inhibited tumor growth in an in vivo mouse xenograft model. Terpestacin treated mice survived significantly longer than the other agents. Dynamic MRI showed significantly decreased blood flow in the Terpestacin treated mice, implying that Terpestacin inhibits tumor neovascularization. This finding was accompanied by marked reductions of proangiogenic factors and significant induction of angiogenesis inhibitors in tumor tissue. **Conclusion:** We have shown that Terpestacin is an effective anti-tumor agent in neuroblastoma cells in vitro and neuroblastoma xenografts in vivo. Collectively, these findings indicate that endostatin and a new drug Terpestacin may be a potent anti-cancer agent against neuroblastoma due to its multi-faceted inhibition of HDAC activity, as well as anti-angiogenesis activity.

086 - OA
Title: Radiation Burden of Paediatric Percutaneous Ultrasound-Guided Permanent Central Venous Access Insertion
Authors: Jonathan Wells, MBChB(1), Mohit Bajaj, MBChB(2), Stephen Evans, MBChB(3), James Hamill, MBChB(4)
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Category: Oncology
Keywords: Vascular Access,Ionising Radiation,Percutaneous

Aim of the Study: Permanent central venous access is essential for modern paediatrics. Increasingly permanent central venous access is performed via the ultrasound-guided percutaneous technique with the use of ionising radiation essential for safe insertions. This study aims to identify the amount of radiation used in ultrasound-guided percutaneous permanent central venous access insertion and if this can be reduced. **Methods:** Prospective data collection from November 2015 to May 2016 on all percutaneous ultrasound-guided permanent central access insertions. Radiation dose (mGym2) and time (seconds) was recorded where an image intensifier which recorded radiation dose data was used. **Main Result:** A total of 79 cases (46 Portacaths, 22 double lumen tunnelled lines, 10 single lumen tunnelled lines and 1 haemocath) were performed in 70 patients (age: 1 month – 17 years) with 9 patients requiring 2 insertions. Of these 52 had data recorded for radiation dose and time. The remaining 27 cases had no radiation dose or time recorded and were excluded. The median radiation dose was 0.00705 mGym2 (range 0.000543 – 0.148) and median screening time of 20 seconds (range 3 – 479). **Conclusion:** Fluoroscopic screening is essential for percutaneous ultrasound-guided permanent venous access insertion. The dose of ionising radiation in this series is comparable to previously published percutaneous line insertions but more than that of open insertions. However the benefits of ultrasound-guided percutaneous lines over open lines are well documented in terms of vein patency preservation. Although the amount of ionising radiation used in this series is small, equivalent to a transatlantic flight, attempts should be made to reduce this dose for both patient and staff benefit. Standardisation of the insertion procedure may reduce the amount of radiation used by restricting ionising radiation screening to particular steps of the procedure. However of paramount importance is the procedure is completed safely with the minimum ionising radiation used.

087 - OA
Title: The role of surgery in treatment of invasive mycosis in hemato-oncologic pediatric patients
Authors: Henar Souto, MD(1), Clara Rico, MD(2), Ana L Luis, PhD(3), José L Alonso, PhD(4), Rocío Espinosa, MD(5), Pablo Morató, MD(6), Lucas De mingo, MD(7), Cristina Riñon, MD(8), María s Cortés, MD(9), Manuel Espinoza, MD(10), Juan Carlos s Ollero, MD(11)
Institutions: (1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11)
Category: Oncology
Keywords: Invasive mycosis children,Cunninghamella,Invasive Aspergillosis
Aim of the Study: To review, retrospectively, the utility and results of surgical treatment in hemato-oncological patients with invasive mycosis (IM). **Methods:** Retrospective review of all patients with IM diagnosed at our institution between 1996 – 2015. Demographic, clinic and diagnostic data were recorded as well as information regarding treatment given to each patient. We used the international consensus of the European Organization for the Research and Treatment of Cancer (EORTC) for the diagnosis of IM as a proven infection. **Main Result:** Eight out of 21 patients(1-19 yo) diagnosed with IM (15/21 with leukemia, 2/21 no Hodgkin´s lymphoma, 4/21 solid tumors) underwent surgical treatment. The lung was the most frequently affected organ (19/21), followed by the Central Nervous System (6/21), the spleen (3/21) and the liver (3/21). Isolated fungus were: Aspergillus spp (18/21), Cunninghamella spp (2/21) and Blastoschizomyces capitatus (1/21). Four pulmonary resections, 2 spleenectomies, 2 enterostomies, 1 cystectomy and 1 gastric surgery were performed. All patients with sole medical treatment died (12/13 during active fungal infection) while 4/8 patients who underwent a surgical procedure survived to the IM, (p=0,0012) **Conclusion:** Fungal opportunistic infections are an important prognostic factor in the progress of patients with hemato-oncologlogic diseases and contribute to increase their morbimortality. Although on many occasions surgical procedures are necessary for diagnosis and treatment, we still have very limited information and a consensus has not been reached yet regarding the role of surgery in this type of disease. In our experience, surgical patients have a better prognosis. We defend that surgery should be considered a complementary treatment to medical therapy in all hemato-oncological patients with invasive mycosis since it may be their only chance to survive.

088 - OA
Title: Long-Term Outcomes of Pediatric and Adolescent Mediastinal Germ Cell Tumors: A Single Pediatric Oncology Institution Experience
Authors: David F Grabski, MD(1), Alberto S Pappo, MD(2), Matthew J Krasin, MD(3), Andrew M Davidoff, MD(4), Bhaskar N Rao, MD(5), Israel Fernandez-Pineda, MD(6)
Institutions: (1), St. Jude Children's Research Hospital(2), St. Jude Children's Research Hospital(3), St. Jude Children's Research Hospital(4), St. Jude Children's Research Hospital(5), St. Jude Children's Research Hospital(6)
Category: Oncology
Keywords: Mediastinal germ cell tumors,Platinum-based chemotherapy,Complete surgical resection
Aim of the Study: We aimed to investigate the clinical characteristics, prognostic indicators and long-term outcomes of pediatric and adolescent mediastinal germ cell tumors (MGCT) treated at a single pediatric oncology institution.
Methods: All children and adolescents treated with a MGCT at our institution between 1963 and 2014 were included. Univariate analysis of metastatic disease, complete resection, age, chemotherapy regimen, use of radiation therapy and elevation of tumor markers was performed to determine independent prognostic indicators. **Main Result:** Twenty-five children were identified, 6 with mediastinal teratomas and 19 with malignant MGCT. Median age for children diagnosed with a teratoma was 7.8 years; all underwent primary surgical resection and were cured. Two children with immature

teratomas had elevated alpha fetoprotein (AFP) at diagnosis. Median age of children diagnosed with malignant MGCT was 11.2 years. Six children had elevated AFP, 2 had elevated beta- human chorionic gonadotropin (BHCG), and 2 had elevated AFP and BHCG. At diagnosis, metastatic disease was present in 9 children while 10 presented with localized disease. Five-year overall survival (OS) for children with a malignant tumor was 0.39 (+/- 0.12). Univariate analysis of non-seminomatous GCT revealed platinum-based chemotherapy (patients treated after 1985) to be a favorable independent prognostic indicator (OS=0.56 ± 0.17 vs. 0.14 ± 0.13, $p < 0.05$). Complete resection (OS=0.73 ± 0.17 vs. 0.11 ± 0.17, $p < 0.05$) and localized disease at diagnosis (OS=0.76 ± 0.15 vs. 0.0 ± 0.0, $p < 0.005$) were also found to be favorable independent prognostic indicators. **Conclusion:** Our experience confirms initial surgical resection is the appropriate treatment modality for teratomas. Metastatic disease, non-platinum based chemotherapy regimens and incomplete surgical resection of non-seminomatous MGCT are negative prognostic indicators. Our data suggest that neoadjuvant, platinum-based three drug chemotherapy regimens followed by delayed surgical resection is the appropriate treatment modality for malignant MGCT.

090 - OA
Title: 4-YEAR RESULTS OF MINIMALLY INVASIVE SURGERY IN CHILDREN WITH THORACOABDOMINAL NEUROBLASTOMA
Authors: Evgeniy Andreev, MD(1), Sergey Talypov, MD(2), Tatyana Shamanskaya, MD(3), Maxim Sukhov, MD(4), Denis Kachanov, MD(5), Nikolay Grachev, MD(6), Natalya Uskova, MD(7), Galina Tereschenko, MD(8), Svetlana Varfolomeeva, Professor(9)
Institutions: Federal Scientific and Clinical Center of Pediatric Hematology, Oncology and Immunology named after Dmitry Rogachev(1), (2), (3), (4), (5), (6), (7), (8), (9)
Category: Oncology
Keywords: neuroblastoma,surgery,pediatric
Aim of the Study: Improvement of surgical treatment of children with neuroblastoma thoracoabdominal localization. **Methods:** Radical surgery treatment was performed in 198(01.2012 - 01.2016).MIS was performed in 54(27.3%). Patients were treated according to NB2004 protocol.Image-defined risk factors (IDRF) and size of the tumor were used to select patients for MIS.After initial work-up patients without IDRF and with a tumor less than 8 cm in the largest dimension were considered as eligible for MIS. **Main Result:** Median age was 20 months (range 1-96).There were 26 patients younger 1 year old(48%). M:F ratio was 1:1.16. Distribution of stages according to INSS was as follows:stage 1 – 29(54%) patients, stage 2 – 11(20%), stage 3 – 0, stage 4 – 10(18.5%), stage 4S – 4(7.5%).Laparoscopic tumorectomy was performed in 40 (74%) patients, thoracoscopic resection – in 14(26%).The size of the tumor ranged from 1 to 8 cm. The mean duration of surgery was 119 minutes. Intraoperative complications: 2(3.7%) injury of major vessels required conversion to laparotomy, 1(1.8%) trauma of duodenum.We have met with technical difficulties during 2 operations (3.7%) which required conversion to laparotomy. Postoperative complications: 4(7.4%) injury of sympathetic ganglia after thoracoscopy complicated by Horner syndrome, 1(1.8%) sepsis, 1(1.8%) intestinal obstruction required open re-surgery. Early postoperative period in all patients after endosurgical operations was much faster and easier than in patients after open surgery: early shut-down of mechanical ventilation, less pain syndrome, early activation and better cosmetic effect. We have observed 1(1.8%) local relapse which required open re-surgery. Median follow-up time was 16 months. **Conclusion:** MIS in children with thoracoabdominal neuroblastoma is an effective technique which enables to carry out radical surgery in the absence of contraindications and IDRF and provides minimally invasiveness and good cosmetic effect without worsening oncological prognosis.

092 - OA
Title: Fine Needle Aspiration Cytology in Pediatric and Adolescent Papillary Thyroid Carcinoma
Authors: Benjamin A Farber, MD(1), William J Hammond, MD(2), Neha Bhattacharjee, BS(3), Charles A Sklar, MD(4), Michael P La Quaglia, MD(5)
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Category: Oncology
Keywords: papillary thyroid carcinoma,biopsy,thyroidectomy
Aim of the Study: Papillary thyroid carcinoma (PTC) is the most common type of thyroid cancer, and while it remains a rare malignancy in pediatric populations, the incidence of pediatric thyroid cancers is rising. Atypical findings on thyroid fine needle aspiration (FNA) cytology present a dilemma for management of patients. We reviewed our experience with FNA cytology and its correlation to pathologic findings at the time of surgery. **Methods:** With an IRB waiver of consent requirements, we retrospectively reviewed 214 pediatric and adolescent patients diagnosed at age ≤22 years with PTC who were treated at our institution between 1980 and 2016. Variables assessed in our analysis included age at diagnosis, TNM stage, family history, and Bethesda classification of FNA. **Main Result:** A total of 123 patients with histologically confirmed PTC had FNA as part of their initial diagnostic work-up prior to surgical intervention. Ninety-three were female (76%) and 30 were male (24%). Median age at diagnosis was 18.4 years (range, 6.3-22 years). Ninety-three patients (76%) underwent total thyroidectomy at the time of diagnosis, 29 had thyroid lobectomy, and 1 patient

was treated with radioactive iodine ablation alone. Ten of 123 patients (8%) had non-diagnostic or benign findings on FNA but subsequently went to surgery for enlarging mass. Atypical or malignant cytology was found in 92% of the FNA biopsies, with Bethesda III (n=15) in 12%, and Bethesda greater than IV in 80% (n=98). **Conclusion:** Fine needle aspiration cytology has high concordance with final pathology. These data support the use of this modality to identify malignancy to allow operative planning and discussion with patients and families prior to surgery.

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Title: Is the deficiency real or apparent- Estimation of levels of folic acid, homocysteine and vitamin B12 in neonates with neural tube defects and their mothers in north India.
Authors: Ashish Chhabra, MCh(1), Jai Kumar Mahajan, MCh(2), Jyotdeep Kaur, MD(3), KLN Rao, MCh(4)
Institutions: Guru Gobind Singh Medical College & Hospital, Faridkot(1), Post-graduate Institute of Medical Education & Research, Chandigarh (2), Post-graduate Institute of Medical Education & Research, Chandigarh(3), Post-graduate Institute of Medical Education & Research, Chandigarh(4)
Category: Research
Keywords: Homocysteinemia,Folic acid,Vitamin B12
Aim of the Study: To study the relationship between serum folic acid (FA), homocysteine and vitamin B12 levels in neonates and their mothers and occurrence and severity of neural tube defects (NTDs). **Methods:** This study included 26 neonates with NTDs and their mothers (Group-I). Age matched neonates with minor illnesses and their mothers formed the control group (Group-II). FA, homocysteine and vitamin B12 levels were measured in either group. **Main Result:** Both the groups were comparable with regard to age, gender and maturity. Out of 26 neonates in NTD group, 12 (46%) had lumbosacral defects. The neonates, in group-I had lower FA levels (Serum:10.75+5.81ng/ml, RBC:791.21+180.59ng/ml, Whole blood:349.30+78.92ng/ml) as compared to controls (Serum:17.18+5.68ng/ml, RBC:917.99+311.28ng/ml, Whole blood:474.46+203.76ng/ml) (p values <0.001, <0.001, 0.005 respectively). The FA levels in whole blood and in RBCs were higher in group-I mothers (Whole blood:303.96+53.13ng/ml, RBC:791.21+180.59ng/ml) as compared to the mothers in group-II (Whole blood:227.47+74.58ng/ml, RBC:643.54+216.69ng/ml) (p values <0.001, 0.10 respectively). Whereas, serum FA levels were lower in the group-I mothers (10.40+6.09ng/ml) when compared to the group-II (11.55+2.98ng/ml) (p value 0.310). Homocysteine levels were found to be significantly higher in both mothers and the neonates of NTD group (Group-I mothers:11.57+3.97µmol/L, Group-II mothers:9.06+3.73µmol/L, Group-I neonates:7.90+3.12µmol/L, Group-II neonates:6.32+1.79µmol/L) (p value 0.023, 0.030 respectively). A moderate association between low vitamin B12 levels in mothers and neonates and the occurrence of NTDs was also noted (p values 0.135, 0.695 respectively). **Conclusion:** Both maternal and neonatal hyperhomocysteinemia play an independent role in the development of NTDs whereas deficiency of vitamin B12 carries a moderate risk suggesting a combination therapy of FA with vitamin B 12 for prevention of NTDs. The high levels of maternal FA may not reflect in neonates. Evaluation of defects in FA receptors and transporters at the placental level, which prevent transfer of FA to developing fetus, may help to understand this enigma.

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Title: Children with chronic functional constipation tend to have Autism Spectrum Disorders (ASD) traits
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Institutions: Tokai University School of Medicine, Department of Pediatric Surgery(1), Tokai University School of Medicine, Department of Psychiatrics(2), Tokai University School of Medicine, Department of Psychiatry(3), Tokai University School of Medicine, Department of Pediatric Surgery(4), Tokai University School of Medicine, Department of Pediatric Surgery(5), Tokai University School of Medicine, Department of Pediatric Surgery(6), Tokai University School of Medicine, Department of Pediatric Surgery(7), Tokai University School of Medicine, Department of Psychiatry(8)
Category: Research
Keywords: constipation,autistic spectrum disorders,psychological care
Aim of the Study: Chronic constipation with/without encopresis is prevalent among population and sometimes refractory and tends to be recurrent. Children with chronic constipation are said to have unknown, constitutional factors and the name of “functional constipation” is given to the condition. Recently, children with Autism Spectrum Disorders (ASD) have been reported to suffer more from constipation and chronic constipation might have some effect on children’s development. This study was carried out to elucidate whether they have ASD traits compared with controls measured by Japanese rating scale. **Methods:** A prospective study of 36 children was performed during the past 30 months. Twenty-five patients (16 boys; mean age 3.4 years; range 2-7 years) with chronic functional constipation but without any designated psychiatric disorder and 11 patients (4 boys; mean age 4.8 years; range 2-10 years) without the disease were enrolled. Each patient was evaluated with Pervasive Developmental Disorders Autism Society Japan Rating Scale (PARS) for ASD traits by an interview. When the PARS peak symptoms scale (points of most pronounced symptoms during infancy) is more than nine, the patient was considered to have positive ASD traits. Number of patients with positive ASD traits was compared between groups by Fisher’s exact test. Positive rate of each PARS items were also compared. **Main Result:** Patients with positive ASD traits are 17/25 with constipation while there is one out of 11

without the disease (P=0.0008). Positive PARS items detected more in patients with chronic constipation include: Extremely unbalanced diet, eats very few food items (18), Repeats the words of commercials, etc.(15), Becomes immersed lining up toys and bottles(14), Persistently asks the same question (12), Repeatedly watches specific scenes of videos(12). **Conclusion:** Children with chronic functional constipation include those with positive PARS score, which suggest that psychological care oriented to ASD may be necessary on treating them as well as conventional care.

120 - OA

Title: Long-term results of patch tracheoplasty using collagenous connective tissue membranes (biosheet) in dogs

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Category: Research
Keywords: regenerative medicine,scaffold,tracheoplasty

Aim of the Study: Although a variety of artificial tracheas have been assessed, so far, none has proved satisfactory for clinical use. In-body tissue architecture technology, which utilizes the tissue-encapsulation phenomenon of foreign materials in living bodies, has enabled the production of prosthetic collagenous tissues in a wide range of shapes and sizes to meet the needs of individual recipients. The aim of this study was to investigate the usefulness of patch tracheoplasty using in vivo tissue-engineered collagenous connective tissue membrane, called “biosheet,” in a large animal model. **Methods:** Adult, female beagle dogs (n = 7) were used in this study. Biosheets were prepared by embedding rod-like molds, covered with slitting tubes, in the dogs’ dorsal subcutaneous pouches for 2 months. After histological assessment, patch tracheoplasty with the biosheets was performed. Briefly, a midline longitudinal tracheotomy (10 × 20 mm) was created, and rectangular biosheets (10 × 20 mm) were implanted heterologously into the defect. Endoscopic evaluation was performed 1 week, 1 month, and 3 months after tracheoplasty. Tracheas including biosheets were harvested for histological evaluation at 1 month (n = 3) and 3 months (n = 4) after tracheoplasty. **Main Result:** During the observation period, all animals survived, and granulation tissues were not observed in the endoscopic studies. In addition, endoscopic findings showed that the anastomotic part and internal surface of the biosheet turned smooth in 1 month, indicating enough re-epithelialization. Histological analysis after 1 month of tracheoplasty revealed that ciliated columnar epithelium was regenerated on the internal surface of the biosheet. Safranin-O staining confirmed chondrocyte migration into the biosheet after 3 months of tracheoplasty. **Conclusion:** Ciliated columnar epithelium and chondrocytes were well regenerated on the biosheets, indicating that biosheets have the ability to self-organize in a dog model of patch tracheoplasty.

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Title: Operation of patients with congenital anorectal malformations seem to impair the rectoanal inhibitory reflex and therefore increase the chance on constipation.

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Category: Research
Keywords: congenital anorectal malformation,rectoanal inhibitory reflex ,defecation problems

Aim of the Study: We investigated associations between the rectoanal inhibitory reflex (RAIR), type of congenital anorectal malformations (CARM) and kind of operation that these patients had undergone and objective measured fecal incontinence and defecation problems. **Methods:** We retrospectively reviewed clinical data of 47 patients who underwent operation for CARM at the University Medical Center Groningen between 1976 and 2009. We analyzed thorough anorectal physiology testing, including testing the presence of RAIR. We classified the patients into four groups: without fistula; with recto-perineal fistula; with recto-urethral, -bulbar or –vestibular fistula; and a group with prostate fistulas, bladderneck fistulas and cloaca’s. **Main Result:** We found RAIR in 49% (n=23) of CARM patients. Of the patients born without fistula 9% had RAIR, of patients with a recto-perineal fistula 40%, of patients who had either urethral-, bulbar- or vestibular fistula 40% and patients who had prostate fistulas, bladderneck fistula or cloaca prostate fistulas 13% had a RAIR. RAIR was present in all patients who were not operated (n=2), had undergone ASARP (n=4), PSARVUP (n=2), and was present in 42% (n=31) of the patients operated with PSARP. There was no association between the absence of RAIR and fecal incontinence (p = 0.663). Rectal volumes in patients with perineal fistula and urethral/vestibular/bulbar fistula who had a RAIR were lower than in patients without RAIR (median: 211,43ml versus 490,00ml and median: 298,89ml versus 400,56ml, respectively). **Conclusion:** Patients born with CARM have RAIR independently of the CARM form. RAIR however may be impaired due to operation. ASARP seems to be less destructive for the RAIR than PSARP. The increased rectal volumes in patients without RAIR indicate that they have the tendency to be more constipated. Therefore, saving the internal anal sphincter during the operation might improve the

clinical results of CARM patients.

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Title: Validity of the Japanese nationwide stool color card screening for biliary atresia
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Category: Research
Keywords: Biliary atresia,Screening,Stool color card
Aim of the Study: With improvement of outcomes in biliary atresia (BA) patients operated in the neonatal period, an earlier diagnosis is being attempted. A new Japanese nationwide stool color card (SCC) screening which was launched in 2012 checked infants' stool at 14 and 30 days of age. According to the 2015 Japanese BA Registry, stool colors of 25 out of a total of 108 affected infants were reported. 9 out of 25 reported their stool color as No.4, and were thus falsely identified as normal. The infants with boundary color 4 must be carefully noted. The aim of this study is to examine the distribution of individuals with a particular stool color among a healthy general population and the validity for earlier diagnosis of BA. **Methods:** The new SCCs have 7 photographs of different colors of stool samples and are included in the maternity records book. As stool colors get darker, the number of the stool color increases as well. Stool colors 1 to 3 are defined as abnormal, indicating acholic stool. Colors 4 to 7 are defined as normal. Between April 2015 and January 2016, we recruited caregivers for this study and randomly asked about their infants' stool colors at the regular health check of the newborn. **Main Result:** Stool color investigation was obtained from 2,028 infants. We divided the samples into two groups, by age at examination of less than 20 days (Group A) and above 21 days (Group B). The mean ages at examination for stool color were 14 (±2) days and 31 (±4) days respectively. The proportion of infants with color card No.4 was 62.8% and 52.6% respectively. **Conclusion:** Our study shows high frequency of stool color 4 at 14 and 31 days and the new SSC is not suitable to diagnose and screen for BA in infants younger than 1 month.

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Title: ELECTRICITY INDUCED TRAUMA IN CHILDREN. 13 YEARS EXPERIENCE OF A TERTIARY PEDIATRIC SURGERY CENTER
Authors: Bogdan Bogdan Savu, PhD(1), Mihaela Ciornei, MD(2), Elena Tarca, PhD(3)
Institutions: "Gr. T. Popa" University of Medicine & Pharmacy(1), "Gr. T. Popa" University of Medicine & Pharmacy(2), "Gr. T. Popa" University of Medicine & Pharmacy(3)
Category: Trauma
Keywords: Electricity,Trauma,Children
Aim of the Study: We aimed to assess the amount of electricity induced trauma pathology in children admitted in our hospital between 2003 - 2015. **Methods:** A retrospective approach was undertaken, examining the medical records of patients treated for conditions induced by contact with electrical current. Most data could be collected by accessing the stored medical files in our hospital. **Main Result:** There were 80 patients aged between 1 - 17 years. Most patients (51) were in the 9 - 15 years age group. There were 68 boys and 12 girls. The peak of admissions was between 2007-2008, with 11 cases per year. Most cases were admitted during the first 24 hours after the accident; the longest admission delay was 2 weeks. Length of hospital stay varied from a few hours, to periods longer than 30 days in 22 patients. A number of 51 patients required an ICU admission, with 18 staying for longer than a week. Fatal outcome occurred in 3 cases. The most usual injury mechanisms included electrical arch (24 patients) and domestic power main contact (33 patients). The most encountered lesions were 3rd and 4th degree burns (in 39 patients); in 30 patients BSA was > 5%. Frequent associated lesions included craniocerebral trauma (9 patients), thorax and abdominal contusion (7 cases), cardiac arrest (4 cases), limb fractures (4 cases). Usual short term complications included sepsis (15 cases) and postcombustional shock (6 cases). Often encountered long-term complications were represented by retractile scars (6 patients). Most frequently performed therapeutic gestures included dressing & debridement (46 cases), free skin grafts (19 cases), necrectomies (11 cases), partial limb amputation (7 cases). **Conclusion:** The toll in hospital days, mutilating sequels in growing children and resource consuming therapeutic maneuvers was high. Older children were more exposed, as they are more prone to coming in contact with high voltage power lines.

OA13. ORAL ABSTRACTS
Tuesday, October 11 | 15:30 – 17:45 | Marriott Ballroom Salons 2/3

MODERATORS: MONSOUR AHMED J. ALI, ANDREA BADILLO

017 - OA

Title: outcome of oesophageal atresia trachioeshophageal fistula among Afghan children at French Medicle Institute for Children, kabul, Afghanistan
Authors: Jalil Wardak, MSC(1)
Institutions: French Medical Institute for Children (1)
Category: General Surgery
Keywords: esophageal atresia ,kabul, Afghanistan ,Afghan children
Aim of the Study: This study was aim to review the outcome of the surgical experience of the last 6 years to evaluate the outcome and management of EA with or without TEF in our institute **Methods:** : This work was carried out at French medical institute for children Hospital, in the period from January 2010 through July 2015. ninty (90) neonates (54 males and 36 females) diagnosed as OA with or without TOF. After stabilization, 86 cases were treated by oesophago-oesophageal anastomosis via poster lateral thoracotomy,76 extrapleural,10 trans pleural approach from 64 extra pleural 10 of them were tubeless no drain no OGT, 4 cases were treated by staged procedure (ligation of fistula, cervical oesophagostomy and feeding gastrostomy) due to long gap oesophageal atresia **Main Result:** : 7 (7.7%) cases developed gastro-oesophageal reflux treated by medicine, 2 cases (2.2%) developed leakage postoperatively which healed by secondary thoracotomy ,2(2.2%) cases developed pneumonia, 12 cases (13%) developed stricture resolved by oesophageal dilatation in one case dilatation filed and we did retrograde dilatation and tall procedure 17(18.8%) Death has occurred in cases postoperatively due to late came of patient to hospital, low birth weight, pre-operative sepsis, associated anomaly and cardiopulmonary failure. There was no single case of fistula recurrence. Outcome of 10 patient who treated by extra pleural tubeless method were excellent length of stay was 6 day after operation in these patient **Conclusion:** On the basis of this critical retrospective review of our surgical experience over the last 6 years, our results are comparable with the published international survival rate. We believe that the advances in neonatal intensive care, pediatric anaesthesia, refinements in surgical techniques training of all doctors specially gyn obs doctors through seminars or media to refer early the patient have contributed to improve outcomes of oesophageal atresia

144 - OA
Title: Treatment results of the proximal radial fractures in children
Authors: Ladislav Planka, MD(1), David Stary, MD(2), Ondrej Marek, MD(3), Tereza Pinkasova, MD(4)
Institutions: Faculty Hopsital Brno(1), Faculty Hopsital Brno(2), Faculty Hospital Brno(3), Faculty Hospital Brno(4)
Category: Trauma
Keywords: Child,Injury,Radius
Aim of the Study: Proximal epiphyseal or metaphyseal radial fracture is a serious injury, after incorrect therapy to severe complications are founded (limited mobility, growth plate closure). Dislocated fractures are usually treated by closed reduction and by instability pinning (K-wire) or elastic nailing (Prevot nail). The subject of this prospective study was to compare both methods of minimally invasive osteosynthesis. **Methods:** The study was designed as a prospective multicentric clinical trial. Patients with a diagnosis of proximal radial fractures or separation treated in the years 2006 to 2015 were observed. Comparison of two methods was based on the observation of the same parameters - interval to complete healing of the bone, the time gap to full extremities loading, treatment outcome (severe postoperative complications) and the required length of fixation. **Main Result:** The group of patients comprised from 7 boys and 27 girls aged 3 -18 years. K - wire was used at 19 and P- nail in 15 patients. The length of fixation, length of healing and the time to full loading were very similar (no significant difference). Significant differences occurred in complications after treatment. After treatment with K - wire was limited the range of motion in total of five (26%) patients, after treatment with P - nails in 3 (20%) patients (not significant; p = 0,687). Serious complications occurred only after treatment with K - wire in three cases (twice radioulnar synostosis and once necrosis of the radial head – significant difference; p=0,01). **Conclusion:** K – wire using seems to be risky. Method of P – nailing appears to be safe and it is suitable used it as the first choice. The technique of implementation is quite difficult. Such as merging the advantages of both methods appear to be using techniques ESIN like. Further prospective multicenter clinical trial will be needy.
Analysis was supported by grant from Norway.

145 - OA
Title: Red cell distribution width and neutrophil to lymphocyte ratio as a predictive factor of treatment in pediatric patients with burn
Authors: Metin Gunduz, MD(1), Ilhan Ciftci, MD(2), Ahmet Cınar Yasti, MD(3), Ahmet Guven, MD(4)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1), Selcuk University Medical Faculty Department of Pediatric Surgery (2), Hitit University Medical Faculty Department of General Surgery (3), Gülhane Military Medical Academy Department of Paediatric Surgery (4)
Category: Trauma
Keywords: Red cell distribution width,neutrophil to lymphocyte ratio,burn
Aim of the Study: Red cell distribution width (RDW) is associated with mortality in certain diseases. Neutrophil to lymphocyte ratio (NLR) is a potential marker of inflammatory diseases. However, the relationship between RDW-NLR and morbidity in patients with burn is unknown. This study was performed to investigate the utility of RDW and NLR as a predictor in pediatric burn patients. **Methods:** We performed a retrospective analysis of 39 pediatric patients with burn.

Patients were divided into two groups, treated with or without greft. RDW, NLR, age, sex, total body surface area (TBSA), and albumin values were calculated and compared. Analysis was performed to determine the relationship of RDW and NLR with groups **Main Result:** There was a slight increase of RDW and NLR values in group 2 patients but this increase was not statistically significant than the group 1 (p values :0.726, 0.951 respectively). There was a positive correlation between NLR and day in hospital stay duration (p value:0.000), TBSA and day in hospital stay duration (p: value 0.000) and RDW and lymphocyte (p: value 0.005) values . **Conclusion:** NLR is an independent, cheap, easy, and strongly predictive marker of morbidity in patients with burn, on the other hand RDW cannot be used as a predictive factor of morbidity in pediatric scald burns.

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Title: Short, double elastic nailing of severly displaced distal pediatric radial fractures – a new method for stable fixation.
Authors: Jozsa Gergo, MD(1), Fadgyas Balazs, MD(2), Kassai Tamas, MD(3), Varga Marcell, MD(4)
Institutions: Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(1), (2), (3), (4)
Category: Trauma
Keywords: Dia-metaphyseal radial fracture,Elastic nailing,New treatment
Aim of the Study: The study focused the group of patients, in whom the fracture is too distal to be treated with classic elastic stable intramedullary nailing (ESIN) via a laterodistal approach and too proximal to be stabilized with Kirschner wire. **Methods:** We reviewed retrospectively 24 patients who underwent double short elastic nailing for distal dia-metaphyseal radial fracture between November 2013 and December 2015. This is a new, specially modified minimally invasive surgical technique. Indications for surgery included a displaced, instable metaphyseal and dia-metaphyseal fractures of the radius. The aims of this study were to introduce a method to treat distal radial diaphyseal metaphyseal junction fractures by prebending short elastic intramedullary nail and evaulate the outcome of this procedure. **Main Result:** There were 17 male and 7 female with an average age of 9,8 years (range, 4 to 16 years). The right hand was involved in 16 cases and the left hand in 8 cases. The mechanism of injury were: fall (65%), caused by ball (10%), others (25%). The average follow-up was 17,8 months (range, 7 to 28 months). Of the 24 patients, three presented tenosynovitis of the extensor digitorum communis, which resolved following removal of the radial nail. All patients recuperated complete flexion-extension as well as pronatioan and supination. **Conclusion:** This technique is an effective, safe and easily learnable procedure for the unstable fractures of the distal third of the radius. It can be established that in all of our cases we could achieve good functional results, without long period of the immobilization.

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Title: TREATMENT DECISIONS IN THE MANAGEMENT OF FRACTURES OF THE LATERAL HUMERAL CONDYLE IN CHILDREN
Authors: Justus Lieber, MD(1), Markus Dietzel, MD(2), Hans-Joachim Kirschner, MD(3), Jörg Fuchs, PhD(4)
Institutions: University Children‘s Hospital, Department of Pediatric Surgery and Pediatric, Tübingen(1), University Children‘s Hospital, Department of Pediatric Surgery and Pediatric, Tübingen(2), University Children‘s Hospital, Department of Pediatric Surgery and Pediatric, Tübingen(3), University Children‘s Hospital, Department of Pediatric Surgery and Pediatric, Tübingen(4)
Category: Trauma
Keywords: fracture of the lateral humeral condyle ,treatment decision,complications
Aim of the Study: The aim of the study was to analyse rates of conservative and operative therapy in fractures of the lateral humeral condyle depending on initial extent of displacement (< or >2mm articular gap) and fracture stability in the early treatment period. Another aim was to determine the rate of subsequent displacement and to analyse accuracy of initial treatment decisions. **Methods:** Retrospective data analysis of children with a fracture of the lateral humeral condyle treated between 2005 and 2014. **Main Result:** 90 children (mean age 9y; 3-15) were included. Fifty-three fractures (59%) were initially undisplaced and 37 (41%) were initially displaced. The 53 initially undisplaced fractures were classified as „primarily stable“ and treated conservatively. At day 5, 33/53 fractures remained undisplaced („secondarily stable“) and immobilization was continued for 3-5 weeks. In 8/53 cases (8.9%) subsequent displacement („secondarily unstable“) was detected and operative treatment was initiated. Another 8/53 received operative treatment initially, despite the fact that no fracture displacement was seen. In 2/53 cases subsequent displacement was detected, but conservative treatment was continued with subsequent impaired elbow movement and cubitus varus. The remaining 37 (41%) fractures presented with significant displacement initially and operative treatment was performed (K-wires 51%, screws 38%, combination 11%). Operative revision became necessary in 5 cases because of insufficient or unstable osteosynthesis. Cast immobilization was 29 days (range, 21–37). Metal removal was initiated after 8 weeks. At follow-up there was 1 malunion and 1 fishtail-deformity without clinical impairment. **Conclusion:** Stable fractures of the lateral humeral condyle heal with good results after conservative treatment. Unstable fractures – wether primarily or secondarily detected – need to be recognized as such, and operative therapy must be initiated in order to reconstruct the articular surface. Mangement of fractures according to their stability reduces complications and prevents unnecessary operative management.

149 - OA
Title: Non-Iatrogenic Vascular Injuries in Children – A 12-Year Experience From a Single Paediatric Tertiary Trauma Centre
Authors: Imran Kader, MD(1), James Garrard, MD(2), Senthil Kumar, MD(3), Rajendra Kumar, MD(4)
Institutions: University of Newcastle(1), John Hunter Hospital(2), John Hunter Hospital(3), John Hunter Hospital(4)
Category: Trauma
Keywords: Vascular,Trauma,Injury
Aim of the Study: Traumatic vascular injuries in children are very rare, contributing to 1% of all paediatric trauma, but can cause significant morbidity. This study aims to describe our experience with these complex injuries, pattern of injury, management challenges and outcomes. **Methods:** During the study period from 2004 to 2016, medical records of all children with traumatic vascular injuries aged 0 – 17 from a tertiary trauma centre were retrospectively reviewed. Demographic data, injury mechanism, management and outcome data was extracted. Vascular injury (VI) data was compared and analysed. **Main Result:** 13197 children were admitted with trauma, of which, 120 children had a VI. Upper limb VI was the most common (n=89) injury, followed by lower limb (n=22), abdomen (n=4), head and neck (n=3) and thorax (n=2). The median patient age was 14 years (Range 2–17). There were 89 males and 31 females. The mechanism of injury that produced the highest average trauma index severity score was motor vehicle accidents. 65% of injuries were due to penetrating trauma. 9% of upper limb vascular injuries were associated with a supracondylar fracture of the humerus. Primary repair of the vessel was performed in 84 cases; interposition graft in 15 cases, ligation or selective endovascular embolization of the vessel was performed in seven cases and amputation was necessary in five cases. Three patients underwent bypass graft of injuries and six injuries required endarterectomy and patch repair. Three injuries were managed non-operatively. There was associated major nerve injury in 8 cases. There were 4 mortalities. **Conclusion:** Penetrating injuries are the most common mechanism of trauma. Upper limb vascular injures are the most common vascular injuries in children. A high index of suspicion is required when dealing with vascular injuries and operative intervention is commonly required. Primary repair of the vessel is safe and effective in most cases.

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Title: Identifying Pediatric Trauma Data Gaps at Large Urban Trauma Referral Center in Santiago, Chile
Authors: Etienne St-Louis, MD(1), Daniel Roizblatt, MD(2), Dan L Deckelbaum, MD(3), Robert Baird, MD(4), Cesar M Valenzuela, MD(5), Alicia Ebensperger, MD(6), Tarek Razek, MD(7)
Institutions: McGill University Health Centre(1), Hospital del Trabajador(2), McGill University Health Centre(3), McGill University Health Centre(4), Hospital Sotero del Rio(5), Hospital Sotero del Rio(6), McGill University Health Centre(7)
Category: Trauma
Keywords: Pediatric Trauma Registry,Data completeness,International Partnership
Aim of the Study: Trauma registries contribute to improving trauma care, but their impact is highly dependent on the quality of the data. A simplified point of care pediatric trauma registry (PTR) was developed at the Centre for Global Surgery from the McGill University Health Centre for implementation in Low-Middle Income Countries (LMIC). Pilot deployment was launched at a large urban trauma centre in May 2016 in Santiago, Chile. Prior to deployment, we sought to identify gaps in existing trauma records in order to optimize PTR practicality and user benefit. **Methods:** The project was approved by the local Institutional Review Board. Retrospective chart review was conducted on trauma patients below the age of 16 who were evaluated at the emergency room (ER) of Hospital Dr. Sotero del Rio between January 1st and June 30th 2015. Data completeness was evaluated for each component of the PTR (demographics, mechanism, injury and outcomes) **Main Result:** 351 patients were included. Demographic data completeness ranged from 4.5% (mode of arrival) to 100% (age). Mechanism data completeness ranged from 57.8% (site of injury) to 93.9% (cause of injury). Injury physiology data completeness ranged from 0.3% (respiratory rate) to 72% (heart rate). Interestingly, injury anatomy data completeness was superior to physiology data with 99.4%. Outcome data completeness dropped from 100% to 47.3% at 2 weeks. No significant differences were found when comparing data completeness between groups of consultants, ER triage priorities or age categories. **Conclusion:** Existing data gaps in health records can hinder decision making. In resource-limited settings, high quality data is essential to guide responsible resource allocation. These gaps call for improved data collection methods. We believe implementation of a simplified trauma registry has the potential to reduce data gaps for pediatric trauma patients by streamlining trauma data collection at point of care.

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Title: Disaster preparedness and response-An experience gained from Nepal during earthquake 2015
Authors: Dinesh Prasad koirala, Resident(Final Year) in paediatric surgery(1)
Institutions: Bangabbandhu Sheikh Mujib Medical university(1)
Category: Trauma
Keywords: disaster,Preparedness and response,Nepal 2015
Aim of the Study: To describe an effective and immediate response from medical personnel is critical to meet the need of affected children at the time of earthquake disaster **Methods:** An account of the experiences and a descriptive study

of response made by residents of paediatric surgery of Bangabhandhu Sheikh Mujib Medical university during first three weeks after earthquake in different districts of Nepal. **Main Result:** 550 children were managed by the residents and local health personnel. Children were divided in two categories seeking help. First one was medical where 350 children were treated .The problems encountered were respiratory infection, diarrhea,nutritional.Second was surgical where dressings , wound closure, plasters for fracture, chest tube was done. Rehabilitation regarding psychological issues were also taken into considerations. **Conclusion:** There is a need for hospital and other health care facilities to creat an effective response capacity for earthquake disasters. This can be accomplished through preparing and practicing disaster plans, participation in accreditation process and conducting training for medical students. Nepal government should immediately initiate the formulation of national policy for disaster preparedness and response

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Title: SYSTEMATIC ANALYSIS OF CHILD INJURIES IN THE CZECH REPUBLIC
Authors: Ladislav Planka, MD(1), David Stary, MD(2), Ladislav Dusek, PhD(3)
Institutions: Faculty hospital Brno(1), Faculty Hospital Brno(2), Institute of Biostatistics and Analyses(3)
Category: Trauma
Keywords: children,trauma,analysis
Aim of the Study: Approximately 500 000 children´s injuries per year are treated in Czech Republic. The authors present an analysis of 35 785 injured children and monitoring the accidents development depending on the targeted prevention. The main tool was the new National Register of Children's Injuries (NRDU). **Methods:** NRDU allows answer a specific question on a traumatic mechanism, place of injury, dangerous activity or dangerous tools depending on the type of injury, the injured part of the body and the severity of injury. It allows observing specific parameters before the implementation of some preventive measures and after their implementation in regard to assess their effectiveness. This analysis was carried out between years 2009 - 2015; the life-threatening injuries and the number of child deaths caused injury were monitored. **Main Result:** The main positive finding was the reduction in the number of child deaths caused injury (234 in 2008, 112 in 2015 – Graph 1) and a reduction in the number of serious injuries (309 in 2008, 153 in 2015 – Graph 2). Reduce the number of serious accidents is the direct result of a well-led child injury prevention, the mortality rate together with improvements of the traumatology care. **Conclusion:** The mortality rate and several injuries incidence is decreasing in Czech Republic. Especially because of systematic analysis of child injuries (NRDU), there was possible to search for the risk factors of pediatric injuries and lower the children mortality with traumatic etiologies in Czech Republic. Analysis was supported by grant from Norway.

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Title: Prevalence and ethnic/racial disparities in the distribution of pediatric injuries in South Florida: implications for the development of community prevention programs
Authors: Carmen Ramos, MD(1), Patrick C. Hardigan, PhD(2), Mark G. McKenney, MD(3), Gretchen Holmes, PhD(4), Rudy Flores, CSTR(5), Ascension M. Torres, MD(6), Brenda Benson, RN(7)
Institutions: Kendall Regional Medical Center(1), Nova Southeastern University(2), Kendall Regional Medical Center(3), Kendall Regional Medical Center(4), Kendall Regional Medical Center(5), Kendall Regional Medical Center(6), Kendall Regional Medical Center(7)
Category: Trauma
Keywords: epidemiology,disparities,pediatric trauma
Aim of the Study: Assess pediatric injury profiles and ethnic/racial disparities of specific injuries in a Regional Trauma Center (TC). **Methods:** Prospectively collected data from 2011-2015 were obtained from a Level 2 TC for children < 21 years old. Demographic, injury pattern, geographical area, injury scores and treatment data were analyzed. **Main Result:** 1610 patient, ages 0-21 years were cared for at the TC from 2011-2015. 73% were males. Mean age 15.75 years. 74% of the population was in the 16-21 years category. Racial breakdown was 44% White, 34% Asian/Native American and 21% Black/AA. Hispanics comprised 48%. Mortality=2.3%. Mean initial GCS was 14.2 (SD 2.59), ISS=7 (range 1-75), and TRISS scores were 0.96 (range 0.001-0.999). Mean ICU stay was 1.62 days. A multinomial regression model was performed to ascertain the effects of age, race/ethnicity on the likelihood on suffering specific injuries. Hispanics had higher relative risks of falls (RR 10.4, 95% CI 2.7-29), motor vehicle accidents (RR6.4, 95% CI 3.6-11.4) and motorcycle accidents (RR 3.7, 95% CI 1,7-8.2). Black/AA children had higher risks of gunshot wounds, $p< 0.001$. No significant differences were observed when adjusting for age and race/ethnicity for stabbing and pedestrian injuries. **Conclusion:** Ethnic/racial differences were observed in the pattern of injuries in the pediatric population attended. Understanding differences and using geographic distribution mapping to identify regions of higher prevalence will complement planning for prevention programs.

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Title: Perineal Trauma in Children: primary or staged repair
Authors: Amel A Hashish, MD(1)
Institutions: Tanta University(1)
Category: Trauma

Keywords: perineal trauma,primary repair,colostomy
Aim of the Study: The management of perineal trauma in children is very challenging in the absence of a well-defined institutional management protocol. The purpose of this study was to evaluate the result of implementing a standardized therapeutic approach to perineal trauma in children in our institution **Methods:** This is a prospective study included 34 patients with perineal trauma. Two patients died of associated head trauma and other concomitant injuries. the patients were treated either by primary repair of all perineal soft tissue injuries without colostomy (group 1, n = 16), primary perineal repair with covering colostomy (group 2, n = 11), or fecal diversion and wound drainage with delayed sphincter repair if needed (group 3, n = 5). Each patient was assigned to a particular management depending on the presence or absence of full-thickness anorectal injuries, anorectal lacerations, degree of wound contamination, and/or significant skin loss. All patients were evaluated with regard to the type of trauma, physical findings, management, postoperative wound infection or disruption, postoperative functional outcome, and cosmetic results **Main Result:** The ages ranged from 2 to 14 years. Significant wound infection occurred in three patients (one in each group), moderate-to-mild wound infection occurred in another four patients, partial wound disruption occurred in two patients in group 1. Urethral stricture occurred in two patients, who were treated by repeated dilatation. Vaginal stenosis developed in one patient. Anorectal continence was noted in 25 (80.6%) of 31 patients who were older than 3 years during the last follow-up visit. **Conclusion:** The proposed simple algorithm for management of perineal trauma in children proved to be safe and effective. Primary repair of the anorectal sphincter and other injured soft tissue is highly recommended. Fecal diversion is only required in cases of significant anorectal lacerations associated with gross faecal contamination.

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Title: Pediatric Vesicoureteric reflux: Role of contrast enhanced voiding urosonography
Authors: Sugandh Aggarwal, DNB(1), Alpana Prasad, MS(2), Rajeev Kulshrestha, MS(3), Deepak Chawla, MD(4)
Institutions: Sir Ganga Ram Hospital, New Delhi 60(1), Sir Ganga Ram Hospital, New Delhi 60(2), Sir Ganga Ram Hospital, New Delhi 60(3), Sir Ganga Ram Hospital, New Delhi 60(4)
Category: Urology
Keywords: Contrast enhanced voiding urosonography,Vesicoureteric reflux,Voiding cystourethrogram
Aim of the Study: Vesicoureteric reflux (VUR) is the most common congenital abnormality of the urinary tract in children presenting with urinary tract infection (UTI). The investigations currently in use to confirm VUR are voiding cystourethrogram (VCUG) and direct radionucleotide cystogram (DRCG). In both the modalities there is a risk of radiation hazard especially to the gonads. Contrast enhanced voiding urosonography (ceVUS) is an emerging excellent diagnostic modality using ultrasound and urosonographic contrast agents and its results are comparable to VCUG and DRCG. We evaluated the sensitivity and specificity of ceVUS in the diagnosis of pediatric VUR. **Methods:** The case pool for the study was prospectively enrolled from the outpatient and inpatient clinics of Department of Pediatric Surgery at Sir Ganga Ram Hospital, New Delhi, India. A total of 93 patients with suspected or diagnosed VUR were enrolled during the study period from July 2012 to April 2015. Of these, data of 80 patients who fulfilled the inclusion criteria was analyzed. All of them were evaluated with both ceVUS using Sonovue and VCUG. The presence or absence, laterality and grading of reflux were noted in both modalities. The observations of ceVUS were compared with those of VCUG. **Main Result:** The median age of patients was 13.5 months (5 days to 16 years) with male predominance (M: F = 3.2:1). Out of 80 patients, reflux was seen in 56. Of these 56 patients 38 had bilateral reflux and 18 had unilateral reflux. The most common grade in our study was grade V and least common was grade II. The sensitivity and specificity of ceVUS was observed to be 96.4% and 93% respectively. **Conclusion:** Contrast enhanced voiding urosonography can be considered as an important diagnostic modality for detection of VUR in pediatric population. It scores over VCUG in avoiding radiation exposure in highly vulnerable pediatric patients.

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Title: Long Term Follow-up of Hypospadias Repair – A Single Centre Retrospective Study
Authors: Kishore Panjwani, MS(2)
Institutions: Asopa Hospital Agra(2)
Category: Urology
Keywords: Long Term,Follow-up,Hypospadias Repair
Aim of the Study: The aim of study was to compare the long term post operative status of hypospadias patients by analyzing their cosmesis, voiding functions, psycho-sexual adjustment & Fertility **Methods:** Survey was conducted on 121 patients operated between 2001-2007(age was 6yrs-12yrs) and now they are more than 20yrs old. The control group include 50 healthy male non hypospadias adults. The survey served to evaluate the effect of Hypospadias type, number of operations and surgical procedures on cosmesis voiding functions, sexual psychology, sexual function. cosmesis was consider in the term of Glans shape, straight/bending penis, burried penis, penile skin scaring, self penile length & circumference measurements. Urinary functions were evaluated in the form of spraying, hesitancy, post micturating dribbling, uroflow metery. Hairy urethra, urethral cancreation, stones & strictures formations, sexual function & psychosexual adjustment was measured by questionnaire includes psychosexual condition & sexual behavior & sexual function. Psychosexual condition was evaluated by Zung's self rating depression scale (SDS) & self rating anxiety scale(SAS). Sexual behavior was measured by Age at which different sexual mile stone were reached. libido

strength, Length & circumference of erect penis, overall satisfaction & sexual life. **Main Result:** The post operative SDS/SAS scores & occurrence of depression, anxiety are more in Hypospadias patients than control. patients with proximal hypospadias & patient with multiple operations differed from those with distal hypospadias & single procedure in all parameter of sexual psychology. The average penile length & circumference of hypospadias patients under either flaccid/erect condition were significant shorter than control **Conclusion:** The severity of hypospadias & number of operations were key factors to influence the cosmesis, voiding function & sexual psychology of patients for better long term therapeutic outcome. It is important to choose rational surgical procedure minimize the number of operations to prevent complications.

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Title: CLINICO-BIOCHEMICAL PROFILE OF CHILDREN WITH CONGENITAL ANOMALIES OF KIDNEY AND URINARY TRACT (CAKUT) WITH SPECIAL EMPHASIS ON HYPERTENSION
Authors: VEERABHADRA RADHAKRISHNA, MS(1), Kumaravel S, MCh(2)
Institutions: Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(1), (2)
Category: Urology
Keywords: Congenital Anomalies of Kidney and Urinary tract (CAKUT),Hypertension,Plasma Renin Activity
Aim of the Study: To study the clinical and biochemical profile of CAKUT. To analyze the factors associated with hypertension in CAKUT. **Methods:** A cross sectional study was carried out in the department of Paediatric surgery, JIPMER, Pondicherry, India for a period of 18 months from March 2014 to August 2015. Demographic data were recorded; clinical examination including BP measurement was performed. Various biochemical parameters including plasma renin activity (PRA), urinary beta-2-microglobulin (B2M) and microalbuminuria were evaluated. **Main Result:** A total of 81 patients with CAKUT were studied. PUJO was the most common anomaly found (39.5%) followed by PUV (32.1%). 22 out of 42 (52.4%) patients were diagnosed to have a CAKUT in 3rd trimester despite having a normal 2nd trimester USG. Weight was ≤ 3rd centile in 22 (27.2%) patients, length/height was ≤ 3rd centile in 4 (5%) patients and both weight and length/height were ≤ 3rd centile in 26 (32.1%) of the study group. Bilateral disease had a significantly higher incidence of reduction in weight (p=0.015) and weight and length/height (p=0.013) compared to unilateral disease. Hypertension was found in 27.2% cases and no association was found between hypertension and PRA, B2M or microalbuminuria in our study. PRA and B2M were significantly elevated (64.2% each) in the study group. PRA was inversely proportional to estimated glomerular filtration rate (eGFR) [(p=0.006)]. eGFR was compromised in 74.1% population. **Conclusion:** Two-thirds of CAKUT in children were diagnosed antenatally and ultrasound screening in the third trimester was more sensitive. Bilateral disease in CAKUT was significantly associated with poor somatic growth. PRA defined severity of renal damage as it's inversely proportional to eGFR. The occurrence of hypertension was higher in children with CAKUT than normal children, and its cause was possibly multifactorial because it was not associated with high PRA, high B2M or microalbuminuria.

176 - OA
Title: Innovation in surgical management of Uretero- pelvic junction obstruction.
Authors: Mehran Hiradfar, MD(1), Parisa saeedi, MD(2), Reza shojaeian, MD(3)
Institutions: Mashhad University of Medical Sciences(1), Mashhad University of Medical Sciences(2), Mashhad University of Medical Sciences(3)
Category: Urology
Keywords: Ureteropelvic junction obstruction,Minimally invasive,laparoscopy
Aim of the Study: Background and Objectives:, Pyeloplasty is performed through various methods. Conventional minimally invasive surgery or robotic surgery have become popular as the first choice in the management of uretero-pelvic junction obstruction (UPJO). Aim:The presence of major differences in anatomy and physiology of kids compared to adults requires a different perspective and thinking about MIS in this age group. With a minimally thinking strategy, and to reduce many of the disadvantages of full laparoscopy or robotic assisted laparoscopy surgery, we combined laparoscopy with extracorporeal anastomosis. **Methods:** Patients and Methods: 48 cases of UPJO were treated by this technique. Early complications, and functional and cosmetic results were documented. **Main Result:** Results: 39(81.25%) of patients were male. Mean age was 2.96±0.34 years. The operation time was from 60-120 minutes. Patients were hospitalized for 2-4 days. Mean anteroposterior diameter of the pelvis was 25.5±1.34 mm and 13.3±5.97 mm before and after operation, which indicated a significant reduction after surgery (p=0.002). Cosmetic result was excellent in all cases. Three patients needed additional surgeries. **Conclusion:** Conclusion: The duration of laparoscopic surgery largely depends on surgical skills which is especially is about the intra-corporeal anastomosis between pelvis and ureter. As the pyeloplasty and anastomosis were performed extracorporeal in this procedure and during this part of surgery the abdominal cavity was deflated from gas, so the duration of gas insufflation is obviously less than full laparoscopy and robotic assisted surgery, which can prevent many unto warded intra- and post- operative side effects of prolonged gas insufflation. Learning curve is much more less than full MIS approaches. Complications were comparable to other techniques of surgery and the length of hospitalization was relatively short and is comparable to laparascopic surgery. The cost seems to be less compared to full MIS with similar or better final cosmetic results.

177 - OA
Title: The scrotal tube : a new operative technique for urethroplasty in proximal hypospadias using non hair bearing scrotal skin described as the scrotal plate
Authors: saber M waheeb, PhD(1)
Institutions: Alexandria university(1)
Category: Urology
Keywords: scrotal tube,scrotal plate,proximal hypospadias
Aim of the Study: Growing interest in the one stage repair of hypospadias has developed in recent years. The use of scrotal skin has been frowned upon in modern hypospadias practice. The claim that scrotal skin is universally covered with hair is the reason why scrotal skin has been abandoned. In the present study, the data of 32 patients who underwent scrotal tube urethroplasty is presented. **Methods:** Retrospective analysis of patient records revealed 32 patients who were admitted to Alexandria pediatric surgery department and who underwent the scrotal tube urethroplasty by a single surgeon during the period from January 2010 to December 2015. In the first 10 cases of the series intraoperative biopsies were obtained from the edges of the scrotal plate to study an area of the scrotum grossly void of hair on histological basis. **Main Result:** The patients were followed up for 4-13 months. In the first 10 cases, 3 biopsies from the edges of the scrotal septal skin were obtained and histologically examined for the presence of hair follicles. 9 patients showed no hair follicles.1 patient showed a single hair follicle in one of the 3 biopsies. 26 patients underwent a one-stage repair, 20 of which received only the scrotal tube urethroplasty. 6 patients received a combined repair the scrotal tube proximally and a duckette type tube distally. 6 patients recived a 2-stage repair with a scrotal tube urethroplasty in the first stage and a dukette type tube or a mathieu type flap in the second stage. During the period of follow up urethrocutaneous fistulae were observed in 2 patients. Urethral diverticulum was observed in one patient. **Conclusion:** The taboo of using scrotal skin in urethroplasty can be challenged. The scrotal tube urethroplasty is a reliable technique to be used in patients with proximal hypospadias. It provides a low risk of fistulae and acceptable functional and aesthetic results.

178 - OA
Title: Pre-operative upper tract status in Exstrophy-Epispadias: A prospective study to determine Glomerular Filtration Rate, renal scarring, and drainage.
Authors: Kanoujia Sunil, MD(1), Om P Purbey, MD(2), Archika Gupta, MD(3), Anand Pandey, MD(4), Ajay K Verma, MD(5), Shiv N Kureel, MD(6)
Institutions: Department of Pediatric surgery, King George's Medical university(1), Department of Pediatric surgery, King George's Medical university(2), Department of Pediatric surgery, King George's Medical university(3), Department of Pediatric surgery, King George's Medical university(4), Department of Pediatric surgery, King George's Medical university(5), Department of Pediatric surgery, King George's Medical university(6)
Category: Urology
Keywords: Bladder exstrophy,Exstrophy-epispadias,Upper Tract status
Aim of the Study: Aim- Is upper tract always normal in Exstrophy-Epispadias or some patients have already compromised renal function? This knowledge may help in planning the bladder reconstruction, need for augmentation, and creation of bladder neck resistance. This prospective study reports the Glomerular Filtration Rate (GFR), DTPA renogram, and DMSA findings in 23 Exstrophy-Epispadias. **Methods:** In last one year, 23 Exstrophy-Epispadias (Classic Exstrophy male- 16, Classic Exstrophy female-3, Epispadias-3, Exstrophy variant- 1) underwent pre-operative upper tract evaluation by subjecting them to DTPA renogram, GFR estimation, and DMSA scan for renal scarring. Age at estimation ranged from 1year to 23 years. Assessment was done on Philips Jet Stream Bright View X dual head gamma camera and GFR was assessed by Gates method. The findings were analyzed. **Main Result:** GFR ranged from 97ml/minute to 56ml/minute. Eighty ml/minute and above was seen in 7, 70-79 ml/minute was seen in 11, and less than 70 ml/minute was seen in 5 patients. Four patients had renal scarring- two unilateral and two bilateral. Hydroureteronephrosis was seen in 6 with two having vesico-ureteric junction obstruction (VUJO). **Conclusion:** In Exstrophy-Epispadias, normal GFR above 80ml/minute may be seen in only one third of patients. In two third of patients, it is less than 80ml/minute. GFR ranged from 71 to 87 ml/minute in patients with scarring or hydronephrosis. Pre-operative renal function in Exstrophy-Epispadias is not always normal.

179 - OA
Title: Penile skin Management in Exstrophy-epispadias Repair: A technical Solution to prevent Buried Penis, Skin shortage and Provide Vascularised Skin Cover with Improved Aesthetics
Authors: Archika Gupta, MD(1), Om P Purbey, MD(2), Digamber Chaubey, MD(3), Ajay K Verma, MD(4), Kanoujia Sunil, MD(5), Jile D Rawat, MD(6), Shiv N Kureel, MD(7)
Institutions: Department of Pediatric surgery, King George's Medical university(1), Department of Pediatric surgery, King George's Medical university(2), Department of Pediatric surgery, King George's Medical university(3), Department of Pediatric surgery, King George's Medical university(4), Department of Pediatric surgery, King George's Medical university(5), Department of Pediatric surgery, King George's Medical university(6), Department of Pediatric surgery, King George's Medical university(7)

Category: Urology
Keywords: Bladder Exstrophy,Exstrophy-epispadias,Buried Penis
Aim of the Study: To report a simple reproducible technique for provision of penile skin-dartos cover which also helps to minimise complications and buried penis appearance in reconstruction of exstrophy-epispadias **Methods:** Utilising the published facts of surgical anatomy of superficial vessels of skin-dartos in epispadiac penis, the technique was used in 60 exstrophy-epispadias (classic exstrophy – 54, incontinent epispadias – 6) in last 3.5 years. The technique utilises three flaps of penile skin-dartos complex; first flap from inner prepuce and two flaps of bifurcated penile skin-dartos. Incision along the bladder plate and along the urethral plate margin was made upto the glans tip. Beginning at urethral plate margin about 7-mm proximal to subcoronal sulcus on both sides, the preputial edge was incised. Entering through the preputial edge incision, inner prepuce was dissected off the outer prepuce and dartos upto corona but left attached to corona as ventral flap. Outer preputial skin-dartos continuous with penile skin-dartos was dissected off the corpora in subdartos plane and bifurcated along the median raphe beyond the penoscrotal junction creating two flaps for dorsal cover, each half having its axial pattern dartos vessel. After bladder and urethra closure, glansplasty, corporoplasty, and abdominal wall skin cover, dorsal midline union of both halves of penile skin-dartos complex provided dorsolateral cover. Reverse advancement of ventral flap provided ventral cover. Outcome measurements were complications and aesthetic appearance on the scale of 0-10. **Main Result:** There was no occurrence of buried penis in any case. However, penile length remained short in 25 cases due to short anterior corpora. Mild penile rotation occurred in one. Superficial skin necrosis occurred in 5 patients that improved on conservative treatment. Aesthetic score ranged 7-8 in all. **Conclusion:** This technique of penile skin management provides symmetrical penile skin cover with satisfying aesthetic appearance and prevention of buried penis.

180 - OA
Title: Subpreputal Meatal-pedicled Flap, in management of Megameatus Hypospadias Variant, 15 years experience.
Authors: saber M waheeb, PhD(1), Mohamed abdelmalak, MSC(2)
Institutions: Alexandria university(1), Alexandria university(2)
Category: Urology
Keywords: Megameatus variant,Hypospadias,Subpreputal Meatal-pedicled Flap
Aim of the Study: The study objectives were to assess the validity of treating Megameatus Intact Prepuce hypospadias variant, which depends on the use of a ventral flap obtained from the prepuce, and based upon a meatal pedicle. **Methods:** This study includes 560 children with MIP variant who were admitted in Alexandria Hospitals “Elshatby and others”, in the period between June 2000 and May 2015. All patients were operated on using Subpreputal Meatal-pedicled Flap Technique. Technique used: -Meatal pedicled preputial flap with glanuloplasty was applied, using Catheter diameter 6,8 F. -The urethral catheter was left from 5 to 8 days. -First dressing was done 3 to 5 days postoperatively. -Follow-up calibration assessment was done on a regular basis, three times during a 6 month postoperative period to assess the repair. **Main Result:** -There were 560 patients with ages varying from 6m to 8 years old , 420 non-circumcised patients against 140 circumcised patients. -In 295 cases (50%), rotation of the flap forwards was sufficient to advance the urethra without additional sutures, on the other hand, the remaining 330 cases required suturing of the flap to the inner lip of the developed glanular wings to achieve proper meatal advancement. -In short-term follow up, there were 44 patients (8%) complaining of edema which resolved by medication within 1 week. -In long-term follow up there were 21 patients (3.9%) complaining of stenosis which were dilatable in calibration sessions, 6 patients (1.2%) suffered from disruption and needed further operations and 13 patients developed urethra-cutanous fistulas (2.3%). **Conclusion:** This advocated technique, involving the use of preputial meatal based flap, is an easily applicable procedure, that can be done for all cases of MIP variant. Moreover, it offers good results, with unremarkable complications.

181 - OA
Title: The effect of ozone therapy for prevent of testicular damage in experimentally cryptorchidism
Authors: Senol Biçer, MD(1), Cebrail Gürsul, MD(2), Ilyas Sayar, MD(3), Orhan Akman, DVM(4), Seçil Çakarli, RN(5), Merve Aydin, MD(6)
Institutions: Erzincan University Faculty of Medicine, Department of Pediatric Surgery, Erzincan,Turkey(1), Department of Physiology, Erzincan University, Faculty of Medicine, Erzincan, Turkey(2), Erzincan University Faculty of Medicine, Department of Pathology, Erzincan, Turkey(3), Ataturk University Faculty of Veterinary Sciences, Erzurum, Turkey(4), Erzincan University Faculty of Medicine, Department of Pediatric Surgery, Erzincan,Turkey(5), Erzincan University Faculty of Medicine, Department of Microbiology, Erzincan, Turkey(6)
Category: Urology
Keywords: cryptorchidism,ozone therapy,protective effect
Aim of the Study: Undescended testis is seen at 3% in newborn infants and it is a major cause of infertility. The aim of study was to investigate the protective effects of ozone aplication to testicular tissue in unilateral cryptorchidism. **Methods:** A total of thirty five rats were divided into five groups: 1-control, 2- cryptorchidism, 3-cryptorchidism +ozone, 4- cryptorchidism+hCG, 5-cryptorchidism+ozone+hCG. The left testes of rats except group control taking into abdominal cavity surgically was created experimental cryptorchidism. After a month waiting period, ozone treatment to Group 3,

hCG therapy to Group 4 and hCG+Ozone therapy to Group 5 was administered intraperitoneally for 3 weeks. At the and of the study making bilateral orchiectomy, testicular index were calculated and testicular sperm motility were evaluated. Histopathological examination was done by Johnsen scoring. Oxidative damage was assessed with MDA, SOD, CAT, GSH, GPx 1 biochemically. Caspase 3 Immunohistochemical staining was performed. **Main Result:** Decreased testicular index and sperm motility in group cryptorchidism was increased in treatment groups both testis that the most significant increase was found in ozone group. Highest Johnsen score and the lowest Caspase 3 staining score was detected in the ozone group. While least MDA levels was found in group ozone+hCG, CAT, levels of SOD, the GPx_1 and tGSH were increased in the group hCG. While caspase 3 was decreased in the ozone group, BCL 2 was decreassed in Ozone + hCG group ($p < 0.05$). **Conclusion:** In the unilateral undescended testicle is affected the opposite side as well. Ozone shows protective effect both bilateral and unilateral undescended testes with anti-oxidative mechanism. When given appropriate doses of hCG is combined with ozone, it makes a positive impact on the protective effect.

182 - OA
Title: Transvesicoscopic Ureteric Reimplantation in young children: a single-surgeon experience
Authors: Chandrasekharam VVS, MBBS, MCh(1)
Institutions: (1)
Category: Urology
Keywords: vesicoureteric reflux,transvesicoscopic,ureteric reimplantation
Aim of the Study: Transvesicoscopic ureteric reimplantation (TVUR) is a technically demanding, advanced laparoscopic operation performed in only a few centers. There are only a few series of TVUR in young children. We present our experience with TVUR in young children with vesicoureteral reflux (VUR). **Methods:** The records of all TVUR operations were reviewed; patient & operative details and follow-up data was recorded and analysed. Cohen's ureteric reimplantation was performed using intravesical laparoscopy with a 5-mm camera port & two 3-mm working ports. **Main Result:** Over a 3.5 y period, 48 patients (90 ureters) underwent TVUR performed by a single surgeon. Median patient age was 2.5 years (0.6-10.8); median VUR grade was grade 4. Most ureters (66/90, 73%) had high-grade (grade 4 or 5) VUR. Four ureters had previously failed endoscopic injection, while 11 ureters (12%) had paraureteric diverticula with ipsilateral VUR; the diverticulae were simultaneously excised during TVUR. A total of 7 ureters required tapering by plication. TVUR was completed in all 48 children with no open conversions. Mean operating time was 93 minutes for unilateral and 137 minutes for bilateral reimplantation. Intraoperative complications included pneumoperitoneum (4 cases) and slippage of ports (3 cases). Median hospital stay was 2 days. Follow-up is 3-36 months (median 12). All children had clinical and ultrasound examination during follow-up. No child had radiologic evidence of ureteric obstruction post-operatively. Follow-up cystography was obtained in 31 children (58 ureters); 3 ureters (5.1%) had persistent VUR (one grade 2, two grade 1). Because of the low-grade of the persistent reflux, no further treatment was considered. Thus, TVUR was successful in eliminating VUR in 94.9% ureters. **Conclusion:** TVUR could be performed safely & successfully even in young children with high-grade VUR. The results were comparable to open reimplantation, with low morbidity, minimal complications & excellent cosmesis.

VA1. VIDEO ABSTRACTS

Sunday, October 9 | 12:30 – 13:30 | Marriott Ballroom Salons 2/3

MODERATORS: LOUIS MARMON, KENNETH WONG

002 - VA
Title: Upper pole hemi-nephroureterectomy with lower pole ureteric reconstruction in a horse-shoe kidney with obstructed, nonfunctioning upper pole duplex moiety.
Authors: Sujit K Chowdhary, FRCS(1), Deepak Kandpal, MS,MCh(2), Deepak Agarwal, MS,MCh(3)
Institutions: Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(1), Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(2), Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(3)
Category: Laparoscopy and Robotics
Keywords: horse-shoe kidney,unilateral duplex,robotic hemi-nephroureterectomy
Aim of the Study: To present a video demonstration of upper pole hemi-nephroureterectomy with lower pole ureteric reconstruction in a horse shoe kidney with obstructed, nonfunctioning unilateral duplex system. **Methods:** A two and half year-old girl was referred to us with history of recurrent urinary tract infections. On investigations she was found to have a horse shoe kidney with non-functioning, obstructed upper pole of the duplex moiety on right side. She underwent a robotic upper pole hemi-nephroureterectomy after stenting of the lower moiety. The upper and the lower pole ureters had a long common channel, which made the dissection at the lower end very difficult. The lower pole ureter was repaired over the DJ stent. **Main Result:** Postoperative period was uneventful and the child made a quick recovery and discharged on third day after surgery. To the best of our knowledge this the first case of a minimally invasive

Heminephrectomy of duplex moiety in a horse-shoe kidney in a child. **Conclusion:** Minimally invasive hemi-nephroureterectomy in a horse shoe kidney with non-functioning, obstructed duplex moiety is elegant, safe and feasible by robotic approach.

003 - VA
Title: Pediatric robotic augmentation ileocystoplasty with ureteric reimplantation for neuropathic bladder refractory to medical management.
Authors: Sujit Chowdhary, FRCS(1), Deepak Kandpal, MS, MCh(2), Deepak Agarwal, MS, MCh(3), R Srivastava, FRCP(4)
Institutions: Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(1), Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(2), Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(3), Indraprastha Apollo Hospital, New Delhi(4)
Category: Laparoscopy and Robotics
Keywords: Robotic augmentation ileocystoplasty,neuropathic bladder,ureteric reimplantation
Aim of the Study: To demonstrate the technique, safety and feasibility of robotic augmentation ileocystoplasty in children with deteriorating upper tracts despite medical management. **Methods:** All children who underwent robotic augmentation ileocystoplasty were prospectively recruited in the study and results compared with age matched cohort of open surgery patients during the same period. The indications for augmentation were recurrent urinary tract infection, progressive renal scarring and incontinence despite aggressive medical management. All underwent neurosurgical evaluation, ultrasonography, Micturating cystourethrography, dimercaptosuccinic acid (DMSA) renal scan, voiding cystometry and cystoscopy prior to surgery. **Main Result:** Four children underwent robotic augmentation ileocystoplasty for neuropathic bladder refractory to medical management. The age range was from two years to fifteen years. The mean operative time was 330 minutes (range, 300 to 360 minutes). The morphine requirement was significantly less in the robotic group as compared to the open group. The functional bladder capacity at detrusor pressure of <25cm of water without any pain or urine leak, increased from a preoperative mean of 83 ml to postoperative mean of 163 ml at three month after surgery. All are on clean intermittent catheterization through the native urethra with a dry interval of more than 4 hours. There was no anastomotic leak or any postoperative major morbidity. The Hospital stay was 7-10 days. The follow up ranges from twelve months to twenty-four months with a median period of 19 months. **Conclusion:** Robotic augmentation ileocystoplasty in children is a safe and feasible procedure and allows to replicate the gold standard open procedure step for step. Large and long follow up studies are needed to establish the robotic approach as the gold standard but the early results are encouraging.

005 - VA
Title: Single incision laparoscopic gastric transposition in a child with severe corrosive esophageal stricture
Authors: Zafer Dokumcu, MD(1), Emre Divarci, MD(2), Coskun Ozcan, MD(3), Ata Erdener, MD(4)
Institutions: Ege University Faculty of Medicine Department of Pediatric Surgery(1), Ege University Faculty of Medicine Department of Pediatric Surgery(2), Ege University Faculty of Medicine Department of Pediatric Surgery(3), Ege University Faculty of Medicine Department of Pediatric Surgery(4)
Category: Laparoscopy and Robotics
Keywords: Gastric transposition,Single incision laparoscopic surgery,Child
Aim of the Study: Esophageal replacements may be required in cases of long gap esophageal atresia and esophageal strictures that do not respond to dilatations. Colonic interpositions are generally prefered worldwide but gastric transposition is a good alternative with its adventages of better blood supply and single anastomosis. We aimed to present our experience in a case with severe corrosive esophageal stricture who has been treated via single incision laparoscopic gastric transposition. **Methods:** After receiving local ethical committee's approval, medical records of a case with corrosive esophageal stricture who had been treated with single incision laparoscopic approach was reviewed. **Main Result:** A five year old boy suffering from severe dysphagia due to ingestion of an industrial type of cleaner was under esophageal dilatation programme for more than 12 months. Long-segment stricture did not respond to dilatations with 3 weeks interval, 2 sessions of mitomycin application and a strict anti-reflux treatment. Esophageal replacement was indicated upon radiologically approved severe esophageal stricture necessitating dilatations with mild to moderate bleeding. Single incision laparoscopic gastric transposition was performed via 3-holed single incision laparoscopic surgery port. Liver was retracted with the aid of subxyphodial automatic retractor. Stomach was mobilized, gastroesophageal junction was divided and retrosternal dissection up to cervical region was performed. Following cervical disection, stomach was pulled up through retrosternal tunnel. Esophagus was transected and esophagogastric anastomosis was performed over a nasogastric tube. Operation was terminated following laparoscopic bilateral gastric fixation at the level of xyphoid. Operative time was 4 hours. There was minimal bleeding. Right pneumothorax necessitated intraoperative tube thoracostomy. Patient was extubated and orally fed on postoperative 1st and 5th days, respectively. **Conclusion:** In the era of laparoscopy and robotics, single incision laproscopic gastric transposition may also be performed safely and efficiently in children with corrosive esophageal strictures.

006 - VA
Title: Robotic approach to an obstructed symptomatic retrocaval ureter in a boy with solitary functioning kidney.
Authors: Sujit Chowdhary, FRCS(1), Deepak Kandpal, MS, MCh(2)
Institutions: Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(1), Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(2)
Category: Laparoscopy and Robotics
Keywords: retrocaval ureter,solitary functioning kidney,robotic
Aim of the Study: To demonstrate the technique of robotic reconstruction for obstructed retrocaval ureter in a solitary functioning kidney. **Methods:** A four-year old child was referred to us with the diagnosis of PUJ obstruction in a single functioning kidney, with loin pain. On further investigation and evaluation, he was found to have a type I obstructed retrocaval ureter with the classical “fish hook” appearance on IVP. The distal ureter was not visualized in any radiological imaging. Retrograde pyelogram confirmed the obstruction due to narrowed retrocaval part of the ureter. Robotic reconstruction was carried out after mobilizing the hepatic flexure and right colon to expose the retroperitoneum. Renal pelvis and ureter were mobilized, retrocaval narrow segment was resected and ureteropyelostomy done over 4 F double “J” stent after transposition anterior to vena cava. **Main Result:** The total operative time was 120 minutes. The estimated blood loss was 10 ml. the patient was discharged on third postoperative day. **Conclusion:** Minimally invasive reconstruction for complex urogenital anomalies like retrocaval ureter in children is both safe and feasible by robotic assistance.

017 - VA
Title: Incidental diagnosis of genitourinary tuberculosis in an adolescent submitted to videolaparoscopic nefrectomy
Authors: CAROLINA TALINI, MD(1), ANTONIO CARLOS MOREIRA AMARANTE, MD(2), ANTONIO ERNESTO DA SILVEIRA, MD(3), LETICIA ALVES ANTUNES, MD(4), BRUNA CECILIA NEVES DE CARVALHO, MD(5), HELLEN PAULA DE OLIVEIRA, MD(6), JÉSSICA GUERRA, MS(7), PAULA TRINTINALHA, MS(8)
Institutions: HOSPITAL PEQUENO PRÍNCIPE, CURITIBA/PR(1), (2), (3), (4), (5), (6), (7), (8)
Category: Urology
Keywords: genitourinary tuberculosis,renal tuberculosis,nephrectomy
Aim of the Study: The aim of this study is to describe an unsual case of genitourinary tuberculosis accidentally diagnosed during laparoscopic nefrectomy. About 10-20% of the patients present extrapulmonary tuberculosis involvement. Genitourinary tuberculosis is rarely found in children as it usually develops 10 to 20 years after contact due to endogenous reactivation. **Methods:** We performed a medical records review and also recorded the entire surgical procedure. **Main Result:** Female, 16 years old, diagnosed with Hinman Syndrome and chronic renal failure elsewhere three years befored being reffered to the pediatric urology service. During an hematuria investigation presented cystourethrogram with grade V right vesicoureteral reflux and a small bladder. Ultrasonography demonstrated various cysts in left kidney with irregular content, suggesting displastic multicystic kidney. Scintigraphy showed funcional exclusion of the left kidney. Urodinamics demonstrated low bladder capacity and compliance, presence of uninhibited contractions of the detrusor with miccional urgency and perineal incoordination. Total laparoscopic nephrectomy was proposed. A Gregoir right ureteral reimplantation and Mitrofanoff mechanism using the distal left ureter were also indicated. During surgery presence of multiple cysts in the left kidney with caseous aspect, left ureter obstruction with caseous content in ithe lumen and bladder mucosa with friable and thickened wall were found. Anatomopathologic study showed cronic necrotizing granulomatosis inflammation. Baciloscopy was negative. Mantoux tuberculin skin test was strong reactor – 20mm – family history was positive for pulmonary tuberculosis 10 years earlier (parents and maternal grandmother). The patient recovered well after surgery and is being followed by the pediatric infectologist and treated for tuberculosis. **Conclusion:** This shows the importance of bringing extrapulmonary tuberculosis to the roll of differential diagnosis specially in patients with positive family history and in developing countries. Early treatment is important to avoid disease progression with functional loss of the organ as happened in this case.

018 - VA
Title: Transvesical bilateral uretericreimplantation in children: The surgical subtleties!
Authors: Virender Sekhon, MCh, Pediatric Surgery(1), Mohammad Sualeh Ansari, MCh, Urology(2)
Institutions: SGPGIMS, Lucknow(1), SGPGIMS, Lucknow(2)
Category: Urology
Keywords: Transvesical,Ureteric reimplantation,Vesicoureteric reflux
Aim of the Study: Contemporary literature has proven the safety and efficacy of transvesical ureteric reimplantation in children. Most of these series have described the results of unilateral reimplantation. Here in the author describe the technique of transvesical bilateral ureteric reimplantation in a step by step manner in children. **Methods:** A total of 38 patients (76 units) underwent laparoscopic transvesical bilateral reimplantation by the same surgeon for primary VUR. Of these67had grade II-III VUR while 6 had grade IV on one side and III on other side. Laparoscopic transvesical bilateral cross-trigonal ureteral reimplantation was performed in all the patients.A pure laparoscopic approach using three 5 or 3mm ports, with minor modifications for port security, canulation of ureteric orifices with pre-fixed tubes and

straight dissecting hook were used to aid in ease of surgical steps. **Main Result:** The median age was 4.6years [range 2 – 14 years]. The median operative time was135 minutes [range 110-180mins]. There was no conversion or any intraoperative complication reported. Median hospital stay was 4 days [range 3 – 6 days]. The median follow up is 24 months. On follow up renal dynamic scans normal drainage was reported in all the patients. Reflux resolved in 71 (93.4%) patients. The three patients in whom VUR persisted had tortuous and dilated ureter [Grade IV] on preoperative voiding cystourethrogram. **Conclusion:** Laparoscopic bilateral transtravesical reimplantation is safe and feasible in children. Dilated and tortuous ureters [VUR grade IV] are best to be avoided in the initial phase of this technique.

VA2. VIDEO ABSTRACTS

Monday, October 10 | 12:45 – 13:45 | Marriott Ballroom Salons 2/3

MODERATORS: ARNAUD BONNARD, MUHAMMAD AMJAD CHAUDHRY

001 - VA
Title: Laparoscopic- Assisted Morgagni Hernia Repair and Gastrostomy Tube Placement in a Pediatric Surgical Patient
Authors: Rebecca M Rentea, MD(1), Hendrickson J Richard, MD(2)
Institutions: Childrens Mercy Hospital(1), Childrens Mercy Hospital(2)
Category: General Surgery
Keywords: Morgagni Hernia,gastrostomy tube,laparoscopic surgery
Aim of the Study: Morgagni hernia is a rare often incidentally diagnosed diaphragmatic hernia in the pediatric age group. We present a patient who presented for laparoscopic gastrostomy tube placement and was found to incidentally have a large Morgagni hernia. We present a laparoscopic- assisted full-thickness anterior abdominal wall Morgagni hernia repair at the time of gastrostomy tube placement. **Methods:** Primary laparoscopic Morgagni hernia and gastrostomy tube placement. The hernia sac is left in place and multiple interrupted sutures are used to close the Morgagni defect. The gastrostomy tube is placed using two U-stitch sutures that are used to hitch the stomach up to the anterior abdominal wall and are ultimately buried in the subcutaneous tissues. **Main Result:** The entire operation was completed laparoscopically. **Conclusion:** Laparoscopically- assisted Morgagni hernia repair in the setting of a laparoscopically assisted gastrostomy tube is a safe and effective modality of treatment. This laparoscopic approach has the advantages of minimally invasive surgery without adverse effects.

012 - VA
Title: Thoracoscopic ressection of a pulmonary inflammatory myofibroblastic tumor
Authors: Leonor Carmo, MD(1), Mariana Borges-Dias, MD(2), Luísa Guedes-Vaz, MD(3), Maria Bom-Sucesso, MD(4), Tiago Henriques-Coelho, PhD(5), José Estevão-Costa, PhD(6)
Institutions: (1), (2), CHSJ(3), (4), (5), (6)
Category: Thoracic Surgery
Keywords: thoracoscopy,myofibroblastic tumor,lung
Aim of the Study: Inflammatory myofibroblastic tumor (IMT) of the lung is a challenging and controversial entity. Its diagnosis and further treatment based on the clinic and radiologic features is difficult, making histopathological analysis important. We present the video of an IMT of the lung diagnosed only after successful resection by thoracoscopy.
Methods: A previous healthy 12-year-old boy presented with productive cough for a week, associated with fever for 48h. No relevant alterations were seen in the physical exam. There was no past medical history. A thoracic X-Ray identified a nodular opacity in the right thorax. A CT scan showed a solitary pulmonary spike nodule (19mm) with pleural involvement and inflammatory characteristics. He was medicated with oral antibiotics for 10 days with good clinical response but with no change in the X-Ray image. All the other studies were normal. A percutaneous fine-needle biopsy was performed but was inconclusive. **Main Result:** Thoracoscopic access was performed through three ports. The mass was localized in the anterior surface of the lower margin of the upper lobe, with no invasion of the surrounding structures. Wedge resection was performed with an automatic stapler device, with complete macroscopic resection of the nodule. No chest drain was used. The post-operative period was uneventful. Histopathological examination revealed a IMT with no nuclear atypia. At one year of follow-up there was no signs of recurrence. **Conclusion:** The diagnosis of lung IMT may be only obtained after resection. Thoracoscopic approach seems to be a safe and effective procedure for the resection of IMT.

013 - VA
Title: Video-assisted Thoracoscopic Surgery is an effective treatment modality for Pediatric Descending Mediastinitis
Authors: Radhames E Lizardo, MD(1), Kathleen A Cannon, MD(2), Amy A Hernandez, MD(3), Romeo C Ignacio, MD(4)
Institutions: Naval Medical Center San Diego(1), Naval Medical Center San Diego(2), Naval Medical Center San Diego(3), Naval Medical Center San Diego(4)

Category: Thoracic Surgery
Keywords: Descending Mediastinitis ,VATS,Pediatric
Aim of the Study: Descending mediastinitis in pediatric patients most commonly originates from a retropharyngeal infection. Traditionally, treatment includes broad-spectrum antibiotics and surgical drainage from either a transcervical or transoral approach combined with a thoracotomy. Recently, video-assisted thoracoscopic surgery (VATS) has been described as a treatment option for drainage of the posterior mediastinum. **Methods:** We describe the case of a 17 month-old female child presenting with 6 days of fever, fatigue and neck swelling. Physical exam demonstrated a febrile child with tachycardia, but no hypotension. She had a palpable fullness along the right neck and decreased breath sounds along the right lung base. Laboratory evaluation demonstrated an elevated WBC of 11.3. Plain films and CT imaging revealed a retropharyngeal abscess that extended into her posterior mediastinum. She was placed on broad-spectrum antibiotics, resuscitated and taken to the operating room for a right-sided VATS and transcervical abscess drainage. **Main Result:** Findings at the time of operation included a large multiloculated abscess extending from the base of the skull and mastoid tip down through the mediastinal inlet and into the right pleural space and posterior mediastinum. The abscess cavity was incised, debrided and drained. A right-sided chest tube and cervical drain were placed in the residual abscess cavity. Cultures were obtained that demonstrated methicillin-resistant Staphylococcus aureus. Her chest tubes were in place for 5 days and she was discharged on postoperative day #6. The remaining of her post-operative course was uncomplicated and she made a complete recovery without the need of repeat exploration or drainage procedure. **Conclusion:** Definite surgical management of a retropharyngeal abscess mandates prompt drainage procedure. When this process descends into the mediastinum, VATS is a safe, minimally-invasive and effective treatment modality. This approach should be considered as an alternative option in the treatment of this potentially life-threatening condition.

014 - VA
Title: Thoracoscopic repair of bilateral diaphragmatic rupture
Authors: Melih Akin, MD(1), Burcu Cigsar, MD(2), Seyma Filiz, MD(3), Esma Sehovic, MD(4), Duygu Gürel, MD(5), Resat Sadigov, MD(6), Ali I Dokucu, MD(7)
Institutions: İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(1), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(2), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(3), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(4), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(5), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(6), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(7)
Category: Thoracic Surgery
Keywords: bilateral diaphragmatic rupture ,Thoracoscopic repair,Percutaneous internal ring suturing
Aim of the Study: Traumatic injuries of the diaphragm remain an entity of difficult diagnosis due to non-specific symptoms and rareness of the disease. Once discovered, surgical repair is the standard treatment that is conventionally performed by thoracotomy or laparatomy. Here we report a case of thoracoscopic repair in bilateral diaphragmatic rupture. **Methods:** An 8-year-old girl after motor vehicle accident (MVA) was evaluated for general trauma findings in emergency room. Her physical examination and radiologic evaluation were within normal limits thus patient was initially overlooked for diaphragmatic injuries and discharged. Within 72 hours, patient was readmitted with severe vomiting; CT revealed left diaphragmatic rupture and emergent thoracoscopic repair was performed. At thoracoscopy; diaphragm was found to be split completely from anterior to posterior costal margin laterally and hiatus was intact. Ileum, stomach and colon were herniated. Defect was repaired with primary sutures, suspensory sutures and some sutures were performed as percutaneous internal ring suturing (PIRS) for hernia repair. Procedure was successful and the patient was discharged on 7th day. On post-operative 3rd week control, x-ray and MRI revealed right diaphragmatic rupture, which was also repaired thoracoscopically. In 2nd surgery, diaphragm was found to split similarly, from anterior to posterior margin and liver was herniated totally. Defect was also repaired as PIRS procedure. Postoperative recovery was uneventful with control 2-way chest X-ray showing regular diaphragmatic shape. **Main Result:** . **Conclusion:** Traumatic diaphragm rupture in children is very rare and can easily be missed. Thoracoscopy provides good surgical exposure allowing repair of the defect with excellent cosmetic outcome. To the best of our knowledge this is the 1st case of bilateral thoracoscopic repair for diaphragm rupture in pediatric age group.

015 - VA
Title: Video Assisted Thorascopic Removal of a Paraspinal Neuroblastoma
Authors: Stephan S Leung, BS(1), Abigail Podany, MD(2), Dorothy V Rocourt, MD(3)
Institutions: Pennsylvania State Hershey Medical Center(1), Pennsylvania State Hershey Medical Center(2), Pennsylvania State Hershey Medical Center(3)
Category: Thoracic Surgery
Keywords: Neuroblastoma,VATS,Pediatrics
Aim of the Study: The purpose of this study is to present an atypical presentation of neuroblastoma and to demonstrate a minimally invasive technique for removal of a paraspinal neuroblastoma. **Methods:** The patient presented with

increased swelling over the right mandible for 2 weeks despite antibiotic treatment for presumed parotitis. Pre-operative CT imaging of the mass revealed a lytic lesion. CT guided fine needle aspiration revealed neuroblastoma. CT head/chest/abdomen/pelvis was performed for staging and revealed a left paraspinal mass measuring 2.5 x 3.0 x 1.3 cm adjacent to T10-T11. A bone scan and MIBG scan showed metastatic disease consistent with Stage IV neuroblastoma. After 4 cycles of chemotherapy, the patient had a >50% reduction in the primary paraspinal lesion. Video assisted thorascopic surgery was performed and the lesion was excised without complication. **Main Result:** Final pathology demonstrated a 1.5 x 1.2 x 0.8 cm neuroblastic tumor with treatment effect with involvement of the margin. The accompanying lymph node was negative for tumor involvement. The patient underwent subsequent chemotherapy under the guidance of pediatric oncology. Repeat CT, bone scan and MIBG scan at one year follow up was negative for disease recurrence. **Conclusion:** Neuroblastoma is the most common extracranial cancer in childhood. Paravertebral neuroblastomas arise from the paravertebral sympathetic ganglia. The cancer metastasizes via both lymphatic and hematogenous routes to bone, skin and liver. Parotid metastases are rare with fewer than five case reports having been published in the last several decades. For Stage IV neuroblastoma, chemotherapy and immunomodulatory therapy are critical. Surgical resection is attempted with goal of removal of the entire tumor and histological staging; however, negative microscopic tumor margins are not necessary. Video assisted thorascopic surgery for neurogenic tumors has shown to have good results with minimal postoperative complications. Major advantages include avoidance of open thoracotomy complications and enhanced surgical visualization.

016 - VA
Title: A Novel Technique for Dissection During Thoracoscopic Repair of an H-type Tracheoesophageal Fistula Using a Vessel Loop: A Neat Trick
Authors: Katharine R Bittner, MD(1), Erica D Kane, MD(2), Kaitlyn E Wong, MD(3), Kevin P Moriarty, MD(4), Michael V Tirabassi, MD(5), Gregory Banever, MD(6)
Institutions: Baystate Medical Center(1), Baystate Medical Center(2), (3), (4), (5), (6)
Category: Thoracic Surgery
Keywords: Tracheoesophageal fistula,H type,Thoracoscopic
Aim of the Study: This is a video of a novel technique for assisting in the dissection of an H-type tracheoesophageal fistula during a thoracoscopic repair. **Methods:** The patient is a newborn female born at 41 weeks gestation after an uncomplicated pregnancy and delivery. She had difficulty feeding and respiratory distress so was transferred to the NICU. Chest radiograph revealed right sided pneumonia as well as thoracic vertebral abnormalities. Upper GI demonstrated an H-type tracheoesophageal fistula. Echocardiogram revealed several abnormalities including atrial septal defect, ventricular septal defect, and patent ductus arteriosus. No other abnormalities were detected on examination. After cardiac clearance, she was scheduled for operative repair of the tracheoesophageal fistula. Rigid bronchoscopy was performed to confirm location of the fistula, which was 2cm above the carina. Following this, repair was performed via right video assisted thoracoscopy. During fistula dissection, a vessel loop was inserted behind the fistula and was coiled redundantly to easily and safely isolate the fistula. This was used to assist in retraction and further dissection. The fistula was ligated. **Main Result:** The patient was extubated on postoperative day 2. An upper GI study was performed with no evidence of a leak and she was started on oral feeds. She had a prolonged postoperative stay due to slow development of oral feeding skills. She was sent home three weeks postoperatively. **Conclusion:** This video demonstrates a novel technique during VATS H-type tracheoesophageal fistula repair using a vessel loop directed around the fistula to assist with tissue retraction and dissection.

VA3. VIDEO ABSTRACTS

Tuesday, October 11 | 12:30 – 13:30 | Marriott Ballroom Salons 2/3

MODERATORS: ADIL ASLAM, IAN SUGARMAN

004 - VA
Title: Laparoscopic Nissen Fundoplication in a Premature 3.3 Kg Infant with Situs Inversus Totalis
Authors: Shannon F Rosati, MD(1), Jonathan DeAntonio, MD(2), Claudio Oiticica, MD(3)
Institutions: VCU Health, Children's Hospital of Richmond(1), VCU Health, Children's Hospital of Richmond(2), VCU Health, Children's Hospital of Richmond(3)
Category: Laparoscopy and Robotics
Keywords: Laparoscopic ,Nissen Fundoplication,Situs Inversus Totalis
Aim of the Study: Situs inversus totalis (SIT) is a rare anomaly, characterized by the complete transposition of the thoracic and abdominal organs, with a reported incidence of 1:5,000 to 1:20,000 hospital admissions. There have been less than 100 abdominal laparoscopic procedures described in adults and children. Here, we describe what we believe is the youngest patient to undergo a laparoscopic Nissen Fundoplication with SIT. **Methods:** The child was a 5 week old male, born prematurely at 34 weeks, diagnosed prenatally with SIT. After birth, he was diagnosed with significant

gastroesophageal reflux disease. Pre-operative imaging confirmed complete transposition of his abdominal organs. He underwent a laparoscopic Nissen fundoplication with gastrostomy tube placement. **Main Result:** The 3.3 kg infant had the same number of abdominal incisions as a regular Nissen. There was difficulty encountered when placing a Nathanson retractor in the subxiphoid location, as he had an oversized left lobe of the liver underneath the right diaphragm and the curvature of the retractor placed the handle towards the abdomen. We were able to modify the position of the Nathanson and secure it to the table to provide retraction of the liver. The Nissen was then able to be performed in the usual manner, without any increased operative time or blood loss. **Conclusion:** Case reports, mainly in the adult population with SIT, describe difficulties with technical aspects of intra-abdominal laparoscopic operations and longer operative times. We agree that placing port sites in a mirrored position is important, however, the key portion is the position and curvature of the Nathanson, to allow for retraction of the large left lobe of the liver, with the handle towards the chest and not the abdomen. Laparoscopic Nissen fundoplication is a safe operation in infants with GERD and is easily modifiable to be performed in infants with SIT.

007 - VA
Title: Laparoscopic transhiatal esophagectomy and esophageal substitution for long corrosive esophageal stricture refractory to multiple dilatations with absolute dysphagia.
Authors: Deepak Kandpal, MS,MCh(1), D Bhargava, DM(2), Nameet Jerath, MD(3), Sujit Chowdhary, FRCS(4)
Institutions: Department of Pediatric Surgery, Indraprastha Apollo Hospital, New Delhi(1), Indraprastha Apollo Hospital, New Delhi(2), Indraprastha Apollo Hospital, New Delhi(3), Department of Pediatric Surgery, Indraprastha Apollo Hospital, New Delhi(4)
Category: Laparoscopy and Robotics
Keywords: corrosive stricture,laparoscopic transhiatal esophagectomy,laparoscopic gastric transposition
Aim of the Study: To demonstrate feasibility of laparoscopic esophagectomy and esophageal substitution for corrosive stricture esophagus. **Methods:** A 5-year old boy was referred to us with corrosive stricture esophagus. The child had ingested corrosive 2 years back and following which he underwent multiple failed attempts at esophagoscopy and dilatation in Pakistan and India. After each session of dilatation he was able to take liquids for a period of 4 to 6 weeks. In the last attempt at dilatation he had developed a diverticulum with failure of guide wire to go through. Following this the child developed absolute dysphagia. The child was evaluated with a contrast swallow and esophagoscopy. The stricture was long with multiple pseudo diverticuli. The scope and guide wire were not negotiable across the stricture. The child was planned for laparoscopic transhiatal esophagectomy and esophageal substitution. The retromediastinal dissection was challenging due to dense post corrosive ingestion adhesions. Esophageal substitution was carried out by retromediastinal gastric transposition. **Main Result:** The child was ventilated for 48 hours and contrast swallow was done on 7th day which showed wide patent neck anastomosis, no leak and prompt gastric emptying. He was started on semisolid diet and discharged two days later. **Conclusion:** Laparoscopic esophagectomy and esophageal substitution is an elegant procedure that can be successfully done in a child with minimal collateral trauma and fast recovery.

008 - VA
Title: Laparoscopic Management of Abdominoscrotal Hydrocele
Authors: Kathleen A Cannon, MD(1), Jason Brill, MD(2), Romeo Ignacio, MD(3)
Institutions: Naval Medical Center San Diego(1), Naval Medical Center San Diego(2), Naval Medical Center San Diego(3)
Category: Laparoscopy and Robotics
Keywords: Abdominoscrotal Hydrocele,Laparoscopy,Pediatrics
Aim of the Study: Abdominoscrotal hydrocele is encountered in less than 3% of pediatric hydroceles. Management options include scrotal and inguinal approaches. Laparoscopic approaches have been reported but are mainly utilized for diagnostic purposes. We report a case of abdominoscrotal hydrocele managed via a combined inguinal and laparoscopic approach. **Methods:** A 4 month-old male was referred with bilateral hydroceles. An ultrasound was obtained preoperatively, showing simple-appearing hydroceles. The procedure was begun with a right hydrocelectomy performed in the usual fashion. The left hydrocele was initially approached in the same inguinal fashion, at which point the sac was found to communicate with the abdominal space. A laparoscope was inserted peri-umbilically to visualize the extent of the suspected abdominoscrotal hydrocele. Maryland graspers and EndoSchear scissors were inserted via stab incisions and the dissection of the abdominal portion of the sac was completed laparoscopically. The sac was removed. The inguinal floor was repaired with a modified Bassini repair. **Main Result:** Current consensus on management of abdominoscrotal hydrocele suggests only that the entire sac must be excised. Inguinal and scrotal approaches both have advocates. Available case series document 147 cases of abdominoscrotal hydrocele in 117 patients, most of which have been managed via inguinal incisions. Laparoscopy has been employed for visualization or marsupialization of the sac, but no cases have been reported to date describing a laparoscopic excision. **Conclusion:** Laparoscopic dissection provides an alternative approach to this rare diagnosis. Surgeons should remain aware of abdominoscrotal hydrocele and the multiple operative options that exist.

009 - VA
Title: Shoelace Technique for Laparoscopic Ventral Hernia Repair in a Morbidly Obese Pediatric Patient
Authors: Joshua S Winder, MD(1), Salvatore Docimo, DO(2), Eric M. Pauli, MD(3), Brett W. Engbrecht, MD(4)
Institutions: Penn State Milton Hershey Medical Center(1), Penn State Milton Hershey Medical Center(2), Penn State Milton Hershey Medical Center(3), Penn State Milton Hershey Medical Center(4)
Category: Laparoscopy and Robotics
Keywords: Laparoscopic,Hernia,Shoelace
Aim of the Study: Laparoscopic ventral hernia repair (LVHR) is generally uncommon in pediatric patients. The use of mesh is even less common with only 35 reported cases of traumatic ventral hernia repair using mesh. LVHR in obese adults is common and modern methods of repair attempt to reapproximate the rectus abdominis muscles at the midline, recreating the linea alba. Here we present the case of a 13-year-old male with a large ventral hernia with loss of domain, successfully treated with laparoscopic ventral hernia repair with Shoelace technique. **Methods:** The patient was a 13-year-old male with Prader Willi syndrome, morbid obesity (BMI=64kg/m2), obstructive sleep apnea requiring CPAP, asthma, and Obesity Hypoventilation syndrome with an enlarging ventral hernia. We performed the repair laparoscopically as follows: the abdomen was entered and the hernia reduced with blunt and electrocautery dissection. Utilizing multiple transfascial sutures in a figure-of-eight pattern the defect was closed primarily (shoelace technique). An intraperitoneal onlay mesh was placed over the defect and tacked into place. Multiple transfascial sutures were then placed laterally through the mesh to offload the midline closure. **Main Result:** The patient was initially taken to the pediatric ICU for respiratory monitoring and required increased BiPAP settings due to the increased abdominal pressures from the reduction of his viscera. He was ultimately discharged to home on his baseline BiPAP settings without event. He was seen at 3 months postoperatively and found to have an asymptomatic seroma, without evidence of recurrence. **Conclusion:** The goals of this operation were to reduce the patient's large hernia, provide a functional abdominal wall with rectus medialization, benefit from the advantages of a minimally invasive approach (less wound morbidity), achieve wide mesh overlap of the defect, and preserve a wide array of options for open component separation in the event of a future recurrence.

010 - VA
Title: Well formed philtral dimple and notch-free vermilion after unilateral cleft lip repair - A new procedure
Authors: Bijoy K Das, MS(1)
Institutions: CARe medical College hospital(1)
Category: Misc
Keywords: Cleft lip,Philtral dimple,Dermis flap
Aim of the Study: Absent philtral dimple and notch on the vermilion are the most common complications after the repair of a unilateral cleft lip. Various methods have been described for the secondary correction of a notch but there are only a few reports on how the notch can be prevented during primary lip repair. Multiple surgeries can overcome these problems but due to financial constraints and the distance travel, these patients prefer to come for fewer procedures with maximum benefits. These factors encouraged the author to carry out repair of unilateral complete cleft lip with dermis flap. **Methods:** A prospective study was carried out in 15 patients with unilateral complete cleft lip with or without palate. Lip dissection was done by Mohler method. First, all labial incisions are lightly scored. 2-3 mm margin of the lateral flanking flap was de-epithelialized. V-plasty was done on Vermilion. Follow up was done on 7th post operative day. Scar massage started on 22nd post operative day. Follow up period was 1 year. **Main Result:** Philtrum was well formed in all cases. There were no complications like wound infections but there was notch on vermilion in one patient and slight nasal deformity in one patient. **Conclusion:** This is an initial report of author's centre for development of philtral dimple and to prevent the occurrence of a notch on the vermilion after unilateral cleft lip repair. It is a simple logical sequence of steps that is easy to follow. However, the long-term results should be further evaluated in a larger series of cases over a longer period of follow-up.

011 - VA
Title: Airway Foreign Body extraction without using optical forceps
Authors: Ravi Prakash Kanojia, MCh(1)
Institutions: Post Graduate of Medical Education and Research Chandigarh(1)
Category: Misc
Keywords: Foreign body aspiration ,bronchoscopy,endoscopy
Aim of the Study: It is sometimes difficult to extract foreign body (FB) with optical forceps (OF). Distally migrated foreign body fragments, narrow bronchiolar space, impacted FB, slipping FB from prongs are to mention a few. We present VIDEOS of various methods to extract airway FB without the use of OF in such desperate, difficult and life threatening situations. **Methods:** All patients undergoing bronchoscopy were studied. They underwent FB extractions using fogarty catheter (FC), dormia basket (DB), magnet for metallic FB etc were done. These patients were having difficult circumstances where FB removal was difficult using optical forceps. **Main Result:** 20 patients (6 females) were successfully scoped for removal. The removal was aided by DB in 13, FC in 6 and magnet aided removal in 1. Complete

removal was achieved. **Conclusion:** the study outlines the circumstances where there is failure to extract the FB and in those desperate circumstances we propose alternate methods. The armamentarium for these methods, fogarty and dormia basket should form an indispensable part of the bronchoscopy set.

PA1. POSTER ABSTRACTS

Sunday, October 9 | 12:30 – 13:30 | Exhibit Hall A

PA1-1 | MODERATORS: JOSE ROBERTO BARATELLA, SHIGERU UENO

001 - PA
Title: Persistent Mullerian Duct Syndrome (PMDS) with Transverse Testicular Ectopia (TTE)- A rare anomaly.
Authors: AFRUZUL ALAM, MBSS(1), TAHMINA BANU, MBSS(2), MUSHFIQUR RAHMAN, MBSS(3), TAHMINA AKHTER, MBSS(4)
Institutions: Chittagong Medical College Hospital(1), Chittagong Medical College Hospital(2), Chittagong Medical College Hospital(3), Chittagong Medical College Hospital(4)
Category: General Surgery
Keywords: Persistent Mullerian Duct Syndrome,Transverse Testicular Ectopia, Rare anomaly
Aim of the Study: To report a rare anomaly- Persistent Mullerian Duct Syndrome (PMDS) with Transverse Testicular Ectopia (TTE). **Methods:** Case study. **Main Result:** A 2 ½ years old boy presented with absence of both testis in scrotum and left sided inguinal hernia since birth. Examination of the groins showed normal phallus, left inguinal hernia with empty scrotum, impalpable right testis and palpable left testis in left inguinal region. Exploration under general anesthesia through left inguinal incision revealed two testis, two vas deferences and two vascular pedicles in the inguinal region. The two vas deferences were separated by rudimentary uterus and broad ligament. The cord structures were carefully dissected and rudimentary uterus was excised. Right testis was deposited to the right hemiscrotum through suprapubic subcutaneous tunnel and left testis in left hemiscrotum. Associated inguinal hernia was repaired. Two testis were biopsied and histopathology showed seminiferous tubules lined with germinal epithelium. Post operative period was uneventful. The karyotype was not done. Renal ultrasonogram was normal. **Conclusion:** PMDS with TTE is a rare anomaly and encountered incidentally during operation for undescended testis. So need to create awareness among the surgeons help to plan the proper line of management in these patients.

002 - PA
Title: OVARIAN DETORSION. LONG TERM FOLLOW UP.
Authors: Francisco Javier Murcia Pascual, MD(1), Jose Ignacio Garrido Pérez, MD(2), Chelsy Eduvigis Lasso Betancor, MD(3), Rocio Granero Cendón, MD(4), Verónica Vargas Cruz, MD(5), Fernando Vázquez Rueda, MD(6), Rosa Maria Paredes Esteban, MD(7)
Institutions: Universitary Reina Sofia Hospital(1), Universitary Reina Sofia Hospital(2), Universitary Reina Sofia Hospital(3), Universitary Reina Sofia Hospital(4), Universitary Reina Sofia Hospital(5), Universitary Reina Sofia Hospital(6), Universitary Reina Sofia Hospital(7)
Category: General Surgery
Keywords: Ovarian torsion,Conservative management,Laparoscopy
Aim of the Study: Ovarian torsion in childhood and adolescents is a rare entity. Due to the non-specific symptoms and the poor specificity of radiologic tests, diagnosis of ovarian torsion in girls and adolescents is challenging. Standard procedure has been the removal of the twisted ovary, however ovary preservation is becoming a rising choice. The purpose of our study is to review conservative management of ovarian torsion. **Methods:** A retrospective review of charts of patients between May 2010 and January 2016 was done. Ten girls were operated by laparoscopy and two by laparotomy because of ultrasound and clinical suspicion of ovarian torsion. Diagnosis was confirmed intraoperatively. Enlarged, friable and black-bluish ovary was found. Detorsion and adnexal sparing were performed in all cases, despite the gross appearance. **Main Result:** Mean age was 9 years (3-12 years), median delay between the first symptoms and surgical intervention, was 4.5 days (1-21 days). Sudden abdominal pain was presented in almost all patients. Right ovary was more frequently damaged, and the average size was 6 cm (5-6.8 cm). Tumor markers were normal. WBC was normal in 4 patients, all of them with excellent long term outcome. During the first 6 months the follow-up ultrasound showed good results (Doppler flow and follicular development). Overall time follow up was 38 months (10-66 months). Excellent long-term outcomes was shown in 58% of patients; furthermore three involved ovary atrophied and two oophorectomies due to recurrent adnexal torsion and ovarian mass consistent with teratoma were observed. **Conclusion:** The ability to predict potential future viability by the appearance of the ovary, may be extremely difficult. Macroscopic appearence of ovary is not a true indicator of the degree of ischemia. Normal WBC could predict better outcome. Laparoscopic conservative management, allows that macroscopically nonviable ovaries could be recovered.

003 - PA
Title: Role of Gender and Seasons in Childhood Perforated Appendicitis
Authors: Ilhan Ciftci, MD(1), Tamer Sekmenli, MD(2), Metin Gunduz, MD(3)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1), Selcuk University Medical Faculty Department of Pediatric Surgery (2), Selcuk University Medical Faculty Department of Pediatric Surgery (3)
Category: General Surgery
Keywords: Age distribution,appendicitis,seasonal variation
Aim of the Study: This study was coordinated to explore the demographic features, incidence, seasonal changes and trends of appendicitis in two centers from **Methods:** Patient's records were confirmed appendicitis and perforated appendicitis who were treated in two center. **Main Result:** A combination of data obtained from the two centers showed that a total of 390 cases with appendicitis. Of total 390 cases, 231(59.2%) were composed of boys and 159 (40.8%) of girls, and the number of boys was statistically and significantly higher, compared to that of girls. Of all cases, 326 (83.6%) were acute appendicitis, and 64 (16.4%) were perforated appendicitis. Within those with perforated appendicitis, the number of girls was 35 (54%), significantly higher. **Conclusion:** As a consequence, acute appendicitis may be asserted to be seen higher in boys at schooling age and summer months. Within summer time, cases admitted with the complaint of abdominal pain should be evaluated meticulously as to acute appendicitis. Also, acute appendicitis should be certainly considered in the differential diagnosis of adolescent girls, and the treatment should be performed before perforation. Perforated cases should be followed carefully, and a requirement for reoperation should be kept in mind due to complications.

004 - PA
Title: Seton placement for fistula-in ano: a three-case study in children
Authors: Merve Altin, MD(1), Zafer Turkyilmaz, MD(2), RAMAZAN KARABULUT, MD(3), Kaan Sonmez, MD(4), Sibel Eryilmaz, MD(5), Vokhid Tairov, MD(6), A.Can Basaklar, MD(8)
Institutions: (1), (2), (3), (4), (5), Ahmet Yesevi University Medical Faculty(6), (8)
Category: General Surgery
Keywords: fistula-in ano,seton placement,children
Aim of the Study: It was our aim with this study to present our experience in three patients on whom seton placement was carried out in fistula-in-ano (FIA) by using the wristband part of the surgical glove. **Methods:** Patients(1.5, 2 and 13 years old) were put in lithotomy position after being anesthetized with a laryngeal mask. The fistula was revealed by pushing the 17 gauge blunt needle form the external opening of the FIA to the internal opening on the level of the anal crypt. Following this, the skin between the internal and external openings of the FIA was incised above the blunt needle. On the next stage, the thin, hard, flexible ring in the wristband part of the surgical, sterile glove was cut and used as seton, and it was passed through the fistula with the guidance of the needle. In both cases, two tips of this modified seton were connected in a way to not cut over the fistula. The tightness of the seton was adjusted in a way to leave half of the distance between the internal and external openings of the FIA. The patients were given oral antibiotics and sitz bath with batticon. **Main Result:** These operations lasted twenty minutes. The seton dropped spontaneously on day 15 and 19. While relapse was not encountered on the third and sixth months' follow-up of the patients, it was seen that the operation was also satisfying cosmetically. Incontinence was not seen in the patients. **Conclusion:** the material used as seton in our study was the wristband of the surgical glove, which is both cheap and easy to use. Seton placement used in the treatment of FIA in children might be a method to be preferred due to low recurrence, ease of use, and not causing problems like incontinence.

005 - PA
Title: A three Years Audit of Surgical Management of Un-descended Testis. Experience at King Fahad Hospital, Al Baha, KSA
Authors: MUHAMMAD SHARIF, FCPS(pediatric su)rgery)FEBPS(pediatric surgery(1)
Institutions: Children Hospital and The institute of Child Health Lahore (1)
Category: General Surgery
Keywords: undescended testis,delayed presentation,surgical management
Aim of the Study: To collect the data regarding age, preoperative, operative findings & postoperative outcomes and complications. To compare our results with national and international literatures. **Methods:** Duration: 3 years (January, 2011 to December, 2013) Study Design: Retrospective analysis. Setting: Department of Pediatric Surgery, King Fahad Hospital, Al Baha, KSA. Methods: A retrospective study was conducted from Jan 2011 to Dec 2013. The data of all operated cases of UDT was retrieved from Operation Theatre Register, Inpatient Department, OPD and from medical record office. The files of these patients were reviewed regarding age at presentation, preoperative and postoperative findings and outcomes. All operative cases were included in the study except with incomplete record and missing file. **Main Result:** : A total of 141 patients were operated but due to incomplete records or missing files, only 116 patients were analyzed for results. The operated patients have age ranging from 8 months to 11 years. 68(58.6%) patients have age up to 2 years and 48(41.3%) were more > 2 years age The mean age at surgery was 34 months (almost 3 years)).

On clinical examination, 116 patients (in which 145 testis were operated) we found 131 (90%) palpable testis and 14 (10%) impalpable testis101 (69.65%) orchidopexies were done through inguinal approach, 30 (20.68%) through scrotal approach and 14 (9.65%) were operated with laparoscopic approach **Conclusion:** We conclude that majority of the patients of UDT presented or operated late and also in late operated cases, testis was small size, which has bad impact on fertility in these children. So there is need to run awareness program through symposiums and media among general practitioners, pediatrician and public about early diagnosis, timing and early surgical management of these children to prevent complications like infertility, sub-fertility, malignancy and psychological stress

006 - PA
Title: Patient controlled analgesia in Laproscopic Appendicectomy
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Institutions: (1), (2), (3)
Category: General Surgery
Keywords: Laproscopic,appendicitis,Patient controlled analgesia
Aim of the Study: The aim of this study is to determine whether patients undergoing laproscopic appendicectomy require morphine based intravenous patient controlled analgesia(PCA) post-operatively and if the use of PCAs contribute to morbidity, leading to delay in discharge. **Methods:** This study was conducted in Great North Children's Hospital in Newcastle Upon Tyne, UK. It was a prospective study done within the months of May 2015 to August 2015. Data collection was focused on pain scores (1-10), nausea scores (0-1), the first day (post-operatively) oral diet was tolerated, the first day (post-operatively) of mobilisation and length of stay in hospital **Main Result:** Data was collected on 34 patients with ages ranging from 2-15 years. 19 were male whilst 15 were female. 26 patients had PCA post-operatively where 20 had perforated appendix. Average duration of PCA had been two days (maximum of 4 days). There were 4 patients with perforated appendix without PCA. 9 out of 26 patients on PCA had documented high pain scores (> 5). 85% of patients on PCA vs 63% of patients without PCA on an average tolerated oral intake on days 0-2 post-operatively. 85% of patients on PCA mobilised within days 0-2 post-operatively whilst all 9 patients without PCA mobilised within the first two days. 48% of patients on PCA had a hospital stay of more than 5 days (ave 5 days) whilst 50% of patients without PCA had a hospital stay of more than 5days (ave 6.5 days). Patients without PCA with perforated appendicitis on an average had a hospital stay of 10 days. Nausea scores were not representative as patients had scores of 0 but were given anti-emetics. **Conclusion:** This study shows that PCA do not contribute to post-operative morbidity and delay in discharge. It shows that patients with perforated appendix, warrants the use of PCA post-operatively.

007 - PA
Title: Menkes Disease – case report of a rare syndrome with multiples challenges to the pediatric surgeon
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Category: General Surgery
Keywords: Menkes Disease,Morgagni Hernia,Vesico uretheral reflux
Aim of the Study: To report a case of a child with a Menkes Disease (MD), which imposed multiple challenges to the pediatric surgery team due to connective tissue dysfunction. And also to highlight the importance of genetic counselling even in less developed countries, since this patient had an older sibling that died of the same disease at two years of age. **Methods:** Menkes Disease is a congenital abnormality with is caused by a mutation in the ATP7A gene, leading to a deficient copper-transporting ATPase (ATP7A), and resulting in a multisystemic disease characterized by progressive neurodegeneration and connective tissue dysfunction. It affects 1 in 300,000 live-born babies. **Main Result:** A 13 months-old boy was diagnosed at birth with right renal agenesis and left hydronephrosis. He was the third child of healthy nonconsanguineous parents with two older siblings: the first was a stillborn girl and the second a boy that died at 2 years of age due to MD. At six months, he was admitted due to an urinary tract infection (UTI) and tonic-clonic seizures. At examination, his hair was hypopigmented, thick and sparse, so it was sent to analysis and MD was confirmed. An urethrocystography identified bilateral uretherocele with bilateral grade 2 vesicoureteral reflux. He was again hospitalized due to UTI. On the chest X-ray a Morgagni hernia was identified, which was corrected by a laparoscopic approach. Three months later he was submitted to an endoscopic treatment of the uretheroceles. He's

now on the first month postop and remains asymptomatic. **Conclusion:** MD has a high morbidity and mortality. Genetic counselling of parents with an affected child is mandatory. Early diagnosis is essential to avoid/ postpone neurological deterioration as well as to treat associated anomalies properly. One of the most important abnormalities is a dysfunctional lysyl oxidase that causes connective tissue defects such as hernias like this case.

008 - PA
Title: Protective Effect of Hydrogen Rich Saline Solution on Experimental Ovarian Ischemia Reperfusion Model in Rats
Authors: Nurcan Gokalp, MD(1), A.Can Basaklar, MD(2), Kaan Sonmez, MD(3), Zafer Turkyilmaz, MD(4), RAMAZAN KARABULUT, MD(5), Aylar Poyraz, MD(6), Ozlem Gulbahar, MD(7)
Institutions: (1), (2), (3), (4), (5), (6), (7)
Category: General Surgery
Keywords: ovarian torsion,Hydrogen Rich Saline,experimental
Aim of the Study: The present study aimed to investigate the effects of hydrogen rich saline solution (HRSS) in a rat model of ovarian ischemia–reperfusion injury. **Methods:** Thirty six female Wistar-albino rats were grouped randomly, into six groups of six rats. The groups were classified as: sham(S), hydrogen(H), torsion(T), torsion/detorsion(TD), hydrogen-torsion (HT) and hydrogen- torsion /detorsion (HTD). Bilateral adnexal torsion was performed for 3 hours in all torsion groups. HRSS was given 5ml/kg in hydrogen groups intraperitoneally. Malondialdehyde (MDA) and glutathione-S–transferase (GST) levels were measured in both the plasma and tissue samples. Tissue sections were evaluated histopathologically, and apoptotic index was detected by TUNEL assay. The results were analyzed by a one-way analysis of the variance (ANOVA) and Pearson Chi-Square tests for multiple comparisons using computer software, SPSS Version 20.0 for Windows. **Main Result:** The MDA levels were higher and GST levels were lower in the Torsion and Detorsion groups when compared to other groups ($p < 0.05$). The MDA levels were lower and GST levels were higher in the HTD group compared with the TD group. Follicular injury, edema, vascular congestion, loss of cohesion and apoptotic index were higher in the torsion groups but decreased in the groups that received HRSS. **Conclusion:** According to histopathological and biochemical examinations, HRSS is effective in attenuating ischemia–reperfusion induced ovary injury.

009 - PA
Title: Gastrostomy alone versus fundoplication with gastrostomy: A Systematic Review and Meta-Analysis of outcomes and complications
Authors: Brendan KY Yap, MB BCh BAO(1), Shireen A Nah, MBBS, MRCS, MS(2), Yong Chen, MBBS, MRCS, PhD(3), Yee Low, MBBS, FRCS, FAMS(4)
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Category: General Surgery
Keywords: Gastrostomy,Fundoplication,Meta-Analysis
Aim of the Study: Gastrostomy insertion is among the most common paediatric surgical procedures. Previous common practice was a concomitant anti-reflux procedure, especially for neurologically impaired patients. However, many now advocate gastrostomy alone, with fundoplication only in refractory reflux disease. We compare the outcomes of gastrostomy alone versus fundoplication with gastrostomy, and review the need for subsequent fundoplication after initial gastrostomy alone. **Methods:** Studies published from 1969-2016 were searched in Pubmed and Cochcrane Databases using the keywords “Gastrostomy” and “Fundoplication” for all studies comparing outcomes of gastrostomy insertion alone(GT) to concomitant fundoplication with gastrostomy(FGT) in children. We initially compared studies reporting laparoscopic procedures, but only 2 studies fulfilled the criteria(total 67 patients). We expanded criteria to include open, laparoscopic, and endoscopic procedures. Primary outcomes were minor and major complications. Secondary outcomes were minor complications requiring revision, overall complications (minor+major) and reflux-related complications. Pooled odds ratios(OR) were calculated for dichotomous variables. We used a fixed effects model, and $p<0.05$ was significant. **Main Result:** We reviewed 447 studies;7 observational studies fulfilled our inclusion criteria, including 2745 children undergoing GT(n=1754) or FGT(n=991). GT compared to FGT was associated with less minor complications (17% vs 22.3%,OR 0.43,95% Confidence Interval(CI)0.35-0.63,p=<0.00001,I2= 0%), less minor complications requiring revision(2.9% vs 6.8%,OR 0.44,95% CI,0.25-0.78,p=0.005,I2= 0%) and less overall complications (17.3% vs 23.0%,OR 0.49,95% CI 0.37-0.65,p<0.00001,I2= 0%). Incidence of major complications (2.0% vs 1.7%,OR 0.72,95% CI 0.32 – 1.61,p=0.42,I2= 5%) and reflux-related complications(3.6% vs 2.0%,OR 1.48,95% CI 0.75-2.95,p=0.26,I2= 0%) in both groups was similar. Incidence of subsequent fundoplication in GT patients was 7.4%(median, range 1.9-31.9). **Conclusion:** Gastrostomy alone is associated with fewer minor and overall complications. Concomitant fundoplication is not significantly associated with less reflux-related complications. As few patients require fundoplication after gastrostomy, current trends for reserving fundoplication for medically refractory reflux after initial gastrostomy alone is supported by our study.

010 - PA
Title: Redo Pull-through operation of Hirschsprung's disease: a single institution experience.
Authors: Ji-Won Han, MD(1), Joong Kee Youn, MD(2), Chaeyoun Oh, MD(3), Hyun-Young Kim, PhD(4), Sung-Eun Jung, PhD(5)
Institutions: (1), Seoul National University Hospital(2), Seoul National University Hospital(3), Seoul National University Hospital(4), Seoul National University Hospital(5)
Category: General Surgery
Keywords: Hirschsprung's disease,pull-through,redo surgery
Aim of the Study: Background: Hirschsprung's disease can be defined as a presence of aganglionated segment in bowel and treated with pull-through (PT) surgery. However, redo PT can be performed after failed PT with various reasons. The purpose of this study is to identify the causes and factors associated with redo PT and its outcome. **Methods:** Methods: We reviewed the medical records of 660 patients who underwent PT at least once in our hospital with Hirschsprung's disease between September 1979 and January 2016. **Main Result:** Results: There were 660 patients (male 76.1%) who underwent PT in our hospital. The mean age was 24.4 months and mean follow-up period was 59.7 months. Fifty one(7.7%) patients (male 82.4%) underwent PT more than once. The mean age at redo PT was 64.2 months. The first PT include 26(51.0%) Duhamel operations, 19(37.3%) Soave operations, 3(5.9%) Swenson operations, and 3(5.9%) Pena operations, which were performed both in our hospital (n=14) and in outside hospital (n=43). The second PT include 6(10.5%) Duhamel operations, 47(82.5%) Soave operations, 2(3.5%) Swenson operations, and 2(3.5%) Pena operations and most of them(n=43) were performed in our hospital. The causes of redo PT include constipation with abdominal distension which turned out ganglionated segment(41.2%), remnant aganglionosis (41.2%), leakage/fistula (11.8%) or stricture(7.8&) at previous anastomosis site, fecal incontinence(3.9%), and necrosis at previous anastomosis site(2.0%). The patients who had underwent transanal Soave operation(n=6) experienced more redo PT than patient with transabdominal Soave operation (n=216) (6/6(100%) vs. 38/216(17.6%), p<0.001). Most of redo PT patients had good(50.0%) and fair(45.5) continence function. **Conclusion:** Conclusion: About 7.7% of patients of who undergo PT experienced redo PT because of constipation with abdominal distension and remnant aganglionosis. Transanal Soave operation was associated with redo PT and the continence function of redo patients was good and fair.

011 - PA
Title: STOP SAYING NEVER IN PEDIATRICS There May be a Twist that May Be Missed (Sigmoid Volvulus in Children- A Case Repot)
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Institutions: Salmaniya Medical Complex(1), Salmaniya Medical Complex(2), Salmaniya Medical Complex(3), Salmaniya Medical Complex(4), Salmaniya Medical Complex(5), Salmaniya Medical Complex(6), Salmaniya Medical Complex(7), Salmaniya Medical Complex(8)
Category: General Surgery
Keywords: Sigmoid Volvulus,Children,Adolescents
Aim of the Study: Background/Introduction: "If he doesn't evacuate for a twist in the bowel and the phlegm does not find a way out then it shall rot in the belly" Ebers papyrus Sigmoid Volvulus is frequently reported in the "Volvulus Belt" [Middle East, Africa, the Indian subcontinent, Turkey and South America] and is the third leading cause of large bowel obstruction in North America. It is an uncommon problem in children and adolescents, and is rarely considered as a diagnosis in this group. High index of suspicion is necessary to diagnose the condition. **Methods:** Case Report **Main Result:** Case Presentation: We present a 13 year old Lebanese girl who presented with features suggestive of intestinal obstruction. X ray abdomen revealed classic omega (coffee bean) sign of sigmoid volvulus. The Volvulus was successfully decompressed by using a rectal tube. Next Day She twisted again and was again decompressed but by endoscopy. She was discharged home on parents request to present again after one month. This time the Volvulus could not be decompressed non-operatively, so she underwent Resection with primary anastomosis. Post operatively she had paralytic ileus that resolved at the 10th post-operative day. She then did well and was discharged home. She is now free of symptoms. **Conclusion:** Sigmoid volvulus is an uncommon problem in children and adolescents, and is rarely considered as a diagnosis in this group as a cause of Intestinal obstruction. Pediatric Surgeons should maintain a high index of suspicion, in order not to miss this important diagnosis, as any delay in instituting treatment has a devastation effect in morbidity as well as mortality. Early diagnosis and prompt treatment confers excellent prognosis.

012 - PA
Title: Will delayed surgery increase the rate of complex appendicitis and morbidity in children ?
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Category: General Surgery
Keywords: appendicitis,children,complication

Aim of the Study: Surgery is indicated for acute appendicitis but there is controversy regarding precise timing for appendectomy. Our aim was to evaluate the impact of time delay from emergency department presentation to surgery in developing complicated appendicitis in children and associated morbidity. **Methods:** 219 charts of children, who underwent appendectomy, between january 2013 and december 2014 were retrospectively reviewed. Groups were divided according to interval of appendectomy; Group1: less than 24hours (n=86, 39.3%), group2: 24h to 48h (n=118, 53.8%), and group3: greater than 48h (n=15, 6.8%). We considered complicated appendicitis gangrenous, abscessed or perforated appendix that was defined on periopertive findings and histologic examination. Statical analysis and regression models were performed to search the predictors of complicated appendicitis and evaluate post operative complications. **Main Result:** Among 219 children included in the study, 57 (26%) had complicated acute appendicitis. There was no correlation between delay to surgery and the risk of developing a complicated form of the disease for group 1 [odds ratio (OR) = 0.786, p =0.362] and Group 2 [OR= 0.849, p=0.793]. Beyond the 48th hour (group3), the rate of developing complicated appendicitis and post operative complications increased significantly ; [OR= 3.615, p=0.023] and [OR=8.909, p<0,001] respectively. **Conclusion:** A short in-hospital delay before surgery less than 48hours, for acute appendicitis in child, is not associated with an increased rate of complex appendicitis neither associated morbidity.

013 - PA

Title: A novel "fundoplication" method in reverse gastric tube esophageal replacement surgery

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Category: General Surgery
Keywords: ESOPHAGEAL REPLACEMENT,REVERSE GASTRIC TUBE,LOWER ESOPHAGUS

Aim of the Study: To study the effectiveness of the lower esophageal stump as a “fundoplication” wrap in patients undergoing reverse gastric tube for esophageal replacement in esophageal atresia **Methods:** All patients who underwent the above procedure over an 18 month period were analyzed. Patients with pure atresia underwent initial esophagostomy and gastrostomy. Following a reverse gastric tube creation, the lower esophagus was mobilized keeping the vagus nerve intact. The tube was tunnelled through the hiatus and anastomosed to the esophagus in the neck. The lower esophageal stump was wrapped around the remnant gastric tube below the hiatus. The hiatus was narrowed. Patients received enteral feeds through a nasojejunostomy feed. They were allowed orally once the salivary leak stopped and the neoesophagus was found to be normal on contrast study. The study was repeated at 6-8 weeks, to look for any stricture and assess the “fundal wrap”. A reflux scan was also performed. Esophageal dilatation was done as per requirement. **Main Result:** Five patients (surgery at 1-year-age) were analysed. One patient had a near complete wrap and the remaining a partial (270degree) wrap. 2 patients underwent 1-3 esophageal dilatations after surgery. At last follow-up all patients were accepting orally. Dysphagia for solids was noticed in 2 patients, one of whom had a complete wrap and had narrowing only at the gastroesophageal junction on endoscopy. One patient had reflux on milk scan. Two patients had occasional complaints of cough at night. **Conclusion:** Following a reverse gastric tube, remnant stomach is insufficient for a fundoplication. Maximum volume of stomach should be kept as a reservoir. The lower esophagus is traditionally excised during this surgery. Use of this stump for “fundoplication” helps to reduce reflux and respiratory complications. Dysphagia for solids may be encountered with a complete wrap. Our short term results with this procedure are encouraging.

014 - PA

Title: Colonic interposition for oesophageal replacement at a dedicated paediatric hospital in South Africa: Indications, technique and outcomes

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Category: General Surgery
Keywords: Colonic Interposition,Oesophageal replacement,Oesophageal atresia

Aim of the Study: There remains no consensus about the optimal surgical technique for oesophageal replacement. The aim of this study is to report the medium to long-term follow-up of the colonic interposition procedure from a tertiary Paediatric Surgery Centre. **Methods:** Retrospective review of all patients undergoing a colonic interposition procedure between January 2004 and June 2015. Data on indications, epidemiology, surgical technique, early and late complications and long-term outcomes were collected. **Main Result:** Twenty-one patients underwent colonic interposition. Indications included oesophageal atresia (12/21), caustic ingestion (7/21), HIV stricture (2/21). Technique used was an isoperistaltic, left colonic interposition. Graft placement was in the posterior mediastinum in 12/21 and retrosternally in 9/21. Two patients required a high proximal anastomosis to the pharynx, due to severe caustic injury. Intra-operatively, there were 2 left recurrent laryngeal nerve injuries (10%). One patient died on day 41 post-operatively

from sepsis, giving a mortality rate of 5%. Follow-up data was available for 17/20 patients (85%). Early post-operative complications included anastomotic leak (18%), pneumothorax (12%), sepsis including pneumonia, line sepsis and bacteremia (59%), paralysis of left hemidiaphragm (6%), tracheomalacia (6%) and aberrant right subclavian artery fistula (6%). There were no cases of graft ischaemia. Late complications included anastomotic stricture (24%), redundancy (12%), adhesions (6%), and need for further oesophageal replacement (6%). Mean length of follow-up was 4.0 years (range 0.8-11.4 years). All patients achieved full oral feeding. Weight gain was variable with 5 patients fitting the criteria for failure to thrive. Ongoing symptoms reported included vomiting (19%), abdominal pain (6%), and difficulty in swallowing (13%). **Conclusion:** Colonic interposition is a safe and effective technique for oesophageal replacement in children. Although early complications are common, the associated mortality is low. Long term outcomes are good, with the majority of children achieving growth with full oral feeding and minimal ongoing symptoms.

015 - PA
Title: Importance of pathological lead points in pediatric intussusception
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Category: General Surgery
Keywords: Intussusception,pathological lead point,treatment
Aim of the Study: Intussusception is the most relevant cause of bowel obstruction in infancy. Most of the intussusceptions are idiopathic. The remaining intussusceptions occur due to so-called pathological lead points. The incidence of these pathological lead points varies substantially in published reports. The aim of this study was to review the incidence of intussusceptions due to pathological lead points and their characteristics **Methods:** A literature search was conducted using PubMed, EMBASE, and Cochrane Library in the time period 1998-2016 for 1) “intussusception” And 2) “pathological lead point” and 3) “children”. Inclusion criteria for selection of respective publications were that numbers and types of pathological lead points were clearly mentioned. **Main Result:** The presence of pathological lead points ranges from as low as 0.33% up to 20% of all intussusceptions. These differences are possibly to explain because the study designs varied from epidemiological approaches to large single center series. Pathological lead points occur more frequent in older children. Most of the relevant pathological lead points are lymphoma and Meckel´s diverticulum; others are polyps, duplications, and bowel wall tumors such as lipomas, hamartomas, schwannomas, lymphangiomas and hemangiomas. Around 17% of Meckels diverticula and up to 15% of Burkitt´s lymphoma present as intussusception. **Conclusion:** Intussusceptions due to pathological lead points will be diagnosed in up to 20% of cases according to the included patient group. Because this condition is life threatening, early diagnosis and treatment should be warranted. A high index of suspicion should be raised if intussusceptions present with a prolonged history in older children, as they are pre-disposed to pathological lead points.

016 - PA
Title: Reoperative anoplasty for the treatment of inadequate anorectal position in anorectal malformation
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Category: General Surgery
Keywords: anorectal malformation,reoperation,anoplasty
Aim of the Study: In spite of meticulous primary anoplasty in anorectal malformation, unsatisfactory anorectal positions with poor functional outcomes are not uncommon, and reoperation is often necessary. The aim of this study was to evaluate the clinical characteristics and usefulness of reoperative anoplasty for the treatment of inadequate anorectal position in anorectal malformation. **Methods:** From 2011 to 2015, 95 patients with anorectal malformation underwent anoplasty by the single pediatric surgeon at the authors’ institution. Among these cases, 22 were reoperative anoplasty after primary anoplasty for the correction of anorectal position. The authors retrospectively reviewed the clinical data and postoperative courses of these patients. **Main Result:** The mean age of patients at reoperation was 1.9 ± 1.0 year (range 0.6-4.9 years). The original anomalies of the male patients were rectourethral fistulas in 8 (bulbar 6, prostatic 2), rectovesical fistulas in 3, and perineal fistulas in 3. The anomalies of the female patients were vestibular fistulas in 4, cloacas in 3, and perineal fistula in 1. The reasons for re-anoplasty were anterior-deviated anal position in 13, posterior-deviated anal position in 7, and lateral deviated anal position in 2. Consequently, the patients suffered from constipation in 8, soiling in 11, and both symptoms in 3. Re-anoplasty was performed with protective enterostomy in 4 and without enterostomy in 18. The postoperative mean follow-up period was 1.9 ± 1.3 years (range 0.4-5.0 years). All patients had good anal appearance, and their parents were satisfied with the results of the operation. Assessed using Krickenbeck score, 18 patients (81.8%) showed improvement in stooling pattern after reoperative anoplasty. **Conclusion:** Our study revealed that inadequate anorectal position requiring reoperation after primary anoplasty was not rare. Careful inspection of anal condition was necessary to determine the possibility of reoperation. Reoperative anoplasty was useful

to improve the functional outcomes of anorectal malformation.

017 - PA
Title: On the long-term anorectal functioning in Hirschsprung's disease
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Category: General Surgery
Keywords: Hirschsprung's disease,long-term outcomes,
Aim of the Study: Long-term outcomes in Hirschsprung's disease are reported to improve once patients reach adolescence. There are however contradictory reports. We therefore aimed to investigate the long-term outcomes, considering anorectal functioning, in our cohort of Hirschsprung's disease patients. **Methods:** We retrospectively reviewed clinical data of 172 patients who were treated for Hirschsprung disease at the University Medical Center Groningen between 1955 and 2006. After the exclusion of patients who were deceased (n = 6), had a stoma (n = 10), or whose address was unknown (n = 9), we invited 147 patients to participate. Upon accepting to participate patients were sent the Groningen DeFeC questionnaire, a comprehensive questionnaire on pelvic floor functioning. We scored constipation with the Cleveland constipation scoring system (CCSS, 0-30 point scale) and fecal incontinence with St. Mark's scoring system (SMSS, 0-24 point scale). Each patient was compared with two age- and gender-matched healthy controls obtained in a previous study. **Main Result:** A total of 95 (65%) patients responded (median age 19, range 8-55 years). The majority of patients (n = 81, 93%) underwent a Duhamel procedure. Compared to controls, patients had a significantly higher CCSS (5 versus 2, $P < 0.001$, respectively) and a significantly higher SMSS (5 versus 3, $P < 0.001$, respectively). There was no significant difference in the CCSS between pediatric and adult patients (5 versus 4, $P = 0.340$, respectively). Pediatric patients however, had a significantly higher SMSS than adult patients (7 versus 4, $P = 0.014$, respectively). **Conclusion:** Improvement considering the severity of fecal incontinence may be expected when patients get older. However, patients with Hirschsprung's disease will retain constipation and impaired fecal continence. Therefore, patients with Hirschsprung's disease require continuous monitoring after surgical treatment.

018 - PA
Title: OUTCOME OF PATIENTS REFERRED FOR RESISTANT OESOPHAGEAL STRICTURES: A SINGLE CENTER EXPERIENCE
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Category: General Surgery
Keywords: Esophageal stricture,Savary-Gilliard,Esophageal Atresia
Aim of the Study: Outcome study of managing resistant post corrosive oesophageal strictures by Savary-Gilliard dilatation in patients referred to our department for oesophageal replacement after several attempts of endoscopic dilatation **Methods:** Dilatation starts six weeks after patient stabilization, under general anesthesia & complete muscle relaxation, using Savary-Gilliard dilators combined with fluoroscopic imaging. After several attempts of dilatation, failed cases undergo oesophageal replacement (colon bypass or gastric tube oesophagoplasty) & complications are managed accordingly. Patients are followed up for assessment of growth, dysphagia & quality of life by questionnaire for at least 12 months on outpatient basis. **Main Result:** 58 Cases were studied (male: female ratio 1:1) with mean age 3.65 years (range 0.5-13) with various stricture aetiologies (52 post corrosive ingestion, 2 traumatic injuries & 4 post anastomotic esophageal atresia). All received 149 dilatations (mean = 2.56) with 71% success rate. Failed dilatation cases received oesophageal replacement, limited stricturoplasty or secondary dilatation by Savary- Gilliard dilators. Outcome showed symptomatic relief from dysphagia in 77.6%, normal growth pattern & improvement in quality of life pattern. **Conclusion:** Savary-Gilliard dilatation is an effective option for management of resistant oesophageal strictures to preserve the native oesophagus. It has better outcome than resorting to surgeries, which should be limited to intractable cases

019 - PA
Title: SURGICAL TREATMENT IN HIGH FORMS OF RECTUM ATRESIA
Authors: Igor Kirgizov, PhD(1), Maxim Aprosimov, PhD(2), Sergei Minaev, PhD(3), Ilya Shishkin, PhD(4)
Institutions: (1), (2), (3), (4)
Category: General Surgery
Keywords: proctoplasty,high forms of rectum atresia,correct the malformation completely
Aim of the Study: Improve and optimize the treatment of high forms of rectum atresia, and to decrease the percent of postoperative complications, of both inflammatory and functional nature. **Methods:** for the last 5 years (2010-2015) endoscopically assisted abdominal-peritoneal proctoplasty was carried out in 89 patients aged from 3 months to 1 year with congenital high rectum atresia. Rectourethral fistula was revealed in 62,3% of patients, rectovesical – in 22,8%, rectovaginal – in 14,9% of patients. Laparoscopic stage of the operation was performed through the 3 or 5 mm ports,

dependent on the age of patient. Perineal proctoplasty was carried out after inspection of the perineal muscles with the use of the electrical forceps for muscles stimulation, that help us to pass colon right in the centre of perineal muscles and anal sphincter ring. **Main Result:** in all cases neoanus was formed correctly and extrasphincteric pass of colon was completely excluded. In 3 months after operation excellent results with improved continence function and good cosmetic effect was registered in 43,2% of patients. In 46,3% partial mucosa prolapse was revealed. Significant mucosa prolapse was revealed in 10,5%. Fistula relapse, as well as any inflammatory complications were not registered. **Conclusion:** hereby, endoscopic methods of surgical treatment in high forms of rectum atresia in children allow to correct the malformation completely and to achieve good functional cosmetic results.

020 - PA
Title: 10 years' review of Buried Bumpers: A potentially preventable serious problem in PEGs
Authors: Akhilesh Pradhan, BSc(Hons)(1), Christopher Bassett, MBChB(2), Claire Stewart, MBChB(3), David Drake, FRCS(paed)(4), Mohammed Mutalib, MRCPCH(5), Manasvi Upadhyaya, FRCS(paed)(6)
Institutions: King's College London - School of Medicine(1), Evelina Children's Hospital, GSTT, London(2), Evelina Children's Hospital, GSTT, London(3), Evelina Children's Hospital, GSTT, London(4), Evelina Children's Hospital, GSTT, London(5), Evelina Children's Hospital, GSTT, London(6)
Category: General Surgery
Keywords: preventable,complication,gastrostomy
Aim of the Study: Buried bumper (BB) is a preventable serious complication in percutaneous endoscopic gastrostomy (PEG) fed children. Often laparotomy is needed for treatment. Due to multiple comorbidities, this surgery is associated with high morbidity. Even mortality has been reported following surgery for this condition. Our aim was to review our patients with a BB to ascertain any significant risk factors. **Methods:** This was a retrospective 10 years' review from 2006-2015. Types of tubes, corrective interventions, comorbidities and complications were recorded. We also recorded whether there was any documentation in the clinical notes of either verbal or written instructions regarding tube care being given to carers. Statistical analysis was performed using Fisher's exact test. **Main Result:** Of 535 patients, 475 had only a PEG and 60 had a jejunal extension in addition (PEGJ). There were a total of 31 episodes of BB in 29 patients (PEGJ -16/29; PEG- 13/29). 2.7% of patients with PEG and 17.6% with PEGJ ($p<0.0001$) had a BB. BB developed in the second or subsequent tube in 5/13 patients with PEGs ($p<.0001$) and in 11/16 patients with PEGJ ($p<.0001$). All had significant comorbidities: neurodevelopmental, cardiorespiratory, genetic. 27/29 had 2 or more comorbidities. All patients had been given verbal preoperative and postoperative instructions. However, there was no documentation of either verbal or written instructions being given to cares in 79% of cases. 25/29 needed laparotomy; one was treated by traction and three by endoscopy. 9/29 had significant postoperative complications including sepsis, delayed feeding and prolonged hospital stay. There were no deaths. **Conclusion:** PEGJ and two or more gastrostomies were significant risk factors in developing BB. Vigilance in documentation and regular, prolonged follow up to provide education to carers could reduce incidence of this serious preventable complication.

021 - PA
Title: Gastroprotective effect of Oxygen-Ozone therapy in model of acute gastric ulcer induced by indomethacin in rats
Authors: Şenol Biçer, MD(1), Cebrail Gürsul, MD(2), İlhan Demiryılmaz, MD(3), İsmail Demiryılmaz, MD(4), Necla Aydın Peker, MD(5), Hüseyin Eken, MD(6), Orhan Çimen, MD(7), Levent Demirtaş, MD(8), Seçil Çakarlı, RN(9)
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Category: General Surgery
Keywords: ozone therapy,gastric ulcer,protective effect
Aim of the Study: We evaluated the effects of a panel of pharmaceutical interventions in an experimental model of gastric ulcer. The aim of this study is to investigate the protective effect of ozone therapy in an experimental rat model of acute gastric ulcer induced by indomethacin. **Methods:** Twenty-eight Wistar-albino male rats were used in this study. The rats were divided into four groups of seven animals in group as follows: Group 1 (control), Group 2 (sham), Group 3 (ozone), and Group 4 (lansoprazole). After 24 hours of fasting, 5 ml ozone-oxygen mixture was administered to Group 3, 30 mg/kg lansoprazole-5 ml distilled water mixture was administered to Group 4, and 5 ml distilled water was administered to Group 2 by gavage. Five minutes later, 25 mg/kg of indomethacin was administered to stomachs of all rats by gavage except for the control group. After six hours, all animals were anesthetized and stomach tissue was extracted. Ulcers on the gastric surface were measured at the time of collection. Myeloperoxidase (MPO), malondialdehyde (MDA), catalase (CAT), total glutathione (tGSH), superoxide dismutase (SOD), and 8-hydroxy-deoxyguanosine (8-OHdG) were measured in the stomach tissue. **Main Result:** Administration of ozone and

lansoprazole led to decreased macroscopic gastric ulcer size induced by indomethacin. Ulcer area was elevated in the sham group (71.47 ± 17.08 mm2) relative to the treatment groups. Ulcer area was 20.79 ± 12.88 mm2 in ozone group, significantly lower than sham group but significantly greater than the lansoprazole group. MPO, MDA, CAT, and 8-OHdG levels after ozone administration were significantly reduced and tGSH and SOD levels were higher relative to the lansoprazole group (p<0.01). **Conclusion:** Ozone therapy has a protective effect on acute gastric ulcer induced by non-steroidal anti-inflammatory drugs through an antioxidative mechanism.

022 - PA
Title: MANAGEMENT OF INTUSSUSCEPTION: THE INDIAN ALTERNATIVE
Authors: anu Paul, FRCS paediatric surgey(1), Roshan Snehith, MS(2), Augusto Zani, PhD(3), Niyi Ade-Ajayi, PhD(4), Abraham Mammen, MBBS, MS, MCh(5)
Institutions: (1), (2), (3), (4), (5)
Category: General Surgery
Keywords: intussusception,hydrostatic enema,india
Aim of the Study: Aim: To report the strategies for managing intussusception in India. **Methods:** A 15 question survey was administered to surgeons attending the Annual Meeting of Indian Association of Paediatric Surgeons in October 2014. The questionnaire focused on the treatment of confirmed intussusception. Comparisons between hydrostatic reduction (HR) and pneumatic reduction (PR) were made (Fisher' s exact test). Data are reported as median (range). **Main Result:** 73 delegates completed questionnaires. Respondents reported managing 5(<1- 35) cases of intussusception a month. 16(22%) respondents manage >10 cases. Treatment modality of choice: is HR for 59% of respondents, PR for 31%, laparotomy for 7% and laparoscopy for 3% (Figure). Radiology: radiologist is involved in HR by 73% respondents and in PR by 29% (P<0.001). A further 25% of respondents who use PR use the services of a Radiographer alone. Sedation: higher use of sedation is reported by respondents employing HR (50%) in comparison to those using PR(17%, P<0.01). Antibiotics: no difference was noticed in the use of antibiotics between HR (72%) and PR(48%, P= 0.051). Perceived success rate: 88% of surgeons employing HR and 91% of those using PR (P=1) report a success rate >75%. We noticed no differences in time to discharge between the HR group, 24(6- 48) hours and PR group 24(16- 48; P=1). Centre of practice: no differences in the proportion of surgeons working in government teaching hospitals as opposed to private (HR= 35%, PR= 48%; P=0.43). **Conclusion:** The majority of surgeons in India favor hydrostatic reduction of intussusception This technique has the advantage of avoiding ionizing radiation but is associated with a higher requirement for sedatives than pneumatic reduction There were no differences in antibiotic use, success rate and length of hospital stay between these two techniques

PA1-2 | MODERATORS: TAHMINA BANU, YUTAKA KANAMORI

023 - PA
Title: SPONTANEOUS RESOLUTION OF PRIMARY AND RECURRENT CYSTIC HYGROMA FOLLOWING ACUTE INFECTION
Authors: Chauhan Kashif, MRCS(1), Richard Gan, MRCS(2), Bala Eradi, FRCS(3), Brian Davies, FRCS(4), Shailinder Singh, FRCS(5)
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Category: General Surgery
Keywords: CYSTIC HYGROMA,ACUTE INFECTION,LYMPHANGIOMA
Aim of the Study: There are reports of chronic infection leading to spontaneous regression of primary cystic hygromas(CH). To the best of our knowledge there is no report of acute infection in primary and recurrent CH leading to a rapid and spontaneous resolution. We report case series of four patients with primary (three) and recurrent (one) CH, which resolved spontaneously following an episode of acute infection within a short span of 1-2 weeks. **Methods:** A retrospective case note review of four cases of CH was done in two tertiary paediatric surgical centres in UK. **Main Result:** Four-year-old boy presented with CH in the axilla. It recurred within 3 weeks of surgical excision. He developed acute infection in the recurrent CH while waiting for sclerotherapy. This was treated with oral antibiotics and led to complete resolution of the swelling within a week. Follow up was 3 months. A neonate presented with congenital left sided CH in the neck. On day 9 of life there was an infection in the CH, which was treated with intravenous antibiotics. There was a complete resolution of the neck swelling within 2 week. Follow up was 12 years. A 2-month-old girl presented with right-sided CH in her neck. A decision was made to treat it conservatively. The CH got infected at 6 months of age while on conservative management. It was treated with intravenous antibiotics. There was a complete resolution of the neck mass in 2 weeks. Follow up was 2 years. A neonate presented with congenital right neck CH. Sclerotherapy was planned at 6 months of age. The infant developed an acute infection in CH at 4 weeks, requiring intravenous antibiotics. There was complete resolution of CH within weeks. Follow up was 1 year. **Conclusion:** This case series raises our awareness of spontaneous resolution of primary as well as recurrent cystic hygromas following

acute infection.

024 - PA
Title: FUNCTIONAL OUTCOMES IN PATIENTS TREATED FOR HIRSCHSPRUNG´S DISEASE
Authors: Paolo Bragagnini, MD(1), Yurema Gonzalez, MD(2), Natalia Alvarez, MD(3), Alexander Siles, MD(4), Juan Elias, MD(5)
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Category: General Surgery
Keywords: Hirschsprung disease,incontinence,constipation
Aim of the Study: To analyze functional outcomes of patients operated for Hirschsprung's disease (HD). **Methods:** Retrospective study of patients with HD (2000-2014).We analyzed surgical technique, age at diagnostic and treatment, amount of resected bowel, complications and their influence on functional outcomes. **Main Result:** Of the 44 diagnosed with HD, 37 were operated in our center. Men 29(78,37%). With associated pathology 7(18.91%), and 5(13.51%) made their debut with enterocolitis. Diagnostic average age 12.6 (0.03 to 86.66 months) and operation average age 17.29(3.80 to 113.76 months). We did transanal endorectal pull-through (TERPT) in 17(45,94%) patients and transabdominal approach (TAB) in 20(54,06%). Received postoperative dilations 8(21.62%) patients. Functional outcomes were evaluated at an average age of 9,61(4,72-15,65years) incontinence/soiling were found in 6/28(21,42%) and constipation in 5/28(17,85%). The highest rate of incontinence/ soiling was present in 41.7 % TERPT vs. 6.2% TAB(p:0,036). However, the average age at follow-up in patients with incontinence/soiling was 5,93±1,25years old, less than the 10,61±3,23 years in the ones without incontinence/soiling (p<0,001). We found that the 5 cases of constipation arose in patients with TAB(p:0, 044), and likewise all were operated under 1 year of age. **Conclusion:** Despite the well known benefits of the TERPT over the TAB, we found a greater degree of incontinence/soiling in the TERPT, which could be explained by a less follow up. On the other hand there is a higher rate of constipation in the TAB that lasts in time. The incontinence/soiling improved with time.

025 - PA
Title: The effect of sedation and factors contributing to the successful hydrostatic reduction of intussusception
Authors: Bibekanand Jindal, MBBS, MCh(1), Pavan Kumar Nimmala, MBBS, MS, MCh(2), Bikash Kumar Naredi, MBBS, MS, MCh(3), Kumarvel S, MBBS, MS, MCh(4), Krishna Kumar G, MBBS, MS, MCh(5)
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Category: General Surgery
Keywords: Intussusception,Non-operative management,hydrostatic reduction
Aim of the Study: The study was planned to the see the efficacy of sedation and other factors in the overall success rate of hydrostatic reduction of Intussusception. **Methods:** All children in the age range of (3 months- 3 years), from November 2012- December 2014 diagnosed as intussusception on ultrasound and meeting the criteria for non-operative management were randomized in to 2 groups (Group I and Group II) and subjected to hydrostatic reduction. In group I, children were subjected to sedation with intravenous midazolam just prior to the procedure and in group II no sedation was used. In addition to the sedation, other factors like duration of symptoms, presence of lump, blood in per rectal examination, and length of intussusception segment contributing for successful reduction were studied. **Main Result:** Total 46 patients were enrolled during this study period with 23 in each group. The median age was 8 months with 16 female and 30 male and 71.7% of all successful hydrostatic reduction. The successful reduction in group I (78.3%) was higher than group II (65.2%), but was not statistically significant (p>0.05). We observed that absence of lump in the abdominal examination and blood in the per-rectal examination had higher success rate with P-value < 0.05. The length of intussusception with successful reduction was smaller (5.45 + 1.91 cm) as compared with the group failed to reduce (7.95 + 2.56 cm) and was statistically significant. The recurrence rate noticed in our study was 4.3% with 6.5% of procedure related complication (perforation). **Conclusion:** Ultrasound guided hydrostatic reduction of Intussusception is safe and reliable method of non-operative management of intussusception. Sedation has definite advantage in improving the success rate with other factors like absence of lump and blood in the examination and smaller length of intussusception are the factors affecting the success rate of hydrostatic reduction.

026 - PA
Title: Retrograde dissection in laparoscopic appendicectomy for complicated pediatric appendicitis
Authors: Mario A Riquelme, MD(1), Daniel Gonzalez, MD(2), Gerardo E Aguirre, MD(3), Adrian Elizondo, MD(4)
Institutions: Hospital Christus Muguerza (1), Universidad de Monterrey(2), Universidad de Monterrey(3), (4)
Category: General Surgery
Keywords: laparoscopic appendicectomy ,Retrograde dissection,complicated appendicitis

Aim of the Study: Describe a surgical strategy to realize laparoscopic dissection in complicated cases of appendicitis. To perform apendicectomies in pediatric populations with complicated appendicitis is technically complex, requires experience and high technical skills for recognizing the best initial site for dissection; the distortion of the anatomy due to severe inflammation and secondary fibrosis makes it difficult to recognize structures and requires to start the dissection for the least affected part. **Methods:** A total of 108 pediatric laparoscopic apendicectomies executed on the last 5 years were analyzed, among them, 20 were ruptured appendices, all of them presented a palpable inflammatory plastron, in 12 of which it was not possible to identify a dissection plane due to distortion of the anatomy. The base of the appendix was the least affected part by the inflammatory process, reason why the apendicectomy was performed with a retrograde technique, by placing a clip or a stitch in the base of the appendix, subsequently performing the resection towards the tip. **Main Result:** Of the 12 cases, 8 were male and 4 female, age 6 – 17, in 8 cases the pathology report was ruptured appendix with peritonitis, in the other 4 cases, pathology reported appendicitis with peritonitis. There were no conversions and the average of hospital stay was 4 days, there were no reports of residual abscesses. **Conclusion:** Retrograde dissection of the appendix is a valuable technical option that can be applied in every patient with ruptured appendicitis and distortion of the anatomy on the right lower quadrant. With this strategy, decrease the chances of injuring adjacent structures, or to generate appendicular ruptures that increase the purulent content in the abdominal cavity

027 - PA
Title: Comparative study between Botulinum toxin injection and Internal Anal Sphincter Myectomy for treatment of Chronic Idiopathic Constipation
Authors: Mohamed El Seoudi, MS(1), Gamal El Tagy, MD(2), Mohamed Elbarbary, MD(3), Sherif Kaddah, MD(4), Mahmoud Elfiky, MD(5), Mostafa Gad, MS(6)
Institutions: Cairo University(1), Cairo University(2), Cairo University(3), Cairo University(4), Cairo University(5), Cairo University(6)
Category: General Surgery
Keywords: Chronic Idiopathic Constipation ,Myectomy,Botulinum Toxin
Aim of the Study: Neurotoxic protein produced by Clostridium botulinum has many therapeutic indications with few studies on its role in constipation. Treatment of intractable constipation surgically has been Internal Sphincter Myectomy. **Methods:** Cases were selected with positive Rome III criteria for Chronic Idiopathic Constipation that failed medical treatment for at least 6 months. Cases with suspected other causes of constipation were excluded. Randomization was performed and data collected using REDCap. All cases received colonic preparation. Half the cases (group A) underwent Internal Sphincter Myectomy at least 5 cm. The other half (group B) received intrasphincteric injection of Botulinum toxin type A. **Main Result:** Twenty cases were selected. Mean Age was 4.4 years (A) & 6.34 (B). Male to Female ratio 2.3:1. Mean duration of illness 2.95 years (A) & 4.15 (B). No major complication in both groups. Soiling improved in both groups (p=0.051). Constipation relief based on Zero Rome III criteria was obtained in 80% (A) & 70% (B) on follow up to 6 months. Most cases achieved 1-3 motions per day 70% (A) & 50% (B). **Conclusion:** Botulinum toxin injection is equally effective but less invasive than Myectomy. Larger sample and longer follow up are needed to full evaluate results.

028 - PA
Title: Surgical complications of percutaneus endoscopic gastrostomy (PEG) in Children's Hospital Zagreb
Authors: Marko Mesić, MD(1), Zoran Bahtijarević, MD(2), Ljudevit Sović, MD(3), Fran Štampalija, MD(4), Nikica Lesjak, MD(5), Oleg Jadrešin, PhD(6), Iva Hojsak, PhD(7)
Institutions: University Children's Hospital Zagreb(1), University Children's Hospital Zagreb(2), University Children's Hospital Zagreb(3), University Children's Hospital Zagreb(4), University Children's Hospital Zagreb(5), University Children's Hospital Zagreb(6), University Children's Hospital Zagreb(7)
Category: General Surgery
Keywords: malnutrition,minimally invasive method,gastrostomy
Aim of the Study: Percutaneous endoscopically assisted gastrostomy (PEG) is a minimally invasive method of introducing a permanent gastrostomy in patients who suffer malnutrition due to multiple causes. Different neurological syndromes are the most common cause for PEG in children, followed by malnutrition due to inflammatory bowel diseases and tumors. **Methods:** The data was compiled retrospectively over the period from 2013 to 2015. Special consideration was given to surgical complications and their treatment. We analyzed indications, technique success and the management of complications in our patient **Main Result:** Over the last 3 years we installed 23 PEG's. The age of the patients was between 3 months and 16 years, average age 6,5 years. Male to female ratio was equally distributed. Neurologic disorders were the primary group of diagnosis in 17 of our patients, whereas the main indication for instillation of PEG was severe hypotrophy in 19 patients accompanied with feeding disorder in 4 of our patients. In 19 patients we used the pull through technique, and in 4 patients due to dificulties during procedure we performed laparoscopically assisted pull through. In 2 patients we had early postoperative local site infection, in another 2 late site infection wich were all treated conservatively. On 3 of our patients we had to operate for late surgical complications, 2 due to burried bumper syndrome, and 1 due to gastric perforation and formation of gastrocolic fistula. **Conclusion:** PEG

is a safe method of ensuring an enteral feeding pathway for severely affected children unable to feed per os. In our experience it is easily performed even in small children with a low complication rate.

029 - PA
Title: DETERMINANTS OF POST-OPERATIVE OUTCOME IN EMERGENCY ABDOMINAL SURGERY IN CHILDREN IN KANO NIGERIA.
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Institutions: Aminu Kano Teaching Hospital Kano Nigeria(1), Aminu Kano Teaching Hospital Kano Nigeria(2), Aminu Kano Teaching Hospital Kano Nigeria(3), Aminu Kano Teaching Hospital Kano Nigeria(4)
Category: General Surgery
Keywords: Post-operative outcome,30- day mortality,emergency
Aim of the Study: Our study aimed to determine the factors associated with adverse post-operative outcome following emergency open intra-peritoneal surgeries in children in our centre. **Methods:** This is a prospective observational study of consecutive patients who underwent emergency abdominal surgeries in our centre between October 2014 and March 2015. Demographic and clinical data were collected for analysis. Pearson's chi-square was used to test for association between selected patient variables. Significance was assigned to a p-value <0.05. **Main Result:** There were 25 patients in all, with 16 males and 9 females (M:F = 1.78:1). Their ages ranged from 1 day to 12 years, with a median of 3 years. There were no mortalities at 24 hours post-operation. The 30 day mortality rate was however 16% (4/25). Anastomotic leakage was significantly (p= 0.046) associated with death within 30 days of surgery. **Conclusion:** Emergency abdominal surgeries in children in our series, was associated with a high mortality. Patient and system factors may be contributory.

030 - PA
Title: Current Profile of Hirschsprung's Disease in Japan - a 5-year Nationwide Survey-
Authors: Tomoaki Taguchi, MD, PhD, FACS(1), Satoshi Obata, MD, PhD(2), Takahiro Jimbo, MD(3), Satoshi Ieiri, MD, PhD(4), Kazuhiro Nakame, MD, PhD(5), Takashi Akiyama, MD, PhD(6), Naoto Urushihara, MD, PhD(7), Hisayoshi Kawahara, MD, PhD(8), Masayuki Kobota, MD, PhD(9), Miyuki Kono, MD, PhD(10), Masaki Nio, MD, PhD(11), Yuji Nirasawa, MD, PhD(12), Shohei Honda, MD, PhD(13)
Institutions: The Japanese Study Group for Hirschsprung's disease(1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13)
Category: General Surgery
Keywords: Hirschsprung's disease,Nationwide survey,transanal endorectal pull-through
Aim of the Study: To study the current profile of Hirschsprung's disease (HD) in Japan, a retrospective nationwide survey was carried out. **Methods:** Patient data were collected between 2008 and 2012 according to the Ethical Guideline for Clinical Research published by the Ministry of Health, Labour and Welfare of Japan on July 30, 2003 (revised 2008) and complied with the 1964 Declaration of Helsinki (revised in 2008). And, this study was approved by The Ethics Committee for Clinical Research of Faculty of Medical Sciences, Kyushu University. **Main Result:** Finally, a total of 1,103 cases were evaluated. The incidence and the male/female ratio were 1/4,895 newborn and 2.9:1. The patients with family history of HD were 7.1%. For the diagnosis of HD, rectal mucosal biopsy with acetylcholinesterase staining and contrast enema were more popular and performed in 81.8% and 99.2%, respectively, whereas manometry was performed less frequently in 45.8%. Of the Extent of aganglionosis, the sigmoid colon, left-right colon and total colon aganglionosis were 63.1%, 14.9%, and 7.9%, respectively. Regarding the definitive operation, transanal endorectal pull-through (TAEPT) was the most popular operation in 49.6%. In addition, laparoscopy-assisted operations increased up to 46.9%. The incidence of preoperative enterocolitis and the overall mortality rate were totally 17.2% and 2.4%, respectively, however the mortality rate of the small intestine aganglionosis was still high in 25.0%. **Conclusion:** Comparing to the past nationwide surveys in Japan, by changing the time, the patients with family history of HD have increased. A primary operation without laparotomy, including TAEPT and laparoscopy-assisted operations, has become the first choice for a definitive operation of HD. The overall mortality rate, except for small intestine aganglionosis, has decreased over time. For the patients with small intestine aganglionosis, the development of new treatment approaches is expected in the future.

031 - PA
Title: Single Site Laparoscopic Appendectomy is Safe and Effective for Surgical Treatment of Appendicitis in Children
Authors: Jessica O Green, MD, PhD(1), Adam Gorra, MD(2)
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Category: General Surgery
Keywords: Single Incision Laparoscopic Surgery,Appendicitis,Appendectomy
Aim of the Study: Single site appendectomy in children is an underutilized approach for surgical treatment of appendicitis. This study aims to demonstrate that single site laparoscopic appendectomy is safe and effective for surgical treatment of inflamed, non-perforated appendicitis. **Methods:** A retrospective chart review was conducted for all

laparoscopic appendectomies performed for non-perforated appendicitis in children aged 2.5 to 17.8 years by a single surgeon between April 1st, 2015 and April 1st, 2016. 99 appendectomies were completed using an umbilical single site laparoscopic approach (SSLA) and 21 appendectomies were performed using the conventional 3 port approach (3PLA). In the single site approach, a 2 cm vertical transumbilical incision is made and a GelPOINT Mini access port inserted with three 5 mm trocars. The cecum is mobilized intracorporally and the appendix exteriorized through the umbilical incision. The mesoappendix is divided with electrocautery and the appendix is ligated with a 3-0 Vicryl tie. Operative times, length of stay, and complication rates were compared based on operative approach. **Main Result:** There were no significant differences for operative time (3PLA: 26.1 9.1 min vs SSLA: 25.7 6.8 min, p=0.85) or length of stay (3PLA: 0.96 0.52 days vs SSLA: 0.85 0.7 days, p=0.53) based on surgical approach. Complications examined include intra-abdominal abscess, incisional hernia, post-surgical bleeding, surgical site infection (SSI), enterotomy, small bowel obstruction (SBO), and recurrent appendicitis. The 3PLA complication rate for inflamed appendicitis was 9.5% (2 intraabdominal abscesses). The SSLA complication rate for inflamed appendicitis was 7.1% (1 intaabdominal abscess, 1 hernia, 4 SSI, 1 enterotomy), in line with previously published complication rates for laparoscopic surgical treatment of appendicitis. **Conclusion:** A single site approach to laparoscopic appendectomy in children does not increase operative time, length of stay, or complication rates compared to conventional 3 port laparoscopic appendectomy.

032 - PA
Title: BOUGIENAGE OF THE ESOPHAGUS IN CHILDREN: AN EXPERIENCE
Authors: Igor Kirgizov, PhD(1), A Gayadaenko, PhD(2), Svetlana Aprosimova, PhD(3)
Institutions: (1), (2), (3)
Category: General Surgery
Keywords: ESOPHAGUS BOUGIENAGE,efficiency estimation ,positive result
Aim of the Study: The safest method of treatment of cicatricial strictures of gullet is endoscopic bougienage along a guide string. Aim of the study was an efficiency estimation of the endoscopic bougienage along a guide string in children. **Methods:** The set of hollow bougies from 15 (5??) to 39 (12,8??) French in diameter was used. We used conic bougie with diameter is increasing at its extent. The guide string was spent under endoscopic control, in case of its impossibility (a lumen less than 4,8 mm) under x-ray control. Bougie diameter increased gradually, by 2 mm. In total for one session 2-3 bougies were used, the following session started from bougie of the previous diameter. After the session termination endoscopic control of a gullet wall, hemostasis in places of ruptures by cold solutions was spent. 15 children aged 1 - 12 years were treated.. They were divided into 3 groups: I - 6 children with peptic strictures, II - 4 children with postburn strictures and III - 5 children with cicatricial strictures after operative treatment for malformations of esophagus in a place of esophago-esophago anastomosis. In all cases we performed a course of antegrade endoscopic gullet bougienage along a guide string under endotracheal narcosis before permanent effect of lumen diameter not less than 8-9 mm was achieved. **Main Result:** In all children the proof effect from the spent treatment was marked, the greatest positive result was marked in the I-st and in the III-d groups of children. Patients from the II-nd group after basic course needed carrying out supporting gullet bougienage in connection with less proof result. Complications after gullet bougienage were not marked. **Conclusion:** the endoscopic bougienage along a guide string is a unique effective method of treatment of cicatricial gullet strictures, which allows to decrease risk of complications.

033 - PA
Title: NODULAR FASCITIS IN CHILDREN: SINGLE-CENTER EXPERIENCE
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Category: General Surgery
Keywords: Nodular fascitis children,Myofibroblastic tumors,Sarcoma
Aim of the Study: To define Nodular Fascitis (NF), a rare entity with very few cases published regarding pediatric patients. Diagnostic criteria are established and a therapeutic protocol is proposed to help pediatric surgeons as it sometimes misdiagnosed as a malignant disease. **Methods:** Seventeen patients (age 2-14 yo) of a single pediatric institution have been included describing epidemiologic, clinical and diagnostic data as well as the therapeutic treatment given to each patient. Most of them were males. Head and neck were the most affected regions. Biopsy was performed in half of the patients. Image studies performed were CT in 2 patients, ultrasound in 7 patients and MRI in 6 patients. One patient, who had a cranial big lesion, was pre-surgicaly injected once with intralesional corticoids and given systemic high doses of metilprednisolone in order to try to reduce the tumor´s size. **Main Result:** Image studies were not definitive for NF diagnosis and there were 3 cases in which a malignant disease could not be discarded. Biopsy was definitive for NF in 3 patients and inconclusive in 4 children. All patients underwent a surgical procedure and two locally recurred. There was one major complication, and 5 minor adverse events. Presurgical steroids had no effect in tumor´s size. All 17 patients had pathological diagnosis of NF. **Conclusion:** Nodular fascitis diagnose should be considered whenever a soft tissue lesion show fast growing and an aggressive local behavior. Biopsy should always be performed if possible. There are no specific radiological findings although oval masses with poorly defined lobulated borders and

surrounded by fat on the MRI are kind of characteristic. Actually, surgical excision continues to be the treatment of choice in infants. Intralesional steroid injection in order to decrease tumor´s size is an early therapeutic valid option. In our experience it has not been successful.

034 - PA
Title: Ovarian torsion in children; case report of bilateral ovarian torsion with simultaneous fallopian entanglement in infant
Authors: Ljudevit Sovic, MD(1), Marko Mesic, MD(2), Božidar Župančić, PhD(3), Stjepan Višnjić, PhD(4), Zoran Bahtijarević, MD(5)
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Category: General Surgery
Keywords: Ovarian torsion,Adnexal entanglement,Adnexectomy
Aim of the Study: Case report of a female infant aged 2 months and 26 days, born from twin pregnancy in 37 th week of gestation as a second twin. She developed bilateral ovarian pseudocysts detected antenatal in 34th week. As a result of acute abdomen caused with bilateral ovarian and adnexal torsion of 720 degrees with hemorrhagically infarcted ovaries there was also noticeable simultaneous rotation of the right mesovarium with ipsilateral ovary around the left fallopian tube. The patient underwent right-sided adnexectomy because adnexal necrosis and left-sided partial oophorectomy with good reconvalsecention. According to the reviewed literature this is the only such case in this age group **Methods:** The operative examination was performed by inferior medial laparotomy, which displayed the left ovary approximately 5 cm in diameter, torquated for 720 degrees and right ovary torquated around its axis for 720 degrees both dark brown in color. At the same time right ovary with its stem was wrapped around the left fallopian tube. Considering the intraoperative findings right-side adnexectomy and partial left side oophorectomy was performed. After resection of the left ovary it was possible to leave about 0.5 cm2 of healthy ovarian tissue **Main Result:** The patient underwent right-sided adnexectomy because adnexal necrosis and left-sided partial oophorectomy with good reconvalsecention. According to the reviewed literature this is the only such case in this age group **Conclusion:** Ovarian torsion as illustrated in this case can occur at any age and with clinical suspicion when viewing and radiological treatment quicker we can come to an accurate diagnosis and access to the surgical treatment of ovaries with a significant reduction in subsequent comorbidities.

035 - PA
Title: Combined anesthesia provides hemodynamic stability in laparoscopic appendectomy
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Category: General Surgery
Keywords: Pediatric Anesthesia,Combined Anesthesia,Hemodynamic stability
Aim of the Study: To compare hemodynamic stability (HS) of patients during Pediatric laparoscopic appendectomy (PLA) for acute appendicitis, using two different anesthetic techniques: General Anesthesia alone (GA) versus Combined General and Regional Anesthesia (CA). **Methods:** Prospective, randomized and comparative study of patients subjected to LPA during the period of October 2015 to February 2016. Patients were divided into four groups: GA, ages 6–11 years (GA6-11), CA ages 6-11 years (CA6-11), GA 12–17 years (GA12-17) and CA 12–17 years (CA12-17). Hemodynamic measurements were performed during induction (M1), 5 minutes after pneumoperitoneum induction (M2), end of pneumoperitoneum (M3) and extubation (M4). Hemodynamic Instability (HI) was considered when 3 out of 5 altered criteria were present: Heart rate (HR), systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial pressure (MAP) and temperature (T). Statistical analysis included descriptive, central tendency and dispersion measures and X2 for dichotomy variables. Significance level was established at ≤ 0.05 and RR and CI 95% were also reported. **Main Result:** : 67 patients were studied, 7 were excluded for presenting IH before induction of anesthesia. There were 28 patients in the CA group (6-11 years, n = 19; 12 – 17 years, n = 9) and 32 in the GA group (6-11 years, n = 17; 12 – 17 years, n = 15). The CA12-17 had 100% HS during M1, while AG12-17 had only 53% (RR = 0.4, IC 0.2 – 0.7). During M2 CA12-17 88.9% had HS Vs GA12-17 in which only 40% had HS. During M3, 84.2% of CA6-11 had SH and only 35.3% of the GA6-11 had SH (RR = 0.3, 70% protection). **Conclusion:** : CA offered 60% protection of hemodynamic stability, making PLA a safer procedure during the induction and 5 minutes after pneumoperitoneum was established. We recommend to use a combined anesthetic technique during PLA.

036 - PA
Title: One stage Prolapsing Transanal Endorectal Pull Through (OPTEPT) for Hirschsprung’s disease: Its a easy, time saving, less complicating procedure

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Category: General Surgery
Keywords: Transanal endorectal pull through ,Hirschsprung's disease ,One stage prolapsing trans anal endorectal pull through
Aim of the Study: Transanal endorectal pull through (TEPT) is latest development in the treatment of Hirschsprung's disease but perianal excoriation and anal incontinence is very common and troublesome complications. It may be due to extensive anorectal dissection during procedure. To avoid this dissection we try to prolapsed in the sigmoid colon by gradual traction of the anorectal mucosa and submucosa trans-anally. This prospective study done in the Department of Paediatric Surgery,BSMMU since January 2010 to April 2016 to evaluate the safety and efficacy of this procedure in management of HD. **Methods:** 35 children (21 male and 14 female) age range from 1 month to 10 years underwent OPTEPT over last 6 years and 4 months in BSMMU. Median follow up was 5 years (range 3 months to 6 years). Each patients were evaluated with regards to age, sex, length of aganglionic segment, operating time, per operative bleeding, tearing of colonic wall, postoperative anastomoic leakage, retraction, perianal infection, excoriation, soiling and incontinence in details. **Main Result:** Mean operating time was 60 minutes (range 45 to 90 minutes), average length of resected bowel segment was 30 cm (range 20 to 50 cm). One patient required laparotomy because the sigmoid colon was morbidly adherent with transverse colon due to previous abdominal surgery. No peroperative excessive bleeding and on early postoperative period no anastomotic leakage, disruption, retraction, perianal infection and excoriation. On subsequent follow up three patients develop constipation, one patient develop anal stricture and 2 patients noticed perineal soiling. All these patients was managed by dietary manipulation, oral purgatives and regular anal dilatation. **Conclusion:** OPTEPT is technically easy, time saving, safe and effective procedure in properly selected patients with recto-sigmoid HD in all age.

037 - PA
Title: A Novel Laparoscopic Technique for Anorectal Malformations with Lower Recto-bulbar Fistulae
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Category: General Surgery
Keywords: laparoscopy ,anorectal malformations,lower recto-bulbar fistula
Aim of the Study: The definitive surgery for anorectal malformations (ARM) with lower recto-bulbar fistula (bowel-to-skin distance: 1-1.5 cm) is a contraindication of laparoscopy because of difficult exposure of fistula and dissection of distal rectum. Thus may increase morbidity of postoperative urethral diverticulum. Conventionally, posterior or anterior saggital anorectoplasty was used for lower recto-bulbar fistula repair. While, these procedures have potential risks of wound infection/dehiscence and incontinence. We herewith designed a single-incision laparoscopic-assisted perineal anorectoplasty (SILPARP), and evaluate its safety and efficacy. **Methods:** Fifteen patients successfully underwent SILPARPs between November 2013 and March 2016. Laparoscopic rectal dissection was performed from peritoneal reflection to recto-urethral fistula. A 0.5 cm longitudinal incision was made in anterior wall of distal rectal pouch. With guidance of electro-stimulator, a 1 cm vertical midline incision was made at site of proposed anus. When bulging rectum was seen from perineum, four 2/0 silk stay sutures were applied at 3, 6, 9 and 12 o'clock position of distal rectum. The dissection preceded along the rectal walls turn by turn. The rectal pouch was opened to identify the fistula. The fistula was transacted and closed using 5/0 PDS running suture under direct vision. The distal rectum was pulled down to perineal skin for anastomosis. **Main Result:** Mean distance between rectal pouch and perineal skin was 1.15 cm. Mean age at surgery was 3.92 months. Average operative time was 1.60 hours. All patients resumed feeding on postoperative day 1. Median follow-up period was 7 months. No injuries of vessels, urethral or vas deferens occurred. No mortality or morbidities of wound infection, rectal retraction, anal stenosis, or rectal prolapse were encountered. Postoperative VCU verified no urethral diverticulum or fistular occurrence. Postoperative pelvic MR demonstrated that distal rectum located in the central of pelvic muscle complex. **Conclusion:** SILPARP is safe and effective for ARM infants with lower recto-bulbar fistulae.

038 - PA
Title: Outcome analysis of two-staged Modified Duhamel's procedure for Hirschsprung's disease
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Category: General Surgery
Keywords: Duhamel,Quality of life,Two staged
Aim of the Study: Aims: To measure the short and long term outcomes and quality of life after modified Duhamel`s procedure for Hirschsprung`s disease. **Methods:** Materials and methods: Between 2001 and 2009 patients who

underwent Modified Duhamel`s procedure with a minimum follow up of two years were studied. Short (six months) and long term outcomes and quality of life (validated score) was measured by interviews and questionnaires including scoring systems (Holschneider). **Main Result:** Results: Out of 83 patients only 18 boys and one girl responded for interview. Mean age was 7.7 ± 2.3 years. 15% (n=3) had constipation and 65% (n=13) had loose to liquid stools in first six months. Six patients had no soiling after surgery. Of the remaining 13 patients only 2 continue to have soiling. Wound infection occurred in one patient (5%). No patient had anastomotic leak. Long term outcomes revealed 5.2% (n=1) patient had sub acute intestinal obstruction requiring hospjitalization. 5.2% (n=1) required a second procedure for management of complications of anastamotic stricture/outlet obstruction. After a mean follow up of 3.4 (2-10) years, fecal continence scores are good in 85% and fair in 15% patients. QOL scores were good in 84.3%, fair in 10.5%. Only one patient (5.2%) has a poor QOL score. **Conclusion:** Conclusion: Although short term outcomes showed altered bowel function, this improved significantly in the long term, with a good QOL scores in 84.3% patients.

039 - PA

Title: CEREBRAL VENOUS SINUS THROMBOSIS (CVST): DIAGNOSTIC DILEMMA AND MANAGEMENT OF A CHILD WITH PERFORATED APPENDICITIS

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Category: General Surgery
Keywords: Cerebral Venous Sinus Thrombosis,Appendicitis,Hemiplegia
Aim of the Study: To illustrate the clinical presentation, diagnostic difficulties and management of a child with appendicitis who developed CVST. **Methods:** Review of the records and follow up of a patient treated for CVST during April 2016 till date in SWACH. **Main Result:** 11 Years old girl with no past medical illness presented to a district Hospital for fever, abdominal pain and loose stools. She was treated as gastroenteritis for 10 days and transferred to SWACH. On arrival, she was febrile, tachypnoeic, dehydrated (5%). Abdomen was distended and tender. She developed respiratory failure requiring ventilator support. Laparotomy after correcting the fluid and electrolytes with antibiotic cover revealed perforated appendix with gross contamination of peritoneal cavity. Appendicectomy and peritoneal lavage was performed. Child was not arousable and GCS at 60 hours was 2T/15 with unequal pupils. Computer tomography and magnetic resonance imaging showed partial thrombosis of sagittal sinus with acute infarct causing midline shift and impending coning. In view of respiratory failure, coma, facial palsy, left hemiplegia and coning, emergency decompressive right frontotemporal craniectomy was performed. The brain was hyperemic and tense, herniated out upon opening the dura. Cerebral resuscitation with IV Mannitol and anti-epileptic was started. Anti-coagulantion therapy was withheld due to bleeding tendencies. Pupils become equal at 8 hours and GCS improved to 5T/15 on third day, 8T/15 on forth day, and full on third week. Recovery was remarkable with Modified Rankin Scale of 0-2, hemiplegia 4/5 and can eat on her own prior to discharge. No risk factors could be identified and detailed work up for CVST is ongoing. **Conclusion:** Probably sepsis and dehydration is the cause of CVST in our patient and no similar reports in the literature. Even though anticoagulant therapy is the main stay, decompressive craniectomy is lifesaving when there is evidence of coning, coma and hemiplegia.

040 - PA

Title: Recurrent abdominal pain: Sigmoid volvulus – a diagnosis and therapeutic challenge!

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Category: General Surgery
Keywords: sigmoid volvulus,endoscopic reduction,sigmoidectomy
Aim of the Study: Sigmoid volvulus (SV) is a life-threatening condition, well known within the elderly but rare in the pediatric population. In this age group is associated to a redundant, distended sigmoid colon with a short mesenteric axis or to motility alterations. Conservative treatment with barium enema or endoscopic reduction is described with success, but the risk of recurrence is high and should not be undermined. We report a case of a SV successfully treated with colonoscopy and programmed sigmoidectomy. **Methods:** A healthy adolescent girl was admitted in the emergency department (ED) due to intense abdominal pain associated with nausea, retching and abdominal distention. There was no past medical history.Blood work was normal, abdominal ultrasound showed intestinal distention and the CT scan revealed intestinal occlusion suggestive of SV. Endoscopic reduction was performed with success and the patient was discharged the next day. Weeks later recurred to the ED with the same complaints, with an X-Ray suspicious of

abdominal occlusion with a predominantly distended colonic loop and CT that showed a SV. She was transferred to a pediatric surgical ED. **Main Result:** An emergency colonoscopy was performed with successful de rotation. In the post-operative period a barium enema confirmed a redundant and distended sigmoid colon. An elective sigmoidectomy with primary anastomosis was performed. Post-operative period was uneventfull and the histology showed no ganglion alterations. At the moment she is followed in the outpatient clinic, with no complaints. **Conclusion:** SV is a rare condition, but should be kept in mind in the differential diagnosis of intestinal obstruction. Endoscopic reduction seems to be a safe and effective procedure in the emergency setting, preventing the potential morbidity of an emergent surgery. Nevertheless, elective surgery is important due to the high risk of recurrence especially in children that, opposed to adults, have a longer “risk” period. Exclusion of associated disganglionosis/aganglionisis is important.

041 - PA
Title: ENDOSCOPIC REMOVAL OF UNUSUAL FOREIGN BODIES ESOPHAGUS IN OPERATED CASE OF ESOPHAGEAL ATRESIA: A CASE REPORT
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Category: General Surgery
Keywords: esophageal atresia,tracheoesophageal fistula ,foreign bodies
Aim of the Study: To report cases unusual foreign body (Tamarind seed) causing obstruction of esophagus due to esophageal stricture secondary to esophageal atresia surgery. Foreign body was successfully removed endoscopically. **Methods:** Case report: An 18 months male, presented with difficulty in swallowing solid food, vomiting and weight loss. There was history of esophageal atresia surgery in neonatal period, lost follow up after surgery. On examination vitals were stable. Chest and abdomen examination was within normal limit. A barium swallow revealed narrowing at the junction of upper two-thirds and lower one-third of esophagus. The patient was taken up for upper gastrointestinal endoscopy under anaesthesia. On endoscopy, food particles were seen proximal to the obstruction. Tamarind seed was struck to esophagus, proximal to esophageal stricture. After removal of tamarind seed endoscopic dilatation of esophageal stricture was done. Post-procedure period was uneventful. The patient is doing well in follow up and taking solid and liquid foods. **Main Result:** Post-procedure period was uneventful. The patient is doing well in follow up and taking solid and liquid foods. **Conclusion:** Flexible esophagoscopy remains the safest method of esophageal foreign body removal in infants and children. High index of suspicion is required when history of foreign body ingestion is not clear for proper diagnosis and management

042 - PA
Title: SURGICAL MANAGEMENT OF RECTAL PROLAPSE IN CHILDREN: INJECTION SCLEROTHERAPY, THIERSCH PROCEDURE OR BOTH
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Category: General Surgery
Keywords: SCLEROTHERAPY,THIERSCH PROCEDURE ,RECTAL PROLAPSE
Aim of the Study: The management of rectal prolapse in children comprises different treatment modalities, which mainly include injection sclerotherapy, Thiersch procedure or major surgical procedures. This study aims to review our experience in the surgical management of this condition. **Methods:** A retrospective single institution study on children diagnosed with full thickness rectal prolapse and managed surgically during a period of 5 years (October 2009 – July 2014) using known International Classification of Disease (ICD) code. Results are compiled using chi square test and p-value **Main Result:** A total of 26 patients (18 males, 8 females) were identified during the study period with a median age at diagnosis of 4 years (range 1-9). Clinical details of 25 patients were available. Two out of 25 had rectal mucosa prolapse so they are excluded. Rest of 23 patients had full thickness rectal prolapse and were analysed very carefully. Fourteen patients were treated with injection sclerotherapy alone, 8/14 (57.14 %) patients developed re occurrence ranging from 1 month to 9 months post sclerotherapy injection. Among those 5/8 required further phenol injections, 1/8 required phenol and Thiersch suture, 1/7 required rectopexy and 1/8 required rectal mucosal excision. Nine patients were treated with injection sclerotherapy and Thiersch suture. 1/9 (11 %) had re-occurrence 3 months later and was successfully treated with repeated injection sclerotherapy and Thiersch suture. All the 23 patients were on laxatives post procedure and follow up was more than 18 months. The chi-square statistic is 4.1972 with p-value of 0.040491. This result is significant at p- value < 0.05. **Conclusion:** Combination of injection sclerotherapy and Thiersch procedure is more effective than injection sclerotherapy alone in the treatment of full thickness rectal prolapse in children. A post-operative laxative regimen is required in these patients as they can develop de novo constipation in post-operative period.

043 - PA

Title: Review of recurrent ileocolic intussusception cases and a new operative technique for intussusception cases without any leading point

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Category: General Surgery

Keywords: Recurrent ileocolic intussusception,Ultrasound guided hydrostatic reduction,Seromuscular suture

Aim of the Study: We aimed to evaluate our 10 years experience and describe a new operative technique for recurrent intussusception cases without any leading point. **Methods:** We retrospectively evaluated the data of patients who were admitted to our clinic with the diagnosis of intussusception. Demographic data of the patients were recorded. Patients with recurrent intussusceptions were selected. **Main Result:** Between 2006-2016, 598 patients were admitted to our clinic due to intussusception. In 551 (92%) of patients US guided hydrostatic reduction was successful. Emergency operation was performed in 47 patients. Recurrent intussusceptions developed in 25 (4,2%) patients; 16 (2,7%) patient had 1 recurrence, 2 (0,3%) patients had 2, 1 (%0,1) patient had 3, 4 (0,6%) patients had 4, 1 (0,1%) patient had 7, 1 (0,1%) patient had 10 recurrences which were also reduced with US guidance. In one patient; 1st intussusception occurred at 9 months of age which was reduced with USG guidance. But he admitted to hospital seven times more due to recurrent (4 cm) segment. This patient was operated at 2 years of age with a new procedure. During laparoscopy, manual reduction and appendectomy was performed first, then distal ileum and caecum were pull out of abdomen via umbilical incision. Twenty cm segment of terminal ileum was folded for four times to make loops and fixed with seromuscular absorbable sutures. These created intestinal loops were fixed to caecum with one seromuscular suture and replaced into the abdomen. Oral feeding was started on the post operative 2nd day and patient was discharged on the 4th day. Patient is now followed up for three years without any complications or recurrence. **Conclusion:** This new operative technique can be satisfactory for recurrent intussusceptions without any leading point.

044 - PA

Title: Implementing a protocol to prevent pediatric surgical site infections in a resource limited setting: Our experience at a tertiary center in Central Haiti

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Category: General Surgery

Keywords: global surgery,surgical site infection,prevention

Aim of the Study: The World Health Organization reports that in resource limited settings up to two thirds of surgical patients develop surgical site infections (SSI) with significant morbidity and mortality. Our aim was to analyze the rate of SSI in pediatric patients undergoing ambulatory procedures in a resource limited setting after implementing a protocol to prevent SSI. **Methods:** We performed a retrospective review of pediatric patients undergoing elective ambulatory procedures from August 2015 to May 2016 at a tertiary hospital in Haiti following the implementation of a protocol to prevent SSI. The protocol included: washing the operative site with chlorhexidine soap and rinsing with water; prepping the operative site with chlorhexidine/betadine; review of the surgical safety checklist, and administration of 1 dose of cefazolin before incision. After wound closure, application of steri-strips, gauze, and tegaderm. We instructed parents to keep the dressing clean and dry until the clinic visit the following week. Patients treated by a team not implementing the protocol served as control. We defined SSI as wound cellulitis or purulent drainage. **Main Result:** We performed 119 procedures in 99 patients in the study group. Mean age was 6.2 years. 76% of patients were boys. The most common procedure was inguinal hernia repair (66%). 89% of patients returned for their postoperative clinic visit, which occurred on average on day 7.6 (range 3-40 days). There were 0% postoperative SSI in the study group. The rate of SSI was significantly higher in the control group compared to study group (16%, p=0.02). Age and diagnoses were similar in both study groups. **Conclusion:** Implementing a simple and inexpensive protocol led to 0% SSI in a resource limited setting. Measures to prevent SSI are critical as we work towards universal access to pediatric surgical care.

045 - PA
Title: Triage of the Child with Non Traumatic Acute Abdominal Pain: A Clinical Algorithm
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Category: General Surgery
Keywords: Triage,Acute Abdominal ,Clinical Algorithm
Aim of the Study: Non traumatic acute abdominal pain in children is the most common cause of hospital admission in the world, ranging from benign,self-limited diseases to conditions that require immediate surgery. Our aim of this work is to discuss and identify the attributes of non-traumatic acute abdominal pain in children with the development of a simplified clinical algorithm for the triage of these children **Methods:** The present study was conducted on 100 child of both sexes between 5 and 18 years presented with non-traumatic acute abdominal pain at Tanta University Hospital from April o October 2015. Based on the final diagnostic decision, patients were classified into two distinct groups:Group(A):included patients who required surgical intervention& Group(B):included patients who were managed conservatively.Data were collected in reorganized data sheet by the researcher. Full Physical examination of the child with special emphasis on abdominal pain analysis.According to our modified algorithm we classified our patients into 4 categories:catastrophic presentation,intestinal obstruction,acute appendicitis and medical condition. **Main Result:** The study showed that there is significant difference regarding age distribution between both groups with no significant difference regarding sex or previous visit to the E.R in the past 48 hours.Our study also showed significant difference regarding abdominal pain site,character and the severity of pain between both groups.As regards to the diagnosis, the commonest diagnosis among group Apatients was found to be acute appendicitis (26 out of 38) patient,while, the commonest diagnosis among group B patients was found to be nonspecific colicky pain (25 out of 62) patient .Regarding to our clinical algorithm, Only 3 patients in group A were considered as catastrophic presentation **Conclusion:** We were able to find a simplified clinical algorithm for the triage of children with non-traumatic acute abdominal pain. The present algorithm used for diagnosis of acute abdominal pain is effective and preferable in reducing misdiagnosis and maltreatment at emergency

046 - PA
Title: Surgical treatment of idiopathic megarectum in children.
Authors: Igor Kirgizov, PhD(1), Sergei Minaev, PhD(2), Maxim Aprosimov, PhD(3), Ilya Shishkin, PhD(4)
Institutions: (1), (2), (3), (4)
Category: General Surgery
Keywords: Surgical treatment ,improve the results of surgical treatment ,laparoscopic hemicolectomy
Aim of the Study: to improve the results of surgical treatment of children with idiopathic megarectum. **Methods:** for 2010-2015, in our department was made 36 endovideoscopic hemicolectomy with imposing low hardware anastomosis. Middle age 8.3. All patients at last 3 years had no self-defecation and improvement after conservative therapy. Operation: after installing ports, we made endoscopic mobilization of the left colon, the level of resection was determined intraoperatively using a special endoscopic ultrasound probe, a low rectal anastomosis was made with a circular stapler disposable 33 mm diameter. **Main Result:** Three months later colon function was improved in all operated patients. Self defecation 1-2 times a day was observed in 53.2%, the remaining 47.8% of children less than 1 time in two days. **Conclusion:** laparoscopic hemicolectomy with low hardware anastomosis is the operation of choice in the surgical treatment of idiopathic megarectum.

047 - PA
Title: LAPAROSCOPIC GASTROPEXY IN A CHRONIC ORGANOAXIAL GASTRIC VOLVULUS
Authors: Francisco Javier Murcia Pascual, MD(1), Jose Ignacio Garrido Pérez, MD(2), Josué Eduardo Betancourth Alvarenga, MD(3), Miguel Ángel Cárdenas Elias, MD(4), Victoria Jiménez Crespo, MD(5), Rosa Maria Paredes Esteban, MD(6)
Institutions: Universitary Reina Sofia Hospital(1), Universitary Reina Sofia Hospital(2), Universitary Reina Sofia Hospital(3), Universitary Reina Sofia Hospital(4), Universitary Reina Sofia Hospital(5), Universitary Reina Sofia Hospital(6)
Category: General Surgery
Keywords: Gastric Volvulus,Gastropexy,Laparoscopy
Aim of the Study: Chronic gastric volvulus is a rare condition in children; it is characterized by a 180-degree rotation around its axis. We present the surgical treatment of a gastric volvulus treated with laparoscopic gastropexy. **Methods:** A 7-month-old infant admitted for a history of 2 months with recurrent vomiting after intakes and ponderostatural loss with no improvement with medical or nutritional management. Chest x-ray and abdominal ultrasound were normal. Gastric reflux was discarded with impedance-pH monitoring and upper endoscopy found unspecific esophagitis. An upper GI transit revealed a horizontal stomach, with greater curvature localized over the lesser curvature, with both antrum and fundus in same craniocaudal plane. **Main Result:** With the diagnosis of organoaxial gastric volvulus, a 5-

port conventional laparoscopic approach was done with the patient in antitrendelemburg position. Laparoscopic findings included a big and lax stomach with no gastrosplenic or gastrocolic fixation, and gastric horizontalization. Esophagocardiopexy was performed to avoid accidental opening of the angle of His followed by phrenofundopexy and anterior gastropexy. **Conclusion:** Chronic gastric volvulus has an elevated morbimortality rate. Most authors recommend surgical treatment to avoid future recurrence and complications. Laparoscopic approach is advisable for its minimally invasive characteristics even though it has a higher technical complexity, especially in younger patients.

048 - PA
Title: Hirschsprung´s Disease and Neurocristopathy Syndromes
Authors: Rocío Espinosa, MD(1), Henar Souto Souto, MD(2), Clara Rico, MD(3), Jose L Alonso, MD(4), Manuel Espinoza, MD(5), Ana L Luis, MD(6), Marta De Lucio, MD(7), Pilar Guillén, MD(8), Pablo Morató, MD(9), Jaun Carlos Ollero, MD(10)
Institutions: Hospital Universitario Niño Jesús(1), Hospital Universitario Niño Jesús(2), (3), (4), (5), (6), Hospital Universitario Niño Jesús(7), (8), (9), (10)
Category: General Surgery
Keywords: Hirschsprung disease,Neurocristopathy,Congenital central hypoventilation syndrome
Aim of the Study: To define the association between Hirschsprung´s disease (HD) with neurocristopathy syndromes **Methods:** Retrospective study of patients diagnosed of HD that associated other neurocristopathy syndromes in a single pediatric institution during 2000-2015 **Main Result:** Six patients (3 boys, 3 girls) have been included. 3/6 patients associated HD with Haddad Syndrome, a congenital central hypoventilation syndrome (CCHS), 1/6 with bilateral sensorineural hearing loss, iris heterochromia and white hair located in occipital area (Waardenburg-Shah Syndrome) One associated HD with bilateral sensorineural hearing loss and the other associated thoracic ganglioneuroblastoma. Median age at diagnosis was 32 days [16-62].All patients underwent a pull-through procedure in the first year of life. Two cochlear implants were needed. Three patients required tracheostomy and ventilatory support. Genetic studies showed 3 heterozygous for a PHOX2B polyalanine repeat expansion mutation (PARM), 2/3 with 20/26 genotype and 1/6 20/33 genotype and 1 heterozygous for c470C>T mutation in SOX 10 gene. The other two patients had inconclusive genetic results. One patient died due to respiratory problems while sleeping and the other five still alive. **Conclusion:** Association of HD with other neurocristopathies is rare but should be considered in order to achieve an early diagnosis and management of these patients. CCHS is caused by mutations in PHOX 2B gene existing a correlation between genotype and phenotype that allows to anticipate the severity of hypoventilation, the risk of arrhytmias and associated disorders including HD and neural crest tumors so a close follow-up is mandatory

049 - PA
Title: stump appendicitis
Authors: Cherif Abdelhadi, MD(1), Saloua Ammar, MD(2), Entissar Chibani, MD(3), Rim Hassine, MD(4), Mohamd Hadfi, MD(5), Azza Sridi, MD(6), Karim Sassi, PhD(7), Adnene Chouchene, PhD(8)
Institutions: (1), (2), (3), (4), (5), (6), (7), (8)
Category: General Surgery
Keywords: appendicitis,stump,complication
Aim of the Study: Stump appendicitis is a rare entity. The aim of this study was to describe the clinical and radilogic aspects and treatment of this rare disease. **Methods:** Retrospective study of 5 observations of stump appendicitis collected over a period of 5 years, from 2011 to 2015. **Main Result:** There were 2 women and 3 men with an average age of 30 years (15-45 years). SA occurred after an average of 3 years and 3 months after appendectomy (range : 6 months-10 years). The initial appendectomy was conducted through MacBurney (3 cases) or laparoscopically (2 cases). Abdominal CT scan confirmed the diagnosis in all cases. Four patients had an uncomplicated SA and one patient presented an abscess. All patients underwent reoperation through Mac-burney. It was a subserosal stump in all cases. **Conclusion:** SA should be in front of acute right lower abdominal pain with history of appendicectomy. Preventing ASM requires a good dissection of the appendix during appendicectomy.

149 - PA
Title: A New Surgical Technique of Biliary Drainage (Shafique's technique os Biliary Tract Reconstruction)
Authors: Shafiqul Hoque, MBSS(1)
Institutions: ,Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh(1)
Category: Hepatobiliary Surgery
Keywords: Choledochal cyst; ,New surgical technique for choledochal cyst,Shafique's technique for choledochal cyst
Aim of the Study: To find a better anatomical and physiological technique of surgical treatment for treatment of choledochal cyst and similar conditions of bile duct replacement. **Methods:** Roux-en-Y hepaticojejunostomy is the standard techinique of biliary reconstruction after excision of choledochal cyst. Here the author describes a new surgical technique of biliary tract reconstruction using native gall bladder as biliary conduit. New surgical technique: The choledochal cyst is excised as standard technique but gall bladder with its neck is kept in situ. The gall bladder neck is anoastomosed with the common hepatic duct stump and gall bladder fundus is anastomosed with the duodenum.

Materials and methods: Thirty three patients with choledochal cyst has been operated with the new technique from July 2011 to December 2015 in Dhaka, Bangladesh. They were released in 10-15 days unless complicated. **Main Result:** The ages of 33 patients from 3 months to 11 years. Lump was felt in 7 patients and jaundice was present in 7 patients.Recurrent abdominal pain was the commonest presentation. They were diagnosed by ultrasonography in all and MRCP was done in 12 patients. Prothrombin time was elevated by 10% and 15% in 6 patients. Average operation time was 2 hours and 10 minutes. A nine year old girl was died suddenly on 5th post-operative day from severe convulsion of unknown origin. Two child suffered from prolong bile leakage and reexplored to repair anastomotic leak in one and smalll perforation of gall bladder in another. Another patient had a collection near the anastomosis which was resolved spontraneously. **Conclusion:** The new surgical technique is more anatomical and physiological than standard Roux-en-Y hepatici-jejunostomy. There were no significant disadvantage or complication within this short period of study. Even such complication occurs there is scope for Re-do surgery. ERCP is possible for evaluation.

150 - PA
Title: Choledochal Cyst: A new insight into the mystery of its causation
Authors: Nazrul Islam, MS(1), Rajib Khastagir, MS(2), Taslima Akter, M.Phil(3), Mohammad Saiful Islam, FCPS(4)
Institutions: Bangabandhu Sheikh Mujib Medical University(1), (2), (3), Bangabandhu Sheikh Mujib Medical University(4)
Category: Hepatobiliary Surgery
Keywords: Choledochal Cyst,Mystery,Maiden Study
Aim of the Study: Choledochal cyst, especially type–I, cannot be explained in terms of post obstructive dilatation, as there is no concomitant dilatation of the more proximal and intrahepatic segments of the biliary tree and as jaundice is not also a manifestation of the primary or uncomplicated disease. Many theories have been propounded and tested to explain its causation but none has common agreement. To throw some light on the structural basis of its causation, histopathological examination to the dilated segment and the normal proximal constituent of biliary tree of the same patients was undertaken in a maiden study to find out constitutional variability between the affected and unaffected segments. **Methods:** A cross-sectional, prospective study was conducted at Paediatric Surgery Department, BSMMU, Bangladesh from 2010 to 2014. Twenty five consecutive samples from both sexes in paediatric age group was included. Biopsy was taken from cyst wall and wall of the normal CBD proximal to the cyst. Specimens were prepared for staining in verhoeffs iodine iron hematoxylin for elastic fiber and Masson's trichrome for collagen fiber and examine under microscope. **Main Result:** In the dilated segment elastic fibres, the usual native constituent of normal bile duct were replaced to a large extent by collagen fibres lacking elastic properties. Both the quantity and proportion of collagen fibres increased significantly in comparison to the elastic fibres and thereby explain the dilatation as an effect of structural variation (p-value <0.001). **Conclusion:** A practical implication of the present study is that, as a result of the replacement of the normal constituent, the affected segment is rendered plastic and therefore cannot allow generation of sufficient pressure by gall bladder contraction to effect post prandial bile flow in the biliary storage-delivery system. This nonfunctional part obviously cause stagnation and demand removal at all instances.

151 - PA
Title: Hepaticocholecystoduodenostomy-A new surgical approach for biliary drainage in choledocal cyst operation.
Authors: Md Abdul Aziz, MS(1), muhammad Rashedul alam, MS(2)
Institutions: Dhaka Shishu(Children) hospital,Dhaka(1), Dhaka Shishu(Children) hospital,Dhaka(2)
Category: Hepatobiliary Surgery
Keywords: Hepaticocholecystoduodenostomy,Choledocal cyst,Gallbladder
Aim of the Study: To make the patient surgically normal by new procedure of choledocal cyst **Methods:** From March 2011 to May 2016 total 43 patient of choledocal cyst operation performed in Dhaka Shishu (Children) Hospital and other hospital in Dhaka,Bangladesh in new technique of hepaticocholecystoduodenostomy . here choledocal cyst excise as standered technique but gallbladder with its neck kept in situ.the neck of gallbladder anastomosis with common hepatic duct and fundus of the gallbladder was anastomosed in anterior inferior wall of 1st part of distal duodenum.oral feeding started from 3rd to 4th post operative day and drain removed 5-7 post operative day unless any complications.patient release from hospital 10-12 post operative day. **Main Result:** The age of the patient was 4month to 11year 6months.There were 29 female and 14 male.Jaundice was present in 27 patients and abdominal lump was in 15 patients,but recurrent abdominal pain was all the patient.The patient were diagnosed by USG and MRCP.Average operation time was 1hour 50 minutes.3 patients developed biliary leakage,2 patients need re-exploration and other patient manage conservatively. **Conclusion:** In our observation Hepaticocholecystoduodenostomy is a good procedure both anatomically and physiologically.Here ther is no Rouex-e-Y related intestinal complications.operation time is less and incision is small.

152 - PA
Title: Experience of reoperation on biliary tract
Authors: Igor Kirgizov, PhD(1), Sergei Minaev, PhD(2), Vadim Dudarev, PhD(3), Filipp Kirgizov, Medical student(4)
Institutions: (1), (2), (3), (4)

Category: Hepatobiliary Surgery
Keywords: biliary tract diseases ,stricture,hepatico/choledocho- jejunoanastomosis
Aim of the Study: Analysis of complications of operations on the biliary tract and results of its correction. **Methods:** Over the past 5 years in our center were 14 children with biliary tract diseases that required surgical correction, after the previously executed operations on the biliary tract. **Main Result:** Of those with functioning external biliary fistula after previously performed operation–3 children, in 2 cases after surgery for tumor of subliver space, in 1–after cholecystectomy, operated at an amplitude of inflammation. The duration of fistula 0.5-1 year. In 2 cases stricture of biliary tract is distally of fistula, in 1 case BDS sclerosis. In 2 of them fistula closed after endoscopic correction (Papillosphincterorotomy, probing, stenting of the common bile duct). In 1 case we formed choledochojejunoanastomosis by Roux. There were 5 children with average 15.2 years after laparoscopic cholecystectomy about CL (in 1 case a child of 5 years on the background of sickle-cell anemia) with choledocholithiasis, recurrent jaundice. In 3 cases endoscopic papillosphincterotomy, stones extraction. In 1 case laparotomy, choledocholithiotomy. In all cases, recovery occurred as a result of treatment. Stenosis of hepaticojejunoanastomosis was observed in 2 cases out of 30 children operated laparotomy hepaticojejunoanastomosis reconstruction. Observation within 2 years, no signs of cholestasis and restenosis. We observed 4 children with diagnosis of choledochal cysts type 1 with previous cholecystectomy and overlay choledochojejunoanastomosis's, resistant recurrent reflux – cholangitis was detected in all children, in connection with which, in all cases, performed the removal of the anastomosis, resection of the cyst of common bile duct with hepaticojejunoanastomosis on a loop by Roux. **Conclusion:** Endoscopic correction is justified, and can in some cases eliminate the BT pathology. The most preferred in need for repeated reconstructive operations on the biliary tract in children is hepatico/choledocho-jejunoanastomosis on disabled Roux loop. We don't recommend use in children direct choledochojejunoanastomosis, due to frequent reflective cholangitis.

153 - PA
Title: THE RESULTS of PORTO-DUODENOSTOMY for BILIARY ATRESIA PRELIMINARY REPORTS
Authors: Canan Prof. Dr. Ceran, MD(1), Mehmet Prof. Dr. Demircan, MD(2)
Institutions: Inonu UniversiMedical School, Department of Pediatric Surgery(1), Inonu UniversiMedical School, Department of Pediatric Surgery(2)
Category: Hepatobiliary Surgery
Keywords: Kasai,Portoduodenostomy,Biliary Atresia
Aim of the Study: The current management of Biliary atresia (BA) is Kasai hepato-porto-enterostomy. At first Dr.Kasai treated a baby by porto-duodenostomy (PD). He preferred jejunal Roux-en-Y limb after doing PD in a couple of his patients. However there is no evidence jejunal Roux-en-Y limb is better than duodenum. In this study we aimed to present the early results of PD for BA. **Methods:** The patients who underwent PD for BA between 2013 and 2016 were analysed retrospectively. Demographics data, clinical and surgical outcomes were reviewed. **Main Result:** There were 10 patients (4 girls, 6 boys) aged 75.8 days (min 36- max 106). Mean operation duration was 115 minutes (min8–max165). There were no operative complication and anastomotic leak. Liver biopsy showed that four patients had 5/6, two had 4/6 and the other three had 3/6 grade fibrosis. On 9 patients the stool became yellow/green. Bile flow wasn't observed on 1 patient; who had 5/6 grade fibrosis. On the 15th day postoperatively 1 patient died due to sepsis. 3 patients had cholangitis. Liver transplantation was required for 2 patients. Seven were alive with their native liver. Bilirubin, ALT and AST levels were decreased in all patients. However, GGT levels increased in 8 patients. Mean fallow-up time is 20,3 months (1-34months) **Conclusion:** In 2013 due to intestinal perforation immediate surgical intervention was required on an infant with BA. HD was performed in order to obtain fast and easier relief. We suggested that PD is more physiological because bile and consumed food are combined in the duodenum. There is no bypassed segment in the intestine. Operation duration is short. There is only 1 anastomosis. We claimed that due to low bacterial content of duodenum, infection risk should be low. Prospective wide series of comparison between conventional Kasai and suggested operation is needed.

154 - PA
Title: Pancreatectomy for Solid pseudopapillary neoplasms of the pancreas in children
Authors: Sinobol Chusilp, MD(1), Katawaetee Decharun, MD(2), Paisarn Vejchapipat, MD(3)
Institutions: Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok(1), Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok(2), Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok(3)
Category: Hepatobiliary Surgery
Keywords: Solid pseudopapillary neoplasms of the pancreas,Children,Pancreatectomy
Aim of the Study: Solid pseudopapillary neoplasms (SPNs) are very rare pancreatic tumors in children. We present clinical presentation, tumor characteristic, surgical management and outcome of SPNs in our institute. **Methods:** Retrospective review of children with SPNs who underwent pancreatic resection between January 2005 and December 2015 was conducted. **Main Result:** There were 4 patients (3 males, 1 female) undergoing pancreatectomy for SPNs with median age of 11.5 years (10-14 years). Presenting symptoms were abdominal pain (n=4), palpable abdominal

mass (n=2) and vomiting (n=2). All patients had tumors located at pancreatic body and in 2 of them tumors also involved pancreatic tail. 3 patients underwent distal pancreatectomy and 1 patient underwent central pancreatectomy. The mean size of tumor was 7.75±3.70 cm. No tumor involving surgical margins in all patients nor distant metastasis. There has been no recurrence at median follow-up of 32.6 months (1-57 months). **Conclusion:** Although SPNs are rare, they should be considered in differential diagnosis of pancreatic tumor even in male children. In children, these tumors are usually resectable and pancreatectomy with negative margin provides good prognosis.

155 - PA
Title: A study of clinical and pathological features of biliary atresia patient survival for more than five years with native liver
Authors: Song Sun, MD(1), Ping Xue, MD(2), Shan Zheng, PhD(3), Kuiran Dong, MD(4), Yangyang Ma, MD(5), Lian Chen, MD(6), Xuexin Lu, MD(7)
Institutions: Children's Hospital of Fudan University(1), Children's Hospital of Fudan University(2), Children's Hospital of Fudan University(3), Children's Hospital of Fudan University(4), Children's Hospital of Fudan University(5), Children's Hospital of Fudan University(6), Children's Hospital of Fudan University(7)
Category: Hepatobiliary Surgery
Keywords: biliary atresia,prognosis,pathology
Aim of the Study: The aim of this study was to screen the predictive index associated with different prognosis of biliary atresia (BA) patients. **Methods:** 23 postoperative BA patients survived for more than five years with no evidence of liver disease were enrolled in group A. 21 patients who died from liver failure within one year were included in group B. The clinical data were compared and the liver pathology were evaluated according to a scoring system. **Main Result:** The preoperative gamma-glutamyl transpeptidase (GGT) and albumin in group A were much higher than that in group B (GGT: 906.6 vs. 618.2 IU/l, p=0.00; ALB: 40.5 vs. 37.9g/l, p=0.04), while alkaline phosphatase (ALP) was lower in group A (494.2 vs. 640.7 IU/l, p=0.02). There was no difference in other preoperative liver function indexes between the two groups. Compared to group B, the postoperative total bilirubin (TB) and direct bilirubin (DB) (2 weeks after Kasai procedure) were decreased much more in group A (TB: 52.7% vs. 21.0%, p=0.00; DB: 50.1% vs. 23.5%, p=0.00), while GGT was increased less in group A (52.3% vs. 152.6%, p=0.00). To the total pathological score, there was no significant difference between the two groups (p=0.38), while the score of bile plugs was much higher in group A (0.94 vs. 0.33, p=0.04), and the ductal plate malformation (DPM) was present more frequently in group B (0.06 vs. 0.33, p=0.03). **Conclusion:** A sharp decrease of TB and DB within 2 weeks postoperatively predict a good long-term prognosis, while a significant increase of GGT with lower preoperative base predict poor long-term prognosis. The appearance of bile plugs and absence of DPM might be indicators for favorable prognosis.

169 - PA
Title: Comparison of two operative techniques in girls with inguinal hernia: Laparoscopic percutaneous internal ring suturing procedure vs open high ligation
Authors: Melih Akin, MD(1), Abdullah Yildiz, MD(2), Nihat Sever, MD(3), Cetin A Karadag, MD(4), Meltem Kaba, MD(5), Mesut Demir, MD(6), Mete Genc, MD(7), Ali I Dokucu, MD(8)
Institutions: Istanbul Sisli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(1), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(2), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(3), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(4), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(5), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(6), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(7), İstanbul Şişli Hamidiye Etfal Training and Research Hospital, Pediatric Surgery Clinic(8)
Category: Laparoscopy and Robotics
Keywords: inguinal hernia,percutaneous internal ring suturing ,high ligation
Aim of the Study: We aimed to compare laparoscopic percutaneous internal ring suturing (PIRS) procedure and traditional high ligation for inguinal hernia (IH) repair in girls. **Methods:** We retrospectively evaluated female patients with IH, who were admitted to our clinic between 2010 and 2016. Clinical data and operative findings were recorded and analyzed. **Main Result:** During study period 293 female patients with IH were operated in our clinic. PIRS procedure (Group I) were performed to 164 (56%) of them. 73 (44.5%) had right, 26 (15.8%) had left and 65(39.6%) patients had bilateral IH. Among this 65 patients, 16 had only right and 11 had only left IH according to preoperative physical examination, which turned out to be bilateral during laparoscopy. In traditional high ligation group (Group II), there were 129 patients. 78 (60.5%) patients had right, 38(29.4%) had left and 13(10%) had bilateral IH. Sliding fallopian tubes were present in 7 of group I and 21 of group II ($p<0.001$), while sliding ovaries were present in 7 of group I and in 16 of group II (p=0.015). Post-operative follow-up period was 37(6-56) months in Group I and 31(6-57) in Group II. 2 patients were reoperated with the suspicion of recurrence but only one had a small aperture. Recurrence was not observed in Group II, while 2 patients were re-operated for contralateral IH. **Conclusion:** Higher ratio of bilateral hernia repair in PIRS procedure can result from over diagnosis during laparoscopy while increased numbers of sliding tubes and ovaries can be due to tractions during open surgery. With comparable recurrence and complication rates and excellent

cosmetic outcomes, PIRS procedure can be the 1st choice in female IH repair.

170 - PA
Title: Laparoscopic partial circular myectomy for congenital esophageal stenosis due to tracheo-bronchial remnants
Authors: Kyoko Mochizuki, MD(1), Masato Shinkai, MD(2), Norihiko Kitagawa, MD(3), Hiroshi Take, MD(4), Hidehito Usui, MD(5), Takashi Hosokawa, MD(6), Etsuko Osawa, MD(7), Kazuki Yoshizawa, MD(8), Mio Tanaka, MD(9), Yukichi Tanaka, MD(10)
Institutions: Department of Surgery, Kanagawa Children's Medical Center(1), Department of Surgery, Kanagawa Children's Medical Center(2), Department of Surgery, Kanagawa Children's Medical Center(3), Department of Surgery, Kanagawa Children's Medical Center(4), Department of Surgery, Kanagawa Children's Medical Center(5), Department of Surgery, Kanagawa Children's Medical Center(6), Department of Surgery, Kanagawa Children's Medical Center(7), Department of Surgery, Kanagawa Children's Medical Center(8), Department of Pathology, Kanagawa Children's Medical Center(9), Department of Pathology, Kanagawa Children's Medical Center(10)
Category: Laparoscopy and Robotics
Keywords: laparoscopic circular myectomy,congenital esophageal stenosis,tracheo-bronchial remnant
Aim of the Study: Congenital esophageal stenosis (CES) is a rare anomaly which required surgical intervention in many cases. An appropriate management and surgical procedure, especially laparoscopic, were not well established. We developed laparoscopic partial circular myectomy of the esophageal lesion in a child with CES caused by tracheobronchial remnant (TBR) which may avoid leakage of anastomosis. **Methods:** Laparoscopic partial circular myectomy was performed in a thirteen-month-old boy having frequent vomiting and failure to thrive. Esophagography and esophagoscopy showed abrupt stenosis at the lower esophageal wall, and balloon dilatation was not effective. The laparoscopic approach to the esophagus was made using four ports and a liver retractor. The narrow segment of the esophagus was laparoscopically detected 1cm above the esophagogastric junction because the segment exhibited whiter and narrower than the other parts of esophagus. The narrow segment was about 1.5 cm in length. Circular muscle layers were partially (two-thirds round) dissected using a hook electrocautery. Small cartilage-like tissues were identified during this procedure. The muscular layers of both ends were sutured interruptedly, and fundoplication was added. **Main Result:** There were no intraoperative complications and no postoperative leakage. Pathologic examination demonstrated an esophageal smooth muscle layer containing accessory glands and cartilage characteristic of trachea, suggesting CES caused by TBR. After four times of balloon dilatation for mild anastomotic stenosis, the patient could eat solid foods without vomiting. **Conclusion:** Laparoscopic partial circular myectomy is safe and effective for short segment of lower esophageal stenosis of patients with CES caused by TBR.

171 - PA
Title: Single-incision laparoscopic appendectomy : Does age present a limiting factor?
Authors: Ahmed khalil Abdallah, MD(1), Mahdi Ben Dhaou, MD(2), Saloua Ammar, MD(3), Hayet Zitouni, MD(4), Mohamed Jallouli, MD(5), Riadh Mhiri, PhD(6)
Institutions: Department of pediatric surgery, Hedi Chaker Hospital(1), Department of pediatric surgery, Hedi Chaker Hospital(2), Department of pediatric surgery, Hedi Chaker Hospital(3), Department of pediatric surgery, Hedi Chaker Hospital(4), Department of pediatric surgery, Hedi Chaker Hospital(5), Department of pediatric surgery, Hedi Chaker Hospital(6)
Category: Laparoscopy and Robotics
Keywords: appendectomy,single-site laparoscopy,age
Aim of the Study: Single-incision laparoscopic appendectomy (SILA) is increasingly used. We report our experience in order to identify if age represent a limit for this technique in the treatment of acute appendicitis in children. **Methods:** A retrospective study was conducted for patients who underwent SILA between september 2013 and December 2015.Two groups were identified by age : Children aged less than 5 years in the first group and more than 5 years in the second one. Gender, weight, histologic study of the appendix, the location of the appendix, the operative time, the time of restoration of the transit, the length of hospital stay and postoperative complications were analyzed **Main Result:** There were 109 patients. In Group 1 (16 patients) the average age was 3 years and 08 months, the average weight of 17.8 kg. Twenty five per cent of appendicitis were complicated. The mean operative time was 53 min ± 32 min, Seventy five per cent of patients had their transit restored in the first 24 hours. The mean hospital stay was 4.13 days. For the second group (93 patients): the mean age was 9.5 years, the average weight was 26.5 kg, The sex ratio was 1.08, the mean operative time was 47 min ± 29 min, the transit was restored in 73% of patients in the first 24 hours, the mean hospital stay was 3.93 days. Postoperative complications was observed in 3% of cases. There was no significant difference between the two groups. **Conclusion:** Laparoscopic single-site appendectomy is a feasable and safe technique. The age of children didn’t represent limits to its feasibility and outcomes.

172 - PA
Title: Minimal invasive surgery for Solid Pseudopapillary Tumor in Children
Authors: Jungman Namgoong, MD(1), DaeYeon Kim, MD(2)

Institutions: Division of Pediatric Surgery, Department of surgery, Asan Medical Center, University of Ulsan College of Medicine(1), Division of Pediatric Surgery, Department of surgery, Asan Medical Center, University of Ulsan College of Medicine(2)
Category: Laparoscopy and Robotics
Keywords: Solid pseudopapillary tumor,minimal invasive surgery,children
Aim of the Study: Solid pseudopapillary tumor (SPT) of the pancreas is rare primary neoplasm of the pancreas with low-grade malignancy. The aim of this study was to evaluate the outcome of minimal invasive surgery (MIS) for SPT in children. **Methods:** A retrospective review was conducted for patients under the age of 18 years old who had undergone laparoscopic pancreas surgery for pathologically confirmed SPT between January 2006 and December 2015. **Main Result:** 24 patients underwent MIS for SPT. The patient group comprised 20 females and 4 males, with a mean age of 14.7±2.8 months. They underwent laparoscopic distal pancreatectomy [LDP (n=16)], robotic distal pancreatectomy [RDP (n=1)], laparoscopic pancreaticoduodenectomy [LPPPD (n=2)], laparoscopic central pancreatectomy [LCP (n=1)] and laparoscopic enucleation of pancreas [LEP (n=4)]. 88.2% of the LDP performed were spleen-sparing LDP (SSLDP) included 4 cases of splenic vessel sacrificing SSLDP (Warshow technique) and Single port SSLDP. Mean duration of surgery was 229.8±145.5 minutes and one patient was performed transfusion. Perioperative mortality was not developed, but 9 patients were involved postoperative complications included fluid collection (n=1), splenic infarct (n=3), pancreatic fistula (n=4), and wound seroma (n=1). Recurrence of tumor was shown in one patient who underwent LEP due to incomplete resection. **Conclusion:** Lately, MIS is being used more and more extensively in pediatric population, and its scope of usage has widened to include pancreas surgery. The prognosis of MIS for SPT was good in pediatric patients. SPT is the most common pancreas tumor in children and malignancy of pancreas is extremely rare in children, therefore pancreatic MIS would be a safe and feasible option for STP in children.

173 - PA
Title: Single-port laparoscopic transposition of lower polar crossing vessels in children wih pelviureteric junction obstruction : preliminary experience
Authors: Saloua Ammar, MD(1), Mahdi Ben Dhaou, MD(2), Hayet Zitouni, MD(3), Mohamed Jallouli, MD(4), Riadh Mhiri, PhD(5)
Institutions: Department of pediatric surgery, Hedi Chaker Hospital(1), Department of pediatric surgery, Hedi Chaker Hospital(2), Department of pediatric surgery, Hedi Chaker Hospital(3), Department of pediatric surgery, Hedi Chaker Hospital(4), Department of pediatric surgery, Hedi Chaker Hospital(5)
Category: Laparoscopy and Robotics
Keywords: vascular hitch,ureteropelvic junction obstruction,single port laparoscopy
Aim of the Study: Our aim was to evaluate our results concerning laparoscopic single port vascular hitch for crossing vessels. **Methods:** Two patients with lower polar crossing vessels in children were operated using single port laparoscopy. **Main Result:** Two girls aged respectively 13 years and 9 years were referred for intermittent abdominal pain. Obstruction was confirmed by MAG3 nephrogram and the presence of crossing vessels by tomodensitometry. The operative time was 95 minutes for the first case and 85 minutes for the second one. Mean follow up period was 22 months. The two patients were totally asymptomatic during follow up. Inthe two cases ultasonography showed an improvement of the pelvic dilatation and of the kidney fonction. **Conclusion:** Single-port laparoscopic transposition of lower polar crossing vessels in children is a feasible alternative for the management of the obstructive pelviureteric junction. Further large studies are required.

174 - PA
Title: Laparoscopic Pyloromyotomy: A study of the learning curve
Authors: Aurelien BINET, MD(1), François BASTARD, MD(2), Clémence KLIPFEL-LHOMMET, MD(3), Pierre MEIGNAN, MD(4), Karim BRAÏK, MD(5), Anne LE TOUZE, MD(6), Caroline SZWARC, MD(7), Thierry VILLEMAGNE, MD(8), Michel ROBERT, MD(9), Hubert LARDY, MD(10)
Institutions: Universitary Hospital of Tours - Gatien de Clocheville Hospital(1), Universitary Hospital of Tours - Gatien de Clocheville Hospital(2), Universitary Hospital of Tours - Gatien de Clocheville Hospital(3), Universitary Hospital of Tours - Gatien de Clocheville Hospital(4), Universitary Hospital of Tours - Gatien de Clocheville Hospital(5), Universitary Hospital of Tours - Gatien de Clocheville Hospital(6), Universitary Hospital of Tours - Gatien de Clocheville Hospital(7), Universitary Hospital of Tours - Gatien de Clocheville Hospital(8), Universitary Hospital of Tours - Gatien de Clocheville Hospital(9), Universitary Hospital of Tours - Gatien de Clocheville Hospital(10)
Category: Laparoscopy and Robotics
Keywords: Laparoscopic Pyloromyotomy,Learning curve,Pyloric stenosis
Aim of the Study: Laparoscopic pyloromyotomy (LP) is a minimally invasive surgical technique used in pyloric stenosis treatment. This technique is safe, effective and does not show more complications than laparotomy. However there are significantly less scars. Nevertheless this technique requires an acquisition period in order to be optimally applied. This study analyses the learning curve of LP. **Methods:** 9 surgeons were retrospectively evaluated on their 40 first LP (including 270 patients). Patient data was recorded, including peroperative data (operation length and complications)

postoperative recoveries (renutrition, vomiting and complications). The learning curves were evaluated and each variable was compared to the different moments of the learning curve. **Main Result:** The learning curve is cut in to 3 stages: I, learning stage (case n°1 to n°10); II, knowledge consolidation period (case n°11 to n°20) and III, perfecting period (starting from case n°21). Operating time significantly decreases with the learning curve. However complications tend to appear after stage I and all the more so in stage II. There is no significant difference concerning long-term postoperative complications. The best results are recorded in stage III. Renutrition time as well as hospital stay length also decreases significantly form the 1Oth procedure with a stabilisation during stage II and III. The recorded postoperative vomiting is independent to the three stages. **Conclusion:** The learning curve of laparoscopic pyloromyotomy is cut in to three stages. Only 10 cases are needed to acquire the gesture. Complications appear after stage I. Renutrition time and hospital stay length decrease after stage I.

175 - PA
Title: Single incision laparoscopic appendectomy modified vs conventional laparoscopic with 3-trochars: a preliminary report
Authors: Leecarlo Millano, MD(1)
Institutions: Tarakan District Hospital, Jakarta(1)
Category: Laparoscopy and Robotics
Keywords: Modified Single Incision Laparoscopic Surgery of Appendectomy,Acute Appendicitis,Indonesia
Aim of the Study: To evaluate the advantages of the novel approach of appendectomy using the modified single incision laparoscopic surgery technique compared to the conventional laparoscopic technique in terms of length of stay, pain and postsurgery infection. **Methods:** We reported 34 patients with uncomplicated acute appendicitis, who underwent single-incision laparoscopic appendectomy-modified from December 2015 to May 2016, excluding those with abscess, perforation, or peritonitis using ultrasonography. We converted SILS-modified into conventional laparoscopic 3-trochars, if there were micro perforated appendix or retrocaecal position of appendix. Outcomes measured were length of stay, pain and postsurgery infection, between this two techniques. **Main Result:** This preliminary report showed that out of the 34 patients, 9 were converted to conventional laparoscopic appendectomy during surgery due to perforated appendicitis and retrocaecal position of the appendix. The mean length of stay of patients that underwent SILS was 2.12 days and 4.23 days for the 9 patients that had the conventional laparoscopic appendectomy ($p<0.001$). There were 2 patients that had SILS that experienced postsurgical infection and none from patients that underwent the conventional laparoscopy. There were 2 patients that complained pain from the SILS procedure and 6 patients complained pain from the conventional laparoscopy. **Conclusion:** This early study showed a trend of shorter length of stay for patients that underwent SILS for non complicated appendicitis. There is a need to conduct further studies that acquire larger sample size to compare these two different interventions (the SILS procedure and conventional laparoscopy)

176 - PA
Title: Minimal access surgery for the repair of selected congenital diaphragmatic hernias
Authors: Dragan Kravarusic, MD(1), Zahavi Cohen, MD(2), Naftali Freud, MD(3)
Institutions: Soroka Medical Center(1), Soroka Medical Center(2), Schneider Childrens Medical Center(3)
Category: Laparoscopy and Robotics
Keywords: mas,for ,cdh
Aim of the Study: Congenital diaphragmatic hernias may present early or later with either chronic or acute clinical manifestation. The aim of this presentation is to evaluate our experience with the use of minimal access surgery (MAS) for the repair of selected CDH **Methods:** Retrospective review of 43 consecutive patients who underwent MAS repair over the last 10 years. Their weight ranged from 2.9 to 21 kg and ages from 2 days to 6 years. Twenty two were found incidentally during a chest x-ray, 15 presented with a sudden onset of dyspnea, and six had a history of intermittent vomiting **Main Result:** Morgagni hernia was confirmed in 21 patients, all safely repaired with laparoscopic approach . Bochdalek diaphragmatic hernia found in 9 cases, initially two repaired by laparoscopic approach , one by combined and six via thoracoscopic approach. All done as primary repair, one conversion to open due to large defect , repaired with prosthetic mesh . Hiatal/paraesophageal hernia confirmed in 13 patients. Uneventful repair done in ten cases. Difficulties in visualization / intraoperative complication leaded to conversion in 3 cases. Follow-up chest radiograph demonstrated complete resolution in all cases. In MAS cases the average time to full diet was 36 hours, narcotics were given only in first 24 hours and median hospital stay was 3 days with superior cosmetic results. **Conclusion:** Our summarizing recommendations for MAS approach in the repair of selected CDH is related to their location . Anterior hernias - laparoscopy is safe with excellent outcome. Postero lateral - MAS reserved for carefully selected stable patients with clearance & presence of skilled anesthesiologist. Preferable thoracoscopic over laparoscopic approach. Central - sliding hernias - MAS is accurate for the great majority. In complex cases with organo-axial volvulus or multiple congenital adhesions final repair request safety consideration for conversion to open surgery.

177 - PA

Title: Laparoscopic assisted inguinal hernia repair versus open inguinal herniotomy in children- a prospective randomized controlled study in Sylhet M A G Osmani Medical College Hospital, Sylhet, Bangladesh.
Authors: Shamsur Rahman, MS(1)
Institutions: SYLHET MAG OSMANI MEDICAL COLLEGE, SYLHET.(1)
Category: Laparoscopy and Robotics
Keywords: LAPAROSCOPIC,HERNIA REPAIR,IN CHILDREN
Aim of the Study: To compare laparoscopic assisted hernia repair by Spinocane Needle with open herniotomy in infancy and childhood as regards operative time, hospital stay, postoperative hydrocele formation, recurrence rate, iatrogenic ascent of the testis, and cosmesis. **Methods:** A prospective randomized controlled study was carried out in the Pediatric Surgery Unit of SOMCH from July, 2015 onwards. Total sixty patients with IH were randomized into two equal groups by a random-number table sequence. Group A (n = 30) was subjected to laparoscopic assisted inguinal hernia repair by Spinocane Needle). Group B (n = 30) was subjected to open herniotomy **Main Result:** Sixty patients with inguinal hernia were operated upon by 2 different techniques. Group A (n = 30) was subjected to laparoscopic assisted inguinal hernia repair by Spinocane needle. Group B (n = 30) was subjected to open herniotomy. Among them 51 males and 09 females.. All procedures of group A were completed laparoscopically In group A the patients resumed normal activities within 12 hours after surgery, whereas in group B they resumed normal activities within 24 hours. All patients had uneventful postoperative recoveries and were discharged on the 1st post-operative day. There is significant statistical difference between the studied groups as regards operative time. There were no postoperative complications except hydrocele formation was reported in 01 case of Group B. **Conclusion:** Laparoscopic assisted inguinal hernia repair by Spinocane Needle is feasible, safe and rapid technique. It resulted in marked reduction of operative time, low rate of recurrence, no testicular atrophy, no iatrogenic ascent of the testis, and excellent cosmetic results.

178 - PA
Title: Outcomes during a transition period from open to laparoscopic pyloromyotomy
Authors: Nabil Hussein, MBChB(1), Lucy Henderson, MBChB(2), Nitin Patwardhan, MBChB(3), Haitham Dagash, MBChB(4)
Institutions: Leicester Royal Infirmary(1), Leicester Royal Infirmary(2), Leicester Royal Infirmary(3), Leicester Royal Infirmary(4)
Category: Laparoscopy and Robotics
Keywords: Laparoscopic ,Pyloromyotomy,Analgesia
Aim of the Study: Several studies have suggested that laparosopic pyloromyotomy may have some benefits over an open approach. We compared the outcomes at our institution over a period of transition from the open to the laparoscopic technique. **Methods:** Retrospective case-note review was performed, of all patients undergoing pyloromyotomy at a single tertiary institution over a 5-year period (2010-2015). Demographic data, outcomes, complications, length of stay, time to full feeds and analgesic requirements were analysed. Data are presented as median with range in parentheses. Statistical analysis was by way of Fisher's exact and students' t-test. **Main Result:** A total of 185 pyloromyotomies were performed, with data available for 90 open and 60 laparoscopic procedures. Gestation was 40 (34-42) weeks in both groups. Weight was 3.83 (2.42-5.45) kg in the open and 3.69 (2.38-5.9) kg in the laparoscopic group (p=0.74). Duration of surgery was 42 (16-102) minutes for open and 28 (14-97) minutes for laparoscopic (p = 0.0001). Total paracetamol requirements were 23.5 (0-169.4) mg/kg for open, and 13.9 (0-95.3) mg/kg for laparoscopic (p=0.0083). No post-operative analgesia was required for 23 open, and 29 laparoscopic patients (p=0.005). Complications in the open group included incomplete pyloromyotomy (n=1), wound infection (n=4); and in the laparoscopic group included incisional hernia (n=1), omental port site herniation (n=2) and one suspected perforation with conversion to open although no perforation was found (p=ns). **Conclusion:** There appears to be significantly lower analgesia requirement in laparoscopic pyloromyotomy when compared to open, including a significant proportion of infants who do not require any analgesia following surgery. Our results suggest that where laparoscopic technique is being first introduced, the overall complication rates are not significantly higher, and operative times are significantly shorter, despite the learning curve.

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Title: LAPAROSCOPIC VENTRAL RECTOPEXY FOR RECURRENT RECTAL PROLAPSE IN CHILDREN
Authors: ahmed e fares, MD(1), ayman hussien, MD(2), khaled salah, MD(3)
Institutions: fayoum university(1), cairo university(2), cairo university(3)
Category: Laparoscopy and Robotics
Keywords: LAPAROSCOPIC,VENTRAL ,RECTOPEXY
Aim of the Study: We describe the outcome and postoperative complications of rectopexy in our institution from 2014 to 2015 **Methods:** Patients and Methods Prospectively collected data on laparoscopic ventral mesh rectopexy for recurrent rectal prolapse were analyzed. Ethical committee accepted the study. Hospital records of 7 successive

patients (5 males), who underwent Laparoscopic ventral rectopexy were reviewed. Five patients (39 %) were healthy. In the remaining two patients, rectal prolapse was secondary to myelomeningocele. **Main Result:** Seven consecutive patients underwent laparoscopic ventral mesh rectopexy. No patient required conversion to open. Incontinence improved in two patients No recurrence, constipation or mesh erosion **Conclusion:** The laparoscopic ventral mesh rectopexy is an effective treatment for recurrent rectal prolapse.Length of stay is short. The procedure is safe, feasible, and fast and can be done with improved recurrence rates. short-term results of Laparoscopic ventral mesh rectopexy were good

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Title: POST-ANESTHETIC COMPLICATIONS IN RECOVERY ROOM AT A PEDIATRIC HOSPITAL
Authors: CAROLINA TALINI, MD(1), LUCAS AMADEU BERTOLLO, MD(2), LETICIA ALVES ANTUNES, MD(3), BRUNA CECÍLIA NEVES DE CARVALHO, MD(4), DANIELA BIANCHI GARCIA, MD(5)
Institutions: HOSPITAL PEQUENO PRÍNCIPE(1), (2), (3), (4), (5)
Category: Misc
Keywords: PEDIATRIC ANESTHESIA,ANESTHESIA COMPLICATIONS ,POST-ANESTHESIA RECOVERY
Aim of the Study: During anesthesia recovery patients must be carefully assisted. Usually patients recover well and anesthesia levels slowly reduces but complications during this period can be found. Literature reports that up to 24% of patients admitted to post-anesthesia recovery room can present complications identified in this period. This study aims to evaluate complication rates in pediatric patients. **Methods:** Data was collected by nurses that filled a standardized questionnaire in the recovery room during a two months period. **Main Result:** In total 783 pacients were avaluated, 53,4% were 1-5 years old, 84,2% were sleepily when arived at the immediate postoperative room, and was ofered oxigen suply when it was nedeed. We observed that 14% of the pacients presented complications at the immediate postoperative period including desaturation (5,2%), agitation (5,2%), pain (3,1%), nausea e vomiting (0,25%) and laryngospasm (0,25%). We had no case of bronchospasm neither bleeding. The statistic analisis demonstrated that only14 (5,8% p-value:<0.001) pacients who were submeted to anesthetic blockade had pain on immediate postoperative period. The pacients were divided in to 5 groups (group 1: <1 years old , group 2: 1 -5, group3: 5 – 6, group: 4 6 – 10 and group 5: > 10 years old), the group associated with higher incidence of overal complications were group 2 (47%, p – value: 0.035), laryngospasm were observed only in group 1 (2 pacients, p- value: 0.019). Pacients who underwent general pediatic surgery had more overal complication rate (p-value: <0.001), including pain (p-value0,038), agitation (p-value: 0.005), desaturation (p-value: 0.004) when comparing with orthopedic, otorhinolaringology, oftalmology, oncologic surgeries. **Conclusion:** The results we found emphasize the importance of a multidisciplinary team to assist children submitted to surgical procedures in the recovery room allowing early diagnosis and treatment of complications when needed.

200 - PA
Title: Peripheral Vascular Injuries in Children
Authors: Muthurangam Tindivanam RAMANUJAM, MBBS, MS (Gen. Surg.), MCh (Ped. Surg.), FRACS (1), Srihari Singaravel, MBBS, MS (Paed. Surg.), Fellow in Ped. Urology(2), Ian Yee Yik, MBBS, MS (Gen. Surg.), PhD, Fellow in Ped. Surg.(3), Jutti Chandra Ramesh, MBBS, MS (Gen. Surg.), MCh (Ped. Surg.), FRCS(Edin(4)
Institutions: Professor & Chief Of Paediatric Surgery, University of Malaya Medical Centre, University Malaya(1), Senior Lecturer & Consultant, University of Malaya Medical Centre, University Malaya(2), Associate Professor & Consultant , University of Malaya Medical Centre(3), Formerly University of Malaya Medical Centre(4)
Category: Misc
Keywords: Vascular injuries,peripheral vessels,pseudoaneurysm
Aim of the Study: Six cases of peripheral arterial injuries were treated. The etiology. pathology, clinical features & management are discussed. **Methods:** 4 children presented a few hours after the injury, & 2 presented as aneurysm. 2 were neonates & others were less than 14 years. Injuries involved the femoral artery in 2, axillary in 1, radial in 1, radial & ulnar in 1, & brachial in 1. 4 were following arterial cannulation. Two were due to fall on partly broken edge of a wash basin. Fall over a broken stick was referred 3 weeks later, as an “abscess” in the inguinal region. Pulsatile lesion was a pseudo-aneurysm. It was opened & cleared. The tear in the femoral artery was repaired. The radial artery aneurysm was excised. Post femoral cardiac angiography responded well after dilation with a Fogarty balloon & there was no evidence of any thrombus, possibly subintimal bleed. Two preterm neonates, one with brachial & another with radial & ulnar cannulation didn’t recover. Transected axillary artery was repaired, with interrupted prolene stiches. **Main Result:** Two neonates died. 4 recovered well. **Conclusion:** Arterial injuries are not common in children. Educating the children not to stand on wash basins. Educating medical personnel not to puncture the radial & ulnar arteries in the same hand & brachial artery, especially in preterm neonates is essential to reduce iatrogenic injuries. Any child, who had a penetrating injury at the site of the peripheral vessels should be referred to a center for further management.

201 - PA
Title: Simultaneous Palatoplasty and Premaxillary Setback in Children with Bilateral Complete Cleft Lip and Palate with protruding premaxilla.

Authors: Bijoy K Das, MS(1)
Institutions: CARe medical College hospital(1)
Category: Misc
Keywords: Protruded Premaxilla,Set Back,Bilateral Cleft lip
Aim of the Study: The bilateral cleft lip and nasal deformity has a wide degree of variability in regards to the severity of the cleft. Achieving good results after primary repair in children with complete bilateral cleft lip and palate with protruding premaxilla is a difficult task. The author faced the problems of protruding premaxilla in children whatever the age with bilateral complete cleft lip and observes the failure and complications of repair himself and of others. These factors encouraged the author to carry out simultaneous palatal closure and premaxillary setback in children with bilateral complete cleft of the lip and palate with severely protruding premaxilla. **Methods:** Simultaneous palatoplasty and premaxillary setback were carried out in 20 patients. During palatoplasy, good exposure of the vomer made premaxillary setback easy without compromising the blood supply to it. The premaxilla, after osteotomy, was immobilized in all patients by Kirschner wire fixation; an additional gingivoperioplasty was performed in a few patients. Palatal closure was achieved with two flap techniques. **Main Result:** Proper positioning of the premaxilla was achieved in all patients, with good labial repair was done 4-6 months after the primary palate closure. There were no complications like loss of the premaxilla or vascular compromise. One patient had a postalveolar tiny fistula which healed spontaneously. Follow up period ranged from 6 months to 2 year. **Conclusion:** In managing the children with bilateral cleft lip and palate and a protruding premaxilla, the technique of simultaneous palatoplasty with premaxillary setback is well indicated. This technique is advantageous in achieving good results with fewer procedures and thus reduces the total expenditure and the length of the patient's hospital stay.

202 - PA
Title: Timely tracheostomy and gastrostomy perk up outcome in life threatening giant cervico-oro-facial cystic hygromas
Authors: Kashish Kumar, MCh(1), Shilpa Sharma, MCh, PhD(2), Anjolie Chhabra, MD(3), Devendra K Gupta, MCh(4)
Institutions: All India Institute of Medical Sciences, New Delhi (1), All India Institute of Medical Sciences, New Delhi (2), All India Institute of Medical Sciences, New Delhi (3), All India Institute of Medical Sciences, New Delhi (4)
Category: Misc
Keywords: Giant cervico-oro-facial,Cystic hygroma,Management
Aim of the Study: Cystic hygromas may present in the perinatal period and its management poses great challenge to the pediatric surgeon.To discuss cases of giant cervico-oro-facial cystic hygroma who presented with life threatening airway obstruction over last two years and were managed by multimodal therapy. **Methods:** Two neonates presented to us with giant approximately 15x8x4cm cystic hygromas involving the neck, face and oropharynx leading to respiratory distress at birth and at 3 months of age respectively. After initial stabilization a multimodal treatment involving multi-specialities, helped save the two precious lives- ultrasound guided aspiration, sclerotherapy and surgery were used in both the cases. Also a timely tracheostomy and a gastrostomy were required to tide over the crisis period of acute airway obstruction and to establish nutritional support in view of poor and difficult feeding. **Main Result:** Both the children were discharged after a prolonged stay of an average of 55 days and are now doing well at an average 4 months of out patient department follow up. LASER treatment of oro-pharyngeal lymphangiomatous polyps was done later. **Conclusion:** Giant cervico-oro-facial cystic hygromas presenting with life threatening airway obstruction can be managed successfully by a timely tracheostomy and gastrostomy primarily followed by the multimodal definitive treatment of the lesion. These cases highlight the changing trends in management in developing countries.

203 - PA
Title: Fisher technique in unilateral cleft lip; good results and simple technique
Authors: Ayman Hussien, MD(1)
Institutions: cairo university faaculty of medicine(1)
Category: Misc
Keywords: cleft lip,fisher technique,plastic pediatric
Aim of the Study: The presence of unilateral cleft lip is one of the most common congenital deformities. A broad spectrum of variations in clinical presentation exists. Unilateral cleft lip involves deformity of the lip in addition to the alveolus and nose. Patients with this deformity require short-term care and long-term care and follow-up from practitioners in multiple specialties. Patients may need multiple surgical interventions, from infancy to adulthood, in order to achieve necessary function and aesthetic quality.different techniques used for this deformity, we try to focus on simple and easy technique giving good results **Methods:** 20 patients with unilateral non syndromatic cleft lip with or without cleft palate were operated by the same surgeon using Fisher technique. Results and outcome were evaluated Res **Main Result:** we have found that Fisher technique is simple and easy with good cosmetic results provided good patient selection and the surgeon is experienced **Conclusion:** Fisher technique is simple and easy with good cosmetic results provided good patient selection and the surgeon is experienced

204 - PA
Title: A brief history of foreign body inside kids
Authors: Sifat Zereen Khan, MBBS(1)
Institutions: Dhaka Medical College Hospital, Dhaka.(1)
Category: Misc
Keywords: Foreign body,Ingested FB,Inserted FB
Aim of the Study: Kids are curious. Tasting everything, poking tiny fingers everywhere, sitting and dancing over sharps are their favorite pastimes. They want to experience everything in their domestic environment that might not be so safe. In the year 2015 I am obliged to have a closer intimate look to some the most adventurous in our country. This scientific paper is nothing but a comic relief among all these serious scientific stuff. **Methods:** Descriptive observational study **Main Result:** Ingestion and insertion of foreign body is very common in pediatric age group. Our protocol is to admit the patient and observe. 4 patients in 6 months were treated conservatively. Patients who had ingested FB is treated with stool softener and enema simplex. Serial X-rays done. Only 2 (Case 5 & 6) patients needed surgical removal of inserted FB. **Conclusion:** In pediatric age group patients common presentation with Ingested or Inserted FB is panicking parents with a playful innocent! kid. They should be counseled properly and emphasis should be given on hospital admission and close observation. Patients with foreign object inside body can take a catastrophic turn anytime.

205 - PA
Title: Endoscopic managment of Esophageal fistula complicating esophageal surgeries: Report of cases and review of techniques
Authors: MOHAMMAD SH ALONAZI, MD(1)
Institutions: Prince Sultan Military Medical City, Riyadh(1)
Category: Misc
Keywords: esophagial surgery,Recurrent TEF,Endoscopic glue injection
Aim of the Study: Report of cases and review of available endoscopic techniques for the management of Esophageal fistulae complicating esophageal surgeries **Methods:** Report of three cases of recurrent TEF after repair of type C EA-TEF and one case of Esophago-pleural fistula complicating recurrent achalasia surgery. And review of available endoscopic techniques. **Main Result:** Endoscopic fbrin glue injection was unsuccessful in three cases while endoscopic stenting of the esophagus was succeful in esophago-pleural fitula case **Conclusion:** Endoscopic management of Recurrent TEF should be attempted if the hospital setting and resources allows.

206 - PA
Title: Is division of the short gastric vessels necessary for all cases of laparoscopic Nissen fundoplication in children?
Authors: Khaled SaadEldin Ashour, MD(1), Ahmed Mousa Eshiba, MSC(2)
Institutions: Paediatric Surgery Department, Faculty of Medicine, Alexandria University(1), Paediatric Surgery Department, Faculty of Medicine, Alexandria University(2)
Category: Misc
Keywords: Laparoscopic fundoplication,Short gastric vessels,Nissen
Aim of the Study: In this study, we present the results of laparoscopic Nissen fundoplication in children, performed without division of the short gastric vessels. **Methods:** This was a study of 17 consecutive children (11 boys and 6 girls) performed inAlexandria University Hospital. All children had Laparoscopic Nissen fundoplication without division of the short gastric vessels. After completion of the procedure, the wrap was tested for tightness. All children were followed up for 2 months up to 36 months (median 12 months). **Main Result:** Indications of surgery was as follow: Pure GORD in neurologically normal children (4), GORD with hiatus hernia in neurologically normal children (5), GORD in neurologically impaired children (5), finally, GORD with hiatus hernia in 3 cases. The wrap was undone in 4 children (23.55%) that were mainly in the neurologically impaired children (3out of 4 cases). **Conclusion:** Laparoscopic fundoplication in children can be performed without the need for dividing the short gastric vessels. This has not been associated with a tight or difficult to create wrap intraop-eratively. The incidence or wrap failure was comparable to those reported in the literature regarding children with neurological deficit.

207 - PA
Title: Cleft lip repair with or without using Botulinum toxin type-A injection in upper lip muscles (A Comparative Study)
Authors: Dawlat Emara, MD(2), Malek Abu Sneineh, BDS(3)
Institutions: Cairo University -Kasr ElAiny School of Medicine (2), Cairo University -School of Dentisry (3)
Category: Misc
Keywords: cleft lip,botilinium toxin,lip muscles
Aim of the Study: The purpose of this study is to evaluate the efficacy of botulinum toxin type-A injection in unilateral cleft lip patients on: - Lip scar after surgical treatment of unilateral cleft lip. **Methods:** 30 patients with non syndromic cleft lip was included in this study and were devided into 2 groups : Group A: was injected with type-A botulinum toxin 1-2 U/kg in the muscles of upper lip (orbicularis muscle) before 7 to 10 days of surgical treatment by modified millard cheiloplasty. Gruop B : was with injection of normal saline 7-10 days prior to surgery and done using the same

technique Both groups were evaluated 1 and 6 month postoperatively for scar length and width and were compared to non cleft side of the same patient **Main Result:** In group A 14 patients had their lip length equivalant to the philteral length on the non cleft side while the scar width was less than 2 mm in all cases and no side effects of Botilium toxin injection was recorded in any of the patients. In group B 13 patients had scarlength equivalant to the philteral length on the non cleft side while the scar width was less than 2 mm in 12 cases, **Conclusion:** From our study preoperative botilinium toxin A injection into upper lip muscles in cleft lip repair has proved to be safe and the aethetic results were superior to control group. These results will certainly improve the quality of life of the cleft patients and might alleviate the need for secondary surgeries.

208 - PA
Title: Role of caudal epidural block in Paediatric surgical patients.
Authors: Sarita Singh, MD(1), Vinod Kumar Bhatia, MD(2), Jiledar Rawat, MBBS, MS, MCh Pediatric Surgery(3)
Institutions: King George's Medical University(1), King George's Medical University(2), King George's Medical University(3)
Category: Misc
Keywords: Caudal epidural block,Bupivacain,Tramadol,Postoperative pain
Aim of the Study: To know the quality, duration of analgesia and side effect of Bupivacaine and Bupivacaine-Tramadol combination. **Methods:** Prospective study of year 2013. Twenty four children aged 1-5yrs, and ASA I and II physiologic status were enrolled. The patients were randomly allocated in two groups. Any children having allergy to bupivacaine or Tramadol were excluded. Group A received caudal block with 0.25% bupivacaine 0.5ml.kg−1 and Group B received 0.25% bupivacaine 0. 5ml.kg−1 plus tramadol 2mg.kg−1. Peroperative and postoperative vitals, pain score and side effect were assessed regularly first 24 hours. **Main Result:** While comparing the quality of postoperative analgesia Group A started having mild pain after 3hrs and the pain was significant after 6 hours whereas in Group B the child was pain free for almost 5 hours and started having significant pain after 8 hrs which needed analgesic with oral paracetamol of 10 mg.kg-1. Significant pain if pain score of more than 3. When pain score was plotted against time in a graph, it was seen that the score was 0 upto 2 hrs and then started to increase and reached a score of 3 only after 8 hrs in Group B, where as in Group A the pain score started to attain 3 after 6 hrs. The vitals of patients in both groups remain stable till 24 hours. Nausea and vomiting was slightly more in Group B. **Conclusion:** Our study concluded that caudal administration of bupivacaine along with tramadol significantly increased the duration and quality of postoperative analgesia with children undergoing lower abdominal surgery without producing significant adverse effects

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Title: Paediatric Surgical Clinical Coding. A Closed-Loop Audit.
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Institutions: Norfolk and Norwich University Hospital(1), Norfolk and Norwich University Hospital(2), Norfolk and Norwich University Hospital(3)
Category: Misc
Keywords: Clinical Coding,Hospital Financial Management,Patient Discharge Summaries
Aim of the Study: To identify if our team were providing essential information on Electronic Discharge Letters (EDLs) including essential co-morbidities to allow the coding department to accurately code and prevent financial loss to the department. **Methods:** The first cycle of the audit analysed the last 25 coded EDLs from November 2014 for our department. Findings were presented locally to highlight the importance of accurate EDLs and coding. Intervention included the Information Technology (IT) department altering the EDL software to automatically generate previously entered co-morbidities to ensure these were recorded. The Second cycle analysed 69 EDLs from October 2015. **Main Result:** The first cycle identified 25 patients (M:F 22:3, median age 1.85, range 0.1 to 14.7 years). 1 patient had an incorrect coding which was a potential financial loss of £246. 12% (n=3) patients did not have essential co-morbidities recorded which contribute to increasing the financial tariff of a patient visit and therefore the overall cost. The second cycle identified 69 patients (M:F 56:13, median age 4, range 0 to 16 years). 100% of essential co-morbidities were recorded and 100% of patients were coded correctly. **Conclusion:** Alteration of our EDLs to include automatic generation of previously entered co-morbidities led to 100% completion. No potential financial losses or incorrect clinical codes were identified in the second cycle of our audit.

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Title: Pyriform sinus tract misdiagnosed as an infected cystic hygroma in neonate
Authors: JAEHEE CHUNG, MD(1)
Institutions: Yeouido St.Mary's Hospital, The Catholic University of Korea(1)
Category: Neonatal Surgery
Keywords: pyriform sinus tract,neonate,infected cystic hygroma
Aim of the Study: Pyriform sinus tract is a very rare congenital anomalies presenting as a deep neck abscess, especially, in neonate. It results from a failure to obliterate the third or fourth branchial pouch and these tracts are generally left sided. It could be difficult to differentiate from an infected cystic hygroma in neonate. **Methods:** We report

a pyriform sinus tract case misdiagnosed as an infected cystic hygroma of the right neck in neonate. **Main Result:** This 4-day-old girl was referred at the intensive care unit with swelling and redness of the right side of the neck. She presented with 39°C high fever and slight inspiratory distress during feeding. Physical examination revealed a firm mass of 4 cm in diameter at the anterolateral aspect of the right neck. Broad spectrum intravenous antibiotics was started. Cyst was suspected as a complicated unilocular cystic hygroma through x-ray, ultrasonogram and computed tomography of the neck. It was located between right carotid artery and right lobe of thyroid with anterior displacement of trachea. Needle aspirated cystic fluid were yellowish and turbid. Culture was positive for streptococcus viridans. The size of cyst increased rapidly again after the aspiration and returned to the previous size within 2 days. The excision of cyst was done on 7 days after hospitalization. From postoperative 1 day, feeding started again. Pus discharge drained from the neck wound on postoperative 4th day. On the 8th postoperative day, pyriform sinus tract of the right neck was diagnosed with esophagogram. G-tube feeding was started and continued for 2 weeks. Repeated esophagogram revealed the obliteration of the fistular tract. After bottle feeding for 1 week, she was discharged without recurrence. **Conclusion:** We have to consider pyriform sinus tract as a differential diagnosis of infected unilocular cystic hygroma in neonate.

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Title: Experience with Early Continuous Ultrafiltration in Neonates with Congenital Diaphragmatic Hernia on Extracorporeal Membrane Oxygenation
Authors: Patricio E Lau, MD(1), Stephanie M Cruz, MD(2), Darrell L Cass, MD(3), Sarah E Horne, BS(4), Timothy C Lee, MD(5), Joseph Garcia-Prats, MD(6), Stephen E Welty, MD(7), Oluyinka O Olutoye, MD(8)
Institutions: Baylor College of Medicine, Texas Children's Hospital(1), Texas Children's Hospital(2), Texas Children's Hospital(3), Baylor College of Medicine(4), Texas Children's Hospital(5), Texas Childrens Hospital(6), Texas Children's Hospital(7), Texas Children's Hospital(8)
Category: Neonatal Surgery
Keywords: Congenital Diaphracmatic Hernia,ECMO,Ultrafiltration
Aim of the Study: To evaluate the short term outcomes of continuous ultrafiltration (UF) on extracorporeal membrane oxygenation (ECMO-UF) compared to standard ECMO on patients with congenital diaphragmatic hernia (CDH).
Methods: A retrospective review of CDH cases from January 2004 to January 2015 was conducted at our pediatric tertiary center. Neonates with CDH who required ECMO therapy were included in the analysis. ECMO-UF was started within the first 6-12 hours of ECMO initiation in the Neonatal Intensive Care Unit. Prior to this, UF use was rarely used as rescue modality (ECMO group). Outcomes of patients admitted after 2012 (ECMO-UF group) were compared to the ECMO group. Net fluid balance, nutritional status after 48 hours on ECMO, renal function, survival and long term pulmonary outcomes were assessed. **Main Result:** There were 214 CDH patients during the study period and 62(29%) required ECMO. Of these, 15(24%) had UF initiated within 6-12 hours after ECMO cannulation. Patients in the ECMO-UF group had significantly greater caloric intake with higher TPN rates at 48 hours, 47.7±11.1 vs 65.7±11 ml/kg/day ($p<0.01$), and greater total fluid output on ECMO 2493±1751 vs 3858±2167 ml ($p=0.017$). There was no significant difference in renal function. Patients on ECMO-UF had their CHD repaired at 2 days of life compared to 6 days in the ECMO group. Length of days on ECMO was reduced by 3 days with ECMO-UF. No significance was seem in length of tracheal intubation. Overall 6 month survival was equivalent in both group 62.2 vs 60.9% ($p=0.25$). **Conclusion:** The use of early continuous ultrafiltration allows for better optimization of parenteral nutrition while maintaining a more favorable net fluid balance without adverse effect on renal function. Larger studies may help identify other potential benefits of routine UF in long term outcomes in infants with CDH on ECMO.

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Title: Isolated Full thickness aplasia cutis skull: an unusual case managed with limited resources
Authors: NITIN SHARMA, MS, MCh(1), BASANT CHOURASIA, MD(2), MINI SHARMA, MD(3), Raisur Rehman, DNB(4), Sudhakar chidambaram, MD(5)
Institutions: CM Hospital and medical college, Nehrunagar, Bhilai, India(1), CM Hospital and medical college, Nehrunagar, Bhilai, India(2), Pt JNM Medical College, Raipur(3), CM Hospital and medical college, Nehrunagar, Bhilai, India(4), CM Hospital and medical college, Nehrunagar, Bhilai, India(5)
Category: Neonatal Surgery
Keywords: Aplasia Cutis,Folley's catheter,tissue expander
Aim of the Study: Aplasia Cutis is a known entity. It is associated with the defect in the skin and other features. Isolated full thickness aplasia cutis involving the skull bone is a rare entity. Aim of the study is to present our experience in managing one such case. **Methods:** Our case was a male neonate delivered in periphery and presented to us on the same day with wound over scalp. Examination revealed a 25x25 cm ulcer over the scalp with visible leptomeninges and dural sinus. The defect involved the epidermis, dermis and the skull bone beneath. No other obvious anomaly was present. Investigations to rule out other anomalies were done. It included chest x ray, 2d echo, USG abdomen and pelvis. Owing to the unusual size of the lesion, staged repair was planned for closure using tissue expander. As patient was non-affording tissue expansion using a Folley's catheter was planned. **Main Result:** Folley's catheter was placed beneath the skin intraoperatively over both the parietal bones and was dilated by 5cc every week reaching to 30cc in 6

weeks on outdoor basis. One week after the 30 cc volume second stage was planned and the defect was closed using temporal artery based flaps. The child has been asymptomatic during last follow up. **Conclusion:** Congenital aplasia cutis is a known entity but isolated skull aplasia cutis is rare. We can manage these cases even in limited facilities.

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Title: The conservative treatment of giant omphaloceles – insight gained at a large tertiary care centre in Germany
Authors: Rebecca A Pohle, MD(1), Thomas M Boemers, PhD(2)
Institutions: Department of Paediatric Surgery and Paediatric Urology, Children´s Hospital of Cologne(1), Department of Paediatric Surgery and Paediatric Urology, Children´s Hospital of Cologne(2)
Category: Neonatal Surgery
Keywords: Giant Omphalocele,Paint and wait,conservative treatment
Aim of the Study: This study aimed at analysing the treatment modalities and outcomes of patients treated with a primarily non-operative treatment of giant omphalocele at our institution in the last 7 years. **Methods:** We present a retrospective study of 16 patients with giant omphalocele that were treated with a conservative, primarily non-operative treatment in our institution during the last 7 years. We evaluate the patients gestational age, comorbidities, treatment modalities, complications, length of hospital stay, duration of mechanical ventilation, operative procedure and outcome. We give an overview of the literature on this subject. **Main Result:** 11/16 (68,7%) of the initially non-operatively treated patients could undergo a complete closure of the abdominal wall in one single operation. 2/16 (12,5%) underwent a two-step closure of the abdominal wall, with skin closure first and complete closure later. 3/16 (18,7%) of the patients needed a temporary closure with alloplastic material. The mean age until complete abdominall wall closure was 8,8 months (range: 3 – 41 months). 4 patients developed latent hypothyreoidism during povidone iodine application. 1 patient developed a bowel obstruction due to adhesions. 1 patient had an abdominal compartment syndrome after the resection of the omphalocele sac due to an infection at the age of 3,5 months. Three other patients had a local infection of the cele. 1 patient died 6 months after the complete abdominal wall closure due to an acute decompensation of an associated cardial anomaly. **Conclusion:** Our data suggests that the primarily non-operative treatment of giant omphalocele is feasible, safe and has a low mortality. In accordance to other author´s results, it is a method with which even critically ill patient with relevant comorbitities can be treated, but this method is equally suitable for otherwise healthy neonates or premature infants. The overall outcome is good, and the majority of complications minor.

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Title: The Application of Bishop-Koop procedure in intractable intestinal atresia
Authors: Zhong Wei, MD(1), Zhang Hong, MD(2), Yu Jiakang, MD(3)
Institutions: Guangzhou Women and Children's Medical Center(1), Guangzhou Women and Children's Medical Center(2), Guangzhou Women and Children's Medical Center(3)
Category: Neonatal Surgery
Keywords: Bishop-Koop stoma,intestinal atresia,Z-score
Aim of the Study: To evaluate the outcome of Bishop-Koop procedure application in intractable intestinal atresia
Methods: Forty six intestinal atresia patients received Bishop-Koop procedure from January 2011 to December 2015 in our hospital, 24 were complicated with meconium peritonitis (MP), 18 with intractable intestinal atresia and 4 were re-do cases due to anastomotic leakage or intestinal obstruction. The clinical data was retrospectively analyzed, patients were followed up for 4.6 month. Body weight Z-score was used to assess nutritional status. **Main Result:** The overall survival rate was 93.5% (43/46). Incidence of anastomotic leakage was 4.3% (1/46), high output diarrhea was 7% (3/46), TPN associated cholestasis was 19.6% (9/46). Mean duration before the initial postoperative feeding, duration of TPN and hospital stay was analyzed. Patients with MP was 11.14 days (6-20 days), 14.95 days (5-68 days) and 25 days (10-81 days) respectively; patients with intractable intestinal atresia was 9.92 days (6-18 days), 19.23 (6-65 days) and 30.81 days (13-75 days) respectively; patients of re-do was 8.75 days (6-11 days), 22 days (7-47 days) and 40 days (24-55 days) respectively. The normal number of Z-score was increasing during the recovery period. **Conclusion:** The mortality and morbidity of Bishop-Koop procedure in patients with intestinal atresia turned to be low and the clinical results were satisfied. Bishop-Koop stoma is an appropriate procedure for patients with intractable intestinal atresia.

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Title: Prenatal Diagnosis of Congenital High Airway Obstruction Syndrome - Case Report
Authors: Andrea Mrs Miyasaki, MD(1), Eurico Mr Komatsu, PhD(2), Ides Mrs Sperandio, PhD(3), Mauro Mr Basso, PhD(4), Ricardo Mr Parreira, PhD(5), Sandro Mr Oliveira, MD(6), Karina Mrs Costa, MD(7), Veronica Mrs Zarelli, MD(8), Fernanda Mrs Melo, MD(9)
Institutions: State University of Londrina, Parana(1), State University of Londrina, Parana(2), State University of Londrina, Parana(3), State University of Londrina, Parana(4), State University of Londrina, Parana(5), State University of Londrina, Parana(6), State University of Londrina, Parana(7), State University of Londrina, Parana(8), State University of Londrina, Parana(9)
Category: Neonatal Surgery
Keywords: CHAOS Syndrome,Tracheal atresia,Congenital Syndrome

Aim of the Study: The Congenital High Airway Obstruction Syndrome (CHAOS) is a rare condition characterized by fetal airway obstruction due to tracheal or larynx atresia, subglottic stenosis, laryngeal cyst or laryngeal membrane. The disease is often incompatible with life and leads to death in utero or soon after birth. Prenatal diagnosis is suggested by the ultrasonografic findings that are secondary to the obstruction, such as increased lung echogenicity, dilation of the airways, thinning or reversal of the diaphragm and fetal ascites. The aim of this study was to report the case of a newborn (NB) prenatally diagnosed with CHAOS. **Methods:** Case report A female baby was born with 1455 grams at 36 weeks of gestation by caesarian section. The mother was 33 years old and had no comorbidities. During the pre-natal follow-up, multiple fetal malformations were found at the routine ultrasound and the mother was submitted to magnetic resonance imaging, which found: volume and echogenical increase of the lungs, right hand agenesis, prominent forehead, polidramnia, fetal ascites and multiple interventricular communications, as well tracheal alterations suggestive of atresia. The mother went into premature labor and the cesarean section had a multiprofessional assistance. An EXIT (Ex utero Intrapartum Treatment) cervicotomy was performed: there was a blind-ending trachea about 1 centimeter below the thyroid cartilage and the rest of the organ consisted of a fibrous cord without lumen. The NB died in the delivery room. In addition to the airway malformation, the baby had low implantation of ears and agenesis of the right hand. **Main Result:** Unfortunately the baby died in the delivery room. **Conclusion:** CHAOS is a rare congenital syndrome with high mortality. The prenatal imaging may assist in the diagnosis and treatment planning, which consists of EXIT performed by a multidisciplinary team.

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Title: Scarless one stage trans-anal pullthrough for Hirschsprung’s disease in children.
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Institutions: Sylhet MAG Osmani Medical College, Sylhet, Bangladesh.(1), Sohrawardi Medical College, Dhaka, Bangladesh(2), Sylhet MAG Osmani Medical College, Sylhet, Bangladesh.(3), Sylhet MAG Osmani Medical College Hospital, Sylhet(4)
Category: Neonatal Surgery
Keywords: transanal pullthrough,Hirschsprung’s disease in children,HPD
Aim of the Study: Trans anal pull through is the latest development in the concept of minimally invasive surgery for treatment of Hirschsprung’s disease (HPD). It avoids the multiple stages of operations and the morbidity of stomas of conventional pull through procedures, shortens the postoperative need for medication and duration of hospital stay. This prospective study was designed to evaluate the safety and efficacy of single stage transanal pullthrough in the management of HPD in our perspective. **Methods:** Thirty three children (25 boys, 8 girls) aged 15 days to 2 years underwent transanal pullthrough procedure from May, 2012 to August, 2013 at department of Pediatric Surgery of Sylhet MAG Osmani Medical College Hospital and followed up for 2 years. These patients were evaluated with regard to age, sex, diagnostic tools, length of aganglionic segment, intraoperative details and post operative functional results or complications. **Main Result:** Out come was good in most of the patients. Operating time was 60 -120 minutes. The length of resected bowel was 15-45 cm. Postoperative complications included anastomotic stricture in 3 patients, transient haematuria in 1, fecal soiling and frequent accidents still occur in 1, who showed a steady improvement in continence status. **Conclusion:** The one stage operation is an economic approach because it reduces the number of operations and the length of hospital stay. It is very practical for children in developing countries and may also reduce the level of psychological stress for parents and children by reducing the number of operations and operations without any external scar marks. This operation can also avoid ostomy related complications.

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Title: Aesthetic Reconstruction of the Buttocks after Excision of Huge Sacrococcygeal Teratoma
Authors: Essam A Elhalaby, MD(1), Hussam S Hassan, MD(2), Amel A Hashish, MD(3), Hessham A Almetaher, MD(4)
Institutions: Tanta University(1), Tanta University(2), Tanta University(3), Tanta University(4)
Category: Neonatal Surgery
Keywords: Sacrococcygeal Teratoma,gluteal reconstruction,Star technique
Aim of the Study: Background/Purpose: T Traditionally, surgical technique has focused on complete excision of these highly vascular tumors. There has been little emphasis devoted to the cosmetic result following the traditional “chevron" incision and closure. The aim of this work is to report the aesthetic and functional outcome following an innovative "STAR" shape closure technique. **Methods:** Only huge type I SCT were included. A total of 23 patients with huge SCT were treated during the period from May 2003 to December 2015 at Tanta University Hospital and its affiliated hospitals. One patient died shortly after admission prior to surgery. The principles of surgical technique entailed complete excision of the tumor and coccyx, proper positioning of the anus, and excision of redundant skin and closure in a "STAR" shape. Patients were evaluated as regards to final scar appearance and buttock contour, Fecal and urinary continence, lower limbs sensory and motor function, and parents' satisfaction. The follow up period ranged between 6 months and 12 years **Main Result:** Complete excision of the tumors was achieved in 22patients in this specific group.at median age of 2 days. The histology proved to be benign in all patients, and no recurrence was noted during a follow period ranging between 6months and 12 years. The cosmetic appearance was excellent with normal position of the anus, nearly

normal buttocks contour, faint or hidden of the final scar. Both urinary and fecal normal bowel control was noted in 13 of the 16 patients who were older than one year at most recent follow up visit. **Conclusion:** Great attention should be paid to the closure of the skin after excision of huge SCT. "STAR" technique can minimize buttocks deformity and the unpleasant scars without compromising the functional results.

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Title: One stage anterior sagital anorectoplasty for vestibular fistulas in female children
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Institutions: Sylhet MAG Osmani Medical College, Sylhet(1), Sylhet MAG Osmani Medical College Hospital, Sylhet(2), Sylhet MAG Osmani Medical College, Sylhet(3), Sohrawardi Medical College, Dhaka(4), Sylhet MAG Osmani Medical College, Sylhet(5)
Category: Neonatal Surgery
Keywords: anterior sagital anorectoplasty,vestibular fistulas,anorectoplasty
Aim of the Study: One stage anterior sagital anorectoplasty is a recent advancement for the treatment of ARM with RVF in female children. It avoids the multiple stages of operations and the morbidity of stomas of conventional procedures, shortens the postoperative need for medication and duration of hospital stay. This prospective study was designed to evaluate the safety and efficacy of single stage anterior sagital anorectoplasty for the treatment of ARM with RVF in female children within our limited facilities. **Methods:** Twenty six girls aged 2 months to 1 year underwent anterior sagital anorectoplasty from July, 2012 to August, 2013 at department of Pediatric Surgery of Sylhet MAG Osmani Medical College Hospital and followed up for 2 years. These patients were evaluated with regard to age, diagnostic tools, intraoperative details and post operative functional results or complications. **Main Result:** Out come was excellent in most of the patients. Operating time was 50 -80 minutes. Postoperative complication was anal stenosis in 4 patients. Among them anal dilatation was done in 3 and sigmoid colostomy needed in 1 patient. **Conclusion:** One stage anterior sagital anorectoplasty is both feasible and safe in properly selected children with anorectal malformation with rectovestibular fistula. The technique is easily learned and is associated with excellent clinical results.

PA1-5 | MODERATORS: SAMEH SHEHATA, PATRICIO HERRERA

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Title: Transanastomotic feeding in duodenal atresia is a promising technique to overcome prolonged use of TPN.
Authors: Ahmed Arafa Elsayed, MSC(1), Ayman Hussein Abdelsattar, MD(2), Gamal Eltagy, MD(3)
Institutions: Cairo university(1), Cairo university(2), Cairo university(3)
Category: Neonatal Surgery
Keywords: Duodenal atresia ,Transanastomotic feeding,TPN
Aim of the Study: congenital duodenal atresia is one of the most common intestinal atresia, occurring 1 in 2500-5000 live births.There is massive dilatation of proximal bowel which causes two problems; caliber discrepancy and hypomotility as it fails to pump intestinal contents across anastomosis. Transanastomotic feeding offers a practical solution to start early feeding without prolonged TPN. **Methods:** 20 Neonates diagnosed as duodenal atresia, in Neonatal Surgical Unit of Cairo University Specialized Pediatric Hospital were studied. Cases associated with malrotation and multiple atresia were in type I atresia we did excision of the web , in type II and III we did duodenoduodenostomy , in ten cases there was no transanastomotic tube, in other ten cases transanastomotic tube was inserted. Five cases of them transanastomotic tube via gastrostomy was left for 1-3 weeks, together with nasogastric tube for gastric decompression , in the other 5 cases 2 nasogastric tubes were inserted one transnasal transanastomotic for feeding , the other via mouth. **Main Result:** The 20 cases were included in this study over 2 years, from January 2012 to January 2014. Average operative time for cases of transanastomotic tube via gastrostomy was 90 minutes while in cases without it was 50 minutes. The average time needed until full feeds to be achieved was 4-6 days in the transanatomotic feeding group, either through nasogastric tube or gastrostomy, not orally compared to other group , which was 10 to 20 days. In this cohort, no stricture or leakage was found in both groups. **Conclusion:** Transanastomotic feeding either through gastrostomy or Ryle feeding is more beneficial for cases with duodenal atresia with massive proximal dilatation. It is a safe & easy technique. Despite being a lengthier operation, feeds could be established earlier.

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Title: GASTROINTESTINAL MUCORMYCOSIS: A RARE BUT LETHAL MIMICKER OF NECROTISING ENTEROCOLITIS
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Category: Neonatal Surgery
Keywords: Gastrointestinal Mucormycosis,Necrotising enterocolitis,Neonates

Aim of the Study: Neonatal Gastrointestinal mucormycosis is a rare fungal infection carrying high morbidity and mortality. Clinically, it's indistinguishable from necrotizing enterocolitis, and the only histopathology can diagnose this condition. Till date around 60 cases are reported with only 25-30% survival rate. We report a neonate with gastrointestinal mucormycosis presented to our institute. **Methods:** An extramural, 33 weeker, female, 1st of triplets was admitted in NICU (outside hospital) for respiratory distress. Neonate was started on IV antibiotics and tube feeds. She developed distension of abdomen on day-5 of life, diagnosed as necrotizing enterocolitis and managed conservatively. She was found to have hollow viscus perforation on day 13 of life and referred to us. Child presented in shock. Abdomen was tense and tender. Plain X-ray abdomen showed pneumoperitoneum. Her haemoglobin was 12.3g/dl; the total count was 7150/mm3 with neutrophils 81% and platelet count was 1.56 lakhs/mm3. She was diagnosed as Necrotizing Enterocolitis stage IIIb, resuscitated and posted for surgery. **Main Result:** Intra-operatively, generalized contamination of peritoneal cavity by faeces was found. Distal half of transverse colon and descending colon was sloughed out. Unhealthy colon resected out, peritoneal lavage given, proximal part of transverse colon was brought out as end stoma and healthy sigmoid was brought out as mucus fistula. Neonate didn't recover; she ended up in MODS and expired on POD-2. Intra-operative pus grew pan-resistant enterococcus faecium and Candida.Histopathology of resected segments revealed extensive ulceration of bowel with serositis. Broad fungal elements were seen with angioinvasion at places. Features were consistent with gastrointestinal mucormycosis. **Conclusion:** A high index of suspicion of gastrointestinal mucormycosis is a must in preterm and LBW neonates with NEC having neutropenia. Early aggressive adequate surgery followed by amphotericin-B is the mainstay of treatment. We suggest a frozen section in colonic involvement so that early diagnosis and treatment can be instituted.

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Title: Neonatal perforated appendicitis masquerading as necrotizing enterocolitis: A good disguise?

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Institutions: Le Bonheur Children's Hospital, University of Tennessee Health Science Center, Memphis, TN(1), Le Bonheur Children's Hospital, University of Tennessee Health Science Center(2), University of Tennessee Health Science Center(3), University of Tennessee Health Science Center(4), Le Bonheur Children's Hospital(5), Le Bonheur Children's Hospital, University of Tennessee Health Science Center(6)

Category: Neonatal Surgery

Keywords: Neonatal perforated appendicitis,Neonatal appendicitis,necrotizing enterocolitis

Aim of the Study: To present our experience managing a case of neonatal perforated appendicitis (NPA), which was initially diagnosed as necrotizing enterocolitis (NEC). **Methods:** A 10-day-old, 1890-g male neonate born at 36 weeks' gestation, developed fever, abdominal distention and feeding intolerance along-with pneumatosis intestinalis and pneumoperitoneum on plain abdominal radiographs. A presumptive diagnosis of NEC was made. Intra-operatively, perforated appendicitis was encountered and appendectomy was performed. We reviewed current literature seeking similar cases and identified a subset of cases in otherwise healthy neonates where localized NEC was a considered etiology. **Main Result:** Our literature review identified 85 NPA cases in the last sixty years. Eleven cases were without systemic co-morbidities and attributed to NEC localized to the appendix. Most of these patients were premature (9/11) and abdominal distension was present in all cases on initial exam. Over half of the cases (6/11) displayed pneumatosis and seven cases demonstrated pneumoperitoneum on plain radiographs. 7/11 cases presented with abdominal manifestation in the first week. 7/11 cases were initially misdiagnosed as NEC. Two other cases were misdiagnosed as Hirschprung's disease and bowel obstruction respectively, before intra-operative confirmation of perforated appendicitis. **Conclusion:** NPA is a rarity and usually discovered intra-operatively. The etiology remains unclear. Localized NEC has been described as an etiology of perforated appendicitis in otherwise healthy premature neonates. Most cases occur in association with co-existing morbidities such as inguinal hernia, Hirschsprung's disease, cardiorespiratory failure, and other congenital anomalies. We believe that our 10-day-old preterm neonate without systemic co-morbidities presented with NEC localized to the appendix with resultant perforation. Early laparotomy may be considered in a premature neonate presenting with pneumatosis and/or pneumoperitoneum. In view of increasing intra-peritoneal drain placement for stable NEC, a missed diagnosis of perforated appendicitis may explain the failure of drain placement in a subset of cases. A multi-center prospective study may help answer this question.

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Title: Versajet® hydrosurgery system: a new technique for dermoabrasion of neonatal giant congenital melanocytic nevi (GCMN). A single centre case series

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Institutions: Pediatric Surgery of University Hospital of Ferrara(1), Plastic Surgery University Hospital of Ferrara(2), Pediatric Surgery of University Hospital of Ferrara(3), Neonatal Intensive Care Unit of University Hospital of Ferrara(4), Pediatric Surgery of University Hospital of Ferrara(5)

Category: Neonatal Surgery

Keywords: New tecnique for neonatal dermoabrasion ,Versajet® hydrosurgery system,Giant congenital melanocytic nevi
Aim of the Study: The aim of the study was to report our early experience using the Versajet® hydrosurgery system to achieve dermoabrasion in neonates with giant congenital melanocytic nevi (GCMN). **Methods:** During a 6-years period 5 neonates with GCMN of the trunk and face (mean age: 9.2 days, range: 0 day to 15 days), underwent under general anaesthesia early dermoabrasion procedure with Versajet® at the Pediatric and Plastic Surgery of the St. Anna Hospital of Ferrara. After surgery all patients were admitted to neonatal intensive care units (NICU) and treated like severely burned paediatric patients. All neonates underwent non-adherent dressing change until complete healing. **Main Result:** Mean operating time was 47'(range: 30' to 65'). No complications were observed in the intra-operative period, particularly no need for blood transfusion. The mean NICU hospitalization time was 15 days. Following dermoabrasion the mean time of full epithelisation was 21 days. After a mean follow-up of 12 months good results were noted in all patients: a hypertrophic scar along the column was noted in just 2/5 cases (in both successfully treated with topic corticosteroids) and a wound infection by S. Aureus, healed by intravenous antibiotic therapy, in 1/5. **Conclusion:** In our hand Versajet® hydrosurgery system appears to be a safe and effective procedure to achieve early dermoabrasion in GCMN. Operative time was shorter, blood loos minor, retrieval of a cleavage plane easier and hospitalization shorter compared to traditional techniques.

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Title: Esophageal Atresia and Tracheoesophageal Fistula Tubeless Repair; new highlight in previews procedure at French Medical Institute for Children, Kabul, Afghanistan
Authors: Dunya Moghul, MD(1), Mohammad Dr. Teriq Rahimi, MD, MS | Chief Consultant of Pediatric Surgery Department & Head of Surgery(3), Abdul Wardak Jalil, MD, MS(4), Homyoon Atiq Ghairatmal, MD, MS(5), Mohammad Akbar Sherzad, MD, MS(6), Abdul Wahab Amant, MD, MS(7)
Institutions: French Medical Institute for Children(1), French Medical Institute for Children(3), French Medical Institute for Children(4), French Medical Institute for Children(5), French Medical Institute for Children(6), French Medical Institute for Children(7)
Category: Neonatal Surgery
Keywords: Esophageal Atresia and Tracheoesophageal Fistula ,Tubeless Repair,Esophageal Atresia&Tubeless Repair
Aim of the Study: This study aims to find out whether the presence of tubes can affect the outcome of surgery or not **Methods:** A descriptive comparative study design was conducted; LAMA patients and type1 esophageal atresia were excluded. 72 patients underwent repair (2010 till 2015) at our center, 11 of these patients underwent tubeless repair. Compression based on 4 variables was conducted; hospital stay, early complication, prognosis and late complications **Main Result:** The first group of 61 patients, age mean was 6.56 day range (1 day to 30 days), weight mean was 2.53 kg range (1.30 to 3.70 kg), 54.10% were male, 37.70 had cardiac anomaly, and the most common one was PDA. In 4.95% we find other associated anomaly, 75.41% were operated extra plural. In 42.62% early complications developed (most common sepsis). 29.51% died, the mean hospital stay was 15.43 days range (3 to 41 days), in 24.59% late complications developed (common one esophageal stenosis). In the second group, 11 patients who underwent repair without the use of any tubes, the mean age was in the 4.09 days, range (1 to 9 days), weight mean was in the 2.66 kg range (2.10 to 3.20 kg), 63.64% were male, not any anomaly. Early complications developed in 27.27% of the patients. Mean hospital stay 11days. Of these patients, 81.82% were discharged without any late complications. After running the univariate analysis, Fisher exact test showed the association of type of surgery to hospital stays as 0.02(highly significant) and for late complications as 0.06 (marginally significant). All other stayed insignificant including early complications with P-value of 0.27, death compression as 0.35 **Conclusion:** With the limited number of subjects within the study, we conclude that by attempting to avoid using tubes in the repair of esophageal atresia and TEF can shorten a patient's hospital stay and prevent late complications such as esophageal stenosis

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Title: INTESTINAL STRICTURES AFTER NECROTIZING ENTEROCOLITIS (POST-NEC INTESTINAL STRICTURES) – PROGNOSTIC FACTORS
Authors: Yury Kozlov, MD(1), Vladimir Novozhilov, MD(2), Konstantin Kovalkov, MD(3), David Chubko, MD(4), Polina Baradieva, MD(5)
Institutions: Children's Hospital Irkutsk(1), Children's Hospital Irkutsk(2), Children's Hospital Kemerovo(3), Children's Hospital Krasnoyarsk(4), Children's Hospital Irkutsk(5)
Category: Neonatal Surgery
Keywords: necrotizing enterocolitis,post-NEC intestinal strictures,prognostic factors
Aim of the Study: Necrotizing enterocolitis (NEC) is one of the most serious diseases that occur in the neonatal period. This condition is associated with high mortality and the long history, including the development of postoperative post-NEC intestinal strictures. The objectives of this study are: 1) demonstration of patients with necrotizing enterocolitis, which in the follow up periode developed stenosis of the intestinal tube, and 2) the search of risk factors for this condition. **Methods:** In the scientific work summarizes data from 12 patients (Group I) with a diagnosis of post-NEC intestinal strictures, treated at Irkutsk neonatal surgical center over the past 6 years, starting from January 1, 2010.

These patients were opposed 48 patients with necrotizing enterocolitis (Group II), in which the recovery period after operation proceeded without the formation of intestinal stenosis. In a study we investigated the incidence and risk factors for intestinal strictures after acute phase of necrotizing enterocolitis. **Main Result:** The average incidence of post-NEC intestinal strictures in the specified time period was 20% (N = 12/60). In patients with stenosis of the bowel more frequently than in patients without strictures, recorded the development of systemic inflammatory response during the acute phase of NEC. Inflammatory markers of the acute phase of NEC - thrombocytopenia (<50,000 platelets/ mm3), elevated level of C-reactive protein (>10 mg/l) and procalcitonin in the blood plasma (>10 ng/l) significantly more frequently recorded in the group of patients who subsequently developed intestinal strictures. **Conclusion:** Results of the study show the prevalence of intestinal strictures after acute phase of necrotizing enterocolitis. Research has established prognostic factors of post-NEC strictures in infants associated with markers of systemic inflammatory response of the body in the acute phase of the SEC.

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Title: Sepsis in the Surgical Neonate
Authors: Hemanshoo Thakkar, MBBS, BSc, MRCS(1), Zeshan Rawn, -(2), Hammad Khan, -(3), Manasvi Upadhyaya, FRCS (Paed)(4)
Institutions: (1), (2), (3), (4)
Category: Neonatal Surgery
Keywords: Sepsis,Neonates,Central venous lines
Aim of the Study: Sepsis is a leading cause of neonatal mortality. Surgical neonates may be at a higher risk of sepsis. Our aim was to identify the incidence of sepsis amongst surgical neonates and associated risk factors. **Methods:** This was a prospective study over 34 months; January 2013 to October 2015, assessing all admissions to the neonatal intensive care unit (NICU). Sepsis was defined as a positive blood culture in the clinical setting of infection. Diagnosis, gestational age, presence of central venous line (CVL), weight and the use of antacids were reviewed. Chi Square test was used for statistical analysis, $p<0.05$ was significant. **Main Result:** 450 surgical patients (SP) were identified from 2721 NICU admissions. All patients with necrotising enterocolitis (NEC) were included as SP. The overall incidence of sepsis amongst all patients was 6.6%. SP had a significantly higher incidence of sepsis compared with the non-surgical neonatal patients (11.3% versus 5.7%, $p<0.05$). Significant risk factors for sepsis in SP included: 1) CVL: 34% versus 6%, $P<0.00001$ 2) Low birth weight (weight less than 2500 g): 18% versus 2%, $P<0.00001$ 3) Prematurity (gestation age less than 37 weeks): 19% versus 2%, $P<0.00001$ Antacid use was however not found to be significant (10% versus 11%, $P=0.83$). 71% of all septic episodes in SP were in the context of NEC. The most common pathogens isolated were Staphylococcus epidermis (21%), Enterococcus faecalis (14%), Coagulase negative Staphyloccocus (12%) and Escherichia Coli (11%). **Conclusion:** Surgical neonates overall are more at risk of sepsis. Risk factors include NEC, prematurity, low birth weight and CVL. The most commonly identified pathogen in our study was Staphylococcus epidermis emphasising the importance of strict asepsis in the use of CVL. Our data doesn't support the notion of increased risk of sepsis with the use of antacids.

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Title: MURCS association and Anorectal Malformation: Case report of a female newborn
Authors: Sofia Morão, MD(1), Daniel Virella, MD(2), Fátima Alves, MD(3), Rui Alves, MD(4), João Pascoal, MD(5)
Institutions: Department of Pediatric Surgery, Hospital Dona Estefânia(1), Neonatal Intensive Care Unit, Hospital Dona Estefânia, Centro Hospitalar Lisboa Central(2), Department of Pediatric Surgery, Urology Unit, Hospital Dona Estefânia, Centro Hospitalar Lisboa Central(3), Department of Pediatric Surgery, Hospital Dona Estefânia, Centro Hospitalar Lisboa Central(4), Department of Pediatric Surgery, Hospital Dona Estefânia, Centro Hospitalar Lisboa Central(5)
Category: Neonatal Surgery
Keywords: MURCS association,anorectal malformation,newborn
Aim of the Study: MURCS association, first described by Duncan et al in 1979, is a rare and nonrandom constellation of findings that includes Mullerian duct aplasia, renal aplasia and cervicothoracic somite dysplasia. Identification of one component of the MURCS association suggests the presence of the other associated anomalies which may not be noticed until later in life. Anorectal malformations (ARM) comprise a wide spectrum of diseases that involve the distal anus and rectum as well as the urinary and genital tracts. Levitt and Peña described in 2007 a classification of syndromic ARM that associates these two entities. As it is extremely rare, high suspicion is essential for diagnosis and surgical orientation. **Methods:** We describe a case of a female newborn with 2 hours of life that was referred to our Center with suspected diagnosis of anorectal and renal malformations. **Main Result:** Radiologic investigation revealed agenesis of sacrum and coccyx with tethered cord and left multicystic renal dysplasia. Echocardiogram demonstrated patent ductus arteriosus, tricuspid and pulmonary regurgitation. After evaluation, it was decided to perform a left diversing colostomy. Before surgery, genital inspection detected absence of vaginal orifice and hymen, normally placed urethral orifice and anteriorly located anus at the introitus vaginal as a rectovestibular type fistula. Surgical exploration also revealed right uterine, tube and ovary agenesis with left structures intact. Further investigation showed a normal 46, XX female karyotype, left kidney with 2% function at MAG3 renogram and distal colostogram revealed a rectovaginal fistula with short urogenital sinus. At four months of age, it was performed posterior sagittal anorectoplasty

with identification of a 2-cm-long tubular duplication of rectum. There were no complications in the postoperative period. **Conclusion:** Colostomy prior to the main repair, early repair of ARM and postponed vaginal reconstruction are viable options in a low-weight infant, avoiding complications in an already poor prognosis situation.

254 - PA
Title: Management of the Giant Umbilical Cord: Challenging the need for investigations in the newborn.
Authors: Simone Young, MBBS(1), Patricia Davidson, MS, FRCP, FRACS(2), Anne McGeeChan, FRACP(3), Aniruddh V Deshpande, PhD, FRACS(4)
Institutions: Dept of Paediatric Surgery, John Hunter Children's Hospital, Newcastle(1), Department of Paediatric Surgery, John Hunter Children's Hospital, Newcastle(2), Paediatrics, Maitland Hospital(3), Paediatric Urology and Surgery, John Hunter Children's Hospital, Newcastle(4)
Category: Neonatal Surgery
Keywords: giant umbilical cord,urachus,management
Aim of the Study: Giant umbilical cord (>5cms diameter) is rare. We undertook this study to evaluate the need for investigations and treatment of the giant umbilical cord (GUC) in the newborn period. **Methods:** We present a recent case of GUC and report the results of a systematic review of English literature over the last 60 years. All the reported cases were screened to critically evaluate the findings of postnatal investigations and the authors' rationale for treatment. **Main Result:** Case Report. 28 week antenatal ultrasound revealed a male foetus with a grossly thickened umbilical cord, normal urinary tract and no other anomalies. Following delivery at 35 weeks, a GUC was noted, measuring 10cm x 12cm and weighing an estimated 500gm. An abdominal ultrasound reported air tracking in the urachal remnant and the micturating cystourethrogram was normal. Cord fluid analysis was not suggestive of urine. The GUC was uneventfully ligated. The baby represented 5 weeks later with urinary leakage from the umbilicus and retraction of the umbilicus upon micturition (Rowe sign). Surgical correction of the patent urachus was performed. Literature Review. Search of MEDLINE and Embase identified fifteen cases of GUC over the last 60 years (1953-2013). None had lower urinary tract anomalies despite insistence on postnatal investigations (n= 5). Eight cases underwent surgery at different time periods. The delayed leakage of urine from the umbilical stump in early reports (n=6) resulted in management akin to patent urachus. **Conclusion:** Most giant umbilical cords appear to be associated with normal urinary tracts and hence may not warrant investigations in the newborn period in the absence of abnormalities in the urinary system on antenatal ultrasonography. Significant proportion result in urine leakage from the umbilicus after cord separation and we wonder whether intervention may be avoidable in these based on data which support conservative management of patent urachus in newborns.

255 - PA
Title: Outcomes in the treatment of patients born with esophageal atresia in Bogota, Colombia 2009 - 2013
Authors: Catalina Correa, MD(1), Lina M Lopez, MD(2), Ana M Garcia, MD(3), Gloria M Gracia, MSC(4), Ignacio Zarante, PhD(5)
Institutions: Hospital Militar Central(1), Hospital Militar Central(2), Hospital Militar Central(3), Secretaría de Salud de Bogotá(4), Instituto de Genética Humana, Pontificia Universidad Javeriana(5)
Category: Neonatal Surgery
Keywords: Esophageal atresia,outcome,mortality
Aim of the Study: To describe the outcomes of a cohort of newborns with esophageal atresia in Bogota, Colombia, and determine the mortality rate of this condition in our city. **Methods:** We reviewed data from the Bogota Birth Defects Surveillance and Follow-up Program (BBDSFP) between January 2009 and December 2013 for patients registered with ICD-10 codes Q39.0, Q39.1, and Q39.3. The caregivers of those patients were contacted to answer a phone interview about the child’s current health status and previous medical history. All caregivers gave consent before answering the interview. The following data was collected for analysis: vitality, type of malformation, surgical correction of the anomaly, age at first surgery, the number of operations required, complications, and the number of follow-up visits with pediatric surgery. Complications were defined as anastomosis leak or stenosis, recurrent tracheoesophageal fistula, surgical site infection, pneumonia, tracheomalacia, or death. **Main Result:** We contacted twenty-four patients. The child's mother (77%), father (13%), or grandparent (9%), as the primary caregiver, answered the interview. The type of esophageal atresia was with fistula in 63% (15), without fistula in 21% (5), and unknown in 17% (4). Nineteen patients (90%) underwent surgery for repair of esophageal atresia, and the average age at the time of surgery was 3.2 days (±3.5). Eight of the 19 patients who had surgery died. Four deaths occurred in association to major congenital anomalies, two suffered Edwards’ Syndrome, and two died of sepsis. The mortality in this cohort was 42%. All patients had at least one follow-up visit after surgery. **Conclusion:** Not all patients born with esophageal atresia in Bogota have access to neonatal surgery. The mortality in this cohort is exceedingly high, and it calls for the need to establish centers of excellence to treat congenital anomalies and thus improve short and long-term outcomes of these patients.

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Title: PORCINE, GOAT AND SYNTHETIC TISSUE MODELS FOR NEONATAL SURGICAL SKILLS TRAINING
Authors: Anthony Dr Lander, PhD FRCS(Paed) DCH(1)

Institutions: Birmingham Children's Hospital, Birmingham UK (1)
Category: Neonatal Surgery
Keywords: training,neonatal surgery,simulation
Aim of the Study: We wish to describe some simple porcine, goat and synthetic models for paediatric surgical training. **Methods:** The following models were developed and used by over 180 trainees and 28 trainers over a 15 year period in the UK and in Africa: (1) A simple intestinal anastomosis; (2) A discrepant anastomosis; (3) Two models of duodenal atresia (DA) using (a) an isolated “knuckle” of pig intestine to a de-fatted pig ureter and (b) using goat intestine in a cheap jig; (4) A pig bladder was used to represent the stomach to practice placing a Stamm gastrostomy; (5) A Foley catheter placed in the bladder neck was used to model hypertrophic pyloric stenosis; (6) A pig bladder with its ureters was used to practice reimplantation of the ureters; (7) A model of perforated NEC was made using a fixed length of pig intestine inside a bladder; (8) Models of oesophageal atresia using pig ureter and urethra were developed. Feedback forms were reviewed and summarised. **Main Result:** Porcine intestine has less well developed layers than neonatal bowel making extramucosal stitches a taxing but achievable challenge. The DA models proved repairable and were highly rated by trainees and trainers. The reimplantation model was popular and requires little preparation. The NEC model was well liked and very versatile. The OA TOF models proved the most popular. **Conclusion:** Good porcine and goat tissue models of important operations can be easily prepared and used for high quality surgical training.

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Title: ALTERNATIVE MANAGEMENT OF jejunoileal ATRESIAS
Authors: Dr. Ahmed Arafa Elsayed Rawash, MD(1), Dr. Khaled Kamel Hussein, MD(2), Dr. Tamer Yassin, MD(3), Dr. A Elfiky Assem, MD(4)
Institutions: cairo university(1), cairo university(2), cairo university(3), cairo university(4)
Category: Neonatal Surgery
Keywords: atresia,tapering enteroplasty,TPN
Aim of the Study: To study the outcomes of tapering enteroplasty in jejunal atresia and resection of the ectatic segment in ileal atresia relating to operative time, bowel length, establishment of feeds and duration of parenteral nutrition. **Methods:** From January 2012 to January 2014 all neonates presenting with small bowl atresia type I, II, IIIa were included. Cases with duodenal atresia, or type IIIb & IV were excluded. Jejunal atresia cases underwent tapering enteroplasty with or without plication. All cases of ileal atresia had resection of the ectatic segment. **Main Result:** 30 cases of types I, II, IIIa atresia were included over 2 years. 17 cases of jejunal atresia had a significant proximal dilatation that warranted tapering enteroplasty either excision of seromuscular layer and imbrication of the mucosa or, excision of the mucosa or cases of using staplers, in addition to plication in distal jejunal atresia but simple excision of the proximal segment, with an end to oblique anastomosis was done in the other 5 cases. In 8 cases of ileal atresia, excision of ectatic part. In this cohort we have one case that had an anastomotic leak in the tapering enteroplasty group, and one that had a stricture in the simple resection/oblique anastomosis group **Conclusion:** Tapering enteroplasty for cases with jejunal atresia & excision of dilated part in cases of ileal atresia is more benefit and it is a safe technique, and despite being a lengthier operation, feeds could be established earlier.

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Title: Experience of Antibacterial Treatment of Bone and Joint Sepsis in Newborns
Authors: Gennadiy Dr Khanes, MD(1), Olga Dr Liutko, PhD(2), Iryna Dr Maksakova, MD(3)
Institutions: Ukrainian National Pediatric Hospital OkhMatDyt(1), Research Institute of Orthopedics of Medical Sciences of Ukraine(2), Ukrainian National Pediatric Hospital OkhMatDyt(3)
Category: Neonatal Surgery
Keywords: bone and joint ,newbornes,sepsis
Aim of the Study: Bone and joint sepsis in newborns in Ukraine (up to 20% of infants with purulent infection) makes up 2% of mortality and 10% of orthopedic complications. It is important to start early causal treatment. **Methods:** Over the past 10 years, the etiology of the disease was determined by microbiological, serological and PCR-investigations of synovial fluid and venous blood. Inflammatory activity in the blood was evaluated by CRP and procalcitonin, in the synovial fluid - the detection of inflammatory cells and leukocyte elastase, significant increase in streptococcal infection - as the main etiological factor. CRP-12-96 µmol/l, PCT- 0,5 - 2.3 ng/l - depending on the time of onset. **Main Result:** We determined the significance of Enterococcus as an etiologic factor, CRP-12-96, PCT = 0,5-2,3, leukocyte elastase 4+. It highlighted the flora most sensitive glycopeptides. The sensitivity if antibiotics is below in the diagram. **Conclusion:** 2. The systematic approach to treatment has reduced the mortality rate to 0.2-0%.

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Title: Congenital esophageal stenosis : Is surgery needed?
Authors: Jiledar Rawat, MBBS, MS, MCh Pediatric Surgery(1), Sudhir Singh, MBBS, MS, MCh Pediatric Surgery(2), Shivnarain Kureel, MBBS, MS, MCh Pediatric Surgery(3), Sarita Singh, MBBS, MD ,PDCC pain(4)

Institutions: King George's Medical University(1), King George's Medical University(2), King George's Medical University(3), King George's Medical University(4)
Category: Neonatal Surgery
Keywords: Congenital esophageal stenosis ,Esophageal atresia,Dysphagia
Aim of the Study: To present successful management of CES at our center **Methods:** This study ranged from January 2009 to January 2015. Six patients of CES were included in the study. The patients were diagnosed by contrast swallow study and upper gastrointestinal endoscopy. The management initially included esophageal dilation under fluoroscopy guidance.In case of failed dilation, thoracotomy and resection of the stenotic segment and primary esophageal anastomosis was performed in middle and lower esophageal stenosis and antireflux procedure was added in lower esophageal stenosis too. **Main Result:** Total of 6 cases were included in this study. Four cases had stenosis at middle, and two cases had stenosis at lower part of esophagus. One case of middle esophageal stenosis had associated esophageal diverticulum. Lower esophageal stenosis group patient's also required antireflux surgery as stenosis were very near to gastroesophageal junction. In follow up all patient doing well except one case of middle esophageal stenosis need one stage endoscopic dilatation. **Conclusion:** High index of suspicion is needed to diagnoses this condition. Dilation may not be successful to treat all type all type of CES, for whom surgery will be needed. Long term outcome may be satisfactory.

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Title: High Resolution Anorectal Manometry (HRAM) as part of long-term follow-up after surgical repair of anorectal malformation – a case study
Authors: Thomas Bjørsum-Meyer, MD(1), Niels Qvist, DMSc(2)
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Category: Neonatal Surgery
Keywords: Anorectal malformations,High Resolution Anorectal Manometry,Long-term follow-up
Aim of the Study: Only a few small case series have evaluated the long-term outcome after surgical repair of ARM. High Resolution Anorectal Manometry (HRAM) has been introduced to yield more detailed information on function of the anorectum. A 13-year old girl had previously undergone anorectal reconstruction for a vestibular fistula. According to the Krickenbeck classification of postoperative results after surgical repair of ARM the patient had voluntary bowel movements but suffered from grade 2 constipation requiring laxatives and grade 1 soiling. We aimed to report the results of HRAM as part of long-term follow-up after surgical repair of an anorectal malformation. **Methods:** We used a three-dimensional high resolution manometry assembly (ManoScanTM3D;Sierra Scientific Instruments, Los Angeles, CA, USA). Data were analyzed and displayed using the ManoViewTM software (Given Imaging). **Main Result:** The procedure was well-tolerated by the patient. The mean resting and maximal squeeze sphincter pressures were 35.3 mmHg and 92.2 mmHg respectively. Length of High Pressure Zone(HPZ) was 1.0 cm. Rectoanal index was 1.4 during simulated evacuation. RAIR was present. The first sensation, urge and discomfort were observed at balloon volumes of 30 cm3, 60 cm3 and 90 cm3. **Conclusion:** We found HRAM to be a well-tolerated modality in evaluation of anorectal function as long-term follow-up after surgical repair of an anorectal malformation. Compared to reported normal values for HRAM in healthy children, we found low resting and maximal squeeze pressures. Length of HPZ was short. In contrast to these abnormal findings the patient only had mild bowel symptoms. We have planned a prospective study in 161 patients evaluating HRAM as part of long-term follow-up after surgery for anorectal malformations and will compare findings to anatomy (MRI), functional result and quality of life(questionnaires).

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Title: Evaluate prenatal & postnatal diagnosis of fetal small bowel obstruction and its outcomes: 1 year experience in Dhaka Shishu (Children) Hospital
Authors: Sharmin Seraz, MS(1), KMN Ferdous, MS(2), Md Abdul Aziz, MS(3), M. Kabirul Islam, MS(4)
Institutions: Dhaka Shishu (Children) Hospital & Bangladesh Institute of Child Health(1), Dhaka Shishu (Children) Hospital & Bangladesh Institute of Child Health(2), Dhaka Shishu (Children) Hospital & Bangladesh Institute of Child Health(3), Dhaka Shishu (Children) Hospital & Bangladesh Institute of Child Health(4)
Category: Neonatal Surgery
Keywords: Antenatal diagnosis,Fetal small bowel obstruction,Dhaka Shishu (Children) Hospital
Aim of the Study: Ultrasound has been increasing the antenatal detection of fetal small bowel obstruction.This study is to investigate whether antenatal diagnosis is beneficial compare to postnatal diagnosis of small bowel obstruction in fetus and neonate respectively. **Methods:** This observational study was performed in Dhaka Shishu (Children) Hospital from January 2015 to December 2015. 30 cases over a period of 1 year underwent laparotomy for small bowel obstruction. The selection criteria was all clinically diagnosed cases as well as antenatally diagnosed referred cases. During USG scanning multiple fluid filled centrally placed dilated bowel loops in fetal abdominal cavity associated with polyhydramnios is significant. **Main Result:** Age range was 0 day to 12 days. Male baby: 17 & female baby: 13. Among those babies, type III-A ileal atresia (7 cases) was more common. Other cases were type I ileal atresia 4 cases, type II ileal atresia 2 cases, type IIIB 5 cases, type IV 1 case, meconium ileus 4 cases, duodenal atresia 3 cases, malrotation

with Ladd's band 3 cases and 1 case of jejunal atresia. **Conclusion:** Better prognosis was found in those babies who were diagnosed prenatally. The prognosis is related to the gestational age at delivery, the presence of associated abnormalities and site of obstruction. Once a fetal intra-abdominal mass is suspected, serial ultrasound follow-up is needed. So that a systematic approach to ultrasound diagnosis of fetal intra-abdominal pathology along with coordinated cares and consultations with the gynecologist, neonatologist, and pediatric surgeon, a good perinatal outcome can be achieved.

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Title: SURGICAL TREATMENT FOR TESTICULAR LEYDIG CELL TUMORS IN PEDIATRIC AGE. REPORT OF TWO CASES AND SISTEMATIC LITERATURE REVIEW
Authors: Clara Rico, MD(1), Henar Souto, MD(2), María Cortés, MD(3), Rocío Espinosa, MD(4), Ana L Luis, PhD(5), Jose L Alonso, PhD(6), Pablo Morató, MD(7), Manuel Espinoza, MD(8), juan carlos Ollero, MD(9)
Institutions: (1), (2), (3), (4), (5), (6), (7), (8), (9)
Category: Oncology
Keywords: leydig cell,stromal testicular tumor,testicle sparring surgery
Aim of the Study: To describe our experience in the diagnosis and treatment of testicular leydig cell tumors in pediatric patients. **Methods:** From the 27 testicular tumors diagnosed in our centre during the years 2005-2015, we present two patients with Leydig testicular tumors. One was a 13-year- old boy presenting with increased testicular volume. The other was an 11-year- old boy diagnosed by a casual finding of testicular mass in ultrasound. Systematic literature review was done. **Main Result:** In both patients testicular ultrasound showed intratesticular mass. Tumor markers were negative. Surgical strategy included inguinotomy with preventive clamping of the spermatic cord and exposure of the testicle in a separate operative field. In one patient orquiectomy was done because all the testicle was infiltrated. In the other, ultrasonographic guidance was required because the tumor was not palpable, showing a clearly differentiated mass in the inferior testicular pole. Intraoperative biopsy was sent, showing positive for Leydig cell tumor, therefore sparing surgery was done. In both cases the final anatomopathologic result was stromal Leydig cell tumor. During follow up period, 2- 7 years, there was no evidence of local or metastatic disease. Long-term follow up studies claim that testicle sparing surgery should be used as a first-line treatment modality for Leydig cell tumor whenever possible, and that this fact does not compromise oncologic efficacy. **Conclusion:** 1. Leydig cell tumors are rare form of testicular tumors and they usually have a benign course. 2. Testicle-sparing surgery is indicated in Leydig tumors which leave enough testicular parenchyma free of disease. (partially affecting testicular parenchyma).

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Title: Bukuits Lymphoma presenting as abdominal mass: is primary surgery followed by chemotherapy is better than anterior chemotherapy.
Authors: Vijai Datta Upadhyaya, MD(1), Kumar Basant, MD(2)
Institutions: SGPGIMS(1), SGPGIMS(2)
Category: Oncology
Keywords: lymphoma,chemotherapy,surgery
Aim of the Study: Is the tolerance of chemotherapy is better in cases of intestinal burkuits lymphoma if tumour is resected before chemotherapy or not. **Methods:** We studied 6 pediatric cases of Burkitt's lymphoma (BL) of GI tract from Feb 2011 to March 2015. Patients were registered according to criteria developed by Dawson and colleagues; Following features were noted: extent of disease was determined by history, physical examination, baseline complete hemogram, liver function tests, lactate dehydrogenase (LDH) as a tumor bulk indicator, uric acid, serum electrolytes, bone marrow biopsy, abdominal ultrasound and/or contrast-enhanced computed tomography (CECT) scan of the abdomen. **Main Result:** Six cases of intra-abdominal BL presented with intussusception or luminal obstruction were treated during study time. Common presentation was abdominal distension, lump in abdomen, vomiting, pain in abdomen and loss of weight; none of them had history of fever. All cases presented with intestinal obstruction with or without intussusception on ultrasonography, after preliminary resuscitation was subjected to CT scan followed by exploration. In 50% cases there was intussusception while on chemotherapy so operated in emergency whereas 50% cases presented with bowel mass and were underwent chemotherapy after resection. The recurrent admission during chemotherapy due to low total leucocyte count, abdominal distention and features of neutropenic enterocolitis were seen in 100 % cases which were initially treated with chemotherapy where in only one case one episode of enterocolitis was seen in group B. Overall growth and tolerance to chemotherapy was better in group B. The quality of life was better in patients who received chemotherapy after surgery. **Conclusion:** Quality of life of the patients of intestinal Burkuits lymphoma is better in those patients who had resection of the mass prior to radiotherapy rather than those who are subjected to surgery during chemotherapy regimen though a detailed study is needed to reach a definitive result.

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Title: COMPARATIVE STUDY OF OUTCOMEOF PATIENTS WITH WILMS TUMOR TREATED WITH UPFRONT CHEMOTHERAPY AND UPFRONT SURGERY IN ALEXANDRIA UNIVERSITY HOSPITALS
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Institutions: pediatric surgery unit, alexandria university(9)
Category: Oncology
Keywords: wilms tumor,comparative study,preoperative chemotherapy
Aim of the Study: The aim of is to assess outcome in patients treated with preoperative chemotherapy and patients treated with upfront surgery to compare their effect on overall survival. **Methods:** to deciding which protocol to follow, study was carried out on records for patients aged 1 day to 18 year old suffering from wilm's tumor who were admitted to Alexandria university hospital Pediatric oncology, pediatric urology and pediatric Surgery departments, with a retrospective surveyrecords from 2010 to 2015, Design and editing of the transfer sheet with a(PRISMA flow study) Preferred Reporting Items for Systematic Reviews and Meta-Analyses.Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (11) Qualitative data were described using number and percent. Quantitative data were described using Range (minimum and maximum), mean, standard deviation and median. Comparison between different groups regarding categorical variables was tested using Chi-square test. When more than 20% of the cells have expected count less than 5, correction for chi-square was conducted using Fisher's Exact test or Monte Carlo correction. **Main Result:** A significantly statistical difference was observed for survival between the two studied groups favoring the upfront chemotherapy(86.4%)as compared to the upfront surgery group (59.3%)where P=0.009. As regard complication, 20 cases(74.1%) out of 27 were complicated in the group of patient treated with upfront surgery. Meanwhile, 30 cases (68.2%) out of 44 had complications in patient treated with upfront chemotherapy. Also the incidence of intraoperative complication (rupture) was less in upfront chemotherapy group as compared to upfront surgery group. **Conclusion:** Upfront chemotherapy has superiority over upfront surgery.Asthe patient who started with upfront chemotherapy shown,higher survival rate, less percent in complication, less percent needed for radiotherapy, and less rate in recurrence.

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Title: Management of a Benign Phyllodes Tumor in a 13-Year-Old Girl with Transposition of the Nipple Areola Complex and Breast Reconstruction
Authors: Basak Erginel, MD(1), Burcu Ozden, MD(2), Semen Yesil Onder, MD(3), Secil Yuksel, MD(4), Feryal Gun Soysal, MD(5), Alaaddin Celik, MD(6), Tansu Salman, MD(7)
Institutions: (1), (2), (3), (4), (5), (6), (7)
Category: Oncology
Keywords: Phyllodes Tumor,Pediatric,Nipple transposition
Aim of the Study: Phyllodes tumor is a rare primary tumor of the breast. In children and adolescents, it is even rarer with only 20 cases, treatment of which vary in the literature. **Methods:** We report the case of a 13-year-old female patient with a giant benign phyllodes tumor eroding the bottom of the breast skin and causing nipple retraction. We performed breast conservative surgery by mobilizing the areola, using skin flaps and inserting an implant. **Main Result:** Postoperative healing was uneventful with no loss of the NAC. Macroscopic examination revealed a 17 × 14 × 7.5-cm, well-circumscribed, thinly encapsulated nodular lesion containing solid and cystic parts. Histopathologically there were luminal epithelial and myoepithelial cells with moderately cellular stroma. A typical leaf-like growth pattern was detected. There was no cellular atypia and no stromal or sarcomatous overgrowth. The final diagnosis was benign PT. **Conclusion:** A direct to implant reconstruction can therefore be safely performed with good short term symmetry and repositioning of the NAC but the patient must be informed that future surgery may be necessary to upgrade the implant size or consider autologous reconstruction options, once the contralateral breast is fully developed.

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Title: implantable venous access systems
Authors: diana gvardijancic, MD(1), leon slemensek, RN(2)
Institutions: University medical centre Ljubljana(1), University medical centre Ljubljana(2)
Category: Oncology
Keywords: implantable venous acces port,complications,infection
Aim of the Study: Background: Implantable venous access systems (IVAS) are frequently used when treating children with cancer because they ensure reliable venous access for drawing blood and administering intravenous medications. **Methods:** Method: Retrospectively, we analyzed the use of IVAS in 193 children with hematologic malignant disease or with solid tumors who were patients at the Department of Pediatric Hematology and Oncology at the University Clinical Center in Ljubljana between January 2011 and May 2015. **Main Result:** Results: A total of 210 IVAS were implanted (160 using the cutdown method and 50 the Seldinger method). The total time of IVAS implantation was 123,152 days altogether. The average time of IVAS implantation for any given patient was 586.4 days (spanning from 28 to 1646 days). Complications regarding the use of IVAS occurred in 48 (40.7%) children with hematologic malignant disease in comparison to the 11 (14.7%) children with solid tumors. Short term complications: haematoma 8(3.8%), infection 7(3.3%), dehiscence 5(2.3%), thrombosis 3 (1.4%), pneumothorax 1(0.5%)and subcutaneous inflammation 1(0.5%). In 42 patients with hematologic malignant disease and 2 patients with solid tumors, there were a total of 77 instances of positive blood culture results from IVAS samples. The most common cause of infection was Staphylococcus epidermis and Escherichia coli. The rate of bloodstream infection due to IVAS was 0.63 cases of bloodstream infection per 1000

catheter days. The difference in the presence and number of late complications between the groups was attributed to infections, which were prevalent in the group of patients with hematologic malignant disease. **Conclusion:** Conclusion: Our findings indicated that patients with hematologic malignant disease have more complications than patients with solid tumors, mainly due to infection in relation to IVAS.

PA1-6 | MODERATORS: PREM PURI, TATSUO KURODA

316 - PA
Title: Gastric Teratoma in a Female Infant: A Case Report on a Rare Neoplasm
Authors: Esther A Saguil, MD(1), Jason R Castro, MD(2)
Institutions: Philippine General Hospital(1), Philippine General Hospital(2)
Category: Oncology
Keywords: stomach ,teratoma,gastrointestinal bleeding
Aim of the Study: We present the case of a 7 month old fmale with a gastric teratoma who presented with chronic gastrointestinal bleeding. A review of literature is also included. **Methods:** We describe a case of an infant presenting with severe anemia due to recurrent gastrointestinal bleeding starting at the age of 2 months.. Initial workup (RBC tagged scan, Meckels scan) were non-diagnostic. However, on the fifth month of life, a mass was palpated and patient underwent surgery. **Main Result:** A 7 month old female patient presents with black stools since the age of two months. A mass is palpated in the left upper quadrant of the abdomen . On surgery, a large gastric mass with exophytic and endophytic components is noted. Partial gastrectomy was performed. Histopathology report reveals a mature teratoma. No further treatment was instituted and the patient remains well 2 years after surgery. **Conclusion:** We presen the successful management of an infant with a gastric teratoma. This should be included in the differential diagnosis of patients presenting with intraabdominal tumors in infancy. This is also the first reported case in the Philippine medical literature.

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Title: Outcome of renal tumors among children at single center in a developing country
Authors: Huma Halepota, MBBS, FCPS(1), Arshad Muhammad, MBBS, FCPS, FRCS(2)
Institutions: aga khan Hospital(1), aga khan Hospital(2)
Category: Oncology
Keywords: Renal Tumors, National Wilms tumor study board, Societe international D'oncologie pediatrique
Aim of the Study: To determine the outcome of renal tumors among children in our center and compare the results of treatment on the basis of management proposed by the National Wilms tumor study board(NWST) and the Societe international D'oncologie pediatrique (SIOP) **Methods:** study includes 60 children who presented to the Aga Khan University Hospital(AKUH) with renal tumors between 1988 and 2015(aged 0-15 years). The children were divided into those that were diagnosed with wilms tumor and those that had other renal tumors. Wilms tumor patients were further divided according to the treatment strategies they received ie NWST and SIOP and a clinical evaluation was preformed of all patients. **Main Result:** Tumors mostly presented on the right side (65%) and often presented as an asymptomatic abdominal mass in half of the patient population. The diagnostic work up mainly involved CT imaging alone or in combination with an ultrasound abdomen. 39% of the children with Wilms tumor in the SIOP group presented with stage 3 diseases whereas in the NWST group the majority presented with stage 1 disease. Patients with other renal cancers mostly presented with stage 3 disease. In the SIOP group after the treatment 4(14%) patients had disease reoccurrence and 2 patients died due to disease and chemotherapy complications. In the NWST group, 2(9.5%) patients had disease reoccurrence and 1 patient expired. Overall survival of Wilms patients was >80%. In the other tumors group, 1 patient of Rhabdoid tumor expired 2 patients with renal cell carcinoma developed disease complications. **Conclusion:** In contrast to nonWilms tumors, Wilms tumors are curable in the majority of the patients even with limited resource as in our country. The NWTS and SIOP treatment approaches are almost equally effective at our center however adherence to a single treatment is mandatory for effective treatments

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Title: Pulmonary metastasectomy in pediatric patients
Authors: Basak Erginel, MD(1), Feryal Gun Soysal, PhD(2), Rejin Kebudi, PhD(3), Erbuğ Keskin, PhD(4), Alaaddin Celik, PhD(5), Nuran Salman, PhD(6), Tansu Salman, PhD(7)
Institutions: Istanbul university Istanbul Medical Faculty Department of Pediatric Surgery(1), (2), (3), (4), (5), Pediatrics(6), (7)
Category: Oncology
Keywords: Metastasectomy,Pumonary,Pediatric
Aim of the Study: This study aims to evaluate the outcomes of pulmonary metastasectomy resections in pediatric patients **Methods:** We retrospectively reviewed the medical records of 43 children who were operated on in the Pediatric Surgery Clinic between January 1988 and 2014. Forty-three children (26 boys; 17 girls; mean age 10 ± 4.24 years, range 6 months–18 years) who underwent pulmonary metastasectomy resection were included in the study. The

patients were evaluated based on age, gender, history of disease, surgical procedures, complications, duration of hospitalization, duration of chest tube placement, and procedure outcome. **Main Result:** Indications for pediatric resections were oncological. Metastasis was secondary to Wilms' tumor in 14 patients, osteosarcoma in 7 patients, Ewing's sarcoma in 5 patients, rhabdomyosarcoma in 5 patients, lymphoma in 3 patients, hepatoblastoma in 2 patients, and other tumors in 7 patients. A total of 59 thoracotomies were performed. Approaches utilized included unilateral posterolateral thoracotomy (n = 33), bilateral posterolateral thoracotomy (n = 8), and sternotomy (n = 2). Wedge resection was the procedure of choice (n = 44). In selected cases, 11 segmentectomies, 3 lobectomies, and 1 pneumonectomy were performed. There was no perioperative mortality. One patient suffered prolonged air leak and three patients from fever. All patients received chemotherapy. Radiotherapy was administered to 16 patients (37.2 %). Of those 16 patients, 7 had Wilms' tumor, 6 had Ewing's sarcoma/PNET, and 3 were rhabdomyosarcoma patientDuring a median follow-up of 3 years, the overall survival was 74.4 %. **Conclusion:** Multidisciplinary treatment involving pediatric oncologists, surgeons, and radiation oncologists is necessary to obtain positive results in children who have pulmonary metastases of oncological diseases. Wedge resection is a suitable option for children because less lung tissue is resected.

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Title: Laparoscopic management of intra-abdominal tumors - feasible or not?
Authors: Kashish Kumar, MCh(1), Minu Bajpai, MCh(2), Prabudh Goel, MCh(3), Vikram Khanna, MCh(4)
Institutions: All India Institute of Medical Sciences, New Delhi(1), All India Institute of Medical Sciences, New Delhi(2), All India Institute of Medical Sciences, New Delhi(3), All India Institute of Medical Sciences, New Delhi(4)
Category: Oncology
Keywords: intra-abdominal tumors,laparoscopic management,feasibility
Aim of the Study: The safety of laparoscopic management of pediatric intra-abdominal tumors is still questionable. We study the results of the initial case series of pediatric intra-abdominal tumors managed laparoscopically at our institute from July 2013 onwards. **Methods:** Total 11 children(8-males, 3 females) who presented to us with pediatric intra-abdominal tumors were included. The tumors included Wilms tumor(n:7), neuroblastoma(n:2), adrenal cortical tumor(n:1), ovarian teratoma(n:1).Children were between10months-7years and 4 received neo-adjuvant chemotherapy. A 4port laparoscopic nephrectomy and lymph node sampling for Wilms tumor and adrenalectomy for adrenal tumors was performed. **Main Result:** The tumors were removed in toto with no rupture (except in one). Specimens were retrieved through a lumbar incision(n:8) or an inguinal incision(n=1). All the children are under regular follow up. Two children with Wilms' tumor had recurrence. The neuroblastoma child underwent open surgery for recurrence later. **Conclusion:** Laparoscopy/laparoscopic assisted removal of pediatric intra abdominal tumor is a feasible and safe option. It has the advantage of less postoperative pain, shorter hospital stay and a better cosmetic result. Proper patient selection, port placement and laparoscopic experience are contributary.

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Title: THE ROLE OF LIPID PEROXIDATION AND COAGULATING SYSTEM OF BLOOD WITH HIRSCHSPRUNG'S DISEASE
Authors: Igor Kirgizov, PhD(1), Vadim Dudarev, PhD(2), Sergei Minaev, PhD(3), Filipp Kirgizov, Medical student(4)
Institutions: (1), (2), (3), (4)
Category: Research
Keywords: Hirschsprung's disease ,peroxide oxidization ,micro- and macroreological blood properties
Aim of the Study: Hirschsprung's disease affects the population. The important factor of a progressing disease is an activation of free radicals` processes. Thus, H. Watanebe and co-authors (1990) showed that the activation in erythrocytes of peroxide oxidization of lipids leads to the breach of the micro- and macroreological blood properties. **Methods:** The aim of our research is to study peroxide oxidization of lipids and osmotic resistance of erythrocytes in 30 patients with Hirschsprung's disease. During the investigation of the peroxide oxidization of lipids, the concentration of malonyl dealdehyde and osmotic resistance of erythrocytes were evaluated. **Main Result:** It is determined that in children with chronic large intestine stasis the increase of substance of MDA was registered in serum. The increase of the erythrocytes resistance allows to suppose that the reaction of erythrocytes on the peroxide oxidization of lipids change characterises a high degree of these cells` participation not only in microreology but in the antioxidant defence. **Conclusion:** : The carried out study allows to suppose : 1. The erythrocytic section reaction in the first turn on the processes of peroxide oxidization of lipids leads to the change of the reological properties of blood, to the breaches of microcirculation in the form of thromboses mainly in vessels of the submucous and muscular layers, and it correlates with severity of the disease and process activity. 2. In the complex treatment of chronic large intestine stasis, it is important to prescribe antioxidant drugs, which normalize the reduction of molecular oxygen, stabilize a phospholipid layer of the biomembrane of erythrocytes.

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Title: BLOOD PERFUSION CHANGE AND IMMUNE STATUS STATE IN CHILDREN WITH CHRONIC LARGE INTESTINE STASIS

Authors: Igor Kirgizov, PhD(1), Svetlana Aprosimova, PhD(2), Vadim Dudarev, PhD(3)
Institutions: (1), (2), (3)
Category: Research
Keywords: blood saturation ,CHRONIC LARGE INTESTINE STASIS,immune status
Aim of the Study: Research of blood saturation and the immune indices in 230 children with chronic large intestine stasis (CLIS). **Methods:** 230 children with chronic large intestine stasis (CLIS) were fromed into 3 groups: with compensated, subcompensated, and decompensated forms. **Main Result:** In children with compensated form of CLIS the indices pO2 and sO2 decreased by 32.1 % and 15.2 %, pCO2 increased by 6.8 %.While studying the immune status, the leukocytes rise by 11 % from the norm, the lymphocytes decrease by 5 %, the rise of the phagocyte index by 6 %. Content of IgA and M increased to 14 %. In children with the subcompensated form:pO2 and sO2 decrease by 37.6 % and 37.5 % and pCO2 to grow by 13.1 %. In the immune status there was lowering indicators: T–lymphocytes by 15 %, suppression of T-cells by 5 % , of E–helpers` depression by 12 %, phagocyte activity of neutrophils by 10 %, B–lymphocytes activity decreases in producing of IgA by 30 %. The concentration of IgG and M increased by 7 and 15 %. In children with the decompensated form the deeper breaches took place:pO2 and sO2-45.4 % and 50.3 % and pCO2 rose by 47.1 %. In the immune status: T-lymphocytes by 28 %, T-suppressive populations by 22 % on the background of T-helpers depression by 35 %. The increase of autologic E-rosette-forming cells by 20 %, the phagocyte index by 17 % and increasing of the circulating immune complexes in 1.5 times owing to IgG and M increase by 20 and 18 %. Due to this fact the IgA production is abruptly depressed by 50 %. **Conclusion:** Thus, the immune status change correlates with the oxygen perfusion changes, that indicates on the antioxidant protection lowering of the lymphoc pool [illegible] disbalance in the immune regulatoric section.

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Title: Examination of callus formation after tibial fracture in PACAP (Pituitary Adenylate Cyclase Activating Polipeptide) KO mice
Authors: Jozsa Gergo, MD(1), Kiss Tamas, PhD(2), Helyes Zsuzsanna, PhD(3), Reglodi Dora, PhD(4), Juhasz Tamas, PhD(5)
Institutions: Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(1), Szentágothai Research Center Medical School, University of Pécs(2), Szentágothai Research Center Medical School, University of Pécs(3), Department of Anatomy MTA-PTE “Lendület” PACAP Research Team, and (4), Department of Anatomy, Histology and Embryology, Faculty of Medicine, University of Debrecen, Hungary(5)
Category: Research
Keywords: PACAP,Callus formation,Tibial fracture model
Aim of the Study: We investigated the morphology of callus formation in tibia of PACAP knockout (KO) and wild type (WT) mice and studied the signaling pathways regulating osteogenesis. **Methods:** We performed tibia fracture with special scalpel of WT and PACAP KO mice. Fracturing was 5 mm distal from the proximal articular surface of the tibia and the depth was 0.5 mm. We investigated the mice with CT on the third day to confirm the fracture and on the 7. and 21. days after the operation to examine bone healing and callus formation. **Main Result:** Expression of collagen type I increased in callus formation of WT mice, but lower expression was detected in callus of PACAP KO mice compared with the respective controls. As sign of enhanced bone formation increased protein expression of ALP was detected with Western blot in both genotypes. Elements of the BMP signaling pathway were also investigated and increased BMP2, BMP4 and 6 were detected in callus formation of WT mice, while decreased BMP expressions were shown on days 7 and 21 in PACAP KO mice. Moreover, elevated Smad1 expression was demonstrated in PACAP KO mice. **Conclusion:** Our results indicate that PACAP KO mice show various signs of disturbed osteogenesis and bone healing.

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Title: THE PROBLEM OF CONSTIPATION AND FECAL INCONTINENCE IN CHILDREN IS UNDERESTIMATED AND EASILY UNRECOGNIZED
Authors: Marjolijn Timmerman, Bsc.(1), Monika Trzpis, PhD(2), Paul Broens, MD, PhD(3)
Institutions: University of Groningen, University Medical Center Groningen(1), University of Groningen, University Medical Center Groningen(2), University of Groningen, University Medical Center Groningen(3)
Category: Research
Keywords: Constipation,Fecal incontinence,Children
Aim of the Study: Constipation and fecal incontinence (FI) are common in children, but their prevalence rates vary widely in different populations. Furthermore, their diagnosis is still challenging due to a variety of symptoms and co-existence with other disorders. We aimed to study constipation and fecal incontinence, in terms of prevalence, recognition of these problems by patients, help seeking behavior, and associated symptoms. **Methods:** A cross-sectional study was performed in which 240 Dutch children between 8 and 18 years old filled out the Groningen Pediatric Defecation and Fecal Continence Questionnaire. Children without a history of bowel surgery or comorbidities were classified as ‘healthy’ (n = 212). **Main Result:** In the total population, 18% of the children experienced constipation and 9% had fecal incontinence (FI) (3% retentive and 6% non-retentive). Interestingly, also 18% of the ’healthy’ population experienced constipation, while 3% had retentive FI and 4% had non-retentive FI. Of the total children who

experienced constipation or FI, 52% rated the quality of their bowel habits as good or very good. Moreover, 23% of the total children with constipation and 48% of the total children with FI did not talk to anyone about their complaints. Interestingly, 77% of the constipated children had 'normal' stool frequencies, namely once every two days or once/twice a day, while 75% had 'normal' stool consistencies (Bristol stool chart 3 or 4: sausage with cracks or smooth sausage **Conclusion:** The prevalence of defecation disorders, such as constipation or FI, is relatively high in theoretically 'healthy' children. A large part of children with a defecation disorder does not recognize it as a problem and does not seek help, which can lead to an underestimation of the prevalence of these disorders. Finally, most children with constipation have a normal defection pattern, which probably contributes to problems with the recognition.

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Title: A Large Animal Model of Gastrointestinal Aganglionosis
Authors: Nhan Huynh, MD(1), Joshua Rouch, MD(2), Andrew Scott, MD(3), Elvin Chiang, BS(4), James C.Y. Dunn, MD(5)
Institutions: David Geffen School of Medicine at University of California, Los Angeles(1), David Geffen School of Medicine at University of California, Los Angeles(2), (3), (4), (5)
Category: Research
Keywords: Hirschsprung disease,Aganglionosis,Cell-based therapy
Aim of the Study: Gastrointestinal neuromuscular dysfunction (GND) is characterized by absent or poor coordination of the enteric nervous system throughout the gastrointestinal tract. Stem cell therapies are under current investigation and may offer novel solutions for these conditions. Chemical denervation with benzalkonium chloride (BAC) has been employed to mimic disorders of gastrointestinal aganglionosis, but prior studies have been limited to small animal models. We sought to generate a large animal model of colonic aganglionosis in order to facilitate pre-clinical testing of stem cell therapeutics. **Methods:** With IRB approval, juvenile mini-Yucatan pigs underwent a laparotomy and in situ denervation of an isolated 3 to 6-cm segment of colon with BAC. Methods of BAC delivery included gauze soaking (0.5%-4%) and submucosal injections (0.01%-0.5%). Between 7 and 31 days, colonic segments were retrieved and analyzed for aganglionosis using immunofluorescence for S-100. **Main Result:** BAC chemical treatment induced colonic aganglionosis on the anti-mesenteric circumference by either soaking or submucosal injection techniques. Maintenance of aganglionosis without reappearance of ganglia was confirmed up to 31 days following chemical treatment. Antimesenteric aganglionosis was achieved with BAC 2% soaking that resulted in 75% circumferential ablation and BAC 0.02% submucosal injection that resulted in 50% circumferential ablation. The mesenteric circumference, in contrast, showed ganglionic hypertrophy with BAC 1% soaking and focal ganglionic ablation with BAC 0.5% submucosal injections. **Conclusion:** This large animal model demonstrates effective short-term colonic aganglionosis that may be used to mimic Hirschsprung's and other GND diseases. This is a critical pre-clinical step in the evaluation of stem cell-based cellular transplantation therapies for GND.

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Title: CHANGES ACID-BASE STATUS BLOOD AND IMMUNITY IN CHILDREN WITH CHRONIC COLONIC STASIS.
Authors: Vadim Dudarev, PhD(1), Igor Kirgizov, PhD(2), Filipp Kirgizov, Medical student(3), Sergei Minaev, PhD(4)
Institutions: (1), (2), (3), (4)
Category: Research
Keywords: blood saturation,immune indices ,Chronic colonic stasis
Aim of the Study: Research: the blood saturation with O2 and CO2; the immune indices in children with chronic large intestine stasis. **Methods:** During the complex research of blood saturation with O2 and CO2 and the immune indices in 110 children with chronic large intestine stasis were examined. **Main Result:** the compensated form of CLIS the pCO2 increased by 6.8 %. Leukocytes rise by 11 % from the norm, the lymphocytes decrease by 5 %. In the humoral section the content of IgA and M increased to 14 %. In patients with subcompensated form of CLIS pO2 and sO2 continued to decrease by 37.6 % and 37.5 % respectively, pCO2 – grew by 13.1 %. In the immune there was marked a considerable lowering of the absolute and percentage number T – lymphocytes by 15 %. The concentration of Ig class G and M increased by 7 and 15 % respectively. In children with the decompensated form the deeper breaches took place. pO2 and sO2 indices decreased by 45.4 % and 50.3 % respectively and pCO2 rose by 47.1 %. In the immune status there revealed the reduction of an absolute and percentage content of the total T – lymphocytes by 28 % and a vivid predominance T – suppressive populations by 22 % on the background of T – helpers depression by 35 %. Increase of autologic E – rosette-forming cells by 20 %, the phagocyte index by 17 % and increasing of the circulating immune complexes in 1.5 times owing to IgG and M increase by 20 and 18 %. Due to this fact the IgA production is abruptly depressed by 50 %. **Conclusion:** Thus, the immune status change correlates with the oxygen perfusion changes, that indicates on the antioxidant protection lowering of the "lymphocyte pool" with the succeeding disbalance in the immune regulatoric section.

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Title: Analgesic efficacy of caudal dexamethasone combined with bupivacaine in ilioinguinal pediatric surgery: prospective randomized controlled trial.

Authors: Anouar Jarraya, MD(1), Saloua Ammar, MD(2), Hayet Zitouni, MD(3), Sahar Elleuch, MD(4), Riadh Kolsi, PhD(5), Riadh Mhiri, PhD(6)
Institutions: Department of anesthesiology, Hedi Chaker Hospital(1), Department of pediatric surgery, Hedi Chaker Hospital(2), Department of pediatric surgery, Hedi Chaker Hospital(3), Department of pediatric surgery, Hedi Chaker Hospital(4), Department of anesthesiology, Hedi Chaker Hospital(5), Department of pediatric surgery, Hedi Chaker Hospital(6)
Category: Research
Keywords: Caudal epidural,dexamethasone,pediatric surgery
Aim of the Study: The aim of the study was to assess the efficacy of caudal dexamethasone with bupivacaine 0.25% for postoperative pain relief in children undergoing sub-umbilical surgical procedures. **Methods:** In this prospective randomized double blind study, 56 children of ASA-I class aged from 1 to 5 years scheduled for sub-umbilical surgical procedures were randomly allocated to two groups: - group I received caudal block with : bupivacaine 0.25% (1 ml/kg) with placebo - group II received caudal block with : bupivacaine 0.25% (1 ml/kg) with dexamethasone 0.1 mg/ml. Postoperatively patients were assessed for analgesia and side effects. **Main Result:** Demographic parameters (age, weight, size, sex) and per operative heart rate and blood pressure were similar in both groups. Significantly high levels and prolonged duration of post-operative analgesia were observed from the 6th to the 24th post operative hours in group II (P<0.005) with no increased side effects. **Conclusion:** Caudal dexamethasone may safely improve and prolongs post operative analgesia for sub-umblical surgical procedures in children.

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Title: LONG GAP ESOPHAGEAL ATRESIA AND QUALITY OF LIFE
Authors: Svetlana Aprosimova, PhD(1), Igor Kirgizov, PhD(2), A Gayadaenko, PhD(3), Ilya Shishkin, PhD(4)
Institutions: (1), (2), (3), (4)
Category: Research
Keywords: ESOPHAGEAL ATRESIA ,QUALITY OF LIFE ,after surgical treatment
Aim of the Study: Improvement of surgical treatment in children with relapsing tracheoesophageal fistulas (TEF). Standard appreciate the lives of children after surgical treatment of esophageal atresia in the long term. **Methods:** in the study group included 28 children with congenital abnormalities of the esophagus, the reference group amounted to 13 children. The study group I (children operated by the standard method) (n = 16). The study group II (children operated on using the method further separating intimate underlying tissue) (n = 12). Separately identified 3 patients who underwent extirpation of the esophagus, followed by plastics colon. Assessment of quality of life was assessed in groups, a year after the last stage of surgical treatment with the help of questionnaires. To assess the clinical effect applied endoscopic methods, x-rays, CT. **Main Result:** Clinically in 7,14% of the cases determined stenosis up narrowing 2\3 of the esophagus, 21.4% stenosis was determined to 1/3 of the lumen of the esophagus. achalasia is revealed in 3.57% secondarily formed against the background of persistent stenosis, and histological features of tissues, and in 3.57% was determined chalasia amid short of the esophagus with a pronounced reflux. **Conclusion:** Based on questionnaire data, by three main points characterizing the spiritual, social and psycho-emotional adaptation of the child - the results of "good" (53.57%), «satisfactory» - 14,28% , "excellent " 32.14%.

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Title: THE CHANGES IN THE COAGULATION SYSTEM IN THE POSTOPERATIVE PERIOD IN CHILDREN WITH PERTHES' DISEASE
Authors: Vadim Dudarev, PhD(1), Igor Kirgizov, PhD(2), I Sinyuk, PhD(3), Nikolay Kulikov, PhD(4), Sergei Minaev, PhD(5)
Institutions: (1), (2), (3), (4), (5)
Category: Research
Keywords: COAGULATION SYSTEM ,Osteochondropathy,post-operative period
Aim of the Study: to study the blood coagulative ability and its sections (coagulative, vascular-thrombocyte hemostasis, fibrinolysis and physiological anticoagulants) in the post-operative period. **Methods:** 56 patients were examined after the surgical management (patients with the III roentgenological LCP disease stage). The investigation was carried out on the 3-5 days after the surgical operation. Coagulative, vascular-thrombocyte hemostasis, fibrinolysis and physiological anticoagulants were estimated. **Main Result:** the following changes were revealed in the result of the research. In the coagulative cascade a compensatory hypocoagulation was marked on the trigger factors (II, VII, V, X). There was marked the adenasine-diphosphate aggregation increase to 76 % with the aggregation radius increase, with the aggregation time lowering in 0.7 times and the rise of Willibrandt factor in 2.5 times. Transglyminasa (XIII) rose in 0.5 times. The changes testify about the thrombocytes adhesion increase with III a factor lowering and an increase of endotheliosis. There was also marked hypofibrinolysis. The vivid fibrinolysis (XII a in 2.8 times) was defined. Physiological anticoagulants are moderately lowed owing to proteins (CS). **Conclusion:** The following changes characterize the expressed micro-circulatory breaches of the local character, which demand the coagulative system correction in the post-operative period.

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Title: Conservative treatment with octreotide provived early recovery and reduce to hospital stay in esophageal perforation in children
Authors: RAMAZAN KARABULUT, MD(1), Zafer Turkyilmaz, MD(2), Kaan Sonmez, MD(3), A.Can Basaklar, MD(4)
Institutions: Gazi University Medical Faculty(1), (2), (3), (4)
Category: Thoracic Surgery
Keywords: esophageal perforation,octreotide treatment ,conservative treatment
Aim of the Study: Highlighting the effectiveness of non-operative treatment of esophageal perforation (EP) in children with octreotide. **Methods:** We reviewed retrospectively the records of 9 patients (7 boys and 2 girls of average age 5.83 ± 5.35 years) treated at our institution for EP. **Main Result:** EP developed in 6 patients during dilation of esophageal stenosis (5 of 6 caused by caustic burns). In the other three patients EP developed after nasogastric placement, endotracheal intubation, and during endoscopy for foreign body. In 4 patients dyspnea, in 7 patients tachypnea, in 6 patients fever, in 2 patients chest pain and in 1 patient abdominal pain was observed. Pneumomediastinum was seen in 2 patients, pleural effusion in 4, subcutaneous emphysema in 1, pneumothorax in 4 and severe sepsis was seen in 2 patients. Eight of the 9 perforations sealed spontaneously without any surgical interventions. Oral intake was stopped and broad spectrum antibiotics were initiated; parenteral and/or enteral nutrition by gastrostomy, prompt drainage of pleural effusions or mediastinal abscesses were done when necessary. Though not recommended by literature Octreotide was administered to these patients. Only one patient was operated by other clinic and the patient died during their follow up. The overall length of hospital stay ranged between 5 and 28 days with a median of 11 ± 6,59 days. If the patients who underwent surgical intervention and no given ocreotide theraphy are excluded, the median stay was only 8 days (5 to 12 days). All patients in our series (except patient number 8) survived and still have their native esophagus. **Conclusion:** The initiation of octreotide treatment in the early period after diagnosis of esophageal perforation without surgical intervention in children leads to early improvement.

370 - PA
Title: Bilateral Congenital Lobar Emphysema: Staged Management
Authors: Lindsey Perea, DO(1), Thane Blinman, MD(2), Joseph Piccione, DO(3)
Institutions: Philadelphia College of Osteopathic Medicine(1), Children's Hospital of Philadelphia(2), Children's Hospital of Philadelphia(3)
Category: Thoracic Surgery
Keywords: bilateral congenital lobar emphysema,lobectomy,management
Aim of the Study: Only a few isolated cases in the literature exist to guide management of bilateral congenital lobar emphysema (CLE). Here, we review our experience in infants with bilateral CLE. **Methods:** A case series of all infants presenting with bilateral CLE from 2014-2015 in a single institution. **Main Result:** Four patients underwent operative intervention for bilateral congenital lobar emphysema. All four patients had right middle lobe and left upper lobes affected. Preoperative planning with CTA chest allowed a tailored approach based on specific radiologic features: lung herniation across midline on imaging, mediastinal shift, or volumetric enlargement in comparison to the other diseased lobe. Two patients underwent unilateral right middle lobectomies whereas one patient underwent a unilateral left upper lobectomy, and all are growing normally and on room air more than one year later. The last patient underwent a staged procedure beginning with left upper lobectomy followed by right middle lobectomy two weeks later when the patient exhibited rebound hyper-expansion of the remaining diseased lobe. Thoracoscopy was precluded by mass effect in all patients. No patients underwent emergent lobectomies. One patient had pulmonary interstitial glycogenosis (PIG) in the setting of CLE, first reported case of bilateral CLE with PIG. **Conclusion:** This case series supports a staged, image-guided, physiology-based operative approach to bilateral CLE. Excision of both diseased lobes does not appear to be mandatory, at least in the short term follow up, and comports with a “the least intervention that is the most effective” philosophy. CTA is critical for planning, but the role of V/Q scan is not defined. Thoracoscopy appears to have no role.

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Title: Our approach to esophageal perforation secondary to dilatation of caustic esophageal stricture in children
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Category: Thoracic Surgery
Keywords: caustic esophagitis,Dilatation,Perforation
Aim of the Study: This study aims to review our 20-year experience in children with esophageal perforation and develop an algorithm. **Methods:** The study included 50 patients (32 boys, 18 girls; mean age 4.7±2.6 years; range 1 to 17 years) with esophageal perforation secondary to dilatation of caustic esophageal stricture which was performed between January 1985 and December 2014 in our department. Patients were evaluated retrospectively according to age, sex, time elapsed from intake of caustic substance until admission, time elapsed from dilatation until the diagnosis of perforation, clinical findings, the location of perforation, and method of treatment. **Main Result:**
-Diagnosisofperforationwasconfirmedwithin24hours after dilatation in 40 patients and 24 hours after dilatation in 10 patients. The mortality rate was higher in the late diagnosed group (n=2). Perforations occurred in cervical esophagus in

two patients, abdominal esophagus in four patients, and thoracic esophagus in 44 patients. In 21 patients, esophageal perforation healed conservatively and no surgical intervention was required. Of the 29 patients with chest tube, 15 healed with conservative management, while nine were performed thoracotomy with abscess drainage and decortications, and five were performed esophagostomy and gastrostomy. Of the five patients who were performed esophagostomy and gastrostomy, two underwent colon interposition operation and three underwent delayed anastomosis. **Conclusion:** Esophageal perforation induced by dilatation of caustic esophageal strictures is a serious problem which has to be promptly diagnosed, individualizing the therapeutic approach according to the condition of each patient.

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Title: Thoracoscopy on the right side using a novel technique of selective left Bronchus intubation using single lumen endotracheal tube
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Institutions: CM Hospital and medical college, Nehrunagar, Bhilai(1), CM Hospital and medical college, Nehrunagar, Bhilai, India(2), Pt JNM Medical College, Raipur(3), Pt JNM Medical College, Raipur(4), CM Hospital and medical college, Nehrunagar, Bhilai(5)
Category: Thoracic Surgery
Keywords: Selective left endobronchial intubation,Thoracoscopy,EMPYEMA
Aim of the Study: Right thoracoscopy requires selective left intubation which is technically difficult and demanding. Aim of this study was to develop a modified maneuver for selective left endobronchial intubation using single lumen endotracheal tube and check the efficacy of the maneuver. **Methods:** 31 consecutive children below 12 years underwent right thoracoscopy from June2014- March2015. Endotracheal tube was kept in the freezer for 1 minute to provide slight stiffness. Selective Left bronchial intubation was done using neck extension, head tilt and left chest elevation Maneuver. The tip of tube was rotated by ninety degree after 9 cm to guide it towards left main Bronchus. Maximum of three attempts were tried and ET tube kept in the trachea if selective intubation was not possible. **Main Result:** Selective left bronchus intubation could be done in 28(90%). Follow-up ranged from 3 to 12 months. All cases were asymptomatic at last follow up. Selective intubation could be done on First attempt in 21(75%), second attempt in 5(18%) and third attempt in 2(7%). Mean operating time was 1.30 hours (Range: 1.00-2.30 hours). There were 28 empyema, 2 hydratid cysts and 1 Esophageal duplication cyst. The intercostal drain was kept for a mean period of 3 days (Range: 2-4 days). All the cases were kept nil by mouth for 6 hours and discharged at a mean duration of 5 days (Range 4-6 days). **Conclusion:** Selective left endobronchial intubation could safely and easily be performed using this technique

373 - PA
Title: USE OF LASER FOR THE REMOVAL OF MULTIPLE PULMONARY METASTASES IN CHILDREN
Authors: Henar Souto, MD(1), Jose L Alonso, PhD(2), Clara Rico, MD(3), Rocío Espinosa, MD(4), Andrés Varela, PhD(5), Pablo Morató, MD(6)
Institutions: (1), (2), (3), (4), (5), (6)
Category: Thoracic Surgery
Keywords: laser lung resection,lung metastases,oncologic thoracic surgery
Aim of the Study: Describe the use of laser for the removal of pulmonary metastases in children. We explain the technique and its advantages. **Methods:** We present two patients (age: 9 and 14 y) with bone sarcomas, who received surgery, radiotherapy and chemotherapy, and developed lesions compatible with PM on SCAN and PET-SCAN 2 and 2,5 years after surgery. Metastatic lesions were multiple with intraparenchymatous nodules. (poner numero y tamaño medio y lado) Both patients underwent bilateral thoracotomy and nodule resection with laser. **Main Result:** The pulmonary nodules were removed using the laser by atypical lung resection without complications and uneventful postoperative course. No neumothorax was seen and drainage removal was performed 48 hours after surgery in both cases. Hospital length stay was 4 days. Radiographic follow-up 3 to 4 years after resection showed no residual tumor. **Conclusion:** The removal of pulmonary metastases is essential in order to achieve an increase in the survival rate of patients who suffer from different types of sarcomas. This rate is not affected by the stage, the number of lesions or the number of surgeries needed to attain a complete surgical remission. In some patients a bilateral approach is necessary and thoracoscopy is useless because of the intraparenchymatous location of the lesions Surgical options are varied: thoracotomy, thoracoscopy and VATS. The technique chosen depends on the experience and technical capabilities of each centre. The main advantages of the removal of pulmonary metastases using laser are preservation of functional lung tissue and reduction of blood loss. In our experience this makes it an extremely useful technique available for patients in the pediatric age.

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Title: SURGICAL TREATMENT OF LARYNGOSTENOSIS IN CHILDREN

Authors: Zoricto Mitupov, PhD(1), Alexander Razumovsky, PhD(2), Abdumanap Alkhasov, PhD(3), Saidkhassan Bataev, PhD(4), Victor Ruchkov, PhD(5), Nikita Stepanenko, PhD(6), Roman Ignatyev, PhD(7)
Institutions: (1), (2), (3), Filatov Children's Hospital, Scientific Research Institute for Pediatric Surgery at the Pirogov Russian National Research Medical University and SI RAS, MOSCOW, Russia(4), (5), (6), (7)
Category: Thoracic Surgery
Keywords: laryngostenosis,SURGICAL TREATMENT ,Children
Aim of the Study: Reconctructive surgery for paediatric airway stenosis is constantly evolving, although there are unresolved issues and disputes. **Methods:** 158 children with laryngostenosis aged 1 day to 14 years old were treated from 2000 to 2015in our clinic. The average age was 2,3 years. The largest nosological group consisted of patients with cicatricial laryngostenosis – 81 patient (51,2%), paralysis of the vocal cords 26 patients (16,4%) and laryngomalation 16 patients (10,1%). Operation of choice in our clinic at the scar stenosis of the larynx is laringoplastyusing rib cartilage graft interposition. Extending laringoplasty with rib cartilage graft interposition in theposterior portions of the larynxis perfomed at the bilateral paralysis of the vocal cords. We used the T-shaped tube in cases with extensive and long-existing stenosis of the larynx, especially after repeated operations. **Main Result:** There were performed 95 reconstructive operations. The ratio of decannulation was 88.7% (75 of 85 patients) of all patients with scar stenosis of the larynx and vocal cord paralysis after reconstructive surgery. Additional endoscopic procedure was requiredin 16%. **Conclusion:** Thus, at the present time surgical treatment of chronic stenosis of larynx allows to achieve adequate airway lumen and relieve patients of the tracheostomy cannula in a relatively short time in most patients.

375 - PA
Title: Balloon tracheoplasty for the treatment of congenital tracheal stenosis: Results of five neonatal cases
Authors: Kosaku Maeda, MD(1), Shigeru Ono, MD(2)
Institutions: Kobe Children's Hospital(1), Jichi Medical University(2)
Category: Thoracic Surgery
Keywords: congenital tracheal stenosis,pediatric airway,balloon tracheoplasty
Aim of the Study: Congenital tracheal stenosis (CTS) is an obstructive airway lesion that often presents as a life-threatening emergency. Neonates with CTS sometimes develop respiratory distress and may be difficult to intubate. We used balloon tracheoplasty for emergency airway management in neonates. This study aimed to describe the balloon tracheoplasty procedure and the outcomes following its use as the initial treatment of neonatal symptomatic CTS. **Methods:** A retrospective review of five neonates with CTS who were initially treated with balloon tracheoplasty from 2010 to 2013 was conducted. Five patients with a mean birth weight of 2,117 g (1527 to 3248g) were treated during the study period. Of these, four developed respiratory distress after birth, and all patients had difficult intubations. In all five patients, definitive diagnosis of CTS was made by rigid bronchoscopy and 3D-CT. Under general anesthesia, intraluminal balloon dilation of the stenosis was performed using a balloon catheter designed for angioplasty (PTA). A 3-mm dilating balloon was initially inserted at the site of stenosis, and attempts were made to dilate the narrowed segment. The dilatation diameter was then increased from 3 to 5 mm with appropriate hydrostatic pressure, which ruptured the complete tracheal rings. After dilatation using a 5-mm balloon catheter, a 3- or 3.5-mm (ID) endotracheal tube was able to pass through the stenotic tracheal segment. **Main Result:** A total of nine balloon dilatations were performed in five patients. Following balloon tracheoplasty, two patients were extubated, one was extubated after resection and end-to-end anastomosis following initial balloon dilatation, and one with tracheostomy for tracheomalacia. The remaining patient died from tracheal bleeding associated with congenital heart disease. **Conclusion:** The balloon tracheoplasty may provide an important therapeutic option in selected cases with neonatal symptomatic CTS.

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Title: Comperhensive review of the effect of unilateral thoracoscopic sympathectomy on the outcome of contralateral hyperhidrosis
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Institutions: (1), (2), (3), (4)
Category: Thoracic Surgery
Keywords: hyperhidrosis,thoracoscopic,sympathectomy
Aim of the Study: to evaluate the benefits and drawbacks of right side thoracoscopic sympathectomy on the degree of left palm hyperhidrosis **Methods:** : 23 child complaining of bilateral palmar hyperhidrosis causing considerable embarrassment and interfering with activities as drawing and writing undergo right side thoracoscopic excision of T3 and T4 sympathetic ganglia. 1 week postoperative , all children and their guardians were asked to give a subjective view on the degree of left palm sweating, were the questionnaire contain either improved, worsen and not affected. The mean age at intervention was 10 years (range 6-14 years). The sample size consisted of 13 boys and 10 girls **Main Result:** 30.4% (n=7) reported improved sweating on the left palm, 43.4% (n=10) reported no change in degree of sweating on left palm and were asking for operation on left side after noting much improvement on right side, 21.7% (n=5) complained of worsening compensatory sweating in the face and on the left side, 4.3% (n=1) were lost during follow up **Conclusion:** unilateral thoracoscopic excision of T3 and T4 sympathetic ganglia may sometimes improve

bilateral palmar hyperhidrosis

PA1-7 | MODERATORS: AZAD MATHUR, SHARIFA HIMIDAN

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Title: Correction of the pectus excavatum in children by using Nuss method with Park elevator analogue
Authors: Andriy S. Kuzyk, PhD(1), Andriy Dvorakevych, MD(2), Andriy Nakonechnyy, PhD(3), Yuriy Tkachyshyn, MD(4), Mykola Mykyta, MD(5), Andriy Albokrinov, PhD(6)
Institutions: Danylo Halytsky Lviv National Medical University(1), Lviv Regional Children's Clinical Hospital "Ohmatdyt" (2), Danylo Halytsky Lviv National Medical University(3), Lviv Regional Children's Clinical Hospital "Ohmatdyt" (4), Lviv Regional Children's Clinical Hospital "Ohmatdyt" (5), Lviv Regional Children's Clinical Hospital "Ohmatdyt" (6)
Category: Thoracic Surgery
Keywords: Pectus excavatum,nuss procedure,park modification
Aim of the Study: analyze the effectiveness of using the Park modification of Nuss method in the treatment of pectus excavatum in children. **Methods:** Nuss procedures in Park modification with the usage of the Park's elevator analogue were performed in 17 children in Lviv Regional Children's Clinical Hospital "Ohmatdyt" during the period of time from 2013 to 2015. In all of the cases a traction sternal suture was placed in the deepest point under the visual control, then the external traction was carefully performed. **Main Result:** In the Park modification of Nuss procedure the space between a pericardium and a sternum extends and the processes of retrosternal tunneling and bar pulling are visually better controlled, consequently, there is less chance of pericardial injuries. The data was based on 17 patients diagnosed with pectus excavatum. All 17 patients (15 boys and 2 girls), aged 11-18, suffering from mild to severe symmetrical deformities were operated with Nuss-Park method under visual control. In all of the cases an external elevator traction and introducer with the thread for bar pulling were used and only one bar placed. All the bars were put from the right to the left. During the postoperative period the following complications were observed: partial pneumothorax (n=4), metalosis (n=1). In one case a premature removal of the plate was performed because of metalosis. The mean hospitalization time was 8,59 days **Conclusion:** The pectus excavatum surgical correction method of using the Nuss-Park modification is miniinvasive. This modification reduces the chance of injuring of heart and vessels. The method doesn't require long term hospitalisation and provides the patients' fast physical and psychosocial rehabilitation.

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Title: The treatment of residual pericystic cavity in pediatric patients with pulmonary echinococcosis with the method "non-capitonnage" without closure of the bronchial opening
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Category: Thoracic Surgery
Keywords: echinoccoccus,cavity,residual
Aim of the Study: Determination of the efficacy and safety of "non-capitonnage" method of residual pericystic cavity without closure of bronchial opening closing compared to the classic "capitonnage" method with closure of bronchial opening in the treatment of pediatric lung echinoccoccosis. **Methods:** The study included 80 patients. 40 patients (group A) were subjected to non-capitonnage treatment of residual cavity without closure of bronchial opening. 40 patients had narrowing of residual pericystic cavity with closure of bronchial opening (group B). We analyzed the duration of procedure, administered blood , drainage length, secretion, duration of drainage fistula, the time required for reexpansion of lungs, and complications : empyema, atelectasis, fever, wound infection. Postoperative effectiveness: record of length of stay in the intensive care unit and hospital stay, and the control radiological findings six months after surgery. **Main Result:** Man-Vitni's U test confirmed a statistically significant difference between the results of groups, p = 0.0001. It was recorded a larger amount of fluid drained in the control group. Man-Vitni's U test revealed a statistically significant difference in the amount of drained fluid between groups, p = 0.0001. In the study group there were no cases of postoperative pulmonary atelectasis, while in the control group were 16 (40.0%) . Mean time to reexpansion of lung using the control radiological findings of lung was in study group (Md = 11.000 days, n = 40) and control (MD = 16.000 days, n = 40) group Variable effectiveness of the operational methods: in the control group subjects were statistically significantly longer resided in the intensive care unit (p = 0.0003). Subjects in the control group had significantly longer hospitalization (p=0.0001). **Conclusion:** The treatment of residual pericystic cavity of pulmonary echinoccocus in children, should be the method of non-capitonnage due to the rapid overlaying of residual pericystic cavity by epithelial cells originating from surrounding pleura and lung parenchyma.

379 - PA
Title: Thoracoscopy at periphery in Chhattisgarh: Challenges and outcomes
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Institutions: CM Hospital and medical college, Nehrunagar, Bhilai(1), CM Hospital and medical college, Nehrunagar, Bhilai, India(2), CM Hospital and medical college, Nehrunagar, Bhilai, India(3), Pt JNM Medical College, Raipur(4)
Category: Thoracic Surgery
Keywords: THORACOSCOPY,SELECTIVE ENDOBRONCHIAL INTUBATION,EMPYEMA
Aim of the Study: Thoracoscopy requires selective bronchial intubation and a sophisticated technical setup. It is technically difficult and demanding in pediatric age group. This study was designed to assess the difficulty and feasibility of performing thoracoscopy using modified intubation maneuver, modified position and technique. **Methods:** 47 consecutive children below 12 years underwent right thoracoscopy from June 2014-November 2015. All the procedures were done using a modified technique of selective endobronchial intubation. The position used was 45 degree tilt. The infrastructure used included a 5mm telescope, single chip camera, a halogen light source, suction apparatus and a 14 inch television as monitor. CO2 insuflation was not used due to unavailability and ports were kept open instead to allow air to take the space and help in dissection. Endotracheal tube was kept in the freezer for 1 minute to provide slight stiffness for selective intubation. Problem encountered with respect to assistance, blood loss, operating time, dissection and vision were recorded based on a scoring system **Main Result:** Right thoracoscopy was performed in 39 and left in 8. Follow-up ranged from 1 to 17 months. Age range was from 18 – 144 months. All cases were asymptomatic at last follow up. Mean operating time was 1.30 hours (Range: 1.00-2.30 hours). There were 43 empyema, 3 hydratid cysts and 1 esophageal duplication cyst. There were 16 tubercular empyema and 27 post pneumonia empyema. The intercostal drain was kept for a mean period of 3 days (Range: 2-4 days). All the cases were kept nil by mouth for 6 hours and discharged at a mean duration of 5 days (Range 4-6 days). **Conclusion:** Thoracoscopic procedures could safely and easily be performed even with limited facilities.

380 - PA
Title: Is still actual lateral thoracotomy approach for pulmonary hidatid cyst in children? 30 years experience
Authors: Sebastian Nicolae Ionescu, MD, PhD, FEBPS(1), Bogdan Andrei, MD(2), Niculina Bratu, MD(3), Monica Ivanov, MD(4), Marcel Oancea, MD(5), Ionut Secheli, MD(6), Marian Secheli, MD(7), Beatrice Bunea, MD(8), Elena Licsandru, MD(9), George Vlad Isac, MD(10), Diana Stanescu, MD(11), Adriana Gurita, MD(12)
Institutions: Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(1), Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(2), Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(3), Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(4), Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(5), "Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(6), "Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(7), "Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(8), "Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(9), "Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(10), "Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(11), "Maria Sklodowska Curie" Emergency Children Hospital, Bucharest(12)
Category: Thoracic Surgery
Keywords: pulmonary hidatid cyst,lateral thoracotomy,pediatric surgery
Aim of the Study: Pulmonary hydatid cyst is a common pathology in children coming from rural areas. We evaluate the results of the surgical treatment over the past 30 years. **Methods:** It is a retrospective study concerning the management of 462 children with pulmonary hydatid cysts, treated between 1985 – 2015, in our institution, using lateral thoracotomy. **Main Result:** The pulmonary hydatid cysts were located unilaterally in 82% and bilaterally in 18% of the cases; the right lung was involved in 59% and the left lung in 41% of the cases. In 74% of the cases there was a single cyst and in 26% there were multiple hydatid cysts. In 63 cases extrapulmonary localisation were associated. Lateral thoracotomy without rib resection allowed us to perform cystotomy with wedge resection, membrane removal, drainage of the remaining cavity and of the pleural space in 87,5%, ideal cystectomy in 11,5%. Toracophrenolaparotomy was performed for associated liver and right pulmonary cysts in 1% of the cases. In 16 cases we encountered wound infection that healed in 7,5 days (range 5 -10 days), in 9 cases the drainage had to be maintained for 4,5 weeks (range 3-6). There was 1 postoperative bleeding that required thoracoscopic approach for lavage and drainage. No recurrence of the hydatid disease was registered. One death occurred in a 2 years old boy with multiple bilateral cysts.
Conclusion: Pulmonary hidatid cyst is the most frequent surgical pulmonary disease in children in our country. All hidatid cysts were incidentally discovered. Our approach was lateral thoracotomy without rib resection. In bilateral lung localizations, the second intervention was performed 3 to 6 months after the first. The treatment of the pulmonary cysts had priority on the extrapulmonary ones. Lateral thoracotomy is a valid approach for large cysts or multiple ones.

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Title: PROTECTION OF CHILDREN IN SPORTS
Authors: Zoran Bahtijarevic, MD(1), Fran Stampalija, MD(2), Nikica Lesjak, MD(3)
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Category: Trauma
Keywords: sports,injuries,children
Aim of the Study: Sports injuries in children are a well known issue in everyday pediatric surgeon's practice. The lack of data worldwide, no organized pediatric sports trauma registries and specific prevention guidelines makes this issue a

priority. **Methods:** Lack of sports injuries registries, especially in developing countries, on a worldwide basis makes data scarse and speculative. According to some data, there are one billion children involved in various sport activities throughout the world. Benefits of sports are well known, but the bar has not yet been set in relation to what makes „too much sports“ in a child's life. Motivation, injury prevention and raising awareness among trainers, parents, even the children themselves requires organized injury detection, documentation and injury prevention guidelines. **Main Result:** In some developed countries there has been improvement in injury prevention by focusing on education, age-specific and gender-specific training. Proper diet, moderate training intensity and motivational support from parents and trainers need to be addressed and accentuated. Doping prevention is also important because of clear evidence that the age in which athletes begin using illegal substances is declining. Physical and emotional abuse are issues of utmost importance. Pressure that the children get from their surroundings implicates not only their physical health, but also the development of their psyche, especially in developing countries in which the individual success of a young athlete translates into a „better life“ for the whole family. **Conclusion:** Prevention guidelines, training programs and holistic education (of athletes, parents and trainers) are the next step in evolution of sports in children. Global awareness has to be raised and systematic gathering and analysis of data needs to be organized. In order to compose quality prevention programs the emphasis has to be on sports injuries registers and systematic data collection.

405 - PA
Title: Ambulatory or Inpatient Management of mild TBI in children: A post concussion analysis.
Authors: Danielle S Wendling-Keim, MD(1), Adriana Koenig, MD(2), Hans-Georg Dietz, MD(3), Markus Lehner, MD(4)
Institutions: University of Munich(1), (2), (3), (4)
Category: Trauma
Keywords: minor brain injury,guideline,PRECARN
Aim of the Study: Diagnosis and treatment of children with mild traumatic brain injury (mTBI) remain a challenge since initial signs and symptoms don't always indicate the severity of the trauma. Therefore, guidelines regarding the decision upon imaging methods and ambulatory or hospitalized treatment are needed. The goal of our study was to investigate if the standard that was allied from the PECARN rules and is applied in this study can ensure that patients with clinically important brain injury are recognized and lead to outcomes with a low complication rate, a high patient satisfaction and minimal post concussion syndrome incidence. **Methods:** We enrolled 478 children with mTBI and contacted their families with a questionnaire. Out of these, 267 valid questionnaires were received. Patient records and questionnaires were analyzed yielding a number of 140 ambulatory and 127 hospitalized patients. **Main Result:** Patients with mild TBI were admitted according to the above mentioned guidelines or sent home for observation through their parents after thorough patient examination and information. Among ambulatory patients only 13 children (9%) underwent any imaging procedure, however, none of those showed any pathological findings. Interestingly, in 32.2% of hospitalized patients an imaging study was performed and of these only 3 (2.4%) showed pathological findings, namely a skull fracture, two of them in combination with an intracranial hemorrhage. Moreover, the duration of inpatient observation was 48 hours in most cases (55.3%). Strikingly, a majority of all patients (72.4%) did not seek any follow up visit and none of them needed any further treatment. Furthermore, only 10 patients according to 3.7% developed a post concussion syndrome. Patient satisfaction was very high in both, the ambulatory and hospitalized patient group. **Conclusion:** This study confirms that PECARN rules as administered in this study can ensure safe decision making regarding ambulatory or inpatient treatment.

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Title: PANCREATIC INJURY IN CHILDREN ARE WE DOING IT RIGHT? Case Presentation & Literature Review
Authors: Fayza Haider, MD(1), Mohammed Amin Al Awadhi, MD(2), Eizat Abrar, MBChB(3), Mooza Al Dossari, MD(4), Hasan Al Faraj, MBChB(5), Husain Nasser, MBChB(6), Hakima Al Hashimi, MBChB(7), Sharif Al-Arayedh, MD(8)
Institutions: Salmaniya Medical Complex(1), Salmaniya Medical Complex(2), Salmaniya Medical Complex(3), Salmaniya Medical Complex(4), Salmaniya Medical Complex(5), Salmaniya Medical Complex(6), Salmaniya Medical Complex(7), Salmaniya Medical Complex(8)
Category: Trauma
Keywords: Pancreatic Injury,Blunt Trauma Abdomen,Non operative management
Aim of the Study: Background/Introduction: Blunt Trauma to the abdomen accounts for the majority of abdominal injuries in children. Pancreatic injury, although uncommon 2-9%, is the fourth most common solid organ injury. Unlike other solid organ injuries, pancreatic trauma may be subtle or difficult to visualize on CT immediately after an injury. As the incidence of pancreatic injury in children sustaining blunt abdominal trauma is low, management remains a challenge. **Methods:** Case Report **Main Result:** Case Presentation: We present a 7 year old boy who sustained blunt trauma to the abdomen. He presented with abdominal pain, and vomiting. His examination revealed abdominal distension and epigastric bruise. CECT reported Grade 3 Liver injury, Grade 1 Bilateral renal injury and a suspicion of splenic injury. The films were reviewed next morning by the consultant radiologist and reported a grade 3 pancreatic injury. Patient was admitted to Pediatric Intensive care Unit and was treated conservatively. He was discharged to the surgical ward at Day 3 as he was stable. At Day 18 he developed a Pseudo cyst that was aspirated but recurred at Day 25 where a Pigtail catheter was inserted. Child was kept on TPN via a PICC line. The Pigtail catheter was removed on

day 36 and fat free diet was started by day 44. Child was discharged home at day 55 in good health. Outpatient follow up and serial Ultrasound showed resolution of the cyst and normal blood investigations. **Conclusion:** Conclusion: Trauma is the main cause of morbidity and mortality in the pediatric population. Blunt abdominal trauma is the major cause of abdominal injury in children. Computerized tomography (CT) currently is the imaging of choice. Non-operative management of pancreatic injury has become more frequent in the hemodynamically stable patient with no other indication for surgery.

407 - PA
Title: ANGIOGRAPHIC EMBOLIZATION IN ABDOMINAL PEDIATRIC TRAUMA
Authors: Yechiel Sweed, MD(1), Jonathan Singer, MD(2), Sorin Papura, MD(3), Alon Yulevich, MD(4)
Institutions: Galilee Medical Center, Naharia, Israel(1), Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(2), Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(3), Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(4)
Category: Trauma
Keywords: Angiography ,Embolization,Abdominal trauma
Aim of the Study: Angiography and embolization are well recognized as the primary treatments in certain cases of acute traumatic hemorrhage in adults. We present 4 pediatric trauma patients in which transcatheter arterial embolization (TAE) was performed in order to determine the efficacy of this treatment in children. **Methods:** 3 children with blunt abdominal trauma and one child with iatrogenic renal injury (ages 4-13 years) were managed with TAE for lacerated liver (1 patient), pelvic fractures (1) and renal injuries (2).The first two patients, victims of road accidents, had multisystem injuries and were treated by emergency embolization after fluid resuscitation in the Emergency Department (ED). The next 2 patients had renal injuries: a 4 - year- old boy with blunt abdominal trauma was diagnosed on initial CT with an unexpected Wilms tumor and was treated with embolization one day after admission due to hemodynamic deterioration caused by active arterial tumor bleeding. The following day he underwent successful nephrectomy. The other patient was 13- year- old boy with nephrotic syndrome underwent renal biopsy and developed hemodynamic instability. After fluid resuscitation, he underwent an initial negative angiography, but a second-look angiography the following day revealed an active bleeding from an aberrant renal artery, which was then successfully embolized. **Main Result:** In all 4 patients presented, TAE was diagnostic as well as therapeutic, and no child required surgical intervention for control of bleeding. **Conclusion:** We propose that emergency transcatheter angiography and arterial embolization should be considered following resuscitation in the ED, as initial treatment in children with ongoing bleeding after blunt abdominal trauma as well as iatrogenic renal injury. Implementation of this policy demands availability and cooperation of the interventional radiology services.

408 - PA
Title: Management of children with liver and spleen injuries: experience from a non-trauma center
Authors: Kihoon Kim, MD(1)
Institutions: (1)
Category: Trauma
Keywords: blunt liver injury,blunt spleen injury,conservative treatment
Aim of the Study: The liver and spleen are the most susceptible to damage by blunt abdominal trauma. Management of children with intra-abdominal solid organ injuries has evolved steadily and we describe herein the current management for children with solid organ injuries after blunt trauma. **Methods:** Children (<19 years) with blunt liver and spleen injuries were included between May 2010 and February 2016. Data were retrospectively analyzed for age and sex, cause and grade of injury, injury severity score, treatment method, duration of stay, and mortality rate. **Main Result:** 34 patients with blunt liver injury and 22 patients with blunt spleen injury presented. The mean age for the liver injury patient was 12.7 years with 67.6% of the patients being male(23). The m/c cause of injury was traffic accidents, reported in 18, followed by fall 9, and other causes 7 cases. Most patients had a grade II(12) or grade III injury(12), while grades I, IV, and V injuries were present in 3,4, and 3 patients respectively. The mean age of patients with spleen injuries was 13 years, comprising 17 male patients. The reported causes of injuries were traffic accidents in 13, falls in 6, and other causes in 3 cases. Grade II(9) and grade IV(6) spleen injuries were most common, followed by grade III(4), grade V(5), and grade I(1). A mean ISS of 20.6 was recorded for both liver and spleen injury. Thirty patients with liver injuries and 19 patients with spleen injuries were managed conservatively. The average duration of hospital stay was 22.1days for the liver injury, and 22.2days for the spleen injury. No cases of mortality occurred in the spleen injury, while a 2.9% mortality rate was recorded for the liver injury due to uncontrolled bleeding. **Conclusion:** We have performed the conservative treatment in more than 85% of the solid organ injury patients.

409 - PA
Title: Evaluation of Acute Phase Reactants and Injury Severity Score in Pediatric Trauma Patients Under 3.
Authors: Ibrahim Abd el-shafy, MD(1), Laura M Hansen, MD(2), Jeremy Fama, BA(3), Nathan AM Christopherson, MBA(4), José M Prince, MD(5)

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Category: Trauma
Keywords: Pediatric Trauma ,Acute Phase Reactants ,Injury Severity Score
Aim of the Study: The initial response to injury by local inflammatory cells, such as neutrophils, is associated with an increase in acute phase reactants. This generates a systemic inflammatory response with a variety of cytokines resulting in leukocytosis. In particular, the role of IL-6 and the correlation between WBC count and injury severity has been evaluated in adult trauma patients. In this study, we aim to evaluate the initial inflammatory response to trauma in children. **Methods:** A retrospective chart review was performed at a freestanding, tertiary care, state-designated pediatric regional trauma center. Patients were identified using the institutional trauma registry from 2010 to 2015 and included if CBC was obtained at presentation. All incomplete records, transfers and delayed presentation were excluded. WBC and platelet count upon presentation were evaluated for correlation with the injury severity score (ISS). Data was analyzed with SPSS using ANOVA and Pearson correlation as appropriate. **Main Result:** We identified 403 patients < 3 years old with 180 children meeting inclusion criteria, 43.9% were girls; average age 30 months. ISS mean of 8.8 + 7 (range 1-50). WBC had a mean value of 12.78 + 4.38. Platelets had a mean value of 355 + 127. WBC and ISS had a correlation coefficient of -0.0541 with a power of 0.47. When comparing platelets to ISS correlation was -0.0754 with a power of 0.315. Subgroup analysis of children of 1,2 and 3 years of age did not identify a correlation. **Conclusion:** Our study did not identify a correlation between platelet or WBC count with ISS. This suggests that in the injured children under 3, WBC and platelets levels may be poor predictors of injury severity. This perhaps further highlights the difference in the pediatric inflammatory response to trauma.

410 - PA
Title: Abdominal Blunt Trauma in Children in Developing World: Lessons to Learn
Authors: santosh kumar singh, Assistant Professor, Pediatric Surgery(1), pramod sharma, Associate Professor, Pediatric Surgery(2), Deepak Mittal, Assistant Professor, Pediatric Surgery(3)
Institutions: Himalayan Hospital, Swami Ram Himalayan University, Dehradun (Uttarakhand) - 248140, INDIA.(1), (2), Himalayan Hospital, Swami Ram Himalayan University, Dehradun (Uttarakhand) - 248140, INDIA.(3)
Category: Trauma
Keywords: blunt abdominal trauma,children,liver injury
Aim of the Study: Abdominal blunt trauma (ABT) is not uncommon in children especially in the developing world. We present our experience from a teaching hospital in North India. Their presentation, diagnostic work-up, and treatment strategies are presented. **Methods:** All patients below the age of 17 years presenting with a history of ABT during a period from December 2012 till May 2016 were studied retrospectively. Records were retrieved and demographic and clinical profile was studied. Diagnostic work-up was as per a standard protocol for all patients which was mainly imaging. Treatment options were analyzed, and outcome correlated. **Main Result:** A total of 33 patients presented during this period with ABT, mainly due to fall from height or road-traffic accidents. Age ranged from 3-17 years, and most were boys. Most patients were hemo-dynamically stable on presentation, and were conserved after due work-up. An ultrasound was the first imaging, and a contrast-enhanced CT scan was done if there was a suspicion of solid organ injury, or the patient was unstable. A total of six patients were operated out of whom three needed upfront surgery. They all had hollow viscus injury. Others gradually developed signs and symptoms of other injuries. These included duodenal injury, ureteric transection, bile leak and subsequent adhesive intestinal obstruction respectively, in the remaining three patients. There was no mortality. **Conclusion:** ABT is not an infrequent emergency in children in the developing world. Prompt initial management helps significantly in the eventual outcome. Imaging studies are the cornerstone of diagnosing the details and extent of injury. Most patients can be managed by conservative treatment. However, constant intensive vigilance is needed to pick up the late-presenting symptoms and signs for prompt intervention, thereby avoiding possible complications and morbidity.

425 - PA
Title: Comparative study between pyeloplasty for pyelo-Ureteric junction syndrome in children with lombo-assisted procedure and lombotomy.
Authors: HAMIDOU FAYCAL, PhD(1), MALAH NOURIA, MPH(2), BENMOHAMED NADIR, MD(3)
Institutions: (1), (2), (3)
Category: Urology
Keywords: pyelo-ureteric junction ,lombo-assisted pyeloplasty ,anterolateral lombotomy
Aim of the Study: The purpose of our study was to compare the lombo-assisted pyeloplasty procedure for pyelo-ureteric junction syndrome in children with the anterolateral lombotomy technique within the framework of this coverage. **Methods:** Retrospective study from January 2012 to December 2013; 30 children has been collected, we divided them into 02 groups; group1: 14 children, 08 boys and 06 girls, mean age: 69 months (range 12 to 156 months) we performed lombo-assisted pyeloplasty. Group 2: 16 children, 10 boys and 06 girls, mean age 55.5 months (range 05 to 144 months) were operated by lombotomy. In our study we have analyze: Operative time, per and post-operative complications, drainage's type, uses of analgesia, hospitalization length and the aesthetic benefit. **Main Result:** The

average operative time was 100 minutes in the pyeloplasties by lombo-assisted way (range 70 to 130 minutes) versus 75 minutes (range 60 to 100minutes) in opened surgery; drainage's type in the first group was by a double probe "J" and in the second group with a simple pyélostomy or Nephrostomy (non intubated anastomosis). There was no significant difference in terms of: per or post operative complications ; use of analgesic and length of hospital stay. by against the aesthetic result and muscle preservation were better in the group1 (comparable to the pure technical lomboscopy according to the literature). **Conclusion:** surgical treatement of pyelo-ureteric junction syndrom by lomboassisted video surgery still a minimally invasive technique it combines the open pyeloplasty's and lomboscopy's benefits. It remains a good alternative treatment of this pathology.

426 - PA
Title: The impact of Subureteral injection of Deflux for controlling recurrent urinary tract infections in the presence of reflux
Authors: Hadjou Belaid Fatma, PhD(1)
Institutions: EHS CANASTEL ORAN ALGERIE(1)
Category: Urology
Keywords: vésico-uréteral reflux,Subureteral injection of Deflux,recurrent urinary tract infections
Aim of the Study: Objective: To evaluate the result of injection the deflux in the treatment of vésico-uréteral reflux and effectiveness on the disappearance of urinary tract infections. **Methods:** Materials and Methods: Between 2008-2012, 43 patients aged 06 months to 14 years were followed for reflux vesicoureteral, the grade was from II to V, all patients were injected endoscopically, and pyelonephritis was the reason for consultation in the majority of patients. **Main Result:** Results: disappearance of reflux occurred in 28 patients (65.1%), decreased in grade 08 (18.6%), its persistence unchanged 07 (16.3%) , urinary tract infection disappeared in 36 patients (83, 7%), its persistence or its recurrence in 7 cases (16.3%) with female predilection, UTI was pyelonephritis type (9.4%) , related to reflux recurrence (01 cases), its failure (01cas) , complicating improvement in the reflux grade (2 cas), UTI is cystitis type (6.9%) **Conclusion:** Conclusion: endoscopic treatment is the method of choice to control recurrent pyelonephritis in the presence of reflux, source of kidney damage, with minimal aggression, morbidity and maximum comfort.

427 - PA
Title: A prospective study to assess the outcome of antenatally detected hydronephrosis
Authors: MRINAL ARORA, DIPLOMATE OF NATIONAL BOARD TRAINEE(1), ALPANA PRASAD, MS MCH(2), RAJEEV KULSHRESTHA, MS MCH(3)
Institutions: SIR GANGA RAM HOSPITAL (G.R.I.P.M.E.R.)(1), SIR GANGA RAM HOSPITAL (G.R.I.P.M.E.R.) NEW DELHI(2), SIR GANGA RAM HOSPITAL (G.R.I.P.M.E.R.) NEW DELHI(3)
Category: Urology
Keywords: ANTENATAL HYDRONEPHROSIS,CONGENITAL ABNORMALITIES OF KIDNEY AND URINARY TRACT,RENAL PELVIC DIAMETER
Aim of the Study: To determine the incidence of antenatally detected hydronephrosis,frequency of cases requiring surgical intervention and the incidence of associated anomalies in hydronephrosis. **Methods:** All cases of hydronephrosis and hydroureteronephrosis (unilateral or bilateral) detected antenatally at fetal medicine unit of a tertiary care centre during routine ultrasound with RPD of > 4 mm in 2nd and >7 mm in3rd trimester were enrolled in the study.They were followed post-natally up to 6 months with USG done at birth,1 month,3 month and 6 month of age and further investigations were done based on the findings of USG.The study period was from July 2013 to May 2016 including 6 months of follow up. **Main Result:** A total of 172 cases of hydronephrosis were detected antenatally during the period. Out of 172, 107 (62.2%) were born as males and 65 (37.8 %) as females. Diagnosis before 20 weeks was made in 68(39.6%),between 20-32 weeks in 62(36%) and after 32 weeks in 42 (24.4%) Transient hydronephrosis,which resolved on post natal scan was seen in 65.7%. Of the remaining 59 (34.3%) patients, 26 had pelviureteric junction obstruction, 17 had vesicoureteric reflux , 8 had vesicoureteric junction obstruction, 5 had posterior urethral valve and there was 1 case each of ureterocele, posterior urethral diverticulum and proximal ureteric stricture. Associated anomalies were seen in 10 cases (5.8%). MCDK in 3 and urinary extravasation in 2 cases of PUV. Non –urological anomalies were observed in 5 cases, 1 case each of situs- inversus, pituitary adenoma, meningomyelocele, anorectal malformation and TE fistula. **Conclusion:** Widespread antenatal screening has resulted in increased detection of hydronephrosis thereby helping in early management in the post natal period.Hydronephrosis was found to be transient in majority of the cases. PUJ obstruction, VUR ,VUJ obstruction and PUV are some common conditions requiring surgical intervention.

428 - PA
Title: Post-circumcision Bleeding: Causes and Outcome in Different Age Groups
Authors: Waqas Ali, MBBS, FCPS(1)
Institutions: National Institute of Child Health(1)
Category: Urology
Keywords: Post-circumcision bleeding,Penile injury,Methods of circumcision

Aim of the Study: To determine the frequency of post-circumcision bleeding and its outcome in terms of need of admission, blood and blood product transfusions and surgical procedure to secure hemostasis in children presenting to NICH. **Methods:** A total of 126 patients presenting with post circumcision bleeding were included in the study from the period of 2-12-2013 to 4-12-2014 for duration of 1 year and 2 days. Consecutive sampling done. Bleeding from penis due to a cause other than circumcision and family history of bleeding disorders were excluded. Patients meeting the inclusion and exclusion criteria were registered and informed consent taken and data obtained on performa. Data was entered and analyzed using SPSS version 20. Stratification with respect to age, weight, circumciser and method of circumcision was done. Post stratification Chi square test was applied. **Main Result:** The results showed that overall 126 patients had a mean age of 542 days and mean weight was 8.023 kgs. 53.2% were performed by doctors, 32.5% were performed by paramedics and 14.3% were performed by non medical persons. 42.1% were performed by bone cutter, 35.7% were performed by plastibell, 11.9% were performed by some clamp and 10.3% were performed by free hand method. Secondary outcome was hospital admission. 23% of patients required admission. 22.2% required blood or blood product transfusion. 91.3% patients required surgery to secure hemostasis. Statistically significant association found between need for admission and person or/and method of circumcision. Most severe injuries were caused by paramedic and nonmedical persons. **Conclusion:** Circumcision is a minor procedure when done by experienced and trained circumciser. 100% patients presented with post circum bleeding secondary to injury to penile tissues out of which 23% of patients needed admission and blood transfusion due to hypovolemic shock. Education of parents is needed in conjunction with training of the circumciser to prevent life threatening complications.

429 - PA

Title: Outcome of unilateral pyeloplasty as a function of age at surgery and differential renal function at time of surgery

Authors: Ravi Patcharu, MS(1), Shilpa Sharma, PhD(2), Vishesh Jain, MCh(3), Devendra Kumar Gupta, MCh, FRCS,FAMS,DSc(4)

Institutions: All India Institute of Medical Sciences(1), All India Institute of Medical Sciences(2), All India Institute of Medical Sciences(3), All India Institute of Medical Sciences(4)

Category: Urology

Keywords: postoperative outcomes,pyeloplasty,differential renal function and age at surgery

Aim of the Study: To study the postoperative outcomes of pyeloplasty in unilateral pelviureteric junction obstruction(PUJO) as a function of patient's age at surgery and differential renal function on renal dynamic scan(RDS). **Methods:** Postoperative outcomes of unilateral pyeloplasty performed from 2001 to 2010 were reviewed retrospectively. Patients were divided into three Groups I;II;III based on preoperative renal function as < 20%; 21-40%; >40%. These groups were further divided according to age as <1year; 1-<5years; 5-<10years; >10years. A rise or fall of 5% renal function was considered as improvement or deterioration respectively. **Main Result:** 89 patients (72 males;17 females) underwent pyeloplasty. Number of patients in Group I;II;III were 16;36;37. Mean (Range) age at surgery in Group I;II;III was 7.4(2-17) years; 5.7 (0.3-13) years; 6.3 (0.3-13)years. In Group I, 11 patients(68.7%) showed improvement, and none showed deterioration in postoperative renal function. This included 6 patients with <10% preoperative function, all of whom had improvement. In Group II, 16(44.4%) showed improvement and 6(16.7%) showed deterioration, whereas in Group III, 11(29.7%) showed improvement and 5(13.5%) showed deterioration in postoperative renal function. Amongst the 11 patients with deterioration in function, 01 underwent nephroureterectomy, 02 underwent redo pyeloplasty and 08 remained asymptomatic. Of these 11 patients, 5(45.4%) were above 5 years of age at surgery. Of the 38 patients who had improvement, 16(42.1%) were operated in the age group 1-5 years. **Conclusion:** Patients with preoperative renal function <20% and in the age group 1-5 years at surgery are more likely to have improvement in postoperative renal function. Patients with <10% preoperative renal function should also be given a trial of pyeloplasty as they are most likely to improve.

430 - PA

Title: INFLAMMATORY RENAL MASSES IN CHILDREN R

Authors: Shung Ken Tan, MBChB(1), T. Muthurangam Ramanujam, MD(2), Srihari Singaravel, MD(3), Yes Ian Yik, PhD(4), Wan Griffin, MD(5), Wan Shanmugam, MD(6), Payalur Jayalaxmi, MD(7), Kumar Ghana, MD(8)

Institutions: University of Malaya Medical Centre(1), University of Malaya Medical Centre, University of Malaya(2), University of Malaya Medical Centre, University of Malaya(3), University of Malaya Medical Centre, University of Malaya(4), University of Malaya Medical Centre, University of Malaya(5), University of Malaya Medical Centre, University of Malaya(6), University of Malaya Medical Centre, University of Malaya(7), University of Malaya Medical Centre, University of Malaya(8)

Category: Urology

Keywords: Focal Nephronia,Xanthogranulomatous Pyelonephritis,Inflammatory Renal masses

Aim of the Study: This paper discusses the clinical features, pathology & diagnostic difficulties in differentiating inflammatory renal masses (IRM) from tumors **Methods:** Twelve cases of IRM were seen from 1993-2008. Their age ranged between 2 to 14 years. The lesion was bilateral in 3 & unilateral in 6 – right-5 & left 1. In two cases, a diagnosis of renal cell carcinoma (RCC) was made (bilateral in 1). Three received chemotherapy as Wilms' tumor. Two were treated for tuberculosis. One child had Ig-E syndrome & had treatment for TB of spine. One had treatment for UTI. 2

presented with hematuria. Diagnosis was made by laparotomy in 7, laparoscopy in 1 & by percutaneous biopsy in. One child was diagnosed as Bilateral Wilm' tumor & laparotomy & biopsy confirmed Nephroblastamatosis. The child with "bilateral" RCC, had right partial nephrectomy & biopsy on the left. 4 had nephrectomy & one had biopsy. Three children had xanthogranulomatous pyelonephritis (XGP). Two had acute focal pyelonephritis (Focal Nephronia), The child with "bilateral" RCC had pyelonephritic scarring on the left. She had radical nephrectomy on the right & reimplantation on the left for grade III VUR. One had inflammatory pseudotumor arising from the pelvis. One child treated for tuberculosis presented with calculous pyonephrosis with multiple stones & had nephrectomy. **Main Result:** 11 children are alive & well 1 to 14 years after surgery. The child with Ig-E syndrome died 4 years later due to fungal sepsis. **Conclusion:** IRM mimic renal tumors & may lead to unnecessary chemotherapy or surgery & inadequate primary surgery in some children. XGP should be considered in the differential diagnosis of renal masses to avoid delay in definitive treatment. The reliability of percutaneous biopsy is still debated in tumors & in particular in RCC.

431 - PA
Title: Parameters for outcomes of pyeloplasty in children
Authors: Kant J Shah, MBBS, MRCS, DNB Paediatric Surgery(1), Dinesh H Kittur, MS Paediatric Surgery(2), Santosh V Patil, MS MCh Paediatric Surgery(3), Ravindra M Vora, FRCS(4), Sudhakar S Jadhav, MS MCh Paediatric Surgery(5)
Institutions: Paediatric Surgery Centre & PG Institute, Sangli, India(1), Paediatric Surgery Centre & PG Institute, Sangli, India(2), Paediatric Surgery Centre & PG Institute, Sangli, India(3), Paediatric Surgery Centre & PG Institute, Sangli, India(4), Paediatric Surgery Centre & PG Institute, Sangli, India(5)
Category: Urology
Keywords: pyeloplasty,parameters,cortical ratio
Aim of the Study: To study the parameters of ultrasound and diuretic renogram as outcomes of pyeloplasty in children
Methods: A prospective study of consecutive children with pelvi-ureteric junction obstruction (PUJO) was done from 2011-2015. Kidneys with renal pelvis antero-posterior diameter (APD) > 20 mm and differential renal function (DRF) of <= 40% with an obstructive curve were selected to undergo pyeloplasty. The patients were followed-up till 1 year after surgery with ultrasound and Tc 99m DTPA scan. **Main Result:** Of 59 patients enrolled, two refused consent and three were excluded. Complete data were collected for 51 patients. Fifty children had both decrease in APD and increase in DRF at one year after surgery with an overall success rate of 98.1%. One child who had a re-do pyeloplasty had complete renal atrophy. There was a significant change in the median APD from 33 mm to 10.75 mm at one year ($p<0.001$ Wilcoxon Signed Rank test), median DRF from 32% to 45% ($p<0.001$) and the cortical ratio from 0.47 to 0.84 ($p<0.001$). Five children with APD of >20mm at 1 year had significantly improved DRF and cortical ratio. In 10 children the cortical ratio stayed same or decreased but the percentage change in APD and DRF were comparable. The cortical ratio in infants was similar to older children prior o surgery but at 1 year there was a significant recovery in infants 0.92 vs 0.79 ($p=0.004$ Mann-Whitney U test). Ten children with pre-op DRF <= 20% had a significant change in DRF after surgery 94% vs 31% ($p<0.001$). **Conclusion:** Neither renal pelvis diameter nor differential renal function is adequate on its own to study outcomes of pyeloplasty. Cortical ratio is an independent marker and needs to be studied in more detail for long term outcomes.

432 - PA
Title: Vesicoureteral reflux: Efficacy of medical vs surgical management
Authors: Abhimanyu Varshney, MBSS(1), Shilpa Sharma, PhD(2), Vishesh Jain, Mch(3), Devendra Gupta, MBBS, MS, MCh, FRCS (G & Edin), FAMS, DSc(4)
Institutions: All India Institute Of Medical Sciences(1), All India Institute Of Medical Sciences(2), All India Institute Of Medical Sciences(3), All India Institute Of Medical Sciences (4)
Category: Urology
Keywords: Precise,Informative,Surprising
Aim of the Study: To evaluate the outcome of patients treated for vesicoureteric reflux **Methods:** Records of patients treated for vesicoureteric reflux over the last 15 years (2001-2015) were reviewed retrospectively. Their outcome was compared with respect to grade of reflux at presentation, culture proven UTI and treatment modality used. More then one culture proven UTI per year on treatment or development of fresh scars on DMSA was considered as failure. Patients with associated bladder and urethral pathology were excluded. **Main Result:** Of 122 patients, 92 were male. Age ranged from 2 months to 15 years at presentation. 15 were antenatally diagnosed. One had CKD (GFR < 30mL/min) at presentation. 78 (64%) presented with urinary infection. All were started on low dose cyclical chemoprophylaxis. Patients with grade 1-2 reflux remained asymptomatic on chemoprophylaxis. 55 patients developed recurrent UTI despite being on chemoprophylaxis and another 12 developed fresh scars on DMSA despite being asymptomatic. 87.3 % (90/103) of patients with grade 3 or higher reflux had UTI at presentation and 79.6 % (82/103) required surgical intervention. Chemoprophylaxis was successful in preventing UTI in only 8.9% (9/103). Six patients developed progressive fall in function and required nephrectomy. Ureteric reimplantation was only done in patients greater then 1 year of age **Conclusion:** Chemoprophylaxis alone was successful only in grade 1 and 2 reflux. Only 23%(18/78) of patients with history of culture proven UTI had no recurrence of symptoms on chemoprophylaxis. Deflux was successful in patients less than 1 year of age (8/12- 67%) although multiple sittings were required in higher grades

of reflux. There was no recurrence of symptoms after surgical reimplantation. Surgical intervention thus being the definitive treatment should thus be considered at the earliest in higher grade (3 or more) reflux or in presence of culture proven urinary tract infections at presentation to preserve renal function.

433 - PA
Title: DETECTION AND INCIDENCE OF ANOMALIES ASSOCIATED WITH HYPOSPADIAS
Authors: Tariq Abbas, MD(1), Mansour Ali, MD(2)
Institutions: Hamad General Hospital(1), Hamad General Hospital(2)
Category: Urology
Keywords: Hypospadias,Incidence,Anomalies
Aim of the Study: Hypospadias has been associated with synchro- nous congenital anomalies, especially in the urogenital system, and routine screening of patients with hypospadias has been advocated. In this study, we assessed the incidence of genital and extraurogenital congenital anomalies in our hypospadias patients that were noted during physical examination and/or laboratory screening, and evaluated the efficacy of our changing routine screening protocols. **Methods:** We conducted a retrospective analysis of the charts of all hypospadias patients seen at our centre. One hundred and ninty-five hypospadias patients fulfilled the documentation criteria we set for this study. **Main Result:** We found a high incidence of genital and extraurogenital anomalies associated with hypospadias and noted a previously unreported increased incidence of various forms of facial dysmorphism. **Conclusion:** Thorough clinical examination should be done for all cases with with hypospadias patient including extraurgenital organs as well as the face.

434 - PA
Title: congenital megaurethra
Authors: BENSLIMANE HAMMOU, MD(1)
Institutions: medical school of oran(1)
Category: Urology
Keywords: megaurethra,urinary truct infection,nesbit operation
Aim of the Study: The megaureter congenital (MUC) or megalomaniac-urethra or macro-penis is a malformation of the male urethra characterized by an expansion of the latter has agenesis + or - extent of erectile bodies in the penis without detectable obstacle. **Methods:** This is the newborn B.S 28 days old admitted for urinary infection associated diarrhea (digestive table). Clinical examination: penis macro inspection (large yard). 7 cm in length. (Figure 4) .With this one deflection and rotation. On palpation hypoplasia of the erectile bodies of the penis. Apical meatus, Testis up, No hypoplasia of the abdominal wall. (Figures 1 to 4). Besides the laboratory tests: urea, creatinine, blood count formula ECB and urine were found incipient renal failure with UTI. radiological assessment: fig.1 fig.2 fig.3 fig.4 Ultrasound found bilateral ureterohydronephrosis with parenchymal index reduces see right away, retrograde cystography urethrovaginal allowed us to classify the malformation and showed ureteral reflux vesicoureteral bilateral grade IV renal scintigraphy DTPA and DMSA was also conducted. The treatment is surgical, consists : firstly a gesture of urinary diversion for the emergency nephrology (kidney failure) a type of palliative cystostomy was made which improved the urea and creatinine figures; (second time) was performed at the age of 07 months by correcting the distortion by a modeling urethral urethroplasty according to NESBIT technique with urethral dissection bag reduction of the caliber of the urethra and resection of excess skin tissue. **Main Result:** .operation time 1h30min .cosmetic and functional result is good. .no obstruction. **Conclusion:** Congenital mega-urethra remainsa very rare malformation that is often associated with other renal or other defects to look for. The prognosis depends largely on the severity of associated malformations.

PA1-8 | MODERATORS: RALPH COHEN, HIROAKI KITAGAWA

435 - PA
Title: A COMPARATIVE STUDY TO EVALUATE THE OUTCOME OF DOUBLE DARTOS FLAP IN TUBULARIZED INCISED PLATE URETHROPLASTY FOR DISTAL HYPOSPADIAS REPAIR
Authors: MIRZA DR KAMRUL ZAHID, MS(1)
Institutions: Shaheed Suhrawardy Medical College(1)
Category: Urology
Keywords: Double Dertos Flap,Tubularized,Distal Hypospadias
Aim of the Study: To compare the outcome of double-layer dartos flaps to flapless procedure in the tubularized incised plate urethroplasty for distal hypospadias repair to assess the effectiveness of dartos flap in this method. **Methods:** Our study included 28 patients aged upto 12 years who were treated with tubularized incised plate urethroplasty for distal hypospadias in Shaheed Suhrawardy Medical College Hospital from April 2010 to December 2011. They were divided into two groups. Group A(14 patients) had double dartos flap coverings. Group B(14 patients) had no dartos flap covering. The dissected dorsal dartos flap was bisected vertically to form two pdicle wings. Each wing was rotated laterally from either side of the glans to cover the neourethra ventrally in a double-layer fashion. **Main Result:** Mean follow up period was 9 months. In Group A, one patient (7%) developed fistula and one(7%) superficial skin necrosis.

On the other hand three(21%) patients developed fistula and one patient (7%) meatal stenosis in group B, who were treated WITH Snodgrass procedure without using dartos flap. All successful repaired hypospadias patients of both groups had ventrally slit meatus. **Conclusion:** Double dartos flaps covering of the neourethra is a simple procedure and could be effective for the prevention of urethrocutaneous fistula after tubularized incised plate urethroplasty.

436 - PA
Title: Ureterocele: clinical presentations, management and outcomes
Authors: DEEPAK MITTAL, MBBS, MCh(1), A Mitra, MCh(2), S Agarwala, MCh(3), V Bhatnagar, MS, MCh(4), DK Mitra, MS, MCh(5)
Institutions: ALL INDIA INSTITUTE OF MEDICAL SCIENCES, NEW DELHI(1), (2), (3), (4), (5)
Category: Urology
Keywords: Ureterocele,Cecoureterocele,Duplex Kidneys
Aim of the Study: We have studied the clinical presentations and outcomes related to various modes of management of ureteroceles. **Methods:** We retrospectively reviewed the records of the patients who were treated in our hospital for management of ureteroceles. We have included all patients of ureteroceles managed surgically or have undergone endoscopic management. **Main Result:** We have studied the records of 31 patients of ureteroceles, 17 boys and 14 girls. 27 presented with symptoms, of which 17 had urinary tract infection, 16 had pain or dysuria, 4 girls had dribbling or incontinence, 2 had nocturnal enuresis, 1 had hematuria. 10 presented with antenatal hydronephrosis. Out of these 20 patients had duplex systems, 7 boys and 13 girls. In this group 6 underwent open surgery and 14 underwent endoscopic management. In 6 patients who underwent open surgery; reimplantation was done in 5 (2 needed upper pole nephrectomy later) and total nephrectomy was done in 1 patient. The 14 patients in endoscopic management group 6 underwent reimplantation (1 upper pole nephrectomy later) and 3 underwent upper pole nephrectomy. So total 15 cases (75%) needed open surgeries including 7 cases (35%) which needed upper pole or total nephrectomy. No patient required redo puncture of ureteroceles. Of the 11 patients of single system ureteroceles, 10 boys and 1 girl 1(9%) required reimplantation for initial high grade reflux and 2(18%) required upfront nephrectomy due to dysplastic(1) and non-functioning renal unit. **Conclusion:** Endoscopic management of ureteroceles is the first line of treatment. Though following endoscopic puncture most of the patients required anti reflux surgeries but it had prevented a lot more to undergo excision of these units.

437 – PA (Withdrawn)
Title: OUTCOMES OF SURGERY FOR HYPOSPADIAS: CORRELATION WITH AGE, SEVERITY AND SURGICAL STRATEGY EMPLOYED
Authors: Alisha Gupta, M.Ch.(1), Vishesh Jain, M.Ch.(2), Shilpa Sharma, PhD(3), Devendra Gupta, MBBS, MS, MCh, FRCS (G & Edin), FAMS, DSc(4)
Institutions: All India Institute of Medical Sciences, New Delhi(1), All India Institute of Medical Sciences, New Delhi(2), All India Institute of Medical Sciences, New Delhi(3), All India Institute of Medical Sciences, New Delhi(4)
Category: Urology
Keywords: hypospadias,age at surgery,single-stage versus staged
Aim of the Study: To correlate post-operative complications after hypospadias repair with severity of hypospadias, age at surgery and surgical strategy employed. **Methods:** Retrospective records of children with hypospadias who underwent primary surgery w.e.f. January 2005-December 2010 were reviewed. Meatal location(proximal versus distal), age at first surgery(=3 or >3 years) and surgical strategy employed(single-stage versus staged repair) were noted. Outcome variables were urethrocutaneous fistula(UCF), stricture and dehiscence of urethroplasty. **Main Result:** Out of 183 children included, 75(40.9%) had proximal (PH)(age range 1-25 years, median 6 years) and 108(59.1%) had distal hypospadias (DH)(age range 1-19 years, median 5 years). Amongst children with DH =3 years(n=36), 29(80.5%) underwent single-stage procedure of which 5 developed UCF(17.2%) and 7(19.4%) underwent staged procedure all of which were without any complication. Amongst children with DH >3 years(n=72), 64(88.9%) underwent single-stage procedure of which 8 developed UCF(12.5%) and 1(1.5%) developed stricture and 8(11.1%) underwent staged procedure of which 3(37.5%) developed UCF. Amongst children with PH =3 years(n=17), 6(35.2%) underwent single-stage procedure of which 2 developed UCF(33.3%) and 11(64.7%) underwent staged procedure none of which developed any complication. Amongst children with PH >3 years(n=58), 6(10.3%) underwent single-stage procedure of which 4 developed UCF(66.6%) and 52(89.7%) underwent staged procedure of which 12(23.1%) developed UCF and 1(1.9%) had dehiscence. Fourteen children had disordered sexual differentiation all of which underwent staged procedure except 1 who underwent single-stage urethroplasty. UCF developed in 2(1, staged and 1, single-stage). Overall, complication rate in PH(25.3%) was higher than DH(15.7%); higher in children >3 years(22.3%) as compared to =3 years(13.2%); similar in single-stage(19.04%) versus staged approach(20.5%). **Conclusion:** Severity of hypospadias and age at presentation were observed to be independent predictors of success - complication rate was lower with DH and =3 year age. Despite liberal use of single-stage approach even in borderline cases, success rates as high as staged approach could be achieved.

438 - PA

Title: Hypospadias – issues beyond the initial repair
Authors: Jai Mahajan, MCh(1), Monal Kansra, MCh(2)
Institutions: Postgraduate Institute of Medical Education and Research(1), Postgraduate Institute of Medical Education and Research(2)
Category: Urology
Keywords: Hypospadias,Quality of Life,Outcome analysis
Aim of the Study: This study was carried out to compare the cosmetic, functional and psychological results of hypospadias repair. **Methods:** The patients who underwent hypospadias surgery between January 2000 and December 2014 were assessed using validated HOPE (Hypospadias Objective Penile Evaluation Score) and psychosocial assessment (kindle) questionnaires along with uroflow. The study was approved by the institute ethics committee and STATA (14.0 version) was used for statistical analysis. **Main Result:** A total of 45 patients, fulfilling the inclusion criteria, came for follow up. Median age at surgery was 5 years (SD±3.5) (range 2 -14 years). Majority of the cases had distal hypospadias (26). Age at follow up was10.57years(SD±4.6)(range 4 - 23 years) and median length of follow-up was 3.4 years(range 1 -9 years). Mean HOPE score was 41.24/50(SD±4.6) (range 30–47) and it did not show any correlation with age at surgery or the pre-operative morphology. Median kindle score was 3.45 and 3.38 for parents and the patients respectively, maximum being 5. The patients, who were older and had a longer follow up showed low psychological scores irrespective of the cosmetic outcome ($p<0.0057$). Only 6 children (13%) had a normal bell shaped curves on uroflow. None of the children had peak flow rates below the 3rd percentile and 55.5% (25/45) had rates between 3rd and 50th centile. With increasing age, psychological and uroflow scores showed inverse relationship (CC = –0.5218 for peak and ¬–0.4270 for average flow rates) as did the meatal morphology (location and shape) and uroflow (CC= –0.61 for average and –0.71 for peak flow rates) **Conclusion:** Patient satisfaction resides mainly in their own perception of the results of hypospadias surgery. Morphological and functional outcomes improved with increasing duration of follow up whereas, the psychological score deteriorated especially so in their adolescence and early adulthood.

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Title: Early Outcome of Staged Laparoscopic Traction Orchiopexy for Abdominal Testes
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Institutions: Alexandria University(1)
Category: Urology
Keywords: Exstrophy,Neonates,Complete Primary Repair
Aim of the Study: Current trends in exstrophy management include complete primary repair, staged repair or sigma rectum pouch. Our initial experience with Mitchell repair of exstrophy neonates is presented. **Methods:** From June 2005 till December 2012, 27 cases of bladder exstrophy and 3 cloacal exstrophy were managed in Alexandria University Children's Hospital by Complete Primary Repair (Mitchell) within 72 hours of life. Mean follow-up was 60 months by U/S and DMSA. **Main Result:** 18M and 9F bladder exstrophy and 3F cloacal exstrophy cases were repaired. The original Mitchell repair was done in all except 3M exstrophies where an interrupted instead of running urethroplasty was done. A preoperative pelvic manipulation (osteoclysis) with postoperative mummy-wrapping were done instead of osteotomy and postoperative hip spica/external fixator. The only postoperative mortality was due to sepsis. A total disruption occurred due to symphyseal diastasis and a skin dehiscence occurred in 3M exstrophy was easily closed. All but 3F exstrophy cases had mild VUR, but none had a breakthrough UTI or renal scarring to date. U/S was done weekly for the first 4 weeks, monthly for the rest of the first year; while DMSA was done 3-monthly for the first year. All 23 exstrophy patients have dry intervals of 2hr and 17 (2M & 3F) have 3-hour dry intervals. All male exstrophy patients have terminal meatus. **Conclusion:** Apart from the unexpected postoperative mortality, our early experience with the complete primary repair of bladder exstrophy (Mitchell repair) has been satisfactory in both classic and cloacal exstrophy neonates and compares favorably with other early single author series. We recommend the easier preoperative external pelvic manipulation combined with the postoperative 'mermaid wrapping' opposed to the demanding osteotomy and postoperative hip spica/external fixation. Interrupted urethroplasty using 6/0 or 7/0 Vicryl (Boston method) can avoid the inevitable hypospadias after penile disassembly/reassembly in the Mitchell fashion.

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Title: Persistent Mullerian Duct Syndrome(PMDS): A 24-Year Experience
Authors: Muhammad Saleem, MBChB(1), Uzma Ather, MBChB(2), Bilal Mirza, MBChB(3)
Institutions: The Institute of Child health & The Children's hospital Lahore (1), Continental Medical College, Lahore(2), The Children's Hospital, LAhore(3)
Category: Urology
Keywords: Persistent mullerian duct syndrome,Hernia utri inguinale,Transverse testicular ectopia
Aim of the Study: Experience with Persistence of mullerian duct derivatives in otherwise normal male child a very rare disorder is being presented **Methods:** The medical record of 27 cases of PMDS is retrieved and analysed for demography, clinical presentation, investigations, and treatment. **Main Result:** The age was ranged between 3 months and 19 years. Ten patients presented with isolated bilateral UDT, six patients with bilateral UDT and unilateral inguinal

hernia (4 left and 2 right), and eight presented with right inguinal hernia and left sided UDT. Eight of 27 patients showed familial trends. In 21 patients, the diagnosis was made incidentally while operating for UDT and inguinal hernia. At operation 5 patients had female and 22 patients had male type PMDS. In 6 patients (male type), the PMDS was associated with transverse testicular ectopia. In 18 patients the initial operation was performed through inguinal incision with excision of mullerian remnants in the same settings in 12 patients. In 4 patients, straightforward laparotomy performed (familial cases) to excise mullerian remnants. In 5 patients, the PMDS was diagnosed on laparoscopy; initially biopsy of these remnants and gonads followed by excision of remnants by laparotomy approach. Biopsies revealed testicular tissue with variable degree of immaturity and dysplasia. Mullerian remnants did not reveal any malignancy. All patients were genotypically male. **Conclusion:** Isolated UDT, Left UDT and right inguinal hernia, bilateral UDT and unilateral inguinal hernia are the main presenting features. About 30% of the patients showed familial tendency. Inguinal exploration for UDT or inguinal hernia, and laparoscopy for UDT reveal incidental findings of mullerian remnants. PMDS can be managed as single stage or two stage (gonadal biopsies in first stage followed by mullerian remnants excision and orchidopexy).

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Title: Late diagnosed Ocha Syndrome: Case report and Literature Review
Authors: CAROLINA TALINI, MD(1), ANTONIO CARLOS MOREIRA AMARANTE, MD(2), ANTONIO ERNESTO DA SILVEIRA, MD(3), LETICIA ALVES ANTUNES, MD(4), BRUNA CECILIA NEVES DE CARVALHO, MD(5), NAIANE MAYER, MS(6), SABRINA TRISTÃO LONGO, MS(7)
Institutions: HOSPITAL PEQUENO PRÍNCIPE, CURITIBA/PR(1), (2), (3), (4), (5), (6), (7)
Category: Urology
Keywords: Ochoa Syndrome,Urofacial Syndrome,Noneurogenic neurogenic bladder
Aim of the Study: Ochoa syndrome, also known as urofacial syndrome, is a rare condition characterized by functional obstructive uropathy and unusual facial abnormalities. Progresses to renal failure if not diagnosed early. The therapeutic goals are to restore bladder emptying, preventing damage to the urinary tract. This article aims to report a patient with late diagnosis of Ochoa Syndrome, as well as describe their characteristics and clinical outcome. **Methods:** Medical records review. **Main Result:** Male, 7 years, referred to the service with 6 years of age presenting chronic renal failure and several episodes of urinary infection and bedwetting. He was in long-term use of oxybutynin and doxazosin. Ultrasound showed important bilateral hydronephrosis and high post-voiding residual urine volume with thickened bladder walls. Urethrocystography demonstrated vesicoureteral reflux grade V with bladder trabecular thick. Urodynamic study showed bladder capacity of 212 ml with 38 water centimeters pressure, bladder compliance of 5.5 ml/water cm to 212 ml infusion, absence of uninhibited contractions of the detrusor. Cystoscopy that excluded posterior urethral valve. The clinical evaluation clearly presented facies with inverted smile. Due to failure of clinical treatment, elevated post-micturition residue and recurrent episodes of urinary tract infection, a continent conduit for bladder emptying - Mitrofanoff with appendix was indicated and performed by laparoscopy. New cistoscopy was conducted with botox application – 166 units – in a straight line across the bladder wall except for the trigone region in order to improve bladder capacity. During follow-up presents improving in renal function. **Conclusion:** Early diagnosis is essential to achieve a better prognosis. An aggressive urological management is necessary to improve bladder emptying and avoid infections. The suspicion must be raised when observed the combination of urological problems and inverted facial expression upon attempts to smile.

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Title: EFFICACY OF PERCUTANEOUS SELECTIVE SCLEROTHERAPY FOR AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE IN CHILDREN
Authors: Elena Vrublevskaj, PhD(1), Sergei Vrublevsky, PhD(2), Anatole Kotlovsky, PhD(3)
Institutions: Morozov’s Central Referral Hospital for Sick Children, Moscow(1), Morozov’s Central Referral Hospital for Sick Children, Moscow(2), St Luka’s Clinical-Research Center of Medical Care for Children, Moscow(3)
Category: Urology
Keywords: autosomal dominant polycystic kidney disease,percutaneous selective sclerotherapy,children
Aim of the Study: To present our experience of percutaneous selective sclerotherapy (PSST) using ethanol for renal cyst ablation as a minimally invasive mode of treatment for autosomal dominant polycystic kidney disease (ADPKD)in children. **Methods:** From 2007 to 2015, 18 children aged between 1 and 17 years, with ADPKD manifested in pain syndrome underwent PSST for the enlarging dominant cyst (DC). Doppler US and CT-IVP were used for assessment of the kidneys condition. The PSST technique involved US-guided percutaneous needle drainage of the DC fluid, instillation of 96% ethanol into the DC cavity with the volume estimated as 75 % of the drained fluid volume, followed by its aspiration after a 5 minute exposure. The patient data were retrospectively analyzed. **Main Result:** In total, 25 DC including both synchronous and metachronous in the same kidney and bilaterally were subjected to PSST. In all cases, an imaging evidence of DC compression causing circulatory disturbances in the segmental and interlobular vessels was noted, while there was no confirmation of DC connection with the collecting system. The DC size ranged from 3.0 to 7.0 cm. All PSST procedures were conducted as a single session. There were no complications related to the procedure in

any case. In all patients the pain-free effect was achieved within 48-72 hours and considerable increase in renal hemodynamic indexes was seen after 1 month. At follow up of 14 patients conducted at the intervals of 1 – 5 years no evidence of the DC recurrence was demonstrated in any case. **Conclusion:** In our experience, US-guided PSST using 96% ethanol for management of symptomatic patients with ADPKD is very efficacious unfailingly ablating enlarging, symptomatic DC.

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Title: OUR CHILDREN'S VARICOCELE EMBOLIZATION.
Authors: MANGELES MUNOZ-MIGUELSANZ, MD(1), MAURO ALBERTO PADILLA-GARCIA, MD(2), KAMEL MATAR SATUFF, MD(3), RICARDO FERNANDEZ- VALADÉS, PhD(4)
Institutions: (1), (2), (3), (4)
Category: Urology
Keywords: MINIMAL INVASIVE,RESOLUTIVE,COLLABORATIVE
Aim of the Study: The embolization is an effective treatment for the varicocele in children. The aim of this study is to present our experience in the last 4 years with the percutneous embolization with coils and trombogenic material. **Methods:** 17 patients were treated with a median age of 10-14 years-old between the 2008 and 2012. They presented with varicocele treated with embolization with coils and local anaesthetics. The left side was always affected. 4/17 (23.5%) presented with decrease in testicular size without pain, and 14/17 (82.35%) presented with rest pain and during exercise. The follow-up period was between 3 months and 2 years, with US at 3 months and at one year after treatment, considering cured after two years of the embolization. **Main Result:** 15/17 (88%) did not present reflux in spermatic cord veins with the Valsalva maneuver in the US controls at 3 months and at 1 year, remaining asymptomatic.; 1/17 (6%) presented a relapse at 3 months but he was pain-free, therefore he was treated conservatively. Finally, 1/17 (6%) abandoned follow-up. 14/17 (82.35%) of the testicules preserved their size and 2/17 (11.76%) increased in size. A minimal hydrocele appeared in a patient on the 3-month US, as the only complication, disappearing in the next control. **Conclusion:** We consider that the embolization with coils is an effective method for the varicocele treatment at our hospital. It is simple, ambulatory and minimally invasive. We also experienced a low incidence of complications and relapses.

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Title: SELF EXTRUSION STENT LIGATION OF URETHRAL PROLAPSE (SESLOUP)
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Institutions: KORLE BU TEACHING HOSPITAL(8)
Category: Urology
Keywords: urethral prolapse,self-extrusion stent ligation,effective
Aim of the Study: Urethral prolapse is reported as uncommon in literature. However in our institution, we see an average of one every month. It is managed both medically and surgically with reports of manual reduction, excision and urethral ligation over a self-retaining Foley's catheter in literature. Urethral ligation was started in our institution in 2004 and we practice a modification of urethral ligation using a self extrusion stent. We report our experience with 26 girls having urethral prolapse over a 3 year period (March 2013- March 2016) **Methods:** Retrospective cross sectional study done in a tertiary institution in West Africa. 26 patients, ranging from 2-8years, were recruited into the study from both the OPD and Emergency unit. All were treated surgically as day cases by our modified urethral ligation with review a week after surgery. **Main Result:** 1 patient developed E.coli Urinary tract Infection post ligation. 1 had urine incontinence and has been lost to follow up. Self-extrusion of urethral stent with sloughed prolapsed mucosa was achieved in <7days for all patients Follow up was once at the OPD for the 24 non-complicated cases with no recurrence or complications following discharge from Clinic **Conclusion:** All cases were treated successfully with our modification of urethral ligation. Self-extrusion stent ligation of urethral prolapse (SESLOUP) is a cheap, convenient, effective surgical management of urethral prolapse with minimal complications

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Title: Different bulking agents in endoscopic correction of vesicoureteral reflux: multicentre randomize study results in long term follow up.
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Institutions: Russian scientific center of roentgenradiology(1), Russian scientific center of roentgenradiology(2)
Category: Urology
Keywords: vesicoureteral reflux,bulking agent,endoscopy
Aim of the Study: some types of bulking agents are used for endoscopic treatment of VUR. As a rule specialists compare the results of their effectiveness depending on the grade of reflux, clinical symptoms, the age and gender of patients. The randomized comparing of different bulking agent's effectiveness in the vesicoureteral reflux treatment are done in this study. **Methods:** results of the treatment of 335 patients in the age of from 1 till 20 years old (427 ureter units) were analyzed in long term follow up (from 3 till 17 years) in spite of the age where operation was done and grade of VUR. Different bulking agents were used for correction: collagen in 36% of patients, dextranomer/hyaluronic acid

(Dx/HA) in 38%, and polyacrylate polyalcohol copolymer (PPC) in 26% of them. The patients were treated in different clinics at different times. Therefore, there were not special criteria for choosing particular bulking agents in each case; the choice mostly depends on opportunities at that time. The treatment supposed as effective if VUR was absolutely regressed, renal damage wasn't progress and there were not urinary tract infection. **Main Result:** independently of the type of bulking agent summary effectiveness of VUR endoscopic correction was 70%. In patients, who were treated by collagen, reflux recurrent in 35%, in Dx/HA cases recurrent VUR were repotting in 30% of patients. In patients where PPC was used we saw VUR recurrent in 20% cases, but moreover obstructive urodinamic disorders of upper urinary tract (obstructive megaureter) were in 5%, who gets operative correction in further. **Conclusion:** So, every bulking agent may be used for VUR treatment, but more investigations are necessary to determine the indications for each of them.

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Title: Clinical and immunohistochemical correlation of Balanitis Xerotica Obliterans
Authors: Josué E Betancourth-Alvarenga, MD(1), Fernando Vazquez Rueda, MD(2), Ariadna Siu Uribe, MD(3), Francisco J Murcia Pascual, MD(4), Miguel Á Cárdenas Elias, MD(5), Rafael Sánchez Sánchez, MD(6), Rosa M Ortega Salas, MD(7), Rosa M Paredes Esteban, MD(8)
Institutions: Hospital Universitario Reina Sofía, Córdoba(1), Hospital Universitario Reina Sofía, Córdoba(2), Hospital Universitario Reina Sofía, Córdoba(3), Hospital Universitario Reina Sofía, Córdoba(4), Hospital Universitario Reina Sofía, Córdoba(5), Hospital Universitario Reina Sofía, Córdoba(6), Hospital Universitario Reina Sofía, Córdoba(7), Hospital Universitario Reina Sofía, Córdoba(8)
Category: Urology
Keywords: Balanitis Xerotica Obliterans,Circumcision,Phimosis
Aim of the Study: Balanitis Xerótica Obliterans (BXO) is a chronic inflammatory disease of skin and mucosa of male genitals most likely related to an inflammatory process of unknown etiology that may affect children of any age. It has a low incidence 9-19%, but it may represent a potential premalignant lesion. The aim of our study is to establish the incidence of BXO at our center and establish its correlation between the clinical and immunohistochemical (IHC) findings. **Methods:** Prospective cohort including all children <14 years of age with foreskin pathology that required a circumcision. A standard anatomopathological (AP) and IHC examination was performed to all specimens searching for inflammatory response, presence of premalignant lesions, and microbiological associations. **Main Result:** A total of 104 boys with phimosis had circumcision with a mean age of 7±3 years (Range 2-14), 28.1% (n=9/32) of children with 5 years or less had BXO. Presurgical diagnosis of BXO was suspected in 28.9% (n=30) whereas the AP confirmed a total of 24% (n=25) with a good interobserver concordance (κ 0.76: CI 95% 0.7-0.8, p<0.01). Previous treatment with corticoids in BXO was found in 62.5% (n=15/24). The inflammatory response was mediated by T-Lymphocytes, with a positive correlation between p53 expression and chronic inflammation. 8.0% (n=2/25) children with BXO had a meatal stenosis requiring meatal/urethral dilations and topical corticoids. **Conclusion:** The incidence of BXO is greater than previously reported. The surgeons' criterion has a good concordance with the AP findings. The AP/IHC findings indicate that BXO is a chronic inflammatory disease mediated primarily by T-lymphocytes with a high expression of p53.

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Title: Crazy idea of a Friend leads to Paraphimosis
Authors: Kaniz Hasina, MD(1), Nazmus Sakib Ferdous, MD(2), Abdul Hanif, MD(3)
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Category: Urology
Keywords: teacher-student relationships,frequent micturition,Paraphimosis
Aim of the Study: Teachers play an important role in the trajectory of students throughout the formal schooling experience. Although most research regarding teacher-student relationships investigate the elementary years of schooling, teachers have the unique opportunity to support students' academic and social development at all levels of schooling. **Methods:** A 7 year old boy residential madrasa student had the history of frequent micturition during class time. For this reason he was bitten several times. One of his friends gave him an idea to tie the penis to prevent micturition during class time. So he did it and then presented with pain and swelling of prepucial skin for three days with the history of tying of the penis with thread at the level of corona for 3 days. On local examination the foreskin was redden and hugely swollen and a black thread was tied tightly at the level of corona glandis. The skin was ischemic and foul smelled at the dorsum of the shaft of penis. Under general anesthesia the thread was untied and release of paraphimosis was done followed by circumcision. **Main Result:** The boy was discharged on the next day without any complication. **Conclusion:** Although there is extensive research on the positive effects of teacher-student relationships on elementary school students, there is little research on middle and high school students. Middle and high school is when students begin to think about their academic futures, which are informed by academic achievement and social capital in elementary years. Early high school is usually when students dedicate themselves to graduating or decide to drop out. Currently, high school dropout rates are high, and improving teacher-student relationships for students at this stage may decrease dropout rates. Therefore, it is important to develop positive teacher-student relationships during

this time.

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Title: ECTOPIC AND FUSION ANOMALIES OF THE KIDNEY IN SERIES OF 76 PATIENTS
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Institutions: Department of Pediatric Surgery Institute for Children Diseases(1), University Children Hospital Belgrade(2)
Category: Urology
Keywords: ectopic and fusion,kidney ,anomalies
Aim of the Study: Ectopic kidneys(EK) occur in approximately 1 in 1000 births, but only about 1 in 10 of these is ever diagnosed. Horseshoe kidneys(HK) is the most common renal fusion anomaly and occurs in approximately 0,25% of the population. They have variable clinical presentation. There is no single protocol for diagnostic and treatment. **Methods:** The medical records of 76 consecutive children with these anomalies from2010 –2016. were retrospectively reviewed. Age from 0 to 18 years, 55,4% boys.Patients were divided into three groups: 1. Symptomatic patients (by urinary tract or other symptoms); 2. Asymptomatic patients and 3. Patients with solitary ectopic kidney We selectively used ultrasonography, VCUG, MR urography, nuclear medical methods. **Main Result:** We found 42(55%)patients with EK and 31(41%) patients with HK, 3(4%) patients with solitary ectopic kidney. In the group of EK 29(64,4%) are pelvic, 6(13,3%)iliac, 3(6,7%)thoracic, 6(13,3%)crossed and 1(2,2%) cranial . There were right sided 23(51,1%), and bilateral ectopy was found in 2(4,4%) cases. Comparing EK and HK: incidence of symptomatic patients is 51,1%:74,2%(p< 0,05);the incidence of associated anomalies is 68,9%:77,4%. Ultrasound is used for all 76 patients. VCUG was done in 48,9%pts with EK and 45,2%pts with HK. The abnormal findings was in 60%pts with EK,43%pts with HK. Magnetic urography was performed in 26(57,8%) patients with EK,15(48,4%) with HK, all with abnormal findings. Some kind of surgical procedures underwent 18(40%) patients with EK,19(61,3%) with HK. **Conclusion:** When RE or HK is detected, associated renal and urinary anomalies and structural extra-renal malformations should be evaluated. Patients need long-term follow-up and should be examined regularly for potential complications. Diagnosis for this type of anomaly should be kept to the minimum and thus avoid radiation,reduce medical expenses.Clinical presentation and ultrasound findings dictate the need for other diagnostic methods.

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Title: Grafting the incised urethral plate improves the results of TIP repair in primary distal and mid shaft penile hypospadias
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Institutions: Ibn Sina Hospital(1), Ibn Sina Hospital(2)
Category: Urology
Keywords: Hypospadias,TIP,Grafted TIP
Aim of the Study: To examine whether the grafted tubularized incised plate (GTIP) procedure using preputial skin graft in primary distal and mid shaft penile hypospadias cases improves the results of TIP repair. **Methods:** An interventional comparative study was conducted between (1/2009&12/2013). All primary distal and mid shaft penile hypospadias cases before 8/2011 underwent TIP repair , while all since 8/2011 underwent GTIP and the results of both groups were compared. Both repairs were applied regardless of the width and depth of the urethral plate and also regardless of the glans size. Patients were followed up through clinic visits for a period of 2 to 5 years. In all cases urethra was closed in two layers, dartos was used as an interposing layer, and same sutures were used. **Main Result:** : Each group comprised 33 consecutive patients. Mean age at surgery for TIP was 2.1 years and 2.3 years for GTIP. The mean follow up period for TIP was 4.3 years and 3.1 years for GTIP. In each group there were 8 cases with mild to moderate chordee that needed correction with dorsal midline plication (Baskin). The mean operative duration for TIP was 112 minutes while 136 minutes for the GTIP. Within the TIP group, the complication rate was 9.09% [fistula in 2 cases (6.06%) and glanular dehiscence in 1 case (3.03%)], while within the GTIP group the complication rate was 3.03% [only 1 case of fistula]. The difference in complication rate between both groups was statistically significant (P< 0.001). We had neither meatal stenosis nor residual chordee in either group. The results show that the success rate in TIP was 90.91% and 96.97% in GTIP. **Conclusion:** Urethral plate grafting, using a preputial skin when added to TIP repair for primary distal and mid shaft penile hypospadias, results in a significant lower complication rate compared to TIP repair.

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Title: THE INCIDENCE OF DISORDERS OF SEXUAL DIFFERENTIATION AND CHROMOSOMAL ABNORMALITIES OF CRYPTORCHIDISM AND HYPOSPADIAS STRATIFIED BY MEATAL LOCATION
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Institutions: Hamad General Hospital(1), Hamad General Hospital(2)
Category: Urology
Keywords: Hypospadias,Disorders of Sexual Development,Undescended Testis
Aim of the Study: Routine karyotype analysis has been recommended for patients with cryptorchidism and hypospadias. However, it is unclear whether karyotyping should be obtained in all patients, or tailored to the severity or

degree of hypospadias. Therefore, we analyzed the incidence of chromosomal abnormalities in patients with distal or proximal hypospadias and concomitant cryptorchidism. **Methods:** We reviewed the records of patients with cryptorchidism and hypospadias treated at a pediatric hospital between 2010 and 2014. Data collected included karyotype analysis, gonad palpability, and meatal and testes location at time of surgery. Patients with retractile testes and congenital adrenal hyperplasia were excluded from analysis. **Main Result:** We identified 44 patients with hypospadias and cryptorchidism. Karyotype information was available in 25 patients (19 with proximal and 6 with distal hypospadias). None of the patients with distal hypospadias and cryptorchidism had an abnormality of a sex chromosome. In contrast, chromosomal abnormal- ities were present in 6 of 19 individuals (32%) with proximal hypospadias and cryptorchidism. The most common abnormality was mixed gonadal dysgenesis in 3 patients, followed by autosomal translocations in 2 and 48XY aneuploidy in 1. **Conclusion:** When karyotype information was stratified by meatal location with cryptorchidism we found no significant chromosomal abnormalities in distal hypospadias and cryptorchidism, whereas a third of patients with proximal hypospadias and cryptorchidism had an abnormal karyotype. Karyotype analysis appears to be important in individuals with cryptorchidism and proximal hypospadias but of little benefit in patients with distal hypospadias and palpable undescended testes.

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Title: Ureterocele in newborns, infants and children: ten-year prospective study with primary endoscopic deroofing and double “J” stenting.

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Category: Urology
Keywords: ureterocele,endoscopic deroofing,secondary surgery

Aim of the Study: To evaluate the success of endoscopic deroofing with DJ stenting as a primary treatment modality of uncomplicated ureterocele. **Methods:** All babies with uncomplicated ureterocele referred to us between 2005-2015 were to be prospectively recruited into the study without any exception. The indications for operative intervention were to be obstructed ureterocele, bladder outlet obstruction, recurrent UTI or progressive renal scarring. They were then to be taken for cystoscopy in diuretic phase for endoscopic deroofing and DJ stenting with 9F resectoscope. They were then followed up for future development of symptoms and need for secondary surgery with anatomical and functional imaging as necessary. **Main Result:** Forty-three consecutive patients (47 ureterocele units) with ureterocele were recruited into the study. Thirty-four patients were managed by endoscopic first approach with ureterocele deroofing and DJ stenting. Ectopic ureterocele: There were 17 patients with ectopic ureterocele. Thirteen underwent primary endoscopic deroofing. Eight children out of thirteen are completely asymptomatic. On ultrasound evaluation 8/13 have resolution of the hydronephrosis and 5/13 have stable hydronephrosis with no increase in dilatation. None of these 13 children have required a second endoscopic procedure for inadequate decompression of the ureterocele. 2/13 (15%) cases with recurrent UTI and persistent symptoms, required secondary surgery. Orthotopic ureterocele: There were 21 patients out of 22 with orthotopic ureterocele who underwent endoscopic deroofing. 6/21 had episodes of UTI, of which three had resolution of the reflux and two had downgrading of reflux. One child continued to have recurrent UTI and needed a laparoscopic nephroureterectomy. The rate of secondary surgery was 4.7 % in orthotopic ureterocele group. **Conclusion:** We suggest that primary endoscopic deroofing with DJ stenting for obstructing ureterocele is the best initial approach for adequate decompression and reducing the rate of secondary surgery.

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Title: OUT COME OF URETHRAL RECONSTRUCTION IN DISTAL PENILE HYPOSPADIAS BY THE TUBULARISED INCISED PLATE URETHROPLASTY: AS A VERSATILE TECHNIQUE

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Category: Urology
Keywords: Hypospadias,Urethroplasty,TIP

Aim of the Study: The use of the TIP urethroplasty (Snodgrass) technique has gained wide acceptance among pediatric urologists for the correction of hypospadias repair because of its good cosmesis, low complication rate, and reliability in creating a vertically oriented meatus. Objective of this study was to evaluate the technique and postoperative results of the tabularized incised urethral plate (TIP) urethroplasty in our local setup. **Methods:** Prospective observational case series study. During the period of January 2012 to July 2013 a total of 54 boys aged 2 - 13 years (mean 5.5 years) admitted in paediatric surgery ward, Rangpur medical college hospital, with Glanular(5.5%), Coronal(18.5%), Subcoronal(35.18%), Distal penile(11.1%), midpenile(9.6%) hypospadias.They underwent one-stage repair using a modified TIP repair during the mentioned period were included in the study. Outcome was reviewed for each patient to determine the complications, reoperations, cosmesis, and functional results after surgery. **Main Result:** It was found that the surgical operation is easy to perform with mean operative time of 95 minutes. Excellent cosmetic

appearance achieved in 75% cases while satisfactory cosmetic results in 25%. The meatal stenosis was seen in 4 cases, while small urethrocutaneous fistula in 3 cases. The flow time and urinary stream showed that there were no urethral stricture was present in any of our patients. **Conclusion:** Our experience with the modified tubularized incised plate urethroplasty procedure in the management of distal penile hypospadias was found that it is simple, safe and reliable versatile technique with excellent cosmetic and functional results with a low reoperation rate.

453 - PA
Title: Conservative management of antenatal hydronephrosis due to pelvi-ureteric junction obstruction : Outcome assessment
Authors: Virender Sekhon, MCh, Pediatric Surgery(1), Mohammad Sualeh Ansari, MCh, Urology(2)
Institutions: SGPGIMS, Lucknow(1), SGPGIMS, Lucknow(2)
Category: Urology
Keywords: Antenatal hydronephrosis,Antero-poeterior diameter,Pyeloplasty
Aim of the Study: The prediction of likelihood of surgical intervention and its timing for antenatal hydronephrosis (ANH) due to UPJ obstruction (UPJO) is controversial. This study aimed at defining factors which could predict the need for surgery in such patients, and also patient characteristics which necessitate aggressive follow-up. **Methods:** 173 renal units of ANH, confirmed as UPJO postnatally, were included in the study. The indications of surgery at presentation were differential renal function (DRF) of <35% with obstructed renal curve and / or cortical thickness of < 3.5mm; those at follow – up were operated if there was a fall in DRF of > 10% or USG progression of SFU grade of hydronephrosis with an obstructed renogram. The follow – up was done with USG and radionuclide studies 3monthly for 2 years and thereafter 6 monthly for the next 2 years. The patient characteristics of those who underwent surgical intervention versus those who did not were then compared. **Main Result:** Of the 152 patients who qualified for conservative management, 22.7% needed surgery during follow-up. Median follow – up was 59 months and median time to failure was 35 weeks. ROC curve analysis showed that a renal pelvic antero-posterior diameter (APD) of 24mm was the most consistent factor for predicting the need for surgery. APD combined with DRF are the only significant factors forecasting surgery, whereas CT and initial hydronephrosis grade are not. **Conclusion:** APD of > 24mm is the most important factor in predicting the need for surgery. This, in combination with DRF, are pointers for aggressive follow-up of patients on conservative management.

454 - PA
Title: The modified Ulaanbaatar procedure: reduced complications for the most severe cases of hypospadias
Authors: Venkata R Jayanthi, MD(1), Christina Ching, MD(2), Daryl McLeod, MD(3), Daniel DaJusta, MD(4), Seth Alpert, MD(5)
Institutions: Nationwide Children's Hospital(1), Nationwide Children's Hospital(2), Nationwide Children's Hospital(3), Nationwide Children's Hospital(4), Nationwide Children's Hospital(5)
Category: Urology
Keywords: hypospadias,urethroplasty,
Aim of the Study: The “Ulaanbaatar” procedure for proximal hypospadias was described by Dewan as a modification of the classic 2 stage procedure in which the glanular urethra is constructed during the first stage. During the second stage, the penile skin between native proximal meatus and the distal reconstructed urethra is tubularized. **Methods:** We retrospectively reviewed all consecutive patients who completed both stages of the repair. We evaluated demographics, technique of chordee correction, technique of glanular urethra reconstruction and overall outcomes and complications. The first stage is analogous to a classic repair with regard to urethral plate division and chordee correction. Our modification involves creation of a preputial tubularized island flap which is brought through the glans. The remaining penile skin is used for skin coverage and to bridge the native meatus and the distal neourethra. Six months later, the midline skin is tubularized reconstructing the urethra from the proximal meatus to the glanular neourethra constructed at the first stage. **Main Result:** Thirty three boys have undergone both stages. Mean age at surgery was 18.3 months (range 6 - 118). Nineteen underwent evaluation for genital ambiguity at birth (58%). Twenty nine (88%) received preoperative hormones. Chordee was addressed with dorsal plication in 12 (36%), urethral plate transection alone in 6 (18%) or ventral grafting in 15 (46%). Bifid scrotum/penoscrotal transposition was corrected at the first stage in 3 and at the second in 22. Five patients (15%) required a third procedure (3 diverticulae, 1 fistula, 1 vasectomy for recurrent epididymitis). Mean follow up is 15.2 months (0.3 to 50.2). **Conclusion:** The modified “Ulaanbaatar” procedure has a high success rate and is applicable to the most severe cases of hypospadias where urethral plate transection is necessary, particularly those with genital ambiguity. The second stage is relatively simple as it is analogous to a large fistula repair.

455 - PA
Title: Our experience on urethral duplication in children: 4 case reports and review of the literature
Authors: CAROLINA TALINI, MD(1), ANTONIO CARLOS MOREIRA AMARANTE, MD(2), MARIA HELENA CAMARGO PERALTA DEL VALLE, MD(3), AYRTON ALVES ARANHA JUNIOR, MD(4), LETICIA ALVES ANTUNES, MD(5), BRUNA CECILIA NEVES DE CARVALHO, MD(6), DOUGLAS FAGUNDES TEIXEIRA, MD(7)

Institutions: HOSPITAL PEQUENO PRÍNCIPE, CURITIBA/PR(1), (2), (3), (4), (5), (6), (7)
Category: Urology
Keywords: urethral duplication,ectopical urethra,urethral anomaly
Aim of the Study: The urethral duplication is a rare lower urinary anomaly that can present with a variety of clinical manifestations. The aim of the present study is to report four different cases of urethral duplication. **Methods:** Medical records review. **Main Result:** A 10 years old boy presented with urinary loss by the perineal region in every act of voiding. Voiding cystourethrogram demonstrated a duplicated urethra running from the penile urethra to the perineal region. The patient was submitted to a single stage repair by surgery resection of the duplicated path. A 5 years old male patient presented with hypospadia. At the moment of the surgery it was identified a double incomplete urethra, wich communicated by an opening to the ventral urethra wall. The third case is a pacient with the a atrophic orthotopic urethra with its tract at the dorsal part of the penis and a ectopical urethra that opened in the rectum, near the anal verge. He underwent a two stage surgery with urethral ectopic mobilization and posterior construction of a 11 cm long urethra with bladder mucosa and prepucial mucosa free graft. He developed an anastomotic stricture, that required multiple dilatations. The last case is about a nine months old patient with y type urethral duplication, diagnosed with urethral valve, submitted to valve ablation, and now waiting for the atrofic urethra excision. **Conclusion:** The cases treated in our service show that every single case presents its own clinical symptoms and anatomy considerations. The surgical treatment must be individualized according to the anatomical finds. A single stage repair of the y duplication urethra is feasible, when the caliber of the orthotopic urethra is normal.

PA2. POSTER ABSTRACTS

Monday, October 10 | 12:45 – 13:45 | Exhibit Hall A

PA2-1 | MODERATORS: HIROAKI KITAGAWA, EVAN NADLER

050 - PA
Title: The use of flow equation in functional coloproctology and the rise of Continence Normograms
Authors: Heba Taher, MD(1), Ahmed Farag, MD(2)
Institutions: Cairo University(1), Cairo University(2)
Category: General Surgery
Keywords: continence Normograms,Fecal incontinence,integrated coloproctology
Aim of the Study: The flow equation can be used to understand normal anorectal physiology and thus explains The controversies experienced due conflicting research data. According to the flow equation, there are four primary mechanical factors maintaining continence and achieving unobstructed defecation, namely intra-rectal pressure (IRP), the dynamic viscosity of the bowel contents, anal canal length, and diameter. The last three factors are responsible for the anal canal resistance(ACR). All other factors are secondary, and working through one or more of the four primary mechanical factors. The sensory and reflex components work through the IRP and ACR respectively. This data can be used to plan treatment and predict outcomes. Normograms and the automated flow calculator were designed to illustrate and avoid tedious calculations, and they suggest a final diagnosis for each patient. **Methods:** Our study included 32 children, ages ranging from 6 years to 15 years having fecal incontinence (FI) after operations for Anorectal anomalies and Hirschsprung disease. We assessed incontinence using our institute's validated FI score(based on flow equation) which classified FI according to the degree of its severity into six grades. Then we used Anorectal manometry, Lateral defecography and/or FLIP on the same patients to find out the anal canal length (ACL), anal canal diameter (ACD), and rectal pressures during squeeze, rest, cough and urge. We plotted the results on Continence Normograms. The results of both approaches were correlated using the Spearman test. **Main Result:** there was a strong correlation between our traditional approach and the integrated approach interpreted using Nomograms. R is 0.7 $p<0.05$
Conclusion: Calculation of the ACR before and after treatment is helpful when making an objective evaluation of different treatment modalities to the same patient. Calculation of the ACR also gives new insight into the results of modifying existing treatment modalities or creating new ones.

051 - PA
Title: The use of botulinum toxin in children with chronic constipation
Authors: almoutaz eltayeb, MD(1), nagla abufaddan, MD(2), hala mostafa, MD(3)
Institutions: (1), (2), (3)
Category: General Surgery
Keywords: chronic constipation,internal anal sphincter,botulinum toxin
Aim of the Study: Conventional therapy of childhood constipation was based on dietary manipulation, stool softeners and oral laxatives. Although these forms of medications are successful in the majority of cases, still small subgroup of patients may fail to respond to this treatment. The aim of this study is to evaluate the role of botulinum toxin in relieving the symptoms of those patients. **Methods:** This study was conducted on all cases with chronic constipation that fail to

respond to medical treatment and presented to pediatric surgery unit at Assiut university children hospital from January 2014 to June 2016. Cases under went any previous surgical maneuver will be excluded from study. Injection technique: anal dilatation was started by Higar dilators then small self retaining anal retractors were introduced and four injections were made into the four quadrants of the anal canal and rectum at the level of IAS (internal anal sphincter). **Main Result:** twenty cases were included (14 males and 6 females) with age ranged from 5 months to 6 years. The botulinum injection per patients ranged from 1 to 2 injections. The response rate to this treatment was excellent in 6 cases and good in 12 cases and poor in 2 cases. No systemic or local complications occurred in any patients. **Conclusion:** botulinum toxin injection could be safe and effective treatment of chronic constipation in infants and children who fail to respond to medical treatment

052 - PA
Title: One Stage Anterior Sagittal Sphincter Saving Anorectoplasty (ASSSARP) for the Repair of rectovestibular Fistula in girls
Authors: Akram Elbatarny, MD(1), Sherif Shehata, MD(2)
Institutions: Tanta Faculty of Medicine(1), Tanta Faculty of Medicine(2)
Category: General Surgery
Keywords: Rectovestibular,Anterior Sagittal,Sphincter saving
Aim of the Study: We reviewed the records of cases of ARVF done by one stage ASSSARP regarding the preoperative preparation, operative technique, postoperative complications and functional outcome. **Methods:** The medical records of 24 cases of RVF done between April 2010 and September 2015 by one stage ASSSARP were reviewed. The operative technique: a circumfistula incision continued in the midline till the post margin of the EAS. The incision is deepened through the skin and subcutaneous tissues. The rectum is dissected from the vagina until completely separated. The center of the sphincter is defined by muscle stimulation then a mosquito is passed through it followed by gradual dilatation. The rectum is passed through the center of the muscle, the perineal body reforming, anoplasty. Oral clear fluids are allowed 2nd PO day. Anal dilatation program is started on D 14 PO and followed for six months. **Main Result:** The mean age at the time of operation was 6.19. The mean operative time was 97.63 minutes. Vaginal tear occurred in 3/24 cases. Mild superficial wound inflammation occurred in 7 patients while skin dehiscence occurred in 2 patients. Mean hospital stay was 5.8 days. Mean follow up was 15.6 months. Mild anal stenosis occurred in 4 patients. Eight cases suffered constipation; 4 were grade I & 4 were grade II. Soiling grade I occurred in 2 patients. 15 patients continued follow up past the age of 2.5 years and only 1 patient showed a stress incontinence. No colostomy or redo was needed in any case. **Conclusion:** One stage ASSSARP is feasible and gives functional and cosmetic results comparable to other techniques. It provides a better access to female anomalies. The avoidance of muscle incision protects against muscle breakdown if infection sets in, and thus against incontinence. This avoids the morbidity, cost and psychological burden of performing a 3 stage operation.

053 - PA
Title: MIDGUT VOLVULUS WITHOUT MALROTATION FOLLOWING OPEN APPENDICECTOMY: CASE REPORT AND LITERATURE REVIEW
Authors: Daniella MD Chacon, MD(1), Santiago Navas, MD(2), Jesus MD Niño, MD(3)
Institutions: Hospital militar Central (1), Hospital militar Central (2), Hospital militar Central (3)
Category: General Surgery
Keywords: midgut volvulus ,apendectomy ,postoperative complications
Aim of the Study: The aim of this study is to present a case o an intestinal obstruction, secondary to a midgut volvulus without intestinal malrotation as an early and rare complication of an open “Rocky Davis” appendectomy. **Methods:** Case report and literature review **Main Result:** Intestinal obtrucción by midgut volvulus as a postoperative complication of an open appendectomy is a very rare condition. Case reports have been found mainly in laparoscopic surgery as a result of pneumoperitoneum. Our case is the first case reported in postoperative appendectomy by Rocky Davis technique. We do not know the exact pathophysiology of this complication; we can attribute it to distension of bowel loops and / or manipulation during surgical dissection. **Conclusion:** Intestinal obtrucción by midgut volvulus as a postoperative complication of an open appendectomy is a very rare but possible. It is important to be aware of this complication and that it´s early diagnosis might prevent significant postoperative morbidity.

054 - PA
Title: Recto-anterior urethral fistula: Diagnosis and surgical technique for correction of unusual anorectal malformation in male.
Authors: Shiv N Kureel, MD(1), Piyush Kumar, MD(2), Archika Gupta, MD(3), Jile D Rawat, MD(4)
Institutions: Department of Pediatric surgery, King George's Medical university(1), Department of Pediatric surgery, King George's Medical university(2), Department of Pediatric surgery, King George's Medical university(3), Department of Pediatric surgery, King George's Medical university(4)
Category: General Surgery
Keywords: Anorectal malformation,Rectourethral fistula,Anterior Sagittal anorectoplasty

Aim of the Study: To report the diagnosis, surgical technique and results of unusual anorectal malformation (ARM) for prevention of misdiagnosis and its consequent complications. **Methods:** In last seven years, nine recto-anterior urethral fistula (RAUF) were diagnosed. In three neonates, the diagnosis was suspected by triad of meconium stained diaper, absence of perineal fistula, and rectal pouch reaching beyond I point in invertogram. After the colostomy, pressure augmented distal colostogram (PADC) confirmed the diagnosis. Rectal pouch descended beyond I point, coursing anteriorly, tapering and opening in urethra distal to bulb. In six patients with prior colostomy, PADC confirmed the diagnosis of RAUF. All patients received anterior sagittal anorectoplasty (ASARP) with bulb and urethra sparing technique. In modified lithotomy position, through incision along the median raphe, muscle complex was bisected in the midline to expose rectal pouch and bulbospongious muscle. Circumferential mobilization of rectum off the urethra was achieved with dissection staying close to longitudinal muscle coat, leaving the perirectal fascia undisturbed towards urethra. In the same plane, distal most rectal pouch was dissected up to anterior urethra and disconnected under vision. Mobilized rectum was placed in muscle complex. The repair included fistula closure, sphincteroplasty, and anoplasy. After six weeks, stoma was closed in eight patients. The outcome was assessed as surgical complications and defecation pattern after colostomy closure. **Main Result:** There was no case of urethral injury. Bleeding from the bulb during fistula disconnection (4) was controlled with sutures. After stoma closure, constipation was present in 2, perineal excoriation in 1. There was no anal stenosis. Good guarding reflex was present in seven. **Conclusion:** RAUF is uncommon ARM suspected with traid of meconium stained diaper, absence of perineal fistula, and invertogram showing low malformation. PADC will confirm the diagnosis. Bulb sparing trans-scrotal ASARP is safe and effective technique for correction.

055 - PA
Title: AN ANSWER TO AN ENIGMA: INTEGRATED ASSESSMENT OF ANORECTAL FUNCTIONAL DISORDERS
Authors: Heba Taher, MD(1), Ahmed Farag, MD(2)
Institutions: Cairo University(1), Cairo University(2)
Category: General Surgery
Keywords: Fecal incontinence,integrated coloproctology,anorectal functional disorders
Aim of the Study: Authors claim that expensive tests such as anorectal manometry, MRI and Ultrasound don't affect our planning for treatment of anorectal functional disorder because they don’t offer an objective Standardized assessment of clinical outcome after Anorectal procedures. This concept is due to the study of the Anorectal segment which is a physiologically highly integrated system of the bowel in an unintegrated approach. We propose the use of the resistance and flow equations, for the integration of Anorectal physiologic testing. Many authors suggested the resistance of the anal canal to flow to be a more important factor in maintaining continence than the ability of the muscles to squeeze around the anal canal. **Methods:** In our study included 32 children, ages ranging from 6 years to 15 years having fecal incontinence (FI) after operations for Anorectal anomalies and Hirschsprung disease. We assessed incontinence using our institute’s FI score which graded FI according to the degree of its severity into six grades. Then we used Anorectal manometry on the same patients to find out the anal canal length (ACL), anal canal diameter (ACD), and rectal pressures during squeeze, rest, cough and urge. We used those results to calculate the incontinence score using an online program flow index calculator(based on the flow equation). The results of both approaches were correlated using the Spearman test. Sixteen patients were clinically evaluated using our integrated scoring system and Wexner scoring system to correlate the two scoring system together. **Main Result:** There was a significant correlation between the traditional approach and the integrated approach $r=0.848$ $p<0.05$, as well as between the institute’s clinical score and Wexner Score $r=0.852$ $P<0.05$. **Conclusion:** The integrated approach is a new validated method which provides an objective, standardized quantitative evaluation of the sphincter complex in paediatric age group and allows and assessment of changes in adulthood.

056 - PA
Title: Evaluation of new clinical criteria in reducing the number of cases of impalpable undescended testis indicated for laparoscope
Authors: Mohamed Abdelmalak, MSC(1), Saber M Waheeb, PhD(2)
Institutions: Alexandria university(1), Alexandria university(2)
Category: General Surgery
Keywords: impalpable undescended testis,laparoscope,clinical examination
Aim of the Study: To assess the validity as well as diagnostic power of new clinical criteria for reducing the number of undescended testes indicated for laparoscopic intervention. Although laparoscopy is considered the most accurate tool in diagnosis of impalpable undescended testis, there is burden of healthcare problems and limitation of facilities in Africa and in developing countries so clinical examination is a main important step in diagnosis and in the management of the impalpable undescended testis. **Methods:** A cross-sectional study was carried out on pediatric patients with impalpable undescended testis, in Alexandria Children's University Hospital, from September 2013 till August 2014. Pediatric patients with previous surgery in the inguinal region as well as those with retractile testis were excluded. Data were collected using a survey including the patient data as well as the new clinical criteria items (development of Ipsilateral half of scrotum, feeling of Ipsilateral rolling of spermatic cord against pubic bone, assessment of Contra

lateral testis, and presence of Ipsilateral intrascrotal nubbin). **Main Result:** Patients were classified into three groups pure intra-abdominal testis, peeping testis and atrophic testis. • Eighteen patients (15.3%) out of 118 (n) were with intra-abdominal testis; most of them (94.4%) had undergone laparoscopic intervention. The new clinical criteria showed 98.3% specificity and sensitivity in diagnosis of intra-abdominal testis. •While there were 72 patients (61.2%) with peeping testis, most of them (61.1 %) were operated by open surgery, the new clinical criteria showed 98% specificity and 94.4% sensitivity in the diagnosis of peeping testis. •Lastly, we had 28 patients (23.7) with atrophic testis who mostly were operated by open surgery (71.4), the new clinical criteria showed 99% sensitivity and 95.6% specificity in diagnosis of atrophic testis **Conclusion:** Careful and meticulous clinical examination is considered the corner stone in diagnosis and management of impalpable undescended testis.

057 - PA
Title: PREOPERATIVE NUTRITIONAL STATUS AS A PREDICTOR OF OUTCOME IN PEDIATRIC SURGICAL PATIENTS UNDERGOING EMERGENCY ABDOMINAL SURGERY
Authors: Esther A Saguil, MD(1), Adhara k Fernandez, MD(2)
Institutions: Philippine General Hospital(1), Philippine General Hospital(2)
Category: General Surgery
Keywords: serum albumin,preoperative nutrition,abdominal surgery
Aim of the Study: We undertake to determine the relationship, between the preoperative nutritional status of pediatric surgical patients, specific preoperative parameters, and their postoperative outcomes. **Methods:** Patients aged 1-18 years with no other comorbid conditions or syndromes who underwent emergency abdominal surgery at the Philippine General Hospital during a three month period were recruited for this cross sectional study. Nutritional status was based on body-mass index and the standard Nutrition Assessment Tool and Subjective Global Assessment tool. Post-operative outcomes in terms of complications and length of hospital stay were recorded. **Main Result:** Most of the subjects underwent appendectomy (50%), and exploratory laparotomy (39.07%).Eleven (17.19%) developed complications and 1 (1.56%) died of the complication . Thirty (46.87%) stayed in the hospital for more than 7 days. Most of the subjects belonged to <10th percentile based on weight-for-age and height-for-ageq . Fifteen out of the 23 subjects (65%) who belonged to <10th percentile based on weight-for-age had complications or stayed in the hospital longer than 7 days. Thirteen subjects out of the 19 (68.42%) who belonged to <10th percentile based on height-for-age had complications or stayed in the hospital longer than 7 days. All 4 subjects with low serum albumin levels developed complications.Multiple logistic regression analysis reveals that serum albumin, hemoglobin and Subjective Global Assessment (SGA) grade were found to have significant correlation to the operative outcome in pediatric surgical patients (p=0.003). **Conclusion:** We recommend to include these nutritional parameters in the pre operative work up of every pediatric surgical patient for emergency major abdominal surgery in order to recognize those patients who are nutritionally compromised and ensure that active measures at improving nutritional status can be enforced, such as supplementary feeding, providing patients total parenteral nutrition peri-operatively, or early resumption of feeding.

058 - PA
Title: Acquired Rectovaginal Fistula in HIV Positive Children- Repair is Not Fruitless
Authors: Ashwini G Maharaj, MD(1), Anjana Bairagi, MD(2)
Institutions: Nelson R Mandela School of Medicine, University of KwaZulu Natal(1), Nelson R Mandela School of Medicine, University of KwaZulu Natal(2)
Category: General Surgery
Keywords: Rectovaginal Fistula,HIV positive,Anti Retroviral Therapy
Aim of the Study: The initial reports of acquired Rectovaginal fistulas in HIV positive children originated in Africa in the pre anti-retroviral era. It was thought that repair was fruitless and that this represented the end-stage of disease. We aim to demonstrate that in HIV positive children successful repair is possible. **Methods:** This is a retrospective review from 2007 to 2014 (an 8 year period) when anti-retroviral therapy was available to all children in KwaZulu Natal We searched our theatre records for operations performed for recto vaginal fistulas. We included all HIV positive patients with acquired Rectovaginal fistulas. We excluded all HIV negative patients and congenital fistulas. **Main Result:** We found 9 girls with Rectovaginal fistula. This is a decrease in number compared to a previous study from our center, which identified 39 female children over a six-year period. All of the children in the present study had their fistulas successfully surgically closed after having been started on anti-retroviral therapy and having an undetectable viral load or CD4 above 25%. 3 patients had an initial colostomy and fistula repair. There were no breakdowns of the fistula in this group. 6 had an attempt at primary repair. 3 of these (50%) had breakdown requiring redo surgery. 7 patients (77.8%)are continent with no recurrence post surgery. 1 awaits closure colostomy and 1 has a permanent colostomy. All patients are known to be alive on average 45months after initial presentation (range 11- 84) **Conclusion:** Rectovaginal fistulas in the HIV positive child are a rare occurrence since the introduction of Anti retroviral therapy and may explain the dearth of recent literature on the subject. Repair is should always be attempted in the immune reconstituted patient preferably under cover of a divided colostomy. These patients have excellent survival and a good quality of life

059 - PA
Title: A Rare Pediatric Case: Hemorrhagic Cyst Rupture of The Undescended Ovary Mimicking Mucocele
Authors: Tamer Sekmenli, MD(1), Metin Gunduz, MD(2), Ilhan Ciftci, MD(3)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1), Selcuk University Medical Faculty Department of Pediatric Surgery (2), Selcuk University Medical Faculty Department of Pediatric Surgery (3)
Category: General Surgery
Keywords: undescended ovary,mucosele,acute abdomen
Aim of the Study: Undescended over is very rare congenital disease. We aim to provide our case with undescended over mimicking mucocele appendix from the clinical acute abdomen. **Methods:** A 15 -year-old female patient was referred to our clinic with continuous abdominal pain for the last four days and initial diagnosis of renal cystic mass displayed during ultrasonography in another hospital. **Main Result:** The physical examination revealed tenderness in the right lower quadrant. The last menstrual period had occurred 2 weeks ago. Patient hemogram and hormonal profiles did not reveal any pathology. Abdominal Computer Tomography image was demanded. A cystic lesion of about 48x34 mm with well defined borders associated with the appendix and probably with appendix mucocele was reported in the lower right abdominal quadrant close to the cecum based on the tomography image. (Figure1/ A&B). Surgical intervention was considered and patient was admitted to our clinic. Using a infraumbilical right transverse incision, abdominal access was realized. During the exploration, the right ovary was seen to be attached to the cecum and higher in position as well as right ovary originated cystic structure of 5x5 cm. Using needle aspiration intraovarian hemorrhage was confirmed and partial cystectomy was performed. Current clinical condition was decided to be the result of hemorrhagic cyst rupture. The uterus and the other ovary were normal. Likewise was the appendix and did not reveal any pathology. Patient was discharged without any problems the next day. Subsequent to patients discharge, during the USG controls made 3 weeks late, the right ovary was normal and no pathologies could be determined. **Conclusion:** In girls referring to the hospital with abdominal pain, although quite rare, undescended ovaries are to be also considered. As the incidence of renal and uterine anomalies is higher in these patients, in symptomatic cases relevant organs are to be investigated carefully during surgical intervention.

060 - PA
Title: Duodeno-jejunal Angulation, A New Surgical entity of duodenal obstruction
Authors: Shafiqul Hoque, MBBS,FACS,FCPS(1)
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Category: General Surgery
Keywords: Duodenal obstruction ,Duodeno-jejunal angulation,New surgical technique for duodeno-jejunal angulation
Aim of the Study: To establish a new entity of duodenal obstruction from the presentation of 4 cases in my long long 32 years of experience with the development of a new technique. **Methods:** New surgical technique: The author encounter 4 similar cases of duodeno-jejunal angulation causing acute or chronic obstruction. A special surgical technique applied in last 3 cases who survived. The angle opened by a longitudinal incision 1inch proximal and 1 inch distal to the angle and closed transversely. **Main Result:** The first patient of 15 years girl presented with chronic duodenal obstructionad in 1998 to find gross dilatation of duodenum with an acute angulation at its junction with jejunum which was significantly narrow and treated with gastro-jejunostomy but not improved and died after 2 years of suffering. The 2nd patient was 13 years girl, 3rd patient was an infant of 5 months and 4th patient was of 15 years boy presented with chronic duodenal obstruction ad was operated for correction of malrotation but there were not improved and referred to me. All of them were re-operated and acute duodeno-jejunal angulation were detected. The similar new technique was applied in all and they were recovered well and till now maintaining a normal healthy life with significant weight gain. **Conclusion:** The author proposes duodenojejunal angulation is a new entity of duodenal obstruction and the new surgical technique is suitable to relieve the problem.

061 - PA
Title: Vestibular fistula with partial vaginal agenesis and intact cervix- Experience with buccal mucosa graft vaginoplasty with anterior sagittal anorectoplasty
Authors: Shyam P Jaiswar, MD(1), Apala Priyadarshini, MD(2), Kanoujia Sunil, MD(3), Anand Pandey, MD(4), Shiv N Kureel, MD(5)
Institutions: Department of Obstetrics and Gynaecology, King George's Medical University, Lucknow(1), Department of Obstetrics and Gynaecology, King George's Medical University, Lucknow(2), Department of Pediatric surgery, King George's Medical university(3), Department of Pediatric surgery, King George's Medical university(4), Department of Pediatric surgery, King George's Medical university(5)
Category: General Surgery
Keywords: Vaginoplasty,Buccal Mucosa,Vestibular fistula with vaginal agenesis
Aim of the Study: To report the experience of buccal mucosal graft (BMG) vaginoplasty during the anterior sagittal anorectoplasty (ASARP) for correction of vestibular fistula (VF) with partial vaginal agenesis. **Methods:** In last two years, 3 patients of VF with vaginal agenesis presented at the age5, 7, and 17 years. Last patient had previous colostomy made elsewhere. Magnetic resonance imaging (MRI) revealed intact uterus, cervix with absence of distal two

third of vagina and hydrometrocolpos in one. For ASARP, standard procedure of division of muscle complex in midline and mobilization of rectum up to peritoneal reflection sparing the urethra and bladder base was adopted. Posterior to urethra and bladder neck, blind vaginal pouch was opened near the posterior fornix to create a tongue shaped flap for lining the anterior wall of vagina. After sphincter reconstruction around the rectum, for lining of posterior vaginal wall, BMG was harvested and placed with soft vaginal mold made of paraffin gauge. Two patients without colostomy were kept fasting for five days with drugs to minimize bowel movements. Results were assessed by analyzing surgical complications and follow up status. **Main Result:** In patients with and without colostomy, anoplasty and perineal reconstruction healed well. There was no incontinence. The flap on anterior vaginal wall survived in all patients. BMG take was highly satisfactory in all patients. There was one vaginal stenosis and patient is on vaginal dilation. **Conclusion:** In patients with partial vaginal agenesis with intact cervix and VF, the use of vaginal pouch flap for anterior wall and BMG for posterior vaginal wall can simultaneously create satisfactory vagina with completion of ASARP without the need of second stage surgery later on.

062 - PA
Title: Ectopic Gastric Mucosa In Rectum in a Child, A Case Report
Authors: Khizer Mansoor, FEBPS(1), Graham Briars, FRCP(2), Ashish Minocha, FRCS(3)
Institutions: Norfolk & Norwich University Hospitals, NHS Foundation Trust(1), Norfolk & Norwich University Hospitals, NHS Foundation Trust(2), Norfolk & Norwich University Hospitals, NHS Foundation Trust(3)
Category: General Surgery
Keywords: Ectopic Gastric Mucosa,Ectopic,Rectum
Aim of the Study: To present this rare pathology and review of literature **Methods:** The case is presented along with literature review **Main Result:** An 9 year old otherwise fit and well child presented with a vague history of off and on abdominal pain, multiple visits to the toilet and passage of blood and mucous per rectum. The symptoms have been ongoing for 7 to 8 months before presentation. He has not lost any weight or had any other systemic complaints. Clinical examination was unremarkable. An xray showed faecal loading. He was initially treated with laxatives. Blood work up was not suggestive of any significant pathology. He underwent upper and lower GI endoscopies which were suggestive of possibly the diagnosis of inflammatory bowel disease. He was treated with steroids. Azathioprine was added later on as well. Due to ongoing symptoms, a repeat scopy was done and this time confirmed the diagnosis of ectopic gastric mucosa in the rectum. Patient underwent surgical mucosectomy. The specimen confirmed the diagnosis as above. Patient is doing much better symptomatically. **Conclusion:** Gastric heterotopia is most commonly seen in oesophagus. Less than 100 cases have been reported of this extremely rare disorder. Very few cases have been reported in the paediatric age group. There are different theories trying to explain the presence of mucosa in this site. Presentation includes bleeding per rectum, tenesmus, anaemia, perforation, peri anal fistula, rectovesical fistula and possible malignant transformation. Sysmptomatic control has been described with H2 blockers and proton pump inhibitors. Surgical excision offers definitive treatment but recurrence is common.

063 - PA
Title: Effect Of Fecal Diversion On Human Pediatric Colonic Mucosa: Ultrastructural Study
Authors: Omar A Elekiabi, MD(1)
Institutions: Faculty of Medicine, Zagazig University(1)
Category: General Surgery
Keywords: colostomy,mucosa,histopathological
Aim of the Study: Fecal diversion has a common place in gastrointestinal pediatric surgery . These procedures are performed for several indications including ano-rectal anomalies , trauma , intestinal obstruction , neoplastic and inflammatory diseases. Colostomy may be done temporary or definitive , in both situation , a non- physiological condition ensures , the sequela of which is not completely understood. This study attempts to elucidate the changes which would occur in colonic mucosa cells distal to the diversion in comparison to cells of mucosa proximal to stoma . Defining and explaining these changes may help to stratify indications and duration of colostomy in different situations. **Methods:** Four cases of high ano-rectal anomalies were candidates for temporary pelvic defunctioning colostomy at the first neonatal day , and for 6 months till definitive repair was done. Colonic mucosa biopsies were taken from distal and proximal loop (as a control) at time of closure of colostomy , 2 months after ano-rectal repair. The control biopsy was initially targeted for histo-pathological studies to confirm normality and absence of any pathological lesions. Then biopsies from both loops were prepared for scanning and transmission electron microscopy were done to scan the ultra-structures. **Main Result:** Ultra-structures of the goblet cells in the diverted colon reflects hyperactivity with greatly enhanced rate of synthesis and maturation of their mucus granules and in turn increase mucus secretion, compared to control specimen. The endocrine cells were hypo-active in synthesis of their secretory granules. **Conclusion:** Colostomy causes morphological and functional changes in the mucosa of the diverted colon that may be responsible for the bowel habit changes e.g. diarrhea attacks after closure of colostomy

064 - PA
Title: AN UNEXPECTED COMPLICATION: A GLAND ISCHEMIA AFTER CIRCUMCISION. REVIEW OF THE LITERATURE
Authors: Miguel Angel Cárdenas Elias, MD(1), Fernando Vázquez Rueda, MD(2), Victoria Jimenez Crespo, MD(3), Ariadna Siu Uribe, MD(4), Francisco Javier J Murcia Pascual, MD(5), Josué Eduardo JE Betancourth Alvarenga, MD(6), Rosa María Paredes Esteban, MD(7)
Institutions: Hospital Universitario "Reina Sofía"(1), (2), (3), (4), (5), (6), (7)
Category: General Surgery
Keywords: gland ischemia,dorsal penile nerve block,circumcision
Aim of the Study: Circumcision is a frequent and common surgical procedure in children; nevertheless it is not completely hassle-free. A gland ischemia after a circumcision is an uncommon complication and there are very few cases reported in the literature. We report the management and treatment of a gland ischemia after a circumcision **Methods:** Patient treated at our center for ischemia of the entire glans after circumcision and dorsal penile nerve block (DPNB). A review and analysis of cases published in the literature over the past 10 years in children was made **Main Result:** A 10 years old patient who underwent circumcision and DPNB presented with signs of penile ischemia two hours after surgery without any other symptoms. Ultrasonography showed weak but maintained flow of the penile artery. We saw no improvement and 24 hours later we started treatment with pentoxifylline (PTX) that was maintained for 6 days, topical testosterone and a caudal blocking (for 48 hours). The patient evolved favorably and there was complete resolution in 6 days. We made an review of the literature finding 9 cases in pediatric patients in the last ten years. 8 cases (88.8 %) received DPNB and in all cases the surgical cause was discarded. Pain was found in 3 cases, an ultrosonagraphy was performed in 6 cases with normal findings. The most frequent treatment was PTX with successful. Topic testosterone was used in two cases with an hipospadias as a complication. **Conclusion:** The gland ischemia after a circumcision is an unusual complication, and DPNB seems to be the most frequent cause. Pentoxifyfilne is the most frequently used treatment and we consider it as an effective treatment. Several therapeutic options are available for its management, but none is protocolized.

065 - PA
Title: APENDICITIS AGUDA PERFORADA CON PLASTRON EN FOSA ILIACA IZQUIERDA (NO SITUS INVERSUS)
Authors: jorge mi villacis guaranda, MD(1)
Institutions: HOSPITAL CLINICA MIGUEL H. ALCIVAR(1)
Category: General Surgery
Keywords: RARO ,DESAFIANTE ,PERITONITIS GENERALIZADA
Aim of the Study: this work we present the novelty and rarity to find a mass in the left iliac fossa apendicular without being sitis inversus **Methods:** We present a patient of 20 years old who began her clinical condition with vomiting and diarrhea .. reaches the emergency dehydration 2 grade and abdominal pain accentuated in Ilica left fossa, the BH indicates 15,000 white blood cells, and the sonogram not visualize the appendix. It hydrate and covered it with antibiotic, is IC with gastro who I think that was a colitis + sigmoiditis, -at not see improvement proceeds to perform CT with oral contrast enema, reporting no signs of acute appendicitis, the 4 days a diagnostic laparoscopy is decided by finding a generalized peritonitis perforated acute appendicitis in its most tip mass in the left iliac fossa, medication to INVAZ, METRONIDAZOL, for 7 days, evolving satisfactorily change We present this case so rare to find a mass in the left iliac fossa **Main Result:** The surgery is performed laparoscopically with 3 ports, upon entering the cavity we are free purulent material in cavity in all quadrants, flanges and synechiae in abdominal wall and an omental mass that compromised the abdominal wall and bowel loops FII, proceeds vacuum the cavity to release all flanges and adhesions, necro purulent material FID is removed, we decolamos the blind and the appendix which was digested and only a scar was seen in the blind visualize, profusely wash the cavity and a drain Penrose left ... **Conclusion:** We conclude that you should never rule out acute appendicitis, which is found in all sizes, shapes and adresses .. as in this case was a long appendix that was drilled at the tip which was in the FII and formed one plastron

066 - PA
Title: Ultrasound-guided balloon-assisted sclerotherapy with bleomycin for children with lymphatic malformation compromising the upper airway
Authors: Hidehito Usui, MD(1), Masato Shinkai, MD(2), Norihiko Kitagawa, MD(3), Kyoko Mochizuki, MD(4), Hiroshi Take, MD(5), Takashi Hosokawa, MD(6), Etsuko Osawa, MD(7), Kazuki Yoshizawa, MD(8)
Institutions: Department of Surgery, Kanagawa Children's Medical Center(1), Department of Surgery, Kanagawa Children's Medical Center(2), Department of Surgery, Kanagawa Children's Medical Center(3), Department of Surgery, Kanagawa Children's Medical Center(4), Department of Surgery, Kanagawa Children's Medical Center(5), Department of Surgery, Kanagawa Children's Medical Center(6), Department of Surgery, Kanagawa Children's Medical Center(7), Department of Surgery, Kanagawa Children's Medical Center(8)
Category: General Surgery
Keywords: lymphatic malformation,Ultrasound-guided balloon-assisted sclerotherapy,bleomycin

Aim of the Study: Lymphatic malformation (LM) compromising the upper airway is an intractable disease to treat in children. In a high-risk case of choking hazard, pre-emptive tracheostomy is usually recommended to secure the airway, especially for repeated sessions of OK432 sclerotherapy. To avoid tracheostomy, we have contrived a novel way to relieve airway stenosis: Ultrasound-guided Balloon-Assisted Sclerotherapy with Bleomycin (U-BAS/B). **Methods:** Between July 2015 and May 2016, patients with LM compromising the upper airway had undergone U-BAS/B at our hospital. The median age at the start of U-BAS/B was nine months. Those patients required either tracheostomy, intubation, nasal airway tube, noninvasive positive pressure ventilation, or oxygen administration as an airway-assist before U-BAS/B. Under general anesthesia, a balloon was placed on the airway stenotic lesion of LM (usually, oro- or hypo-pharynx). Bleomycin was injected percutaneously or through an oral cavity under ultrasound guidance with the balloon as an orientation aid. Postoperative airway management with intubation was performed in the high care unit at least 48 hours. Repeat U-BAS/B was performed if necessary. **Main Result:** The airway stenotic lesions of LM were improved by one to three sessions of U-BAS/B in all cases, and airway-assists became unnecessary in all but one case with tracheostomy. There were no complications during and the treatment. The median follow-up period was 9 months. **Conclusion:** U-BAS/B may be a safe and effective method to obtain rapid shrinkage of the LM in children compromising the upper airway, which may avoid tracheostomy.

067 - PA
Title: Color Doppler ultrasound a bedside tool for diagnosing a dreadful complication of the malrotation of gut
Authors: Vijai Datta Upadhyaya, MD(1), Basant Data Kumar, MD(2)
Institutions: SGPGIMS(1), S G P G I M S(2)
Category: General Surgery
Keywords: Malrotation of gut,dopler,volvulus
Aim of the Study: The purpose of the study is whether radiological exposure can be avoided in suspected case of malrotation of gut or not in patients presenting after infancy. **Methods:** This is a two year prospective study, a total of 18 suspected cases of malrotation with or without chronic volvulus which were diagnosed on UGI were subjected to ultrasound and the following points were seen. In all cases USG/Color Doppler was done to assess: 1. Position of SMA and its relation with SMV. 2. Whether whirlpool sign is present or not 3. Whether third part of duodenum was retromesenteric or not (done only in 2 cases). The sinologist was kept unaware of the UGI finding hence making the study blind. The cases with complication (with feature of acute obstruction that is severe vomiting with severe abdominal pain or with feature of compromised bowel) were excluded from study because they were explored in emergency **Main Result:** All patients were aged above one year; 10 cases presented after age of 10 year. Pain in abdomen alone was the presenting feature in 55.6% cases, vomiting alone in 16.5% cases and vomiting with pain in 27.9% cases. UGI was conclusive in all cases and finding was documented on exploration. Altered relation of SMA/SMV observed in 83.4% cases. Whirlpool sign was positive in 77.8% cases. On exploration **Conclusion:** USG/Color Doppler shows altered SMA/SMV relation it is suggestive of malrotation of gut and if whirlpool sign is documented is specific for the diagnosis of malrotation of gut with volvulus. Hence the UGI study should be restricted for those group of patients where index of suspicion for malrotation is high but USG/Doppler finding is inconclusive.

068 - PA
Title: Comparison of preoperative ultrasonography and pathology results of patients undergoing appendectomy
Authors: Sibel Eryilmaz, MD(1), RAMAZAN KARABULUT, MD(2), Zafer Turkyilmaz, MD(3), Kaan Sonmez, MD(4), Kıvanc Seref, MD(5), Aylar Poyraz, MD(6), S.Ozhan Oktar, MD(7), A.Can Basaklar, MD(8)
Institutions: (1), (2), (3), (4), (5), (6), (7), (8)
Category: General Surgery
Keywords: ultrasonography,appendicitis,diagnosis
Aim of the Study: The present study, retrospectively reviewing the data of the patients that underwent appendectomy, aimed at emphasizing the diagnostic value of ultrasonography findings by comparing them with pathological diagnosis. **Methods:** This retrospective study included patients aged under 18, who were operated on for appendicitis between 1 January 2015 and 31 December 2015. The relationship between the pathology results of these patients and the results of preoperative ultrasonography performed for the diagnosis of acute appendicitis was investigated. **Main Result:** The study included 100 patients, 42 were females and 58 were males, on whom ultrasonography was performed and whose mean age was 11.3±3.7 years. While there were 28 (28%) patients who did not receive a definitive diagnosis of appendicitis pathologically, there were 43 (43%) patients in whom there were no ultrasonography findings supporting appendicitis. While appendicitis diagnosis was made pathologically in 72 patients (72%), suggestive findings of appendicitis, such as compression and double wall thickness of the appendix (over 6 mm), were detected in 57 patients (57%). In addition, 42% periappendiceal fluid collection, 25% periappendiceal fat inflammation, and 14% appendicolith were detected by ultrasonography. While 47 (65.3%) of the 72 patients with pathologically confirmed appendicitis received appendicitis diagnosis by ultrasonography, 25 (34.7%) did not (Pearson square test p=0.007). The sensitivity of ultrasonography in the diagnosis of appendicitis was found as 66.6% (48/72) and specifity as 64.28% (18/28). **Conclusion:** To our experience, ultrasonography, in the diagnosis of appendicitis, should only be used for the support

of clinical diagnosis or for differential diagnosis.

069 - PA
Title: THE BABY! CARRING SINCE BIRTH, A TWO MONTHS OLD BABY WITH ABNORMAL ABDOMINAL MASS.
Authors: Bablu Saha, MS(1), Md. Mahfuzul Haque, MS(2), Rezbanul Haque Newaz, (3), Md. Sadrul Islam Talukder, MD(4), Goutam Kumar Biswas, MD(5), Hamidul Islam, MD(6)
Institutions: Rangpur medical college hospital,Rangpur Bangladesh(1), Rangpur medical college hospital,Rangpur Bangladesh(2), Rangpur medical college hospital,Rangpur Bangladesh(3), Rangpur medical college hospital,Rangpur Bangladesh(4), Rangpur medical college hospital,Rangpur Bangladesh(5), Rangpur medical college hospital,Rangpur Bangladesh(6)
Category: General Surgery
Keywords: FIF,Teratoma,Tumour
Aim of the Study: Fetus in fetu is a rare condition that has been defined as the presence of one of the twins in the body of the other. It is most frequently located in retroperitoneal area; however, it has been reported in other locations as well. This report presents a case of “fetus in fetu” located in the retroperitoneal. **Methods:** A two months old male child came to the Pediatric surgery department of RpMCH by on 25.10.2015 and got admitted. The child was presented with-Abdominal distension since birth. Distension was gradually increasing in size. Parents also explain that they heard during antenatal US a fetus like something has presented within the baby’s abdomen. A palpable mass at left lumber region which crosses the midline. The mass was about 25 X 15 cm in size, firm, irregular, immobile & circumscribed. **Main Result:** Serum alpha fetoprotein : 5190 ng / ml. An abdominal CT scan showed-A well defined mass that measured approximately 25×15 cm that consist of solid, cystic, and calcified components. The mass was displacing the transverse colon upward and small bowel downward. After laparotomy a well encapsulated retroperitoneal mass was found behind the transverse mesocolon in left side of abdomen. Upon the incision of the capsule we found yellowish fluid with an incompletely developed fetus covered by vernix caseosa . Mass has a pedicle that was connected with posterior parital wall. **Conclusion:** FIF is considered as a benign condition, while the potentially malignant characteristics of teratoma constitute the basis of the discussion. Although there is a consensus on FIF being a benign condition, considering the reports of malignant recurrences there is a need for the total removal of the mass including its capsule. In addition, we consider the evaluation of the postoperative tumor markers and periodical ultrasound examinations is an appropriate approach.

070 - PA
Title: Hamartomatous gastric polyp causing gastric intussusception; a case report.
Authors: Vasileios Mr Papachristos, MD(7)
Institutions: "Pan. & Aglaia Kyriakou" Childrens' Hospital(7)
Category: General Surgery
Keywords: intussusception,hamartomatous polyp,stomach
Aim of the Study: We present a case of a girl with hamartomatous gastric polyps causing intussusception, treated initially as bowel intussusception. Hamartomatous polyps are rare growths in children. The terminology is confusing: hamartoma, hamartomous polyp, fundic amartoma, cystic amartoma and fundic gland polyposis appear to describe the same lesion. **Methods:** The girl was 3,5 years old with a palpable epigastric mass, haematemesis and anaemia. The U/S depicted bowel intussusception. An unsuccessful reduction of the intussusception with air enema led to laparotomy which showed neither bowel intussusception nor other pathology. During gastroscopy a sizable mass in the gastric mucosa was encountered and non-diagnostic speciments were taken for biopsy. The patient appeared with obstructive symptoms such as vomiting, feeding intolerance and a palpable mass in the left abdomen. The barium meal and the barium enema depicted gastric mass but no pathology in the bowel. **Main Result:** Gastrotomy was performed and the mass in the greater curvature of the stomach was removed. The histology showed amartomatous polyp of Peutz–Jeghers type. Eight months after the final operation the patient remained asymptomatic. **Conclusion:** According to the above, hamartomatous polyps may be the leading point of gastric intussusception. The intussusception of the stomach is extremely rare and during U/S can be confused with bowel intussusception, as it was in our case.

071 - PA
Title: Negative –pressure wound therapy for complex wounds: experience in our institution
Authors: MANGELES MUNOZ-MIGUELSANZ, MD(1), MAURO ALBERTO PADILLA-GARCIA, MD(2), KAMEL MATAR SATUFF, MD(3), RICARDO FERNANDEZ- VALADÉS, PhD(4)
Institutions: (1), (2), (3), (4)
Category: General Surgery
Keywords: NOVEL,SAFE ,TECHNOLOGICAL
Aim of the Study: The negative –pressure wound therapy has been extensively used in adults. Its use in children is not extended althought it is showing good results for complex wounds, skin grafts, pilonidal disease, enterocutaneous fistula or anterior wall defects. **Methods:** We present 5 cases treated in our institution in the last two years with a median age of 8.5 years-old. 3 types of wounds were treated: 2 patients with complex or recurrent pilonidal diseade, 1

with a gangrenous ecthyma in the left leg and 2 trauma complex wounds. A continuous -75 mmHg pressure was applied in the pilonidal disease and the gangrenous ecthyma; in the trauma lesions a continuous -125 mmHg pressure was used, according to the updated guidelines. The dressing change was made depending on the device and the amount of fluids collected in a day-case basis. **Main Result:** The time until complete healing was 3 weeks in the pilonidal disease group and 1 month in the for both the ecthyma and the complex wounds groups. The complications were skin maceration, minimal bleeding and retained piece of foam (50%) **Conclusion:** Compared to the classic dressings, the healing time was shortened and the quality of the wound bed was improved for definite repair. The pain improvement during the dressing changes was one more advantage found. We propose this medical therapy as a first treatment option for the complex wounds.

P2-2 | MODERATORS: PATRICIO HERRERA, ANDREA BADILLO

072 - PA
Title: Wandering pelvic spleen and left hemi-diaphragm eventration: A case report
Authors: Fatema Sayeed, MBBS, MRCS (Ed)(1), Kaniz Hasina, MS(2)
Institutions: Dhaka Medical College Hospital(1), Dhaka Medical College Hospital(2)
Category: General Surgery
Keywords: Eventration,Wandering spleen,Torsion
Aim of the Study: Wandering spleen is a rare (reported incidence <0.2%) phenomenon caused by weakening or absence of the splenic ligaments – clinically characterised by the presence of spleen at an unusual abdominal or pelvic location. Its most dangerous complication is the torsion of the spleen around its pedicle. Eventration of diaphragm is another congenital anomaly associated with the developmental failure of part or all of the hemi-diaphragm muscles. **Methods:** We report an extremely rare case of wandering spleen syndrome with left-sided eventration of diaphragm in a 12-year-old boy. **Main Result:** A 12-year old boy presented with two days of pain and gradual distension of abdomen with one day of vomiting. Clinical examination revealed generalised severe tenderness and guarding of the distended abdomen. Erect chest radiograph exhibited isolated elevation of the left hemi-diaphragm with fundic gas shadow malpositioned within the left hemi-thorax, while abdominal radiograph demonstrated signs of intestinal obstruction. Trans-abdominal ultrasound identified a hyper-echoic solid mass in the pelvis with minimum surrounding fluid accumulation. Subsequently, emergency laparotomy was performed which confirmed the left sided eventration. Stomach, small gut and part of large gut were located in the left hemi-thorax. Spleen was found wandering in the pelvic cavity – which was necrotic and twisted around its pedicle. A total splenectomy along with plication of diaphragm was performed. **Conclusion:** Torsion of the wandering spleen can progress to complete necrosis of the spleen. Acute torsion may mimic peritonitis, acute appendicitis, twisted ovarian cysts or bowel obstruction. However, eventration of the diaphragm is generally asymptomatic in adults, which is commonly identified as an incidental chest radiograph finding, and its association with wandering spleen syndrome is rare.

073 - PA
Title: COMPLICATIONS AFTER LAPAROTOMY ON ECMO
Authors: Shannon L Castle, MD(1), Jamie Golden, MD(2), Choo Pei Wee, PhD(3), David Bliss, MD(4)
Institutions: Children's Hospital Los Angeles(1), Children's Hospital Los Angeles(2), Children's Hospital Los Angeles's Hospital Los Angeles(3), Children's Hospital Los Angeles(4)
Category: General Surgery
Keywords: ECMO,laparotomy,CDH
Aim of the Study: Interventions for intra-abdominal pathology while on ECMO, such as sepsis, bleeding, or compartment syndrome are rarely described in surgical literature. We aim to evaluate risk factors for mortality and bleeding complications after laparotomy while on ECMO. **Methods:** The national ELSO database was queried for all patients age 17 and under with a procedure code for any type of laparotomy. Data were analyzed with univariate and multivariate logistic regression to evaluate for differences in mortality and bleeding complications. **Main Result:** The dataset contained 301 patients with a procedure code for laparotomy, unspecified or other coded laparotomy. Average age at cannulation was 670 days (SD=1552 days). Independent risk factors for mortality include lower gestational age (OR 2.22, p=0.003), infectious complications (OR 6.09, p=0.005), and cardiac complications (OR 2.87, p=0.004). Independent risk factors for surgical bleeding include longer duration of ECMO (OR 1.29, P=0.026) and elevated pH (OR=4,18, p=0.023). Presence of a congenital diaphragmatic hernia did not significantly increase mortality or surgical bleeding when adjusted for other independent risk factors. **Conclusion:** Mortality of laparotomy on ECMO is not independently associated with surgical bleeding, but is associated with lower gestational age, infectious complications, and cardiac complications. Significant risk for surgical bleeding is associated with increasing hours on ECMO and elevated pH. Further research is need to evaluate the temporal relationships of these complications and to determine if laparotomy independently increases overall mortality in these children.

074 - PA
Title: Proton pump inhibitors as stricture prophylaxis in infants with reconstructed esophageal atresia

Authors: Pernilla Stenström, PhD(1), Magnus Anderberg, PhD(2), Anna Börjesson, PhD(3), Einar Arnbjörnsson, PhD(4)
Institutions: Lund University, Skane University Hospital, Department of Pediatric Surgery, Lund, Sweden (1), Lund University, Skane University Hospital, Department of Pediatric Surgery, Lund, Sweden (2), Lund University, Skane University Hospital, Department of Pediatric Surgery, Lund, Sweden (3), Lund University, Skane University Hospital, Department of Pediatric Surgery, Lund, Sweden (4)
Category: General Surgery
Keywords: Esophageal atresia,Stricture,Proton Pump Inhibitors
Aim of the Study: Proton pump inhibitors (PPI) are used as prophylaxis, guarding against anastomotic stricture (AS) in the aftermath of surgically treated esophageal atresia (EA). The incidence of stricture formation was studied in this setting, comparing outcomes of 3- and 12-month PPI prophylactic regimens. The study was approved by the Ethical Review Board, registration number 2010/49. **Methods:** Patient characteristics (gestational age, birth weight, prevalence of chromosomal aberrations, and other malformations), as well as rates of survival, AS formation, and required balloon dilatation, were recorded in the following therapeutic subsets: 1) all infants undergoing primary surgical anastomosis for EA in years 2010-2014 and given postoperative PPI prophylaxis for 12 months and 2) all infants similarly treated for EA in years 2001-2009 but given postoperative PPI prophylaxis for 3 months only. Duration of follow-up was 1 year in each group. **Main Result:** Patient characteristics and survival rates in 12-month (n=34) and in 3-month (n=32) treatment groups did not differ significantly. The prevalence of AS was 44% in each group (12-month, 15/34; 3-month, 14/32; p=1). Median number of dilatations required was 3 (range, 1-9) per patient in each group (p=0.69). Median age at initial dilatation was 163 days and 63 days in 12- and 3-month groups, respectively (p=0.04). **Conclusion:** Development of AS in the first year after reconstruction of EA was not reduced by prolonged PPI prophylaxis (12 vs 3 months), but initial balloon dilatation procedures were performed later in infants who were treated longer. Presented at the EUPSA congress in Milano, June 15 – 18, 2016, and partly in the publication: Stenström P, Anderberg M, Börjesson A, Arnbjornsson E. Prolonged Use of Proton Pump Inhibitors as Stricture Prophylaxis in Infants with Reconstructed Esophageal Atresia. European Journal of Pediatric Surgery. DOI http://dx.doi.org/10.1055/s-0036-1584179. ISSN 0939-7248.

075 - PA
Title: Adding a custom made pressure release valve during air enema for intussusception: A new technique
Authors: Ahmed H Morsi, Master in Surgery(1), Ahmed Osama, Master in Surgery(2), Ahmed R Khodary, Master in Surgery(3)
Institutions: Faculty of Medicine, Zagazig University(1), Faculty of Medicine, Zagazig University(2), Faculty of Medicine, Zagazig University(3)
Category: General Surgery
Keywords: valve,intussusception,pneumatic
Aim of the Study: The authors developed a custom made pressure release valve to be added to portable insufflation devices, delivering air at pressures accepted as safe for effective reduction of intussusception in children under fluoroscopic guidance. The aim of this study is to develop a custom made pressure release valve that is suitable for the insufflation devices used for air enema reduction of intussusception and to put this valve into regular clinical practice. **Methods:** An adjustable, custom made pressure release valve was assembled by the authors using readily available components. The valve was coupled to a simple air enema insufflation device. The device was used for the trial of reduction of intussusception in a prospective study that included 132 patients. **Main Result:** The success rate for air enema reduction with the new device was 88.2%. The mean pressure required to achieve complete reduction was 100 mmHg. The insufflation pressure never exceeded the preset value (120 mmHg). Of the successful cases, 58.3% were reduced from the first attempt while 36.1% required a second insufflation. Only 5.55% required a third insufflation to complete the reduction. In cases with unsuccessful pneumatic reduction attempt (18.1%), surgical treatment was required. Surgery ranged from simple reduction to resection with a primary end to end anastomosis. No complications from air enema were recorded. **Conclusion:** The authors recommend adding pressure release valves to ensure safety by avoiding pressure overshoot during the procedure.

076 - PA
Title: ACCURACY OF (ROLLING TEST) IN DIAGNOSIS AND MANAGEMENT OF INGUINAL HERNIA IN PEDIATRIC AGE GROUP
Authors: Mohamed Mamdouh Mansy, MD(1), Saber Waheeb, PhD(2), Khaled Ashour, PhD(3)
Institutions: Alexandria University (ElShatby Hospital)(1), (2), (3)
Category: General Surgery
Keywords: Hernia,Rolling Test,inguinal swelling
Aim of the Study: Is to assess the accuracy of inguinal Rolling test “a palpable silky thickening of the spermatic cord in males, and round ligament area in females that can be done by placing a single or more than one finger parallel to the inguinal canal at the level of the pubic bone and rubbing it from side to side” in diagnosis of congenital inguinal hernia. **Methods:** Methods: The study included all children attended to pediatric surgery department outpatient clinic during the

period from January 2014 to end of June 2014 with history of intermittent inguinal fullness, patients referred from non-pediatric surgeons, or patients with pain in inguinal and pubic region. Children presented with clinically obvious hernia, complicated or recurrent hernia, or bilateral hernias were excluded. Rolling test is considered positive when the suspected side is thick by at least one and half time than the other side. **Main Result:** Results: A total of 300 cases were included in the study with male to female ratio of 2:1. 240 cases (80%) showed positive rolling test and were operated while 60 cases (20%) were negative by rolling test and were followed up regularly for one year . Operative findings showed 6 false positive cases (2.5%) on the other hand from children selected for follow up 3 cases developed clinically evident hernia (5%). Finally the clinically applied rolling test in this series showed a sensitivity of 99.15% And specificity of 90.62%. **Conclusion:** Conclusion: Rolling test in the hands of expert pediatric surgeons has been shown in the current study to be reliable in deciding to operate on the children with suspected hernia.

077 - PA
Title: Rare Case of Waugh's syndrome with Meckel's Diverticulum
Authors: Ana María García Giraldo, MD(1), Catalina Correa, MD(2), Daniela Chacón, MD(3), Jesus Antonio Niño, MD(4)
Institutions: Hospital Militar Central(1), Hospital Militar Central(2), Hospital Militar Central(3), Hospital Militar Central(4)
Category: General Surgery
Keywords: Waugh´s syndrome,Meckel's Diverticulum,intussusception with intestinal malrotation
Aim of the Study: The aim of this poster is exposed a case of Waugh´s syndrome associated with presence of Meckel's diverticulum in an eight-year-old male. **Methods:** An eight-year-old male infant was brought to the emergency room with pain abdomen, vomiting and bleeding per rectum of one-day duration. On examination, he appeared dehydrated, had tenderness all over the abdomen with rebound tenderness and the abdomen was also distended but no palpable mass found. On nasogastric aspiration, bilious fluid was aspirated. The biochemical parameters were leucocytosis and neutrophilia. An abdominal X-ray was made, and it showed staggered air-fluid levels compatible with small bowel obstruction without pneumoperitoneum or others findings. Patient was taken up for exploratory laparotomy with a preoperative diagnosis of small bowel obstruction with a possibility of intestinal gangrene. Upon exploration, an ileocolic intussusception was found and simple reduction of the intussusceptum was done. Meckle's diverticulum was incidentally found which had a wide base and on further inspection of the abdominal cavity, a malfixation of gut was found. Patient underwent to Meckel's diverticulectomy and incidental appendicectomy. **Main Result:** The association of intussusception with malrotation is referred as Waugh syndrome. It has been suggested that malrotation (malfixation) is often associated with a mobile right colon which may be a pre-requisite for intussusception. Air enema reduction of the intussusception may be complicated by midgut volvulus in children with Waugh syndrome and should be investigated to rule this out after the procedure. Malrotation should be looked for and treated if present when reducing intussusception to prevent midgut volvulus after operation. **Conclusion:** Any case of intussusception needs proper preoperative investigation to rule out association of malrotation. Once diagnosed these cases must undergo correction of malrotation along with management of intussusception because malrotation may cause volvulus.

078 - PA
Title: Cystic hygroma of major salivary gland: our experience with intralesional bleomycin sclerotherapy"
Authors: Vijai Datta Data Upadhyaya, MCH. Pediatric Surgery(1), Ankur Bhatnagar, MCh. Plastic Surgery(2)
Institutions: S G P G I M S(1), (2)
Category: General Surgery
Keywords: Salivary gland,bleomycin,intralesional therapy
Aim of the Study: Cystic lymphangioma commonly involve head and neck region or axilla, involvement of other sites like parotid are very rare. This study was done to assess the role of sclerotherapy in cystic lymphangioma of salivary gland like parotid and submandibular area with relevant review of literature. **Methods:** All cases of cystic swelling in parotid and submandibular areas presented in the pediatric and plastic surgery were evaluated. The macrocsytic lesions consistent with the finding of cystic lymphangioma were included in the study where as those having abscess or hemagiomatous component of ultrasound –doppler were excluded from the study. **Main Result:** Five cases were enrolled, three had cystic lymphangioma involving parotid area, and one had involvement of submandibular area and one involving parotid as well as submandibular area. All had multiple cysts, and in majority of cases the aspirate was clear though in one case it was chylous. All except one responded well to the intralesional bleomycin. **Conclusion:** Cystic lymphangioma should be included in the differential diagnosis of cystic lesion of parotid. Surgical excision with in the parotid parenchyma is fraught with dangers and can lead to injury of the facial nerve, parotid duct and parenchyma. Bleomycin sclerotherapy delivered under ultrasound guidance with direct puncture of the individual cysts provide a safe, easy and reproducible treatment modality for the management of this rare entity.

079 - PA
Title: LARYNGOTRACHEAL SEPARATION IN PEDIATRIC PATIENTS: 10 YEARS EXPERIENCE IN A REFERENCE SERVICE

Authors: CAROLINA TALINI, MD(1), LETÍCIA ALVES ANTUNES, MD(2), BRUNA CECILIA NEVES DE CARVALHO, MD(3), CECILIA YAEGASHI, MS(4), DARKEN EUGENIO DE OLIVEIRA, Nurse(5), EWERTON DOS SANTOS ARISTIDES, Nurse(6), SYLVIO GILBERTO ANDRADE AVILLA, MD(7)
Institutions: HOSPITAL PEQUENO PRÍNCIPE, CURITIBA/PR(1), (2), (3), (4), (5), (6), (7)
Category: General Surgery
Keywords: laryngotracheal separation,tracheostomy,lindeman procedure
Aim of the Study: Children with neurologic diseases usually present cronic pulmonary aspiration leading to recurrent pneumonia. Surgical treatment is an option to protect inferior airways. Laryngotracheal separation was first described by Lindeman in 1976. In children is safe, reversible and technically viable to avoid pulmonary aspiration and its complications. The aim of this sudy is to evaluate clinical outcomes of pediatric patients with recurrent pneumonia that were submitted to laryngotracheal separation. **Methods:** Medical records review. **Main Result:** The study was composed by 92 neurologically impaired patients, 57,6% male and 42,4% female, all of them presenting over five episodes of aspiration with pneumonia before surgery. Median age at surgery was 68 months (varying from 2 to 214 months). Post operatory complications occured in 14,1% of patients: 5,4% with fistulae, 4,3% presented bleeding, 2,2% with granuloma, 1,1% presented stenosis and 5,4% presented other minor complications. After surgery 24 episodes of pneumonia were observed: one episode in 29,2% of the patientes that presented pneumonia, two episodes in 33,3% , three episodes in 25% , three patientes presented more than four episodes of pneumonia after surgery but all were diagnosed with bronchodysplasia. The was significant reduction in pneumonira occurency after surgery (50% versus 26,1% - $p < 0,001$). Twenty four patients died – 47,8% with respiratory insuficiency, 17,4% with sepsis, 21,7% died in consequence of the basis disease, 4,3% with subdural empyema and 8,7% with pulmonary bleeding. The complication frequency was similar when comparing patients who progressed or no to dead. **Conclusion:** This article shows that when well indicated laryngotracheal separation reduces the pulmonary infection rates, improving life quality and reducing hospitalization. Cronic aspiration highly increases their mortality as they are already debilitated by their basis disease.

080 - PA
Title: Different Surgical ovarian masses in children and adolescents
Authors: Kaan Sonmez, MD(1), Zafer Turkyilmaz, MD(2), RAMAZAN KARABULUT, MD(3), Bilge Can, MD(4), A.Can Basaklar, MD(5)
Institutions: (1), (2), (3), (4), (5)
Category: General Surgery
Keywords: ovarian mass,benign,malign,children
Aim of the Study: Aim of this study is to discuss findings of our patients who were operated with ovarian masses. **Methods:** A retrospective chart review was performed between January 2002 and December 2010. Age, presentation, symptom(s), and other findings were obtained. **Main Result:** 32 patients were operated for ovarian masses. Patients age were ranged from 15 months to 17 years. The most common presentations were abdominal-pelvic pain and mass. Epitelial ovarian tumors were associated 3 serous cystadenoma, 1 mucinous cyst, 2 mucinous cyst adenoma and one bilateral clear cell sarcoma(the youngest bilateral clear cell carsinoma case in the literature). Another interesting case was followed another center for obesity and excesive weight gaine. 17 liters of fluid aspirated the left ovary and salpingooophorectomy was done. Histopathologic diagnosis was mucinous cyst. In 6 cases, the tumor was associated with a mature cystic teratoma. Remaining 21 ovarian cystys (in 19 case) were functional ovarian cysts. Ovarian torsion was identified 7 of the 32 cases. Two torsion cases were situated in the act of parasitic form inside the periton due to torsion. **Conclusion:** Because most of the ovarian cycts are benign in character, initially fertility conserving operations must be considered.

081 - PA
Title: antibiotics management for acute appendicits in children. Is that worth it?
Authors: Leecarlo Lumbangaol, MD(1), melani mantu, MD(2)
Institutions: Tarakan general hospitals - Jakarta(1), Tarakan general hospital - Jakarta(2)
Category: General Surgery
Keywords: antibiotics,appendicitis,surgical vs non surgical
Aim of the Study: To determine the effect of antibiotics treatments in pediatric appendicitis to prevent surgery
Methods: A retrospective cohort method was used with a non-random consecutive sampling **Main Result:** The group of children with non-complicated appendicitis who resolve only with conservative treatment was 29 children (72.5%)with p value < 0.001. The group of children with complicated appendicitis who resolve with conservative treatment was only 1 child (7.1%) with p value<0.001. There was a significantly pain reduce in both group (p value<0.001) **Conclusion:** The use of antibiotics as a type of treatment for non complicated appendicitis has significant effect to reduce surgery. Its administration also significantly decreasing pain in both complicated and non complicated appendicitis. Further studies with large sample is needed to investigate relationship between antibiotic treatment in pediatric appendicitis to prevent invasive intevention.

082 - PA
Title: Minimising inguinal incision length - a feasibility study
Authors: Joshua Rae, MbChB, MRCSEd (1), Nitin Patwardhan, FRCS(Paed)(2), Sonia Tiboni, MRCS(3), Preethi Bhishma, MRCS(4)
Institutions: Leicester Royal Infirmary(1), Leicester Royal Infirmary(2), Nottingham University Hospitals (3), Leeds General Infirmary(4)
Category: General Surgery
Keywords: Wound length,Inguinal,Feasibility
Aim of the Study: Inguinal herniotomy(IH) and patent processus vaginalis(PPV) ligation are common procedures for any paediatric surgeon. In this age of minimally invasive surgery there is no data available for standard wound length used for these procedures when done open. Our aim was to assess if a 1cm incision can be used to perform IH/PPV ligation safely and the correlation of wound length with age and weight of the patient. **Methods:** We conducted a prospective review of patients undergoing open PPV or IH over a 3 year period from January 2012 to March 2015. A single surgeon or a trainee under supervision performed the procedures. Data was collected for age, weight, side of operation and length of wound post-operatively and at follow up. Pearson correlation coefficient was calculated for age, weight and wound length. **Main Result:** A total of 86 boys underwent IH/PPV ligation. The age range was 2 days -167.1 months, with a median of 14.26 months. Their weights ranged from 2.5-60Kg with a median of 10 Kg. 37 had left sided, 41 right sided and 8 had bilateral procedures. 4 patients underwent an emergency procedure. 3 patients had both an orchidopexy and herniotomy. A consultant perfomed 49 of these procedures. Mean wound length across all procedures was 12.39mm (9-23mm). There was no correlation between wound length and age (r=0.31) and weight (r= 0.40). At a mean follow up of 3.1 months there were no recurrences and no testicular atrophy. Scar was undetectable in 5 patients and smaller in 18. **Conclusion:** A wound length approaching 1cm for inguinal procedures is feasible and safe and can be used across a broad age and weight range in the paediatric population.

083 - PA
Title: Intraoperative Temperature Regulation in Children Using a Liquid-Warming Garment
Authors: Mariya E Skube, MD(1), Robert D Acton, MD(2), Victor S Koscheyev, MD(3), Gloria R Leon, PhD(4), Daniel A Saltzman, MD(5)
Institutions: University of Minnesota(1), University of Minnesota(2), (3), University of Minnesota(4), University of Minnesota(5)
Category: General Surgery
Keywords: Innovation,Thermoregulation,Anesthesia
Aim of the Study: Children undergoing operative intervention while induced under general anesthesia are at risk for experiencing a significant decrease in core body temperature which can lead to adverse effects on the cardiac, respiratory, neurologic, and hematologic systems. It is known that warming 10 to 20% of body surface area can maintain the core body temperature in adults who were not under general anesthesia. Given that the head contributes an estimated 18% of a child’s total body surface area, we theorized that a liquid-warming garment applied to the head could adequately control a pediatric patient’s core body temperature during surgical procedures. **Methods:** Upon approval of the Institutional Review Board of the University of Minnesota, patients undergoing elective, non-cranial general surgical procedures were enrolled in the study with parental consent. A form-fitting head garment, which resembled a child’s winter hat, with an embedded network of tubing was placed on the patient. The internal diameter of the tubing carrying warmed water was 4mm. The garment connected to a computer-controlled water bath that regulated the temperature of the water in the tubing. The garment was warmed to a maximum of 45°C with a feedback mechanism that would respond appropriately to keep the core body temperature to 37°C. Esophageal and/or rectal thermometers measured the patient’s core body temperature. **Main Result:** Ten patients with ages ranging from 1 day to 3 years (mean age 10.5 months) were enrolled in this study. The average procedure length was 82.5 minutes. The mean core body temperature throughout the procedure for all-comers was 36.5°C with an overall mean difference in maximum and minimum temperatures of 1.32°C. **Conclusion:** A liquid-warming garment applied to the head of pediatric surgical patients is an innovative means to regulate and to maintain an ideal core body temperature of patients undergoing surgical procedures.

084 - PA
Title: Acute gastric dilatation in patients with eating disordersAcute gastric dilatation in patients with eating disorders
Authors: Clara Rico, MD(1), Rocío Espinosa, MD(2), Henar Souto, MD(3), Alonso L Jose, PhD(4), Pablo Morató, MD(5), Manuel Espinoza, MD(6), Cristina Riñon, MD(7), Ana Luis, MD(8), Juan Carlos Ollero, MD(9)
Institutions: (1), (2), (3), (4), (5), (6), (7), (8), (9)
Category: General Surgery
Keywords: Acute gastric dilatation,anorexa nervosa,eating disorders
Aim of the Study: To describe the epidemiologic characteristics of this disease, making hypothesis of the different physiopathologic mechanisms involved and establishing a treatment protocol **Methods:** Descriptive and retrospective study, including patients with eating disorders diagnosed of an acute gastric dilatation by plain abdomen x ray during

the years 2007 to 2015. Systematic review of literature was done. A treatment protocol is established based in the results. **Main Result:** We report 35 patients with acute gastric dilatation among the 1887 patients with new diagnosis of an eating disorder in the period of study. Their diagnoses were anorexia nervosa restrictive type (21/35) compulsive type (9/35) and bulimia nervosa (5/35). In 13/35 patients the acute gastric dilatation was caused by binge eating, the rest occurred with little or any intake of food. In the latter a low body mass index (BMI) was found to be responsible of the event. All the patients were initially treated with conservative measures (nasogastric tube and npo). Most of the patients (25/35) showed a favourable course in 48 hours. Nine patients went to intensive care unit due to hemodynamic instability. One patient underwent urgent surgery because of massive gastric perforation. **Conclusion:** •Acute gastric dilatation is an uncommon complication of eating disorders, but it can be life threatening. Its early diagnosis and treatment can prevent from needing urgent surgery. •Acute gastric dilatation physiopathology is related with low BMI, and binge eating. •Patients with hemodynamic instability, BMI lower than 15 or gastric content that could not be evacuated in 48 hours should stay in intensive care unit

085 - PA
Title: Outcome in children with Hirschsprung disease and concomitant cardiac failure
Authors: Johan Hasserius, MD(1), Christina Graneli, MD(2), Kristine Hagelsteen, MD(3), Einar Arnbjornsson, PhD(4), Pernilla Stenstrom, PhD(5)
Institutions: Lund University, Skane University Hospital, Department of pediatric surgery(1), Lund University, Skane University Hospital, Department od Pediatric surgery(2), Lund univesity, Skane University Hospital, Department of pediatric surgery(3), Lund University, Skane University Hospital, Department of Pediatric surgery(4), Lund University, Skane University Hospital, Department of Pediatric surgery(5)
Category: General Surgery
Keywords: Hirschsprung disease,Cardiac heart disease,Bowel function
Aim of the Study: Some children with Hirschsprung disease (HD) have concomitant congenital heart disease (CHD). Knowledge about HD and CHD might help to direct the planning of care. Aim: The aim of this study was to evaluate if there were any differences in patient characteristics, pre- and post-operative medical care and in bowel function comparing children with HD with and without CHD, respectively. **Methods:** All children with HD operated on with transanal endorectal pull through (TERPT) at a tertiary center of pediatric surgery were included. A retrospective chart study regarding patient characteristics and medical care was conducted. A cross-sectional long-term follow up of bowel function, assessed by the Bowel Function Score (BFS 1-20) in children >4 years old was performed during counseling sessions. Children with CHD but without HD were controls. The study was ethically approved. **Main Result:** 40 children with HD without CHD and 13 children with HD and CHD (24%) were included. Failure to thrive was a more common initial symptom among children with HD and CHD (23%) compared to those without CHD (0%) (p=0.001). More children with HD and CHD (69%) had concomitant syndromes compared to children with HD but without CHD (8%) (p=<0.001). In the long-term follow-up patients were median aged 7(4-10) years old. Constipation or obstruction was more commonly reported by HD-patients with CHD (83%) than by patients without CHD (27%) (p=0.009). The overall BFS was higher in children with CHD without HD (BFS 17.5) than in children with HD and CHD (BFS 11) (p=0.042). **Conclusion:** Children with HD and concomitant CHD more commonly presented with failure to thrive and their bowel function was lower than in children with only CHD. The findings indicate that children with HD and concomitant CHD might need special consideration in their initial care and long-term follow-up.

086 - PA
Title: Negative pressure wound therapy in complicated open abdomen in children
Authors: Miguel Angel MA Cárdenas Elias, MD(1), José Ignacio Garrido Perez, MD(2), Francisco Javier Murcia Pascual, MD(3), Ariadna Siu Uribe, MD(4), Sharmila Devi Ramnarine Shancgez, MD(5), Rosa María Paredes Esteban, MD(6)
Institutions: Hospital Universitario "Reina Sofía"(1), (2), (3), (4), (5), (6)
Category: General Surgery
Keywords: negative pressure wound therapy,wall defects,multi-intervened
Aim of the Study: To analyze patients with multiple interventions who have open wall defects in which the negative pressure wound therapy (NPWT) provides benefits facilitating the closure of the wall. **Methods:** A case report of two patients with important wall defects after a surgical procedure in which the primary closure was not possible. **Main Result:** A pluripathologic 4 year old girl with neurological disorder, underwent surgery for Re-Nissen funduplication and gastrostomy. Afterwards she presented peritonitis secondary to gastric perforation, evisceration and important wall necrosis. These complications were treated with polyglycolic mesh and the primary closure was not achieved. The NPWT was associated and was not removed till the wall defect was closed. A two days old term newborn with multiple malformations, who underwent intestinal malrotation surgery with need of ileostomy. He was re-intervened several times, one of them because of ileal perforation. A terminal ileostomy, colonic mucous fistula and polyglycolic mesh placement on intestinal package were performed. Poor development of skin edges motivated the use of NPWT on the open wall. An ileal fistula appeared as a complication. The complete closure of the wall defects was successful and an ostomy remained. **Conclusion:** The NPWT is a helpful tool to treat multi-intervened children with complex wall defects

such as intestinal fistula, poor progress of skin edges and exposed gut.

087 - PA
Title: Transanal endorectal pull-through procedure in patient with Hirschsprung's disease
Authors: Marian Vidiscak, PhD(1), Lucia Hustavova, PhD(2), Viktor Vidiscak, MB(3), Stefan Durdik, PhD(4)
Institutions: Slovak Medical University(1), Slovak Medical University(2), Slovak Medical University, Bratislava(3), Comenius University in Bratislava, School of Medicine(4)
Category: General Surgery
Keywords: Hirschsprung's disease,transanal endorectal pull-through ,aganglionosis
Aim of the Study: This study presents the technique and results of transanal one stage endorectal pull-through procedure in children with rectosigmoid Hirschsprung's disease. **Methods:** Between December 2006 and June 2015, 147 patient underwent transanal one stage endorectal pull-through procedure. In all 147 patients transitional zone was suggested by contrast enema and by perioperative full thickness rectal biopsy at 3 cm above the dentate line. Bowel preparation was done using Bisacodyl suppositories. The extent of colonic resection was specified by perioperative biopsy. The length of intestinal resection was between 15 to 42 cm. Aganglionic segment of the colon was resected, and normal colon was pull down to anastomose with the distal end of anorectal remnant. The colorectal anastomosis was performed according to Swenson's technique. For the antibiotics treatment were used Ceftazidine and Metronidasole. The paracolic Redon suction drain was given for 24 hours. **Main Result:** The bowel movement reestablished within 7-12 hours post operatively. Oral intake began 24 hours after operation. From 147 patients 142 healed up without complications . The length of hospitalization was 5-7 days. Four patients with leak of the recto-colo anastomosis were treated by colostomy for 3 month. In one patient perirectal collection with increased inflammatory markers was treated conservatively using antibiotics. Follow-up period ranged from 6 months to 11 years. **Conclusion:** Transanal one stage endorectal pull-through operation for rectosigmoid Hirschsprung's disease can be successfully performed in all ages with good results, avoiding abdominal exploration, however, the most suitable age is up to 3 years of age.

088 - PA
Title: Rare Presentation of Type II B Tubular Rectal Duplication
Authors: Mohammed Aboud, FICMS, FACS,MD(1), Alaa Al-Baazzee, IBMS (2)
Institutions: The Maternity and Child Teaching Hospital , Al Qadisiya(1), The Maternity and Child Teaching Hospital , Al Qadisiya(2)
Category: General Surgery
Keywords: Type II B,Tubular,rectal duplication
Aim of the Study: Gastrointestinal tract duplications are rare and mostly occur in ileum, with only 5% of all duplications occurring in rectum and are commonly found in the presacral space, posterior to the rectum . There is no sex predominance. Duplications are cystic (type I) or tubular structures (type II) , located usually adjacent to the mesenteric border, but other locations were also reported. Most of the rectal duplications are cystic and 90% do not communicate with the rectum . **Methods:** Case report : A 4 months old girl weighing 6 kg presented with abnormal passage of stool from coccygeal region with absolute constipation through the normal anal opening [figure 1] . This extra orifice had been observed at birth .The other associated gastrointestinal & urinary symptoms were absent. General physical, neurological and genitourinary examinations revealed no abnormality. The baby arranged for radiological evaluation by contrast enema which revealed a well defined tubular mass posterior to the rectum in the presacral space [figures 2,3]. The pathology was managed by elective surgery planned through posterior sagittal route. Surgical exploration revealed a small elongated tubular mass with a well defined muscle coat in relation to posterior wall of the lower one third of the rectum [figures 4-7]. **Main Result:** Histopathology of the common wall revealed presence of columnar epithelial lining with a well developed muscle coat confirming diagnosis of rectal duplication with no gastric mucosa . Postoperatively the child was asymptomatic with normal anorectal functions. **Conclusion:** Various embryological theories have been explained these anomalies from pinching off of diverticula to caudal twinning and disordered separation of endoderm from notochord. Total resection of the feasible pathology is the optimal approach , in our patient was tubular and was communicating with the rectum (type II B), which is very rare.

089 - PA
Title: Continuous caudal infusion as sole anesthetic for elective surgery in neonates
Authors: tiffany sinclair, MD(1), megan stevens, NP(2), micaela esquivel, MD(3), sara seeley, NP(4), claudia mueller, MD(5)
Institutions: stanford university(1), stanford university(2), stanford university(3), stanford university(4), stanford university(5)
Category: General Surgery
Keywords: regional anesthetic,continuous caudal infusion,neonates
Aim of the Study: The use of general anesthesia in young children has come under increasing scrutiny in recent years as concerns for its potential long-term neurotoxic effects are being studied in humans and animals. Meanwhile, regional

anesthesia for surgical procedures in neonates has many advantages, including preservation of respiratory status, faster return to feeding, and better postoperative pain control. We describe the successful use of 3% 2-chloroprocaine administered via continuous caudal infusion as the sole anesthetic agent during elective surgical procedures in infants. **Methods:** Chart review of patients who underwent elective surgical procedures under continuous caudal regional anesthetic at a single institution was performed. Thirty patients (27 males) were identified: 28 patients underwent inguinal hernia repairs (20 bilateral, five with circumcision). Post-conceptional age at surgery ranged from 34-58 weeks (Mean 41 weeks). Mean weight at surgery was 3.3kg (Range 1.9-5.4kg). 23 patients were born prematurely (Mean gestational age 28 weeks; Range 24-35 weeks). Caudal anesthesia was established via continuous infusion of 3% 2-chloroprocaine through an indwelling catheter. A loading dose of 0.5ml/kg, followed by up to three additional incremental doses, was used to initiate the block. Analgesia was maintained by an infusion rate of 1.5ml/kg/hr of the same anesthetic solution. **Main Result:** Successful analgesia by regional block alone was achieved in all patients for the duration of each surgical procedure. Mean operative time was 49 minutes (Range 22-105 minutes). Patients were able to return to feeding immediately after surgery and were ready for discharge home within that day. **Conclusion:** Continuous caudal infusion of chloroprocaine is a safe and effective way to maintain adequate analgesia for elective surgeries in infants. This successful regional approach obviates the use of general anesthetic, which reduces post-operative recovery time and avoids concerns for neurotoxicity.

090 - PA
Title: COMPLEX CARE OF ESOPHAGEAL ATRESIA +/- TRACHEOESOPHAGEAL FISTULA (EA/TEF) PATIENTS - A POPULATION-BASED HEALTHCARE UTILIZATION ANALYSIS.
Authors: Talha Maqbool, BHSc(1), Claire De Oliveira, PhD(2), Marcon Margaret, MD(3), Priscilla Chiu, MD(4)
Institutions: (1), (2), (3), (4)
Category: General Surgery
Keywords: Esophageal atresia,Tracheoesophageal fistula,Heath Utilization
Aim of the Study: Esophageal atresia +/- tracheoesophageal fistula (EA/TEF) is a rare congenital anomaly. Few studies have defined EA/TEF population incidence and healthcare utilization beyond infancy, especially for those patients with other associated anomalies. The objective of this study is to determine the population-based incidence of EA/TEF in the Canadian province of Ontario (ON) and examine long-term healthcare utilization. **Methods:** All EA/TEF patients born in ON from 1998-2011 were examined. Inpatient and outpatient health services data were obtained. Matching data for non-EA/TEF control patients (n=6885) selected randomly from ON births during the study period were also obtained. **Main Result:** There were 345 EA/TEF births in ON (1 in 5,446 live births) during the study period: 196 (56.8%) were males, and 296 (85.8%) resided in urban centres. Patients were evenly distributed across income quintiles (measure of socioeconomic status) and geographic regions. In total, 197 (57%) had coexisting cardiac defects. Overall, 21 (6.1%) patients died during the study period with 16 (76.2%) deaths occurring during the first hospitalization. During the first year of life, EA/TEF patients averaged 2.4 hospital admissions (control = 1.1), and 60 days in hospital (control = 4), with 48 days for the initial hospital stay (control = 3). Outpatient utilization was substantially greater for pediatricians, medical specialists and surgeons. Post discharge, 52 nursing services were delivered through home care service to provide over 428 hours of care per EA/TEF patient (control 1 service over 7 hours). **Conclusion:** EA/TEF patients are complex and require substantial hospital care during early childhood. EA/TEF patients continued to utilize many domains of the healthcare system after the first year of life due to their ongoing morbidities. These data will be useful in planning and providing multi-disciplinary, coordinated care for EA/TEF patients.

091 - PA
Title: Does careful application of Pediatric Appendicitis Score (PAS) and emergency ultrasonography affect the outcome of suspected cases Pediatric appendicitis in indian children?
Authors: Devendra Kumar Dr Yadav, MS, MCh(1), Amat-US Dr Samie, MS, DNB(2), Samir kant Dr Acharya, MCh(3), Deepak Dr Bagga, MS, MCh(4)
Institutions: All India Institute of Medical Sciences, New Delhi(1), VMMC and Safdarjang Hospital(2), VMMC and Safdarjang Hospital(3), VMMC and Safdarjang Hospital, New Delhi(4)
Category: General Surgery
Keywords: pediatric appendicitis,Pediatric Appendicitis Score (PAS),Ultrasonpgraphy
Aim of the Study: To evaluate the outcome of suspected appendicitis by correlation of Pediatric Appendicitis Score and emergency ultrasound in Indian children between 3- 12 years of age. **Methods:** : Consecutive cases of suspected appendicitis (Right iliac fossa pain) were evaluated by using USG (for appendix visualization) followed by clinical scoring of appendicitis by using PAS at pediatric surgery emergency ward by two senior registrars independently at an interval of 2 hours. Children with PAS value=6 underwent appendectomy (open/Laparoscopic) irrespective of USG findings. Appendicitis was defined as appendectomy with positive histology. Outcomes were measured by negative appendectomy rate, missed appendicitis rate and readmission of initial nonoperative patients with appendicitis. **Main Result:** Out of 145 enrolled children 98 (68%) were male, 47 were female (32%). The mean age of presentation was 9.3±2.23 years. The mean duration of symptoms were 2.65±2.23 days (range 1-5 days).Out of 145, 111(76.5%) children were operated and had mean PAS of 8.44±1.2, while the 34(23.5%) nonoperative children had mean PAS of

4.56±0.66. Of 111 operated patients, 109 had appendicitis on pathological examination. Of 34 non-operated patient only 2 had recurrent symptoms, operated and found to have appendicitis. PAS positive predictive value and negative predictive value was 98.2% and 94.12% respectively PAS value 6. Negative appendectomy and missed appendectomy rate were 1.8% and 5.8% respectively. Of 111 operated cases 96 (86.49%) had positive USG findings and 15 (13.51) had negative USG finding. In 34 patients without clinical appendicitis based on PAS score 29 (85.29%) had positive USG findings. The sensitivity and specificity of USG was 86.49% (95% CI: 78.69% to 92.2 %) and 14.71% (95% CI: 5.01% to 31.07%) respectively **Conclusion:** PAS had high -performance score than emergency ultrasound. Initial USG evaluation is useful in triage of suspected appendicitis but is very less specific.

092 - PA
Title: Laparoscopy Inguinal Hernia Repair by cutting off processus vaginalis without suture knots
Authors: ALFONSO GALVAN-MONTAÑO, MD(1), PAUL A OUDDANE-ROBLES, MD(3), SILVIA GARCIA-MORENO, MD(4)
Institutions: HOSPITAL GENERAL DR. MANUEL GEA GONZALEZ - MEXICO CITY(1), HOSPITAL GENERAL DR. MANUEL GEA GONZALEZ - MEXICO CITY(3), HOSPITAL GENERAL DR. MANUEL GEA GONZALEZ - MEXICO CITY(4)
Category: General Surgery
Keywords: INGUINAL HERNIA,LAPAROSCOPY,WITHOUT KNOT
Aim of the Study: The purpose of the study is to know the frequency of inguinal hernia recurrence in children treated by cutting of processus vaginalis without suture knots **Methods:** From January 2015 to may 2016 A total of 17 procedures were performed with a transumbilical approach. A 5mm 30 degrees scope was used and two 3mm ports.a A transperitoneal dissection was made, we used laparoscopic scissors to cut and resect processus vaginalis; cauterization wasn´t used to do it. The hernia defect wasn´t enclose by a suture knot. **Main Result:** A total of 15 children (5 girls and 10 boys) who presented inguinal hernia, underwent laparoscopic repair by cutting off peritoneum processus without suture knot (10 left side , 5 right side, and 2 bilateral inguinal hernia). The mean operating time was 15minutes. The mean follow up period was 10 months. A total of 17 procedures were performed (ranging age from 1 month to 12 years). No recurrence was observed during 3 to 24 months. There were no injuries to the structures as vessels or vas deferens, and without cases of postoperative hydrocele. **Conclusion:** This novel technique provides the benefit of laparoscopic approach and combines the advantages access, simplicity, low cost, minimal postoperative pain and no recurrence The long-term results of this novel technique wil be evaluated in future studies.

093 - PA
Title: Children who underwent thyroid surgeries for thyroid cancers and masses
Authors: Zafer Turkyilmaz, MD(1), RAMAZAN KARABULUT, MD(2), Kaan Sonmez, MD(3), A.Can Basaklar, MD(4)
Institutions: (1), (2), (3), (4)
Category: General Surgery
Keywords: thyroid carcinoma,surgery,children
Aim of the Study: To define clinical presentation, surgical complications, characteristics and survival of thyroid carcinoma (TC) in children. **Methods:** 25 pediatric patients underwent thyroid surgery for thyroid massesand TC in 13 years. Retrospectively evaluated medical data included sex, clinicopathologic characteristics, surgery type, postoperative complications, recurrences, and survival rate. **Main Result:** The female to male ratio was 3.1:1. The mean age at diagnosis was 16.2 years (range, 5–18 years)(median age=15.5 years). A neck mass was the most common complaint(80%). The other patient presented aslymphadenopathy of the supraclavicular region(n=1), neck pain (n=3)and previous history of exposure to ionizing radiation and was receiving chemotherapy for Hodgkin's lymphoma. Seventeen patients were diagnosed with papillary thyroid carcinoma(TC), one with follicular TC, four with follicular adenoma, two with thyroiditis, and one with thyroid lymphoma. Surgical treatment consisted of simpletotal thyroidectomy(n=13), total thyroidectomy with modified radical neck node dissection(n=6), and less than total thyroidectomy (n=6).After thetotal thyroidectomy,supplementary thyroidectomy for recurrence was performed four of the patients with TC. Postoperative radioactive iodine ablation(RAI)was administered to 15 of the 18 patients with TC(83.3%) after surgical therapy. Mean follow-up duration was 4.2 years(range, 0.5–10 years) and no patients died of TC. Recurrence occurred in five patients(27.7%). Seven patients(38.8%) experienced postoperative hypocalcemia. One patient who had undergone bilateral neck dissection was found to have a left thoracic duct injury, which was surgically treated.There was no differences between age, gender, complaint and diagnosis(p>0.05). **Conclusion:** Thyroid carcinoma develops more aggressively and with more recurrences in children. Thus, secondary operations are often required owing to incomplete total thyroidectomy and neck dissection. Given the lack of an adequate caseload in pediatric clinics, it is vital that surgery be performed by experienced physicians to lessen complications.

094 - PA
Title: ANTERIOR SAGITTAL ANO-RECTOPLASTY (ASARP) WITH EXTERNAL SPHINCTER PRESERVATION FOR THE TREATMENT OF RECTO-VESTIBULAR FISTULA: A NEW APPROACH.
Authors: Mohamed I Elsawaf, MD(1), Akram M Elbatarny, MD(2), Mohamed S Hashish, MD(3)
Institutions: Tanta Unversity Hospital(1), (2), Tanta Unversity Hospital(3)
Category: General Surgery
Keywords: Recto-vestibular fistula,anterior sagittal ano-rectoplasty (ASARP),sphincter perservation
Aim of the Study: This study evaluated a new modification combining anterior sagittal ano-rectoplasty (ASARP) with sphincter preservation and positioning neo-rectum in the center of the muscle complex under direct vision for treatment of recto-vestibular fistula. **Methods:** This prospective study was conducted on 25 females with recto-vestibular fistula. Procedure starts with a vertical midline incision extending from ectopic opening to the posterior limit of the sphincter defined and marked with sutures using Pena stimulator. Sharp dissection of the fistula is carried out meticulously from the posterior vaginal wall. Artery forceps is passed in the center of the muscle complex under direct vision, then passing the neo-rectum in the middle of the complex. We introduced a new scoring system based on parental interview assessing functional outcome. Each patient was given a score ranging between 0-20 (Good: 14-20, Fair: 7-13, and Poor: 0-6). **Main Result:** ASARP was performed at a mean weight 5.85 kg, mean age 2.95 months, and a mean operative time 90 minutes. hymen was preserved in all cases. Mean starting of oral feeding 9.5 h. Mean hospital stay was 3.4 days. Wound infection occurred in 3 cases; only one had wound disruption requiring 2ry sutures. 7 cases had anal excoriations. 6 cases had anal stenosis with variable degrees; only 1 case was severely stenotic and required dilatation under general anesthesia. Mean follow up 9.5 months. 18 patients had good score (mean=16.8), with normal frequency, no or mild soiling, normal anal position with no or mild anal stenosis. 6 patients had fair score (mean=10.5). One had poor outcome with score 6 with sever soiling, and severe anal excoriation. **Conclusion:** Sphincter-saving ASARP offers optimal correction, with minimal sphincteric damage, without additional complexities or difficulties to the procedure. The scoring system is simple, practical, and truly reflects early functional and overall parent satisfaction after surgery for ARMs.

095 - PA
Title: “Gastroduodenal Pneumatosis, Late Presentation of Duodenal Stenosis and Endoscopic therapy”: a Didactic Trilogy
Authors: Aniruddh V Deshpande, PhD, FRACS(1), Joseph J Meredith, FRACP(2), Anne McGeeChan, FRACP(3), Scott Nightingale, MMed, FRACP(4)
Institutions: John Hunter Children's Hospital, Newcastle(1), John HUnter Children's Hospital, Newcastle(2), Maitland Hospital, Newcastle(3), Gastroenterology, John Hunter Children's Hospital, Newcastle and University of Newcastle(4)
Category: General Surgery
Keywords: duodenal stenosis,gastric pneumatosis,minimally invasive therapy
Aim of the Study: Duodenal stenosis commonly presents in early infancy and is treated by surgical bypass of the obstruction site. The contribution of associated annular pancreas in obstruction is reported to vary from case to case. We present an instructive case detailing unique imaging findings of a delayed presentation and an endoscopic approach to the management of congenital duodenal stenosis in association with annular pancreas. **Methods:** An 8 month old nonsyndromic female presented with a history of forceful, persistent, non-bilious vomiting since birth and poor weight gain despite acid suppressive therapy. The infant appeared unwell at presentation with signs of acute dehydration and biochemical changes of gastric outlet obstruction. Abdominal ultrasound revealed pneumobilia and a subsequent abdominal plain film revealed gastroduodenal pneumatosis. Contrast CT of the abdomen displayed significant duodenal stenosis, an annular pancreas with no evidence of malrotation. After adequate stabilisation and decompression, therapeutic endoscopy was performed with balloon dilatation to 10mm with rapid improvement in symptoms. The dilatation was performed with radiological guidance and bile stained bowel contents were returned from distal duodenum. A further dilatation to 13 mm was safely undertaken four weeks later. **Main Result:** At three months after presentation, the child is on age appropriate diet with improved growth velocity and without any symptoms. **Conclusion:** In a child without sepsis, gastric pneumatosis and pneumobilia are indicators of underlying chronic partial obstruction in upper GI tract. With improved paediatric endoscopic equipment and techniques, endoscopic balloon dilation is a potentially safe and minimally invasive approach to the management of congenital duodenal stenosis and our case adds to the data showing promising results worldwide. Uncertainty remains as to the long term outcomes with this technique, particularly in the context of an accompanying annular pancreas.

096 - PA
Title: Risk factors of postoperative apnea and surgical complication rate after inguinal herniorrhaphy for infants younger than postconceptional age 60 weeks
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Institutions: Division of Pediatric Surgery, Department of Surgery, Dong-A University College of Medicine, Dong-A Medical Center (1)
Category: General Surgery
Keywords: inguinal hernia,postoperative apnea ,prematurity
Aim of the Study: The aim of this study was to review the complication rate after inguinal herniorrhaphy and the actual incidence and risk factors of postoperative apnea for infants younger than postconceptional age (PCA) 60 weeks. **Methods:** A total of 184 infants (137 males, 42 females) who underwent surgical treatment for inguinal hernia within PCA 60 weeks were reviewed between March 2010 and February 2016. **Main Result:** One hundred four premature babies (P group,M:F=69:35) and 80 full term babies (F group, M:F=68:12) were included. Mean gestational age was 214 ± 27.6 days and 270.1 ± 7.5 days in the P and F group, respectively ($p<0.001$). Birth weight was 1,482 ± 703 g and 3,047 ± 400 g in the same respective order ($p<0.001$). The mean age at the operation was PCA 41.9 ± 5 weeks vs. 44.1 ± 3 weeks, and body weight was 3,933 ± 1,487 g vs. 5,079 ± 1,037 g. Operation time was longer in the P group compared to the F group (46.4 ± 29.9 min vs. 29.9 ± 16.9 min). Postoperative apnea occurred in 11.4% of cases (19.2% in the P group vs. 1.2% in the F group; $p<0.001$). Complications were recurrence (1.08%), vas injury (1.08%), testicular atrophy (1.63%), and hydrocele (2.1%). Univariate analysis for occurrence of apnea revealed significant influences of male sex, short gestational age, early repair time of PCA, smaller weight at operation, underlying bronchopulmonary dysplasia, and longer operation time. In multivariate analysis, short gestational age (OR 0.967) and small weight at the time of operation (OR 0.999) were significant risk factors. **Conclusion:** Postoperative apnea for the infants younger than PCA 60 weeks occurred in 11.4% of cases, and the overall complication rate was 5.9%. To decide on proper operation timing, short gestational age and weight at operation should be considered.

097 - PA
Title: Endoscopic Decompression Of A Duodenal Duplication Cyst In A 3-Year Old Boy – A Case Report And Review Of Literature
Authors: Eliza Sin, MD(1), Ennaliza Salazar, MD(2), Christopher Khor, MD(3), Yee Low, MD(4)
Institutions: (1), (2), (3), (4)
Category: General Surgery
Keywords: duplication cyst,duodenal,endoscopic decompression
Aim of the Study: Introduction Duodenal duplication cysts are rare congenital foregut anomalies, accounting for approximately 12% of all gastrointestinal tract duplications. Surgical excision entails risk of injury to the pancreaticobiliary structures due to proximity or communication with the cyst. We present a case of duodenal duplication cyst in a 3 year-old boy who successfully underwent endoscopic decompression. **Methods:** - **Main Result:** Case Report AT is a young boy who first presented at 15 months of age with abdominal pain. There was one subsequent documented evidence of pancreatitis. Ultrasonography showed the typical double wall sign of a duplication cyst and magnetic resonance cholangio-pancreatography showed a large 5cm cyst postero-medial to the second part of the duodenum, communicating with the pancreaticobiliary system and causing dilatation of the proximal duodenum. He subsequently underwent successful endoscopic ultrasound guided decompression under general anesthesia, with uneventful postoperative recovery. **Conclusion:** Conclusion Endoscopic ultrasound guided assessment and treatment of gastrointestinal duplication cysts is increasingly reported in adults. To the best of our knowledge, only one case of endoscopic treatment of duodenal duplication cyst, in an older child, has been reported thus far in the paediatric English literature. In this paper, we review the current literature and discuss the therapeutic options of this rare condition.

101 - PA
Title: Hirschsprung disease with concomitant syndromes – implications on manifestation, treatment and outcome
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Category: General Surgery
Keywords: Hirschsprung disease,Syndrome,Bowel function
Aim of the Study: This study aimed to evaluate possible differences comparing children with Hirschsprung disease (HD), with and without syndromes, regarding manifestation, process of diagnosis and treatment of HD, and long term outcome with regard to bowel function. **Methods:** Children with HD operated on with transanal endorectal pull through (TERPT) during 2005-2015 at a tertiary center for pediatric surgery were included. Information from charts regarding patient characteristics, manifestation, diagnosis and treatment was compiled retrospectively. In follow-up, the evaluated questionnaire Bowel function score (BFS) was used cross-sectionally for children older than 4 years. Children with syndromes but without HD were used as controls. The study was ethically approved. **Main Result:** Fifty-three children with HD (12 (23%) with concomitant syndromes) were included in the chart study. Of these, 33 children (5 (15%) with syndromes) remained for follow-up, then 7 (4-10) years old. In children with syndromes the most frequent presenting

symptom was absent meconium release (73%), compared to vomiting in non-syndromic children (66%). Syndromic children had a lower median birth weight, 3295 grams compared to 3623 (p=0.013), and their first contact with a pediatric surgeon was median 4 days compared to 1 day (p=0.048). Concerning bowel function, 60% of the syndromic HD children reported major problems in ability to hold back defecation and in sensing the urge to defecate, compared to 0% among the non-syndromic children (p=0.002 and p=0.001). **Conclusion:** Syndromic children with HD presented with other symptoms, had delayed first contact with a pediatric surgeon and a poorer outcome in bowel function compared to children with HD without any syndrome. Therefore, it is suggested that patients with both HD and syndromes should be given special attention in research as well as in clinical work.

156 - PA
Title: Periportal Fibrosis and contracted Gall bladder in USG of Hepatobiliary system- as a diagnostic factor and therapeutic strategy for Biliary Atresia
Authors: Dinesh Prasad koirala, Resident(Final Year) in paediatric surgery(1), Shafiqul Hoque, Professor(2), A.K.M Zahid Hossain, Associate professor(3), Humaira Islam, Consultant Radiologist(4)
Institutions: Bangabbandhu Sheikh Mujib Medical university(1), Bangabbandhu Sheikh Mujib Medical university(2), Bangabbandhu Sheikh Mujib Medical university(3), Anwer Khan Modern Hospital(4)
Category: Hepatobiliary Surgery
Keywords: Periportal Fibrosis and Contracted Gall bladder,Diagnosis and therapeutic strategy,Biliary Atresia
Aim of the Study: This study aims to establish the ultrasonographic finding of periportal fibrosis and contracted gall bladder as diagnostic factor and therapeutic strategy for biliary atresia. **Methods:** Twenty five infants were taken into study from Jan 2014-March 2016.All the patients had undergone ultrasonography of whole abdomen. For assisting the diagnosis 20 children had HIDA scan and percutaneous liver biopsy. The diagnosis was supported by undergoing Kasai procedure in 18 children.It was further supported by histopathological report after Kasai procedure **Main Result:** The age of presentation varies from 45 days to 120 days. Most of the children had clinical presentation of biliary atresia ie persistent jaundice, alcoholic stool, and abdominal mass. For further diagnosis Ultrosongraphy of whole abdomen was done. USG finding in 19 patients revealed periportal fibrosis ranging from 15 x09mm-20x12mm.In 17 patients the gall bladder was present which appeared to be irregularly contracted.In 4 patients saccular well defined gall bladder was present.In three patients gall bladder was absent. Among 20 patients with HIDA Scan and percutaneous liver biopsy 18 patients revealed features of biliary Atresia. Among 18 patients who had undergone Kasai procedure,16 patient revealed absence of biliary tract and contracted gall bladder.Two patients had some remanant of atretic bile duct and normal looking gall bladder. The tissue from the extrabiliary tract on histopathology after kasai procedure also revealed periportal fibrosis and chronic inflammatory cells **Conclusion:** The findings in ultrasonography with periportal fibrosis and contracted gall bladder aid in early diagnosis and therapeutic strategy of biliary atresia specially in Indian subcontinent where the people cannot effort the expensive investigations.However larger study is required to establish this relation provided USG features are carefully analysed by an experienced operator

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Title: Duodeno-Tubular Flap – New Biliary-Enteric Reconstructive Procedure for the Repair of Choledochal Cyst
Authors: Zakaria S Habib, MBSS(1)
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Category: Hepatobiliary Surgery
Keywords: Duodenal tubular flap,Biliary-digestive anastomosis,Choledochal
Aim of the Study: Our animal research project “Duodenal tubular flap (DTF-Habib/Kolar)–new biliary reconstructive procedure” started with the idea to develop biliary reconstructive procedure that combine benefits of being physiologic, anatomic, and can be assessed endoscopically for the management of complications. **Methods:** Prospective animal research study was performed on 10 healthy dogs. The procedure consisted of common bile duct (CBD) transection, construction of (DTF) from the second part of the duodenum, and biliary-enteric (CBD/DTF) anastomosis. First group of 6 animals (dogs 1 to 6) (60%) underwent one stage reconstructive surgical procedure. Second group of 4 dogs (dogs 7 to 10) (40%) underwent DTF procedure, after preparatory step of laparoscopic clipping of CBD, for a mean period of 7 days. **Main Result:** Two dogs from the first group, developed postoperative leak (No 4 and 5), and underwent emergency exploration with redo biliary-enteric anastomosis, with complete recovery. From the same group one dog (No 2) died suddenly on 10th postoperative day. From the second group of 4 dogs, 3 dogs (No 8, 9, and 10) had an uneventful recovery, and one (No 7) died on 3rd postoperative day. None of the dogs in both groups experienced leak at the staple lines, and none of 8 survived dogs developed postoperative cholangitis during the follow up period of 7 to 13 months. **Conclusion:** The construction of DTF is technically feasible, simple, quick, and easy. The newly described biliary-enteric (DTF/CBD) anastomosis simulates physiological anatomy.

158 - PA
Title: External drainage of giant infantile choledochal cyst before definitive repair: is it beneficial
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Institutions: SGPGIMS(1)

Category: Hepatobiliary Surgery
Keywords: Choledochal cyst,biliary draiange,Hepaticojejunostomy
Aim of the Study: Infantile choledochal cysts usually present with jaundice, acholic stool and abdominal lump or abdominal distension. If the surgical intervention is delayed they rapidly progressed to liver fibrosis which is considered to irreversible if progressed to cirrhosis. We are presenting our experience with complicated infantile choledochal cyst presented with cholangitis. **Methods:** We reviewed the data of four cases of infantile choledochal cyst presented with cholangitis managed in one surgical unit in last two years. In one case cholangitis was treated with prolonged antibiotic course before definitive repair where as in rest,external drainage of cyst was done in addition to intravenous antibiotic to treat cholangitis.The available information in form of symptom of presentation, hematological, biochemical parameter, liver function, coagulation profile and histopathology was analyzed. **Main Result:** Four cases age ranged from one month to 6 months were managed in single surgical unit during this period. All had features of cholangitis at time of presentation. Total leucocyte count ranged from 18 x1000/UL to 30.6x1000/UL. Total bilirubin level at presentation ranged from 8.2 mg/dl to 18 mg/dl and PT (INR) ranged from 1.33 to 1.9.Hepatic fibrosis was observed in all cases but cirrhosis was observed in only one case. There was no mortality but one patient had postoperative complication with prolonged hospital stay. **Conclusion:** External drainage helps in early recovery from cholangitis and better optimization of liver function and delay the further progression of liver fibrosis by reliving the biliary outflow obstruction while waiting for definitive repair.

159 - PA
Title: Bowel Perforation after Liver Transplantation for Biliary Atresia: A retrospective study for the care of the transition from children to adult.
Authors: Yanagi Yusuke, MD(1), Matsuura Toshiharu, MD(2), Hayashida Makoto, MD(3), Takahashi Yoshiaki, MD(4), Yoshimaru Koichiro, MD(5), Esumi Genshiro, MD(6), Taguchi Tomoaki, MD(7)
Institutions: Department of Pediatric Surgery, Graduate School of Medical Sciences, Kyushu University, (1), Department of Pediatric Surgery, Graduate School of Medical Sciences, Kyushu University, (2), Department of Pediatric Surgery, Graduate School of Medical Sciences, Kyushu University, (3), Department of Pediatric Surgery, Graduate School of Medical Sciences, Kyushu University, (4), Department of Pediatric Surgery, Graduate School of Medical Sciences, Kyushu University, (5), Department of Pediatric Surgery, Graduate School of Medical Sciences, Kyushu University, (6), Department of Pediatric Surgery, Graduate School of Medical Sciences, Kyushu University, (7)
Category: Hepatobiliary Surgery
Keywords: liver transplantation,bowel perforation,biliary atresia
Aim of the Study: Bowel perforation is one of the noteworthy complication with high mortality after pediatric liver transplantation (LT). The aim of this study was to evaluate the incidence, clinical presentations, risk factors, and outcomes of bowel perforation after liver transplantation (BPLT) for biliary atresia (BA) from children to adult. **Methods:** This is a retrospective analysis of the 70 patients with BA who underwent LT at a single center in Japan between 1996 and 2015. The analyzes of surgical valuables between the patients with or without BPLT were performed to assess the surgical risk factors. Next, the patients were divided in three groups to examine the difference of life period: those who required LT in the first year after Kasai portoenterostomy (Group A), those who required LT before 12 years of age except for Group A (Group B) and after that (Group C), respectively. **Main Result:** The age of the patient ranged from 5 months to 33years (median: 4.6yr). Excluding a case of posttransplantation lymphoproliferative disorder, 13 bowel perforations occurred in 11 patients(15.9%). A multivariate logistic regression analysis identified an independent surgical risk factor associated with the occurrence of BPLT: prolonged operative time of LT ($p = 0.02$). The comparison of three groups among life period indicated that the patients in Group C had potentially higher risk of BPLT due to longer operative time and coexistence of pulmonary complications. Aggressive operations for the severe peritonitis were required in Group C. There was no death directly caused by BPLT. **Conclusion:** BPLT was relatively common in the patients with BA. Because the patients getting into adolescence carry the risk of BPLT, a policy to perform LT as early as possible should be taken into consideration. When LT will be performed, careful observation with high suspicion of bowel perforation should be kept during post-operative management.

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Title: MANAGEMENT OF CHOLEDOCAL CYST IN NEWBORNS AND ELDER CHILDREN
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Institutions: Republican Specialized Scientific Practical Medical Center of Pediatrics(1), Tashkent Pediatric Medical Institute(2), Republican Specialized Scientific Practical Medical Center of Pediatrics(3), Tashkent Pediatric Medical Institute(4)
Category: Hepatobiliary Surgery
Keywords: choledochal cyst,Roux-en-Y hepaticojejunostomy,neonatal cholestasis
Aim of the Study: To study clinical features and results of surgical treatment of infants and children with choledochal cyst **Methods:** We observed 42 children with a diagnosis of choledochal cysts operated during 2013-2016. Routine clinical and biochemical studies were performed. Cyst type was classified according by Todani classification (1977). The patients were divided into 3 groups: the first group was children aged up to three years (n = 16), the second group

includes children aged 3 - 7 years (n = 20), the third group consisted of children over 7 years (n = 10) **Main Result:** Jaundice, acholic stool often were found in patients of I group, and they were correlated with AP, GGT and bilirubin levels. In I and II groups, ALT and AST rates were minimally increased. Patients of II and III group also had high rates of AP and GGT, but bilirubin levels were in normal range. Third group had high rates of ALT and AST, which was due to recurrent cholangitis. Newborns of I group admitted to hospital with complaints on jaundice and presence of abdominal mass in 100% cases. In addition, they had acholic stool in 80% cases. 38% patients had variable grades of liver fibrosis in biopsy. Three patients had biliary cirrhosis. Most of them were found in I group. Roux-en-Y hepaticojejunostomy were performed in the majority of patients-32 (74%). Seven patients (16.3%) underwent cyst excision and hepaticoduodenostomy with short jejunal interposition. Reflux cholangitis were observed in 12.5% patients after Roux-en-Y hepaticojejunostomy **Conclusion:** Clinical manifestation, morphological structure of the liver and postoperative outcomes in children and infants with choledochal cysts are different. In infants and children up to 3 years of age clinical manifestations and course with choledochal cysts is similar to the correctable biliary atresia in neonates. Performing early surgical treatment is mandatory, since it prevents the development of biliary cirrhosis

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Title: Intraoperative supra-hepatic inferior vena cava (IVC) balloon occlusion for bloodless liver resection in a young infant with advanced liver tumour.
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Category: Hepatobiliary Surgery
Keywords: bloodless liver resection,inferior venacava baloon occlusion,
Aim of the Study: To report a novel technique of bloodless major liver resection in an infant with hepatoblastoma by intraoperative IVC balloon occlusion. **Methods:** A six-month old boy was referred to us with a space occupying lesion of the left lobe of the liver. After detailed workup a diagnosis of advanced, non-metastatic hepatoblastoma was made. The large tumor was involving the entire left lobe of the liver and extending to the right lobe. The infant received three cycles of adjuvant chemotherapy with desired shrinkage in the size of the tumor. At the age of nine months and after three cycles of adjuvant chemotherapy, left hepatectomy was planned. Peroperative haemorrhage in a very vascular liver tumor in a small infant was our main concern during the preoperative surgical planning. The use of harmonic scalpel and ultrasonic dissection using Cavitron Ultrasonic Surgical Aspirator (CUSA) for liver resection is our standard technique. However, in this particular patient in view of the highly vascular tumor in an infant we planned for intraoperative IVC balloon occlusion to limit the blood loss further. **Main Result:** The catheter was placed through the right femoral vein after induction of anesthesia. The position of balloon was confirmed to be in the Supra-hepatic venacava below the diaphragm under Image intensifier and balloon was inflated to occlude the IVC once the liver resection was started. The infra-hepatic vena cava was clamped under direct vision. The total operative time was 200 minutes with approximately 20 ml of blood loss. The major liver resection was completed without any blood transfusion. The child is now 10-years old and is free of disease. **Conclusion:** Intraoperative balloon occlusion of the IVC is an innovative measure to reduce the blood loss and appears to be a useful compliment to ultrasonic shear, CUSA and radiofrequency ablation devices.

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Title: Portosystemic Shunt surgery at periphery in Chhattisgarh: Challenges and outcomes
Authors: NITIN SHARMA, MS, MCh(1), Sewakram Verma, MD(2), BASANT CHOURASIA, MD(3), Sudhakar chidambaram, MD(4), MINI SHARMA, MD(5)
Institutions: CM Hospital and medical college, Nehrunagar, Bhilai, India(1), CM Hospital and medical college, Nehrunagar, Bhilai, India(2), CM Hospital and medical college, Nehrunagar, Bhilai, India(3), CM Hospital and medical college, Nehrunagar, Bhilai, India(4), Pt JNM Medical College, Raipur(5)
Category: Hepatobiliary Surgery
Keywords: PORTAL HYPERTENSION,SPLENORENAL SHUNT,HYPERSPLENISM
Aim of the Study: Extrahepatic portal venous obstruction (EHPVO) is the most common cause of pediatric portal hypertension. Cases come from remote background with limited access to health and need proper addressal. Aim of the study was to analyze the Challenges and outcomes of Porto systemic shunts in a peripheral setup **Methods:** 8 consecutive children below 12 years operated with a diagnosis of extra hepatic portal hypertension formed the study group. All were operated on the basis of clinical findings, presence of hypersplenism and documented portal vein thrombosis on Doppler ultrasound. Upper gastrointestinal endoscopy could be done in four cases. Results with respect to shunt patency and rebleed were collected. Problem encountered with respect to assistance, blood loss, operating time, vascular anastomosis were recorded based on a scoring system. **Main Result:** Lienorenal shunt (LRS) was performed in all because of massive splenomegaly with infarcts. Follow-up ranged from 3 to 12 months. All the cases had a patent shunt at last follow up. Mean operating time was 4.30 hours (Range 4.00- 6.00 hours). All the cases were done under 2.5 magnification using instruments from the general surgery department with custom made needle tip monopolar cautery as the only energy device. All the cases were kept nil by mouth for 24 hours and discharged at a

mean duration of 5 days (Range 4-6 days). **Conclusion:** Porto systemic Shunting in children with EHPVO is a viable option. While long term cure rates are comparable to sclerotherapy, repeated hospital visits are reduced with one time surgery. This can be performed even in limited facilities with minimal assistance.

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Title: SINGLE SITE MINI-LAPAROSCOPIC PERCUTANEOUS INGUINAL HERNIA REPAIR
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Institutions: HOSPITAL DE ESPECIALIDADES DE LAS FUERZAS ARMADAS(1), HOSPITAL DE ESPECIALIDADES DE LAS FUERZAS ARMADAS(2), HOSPITAL DE ESPECIALIDADES DE LAS FUERZAS ARMADAS(3)
Category: Laparoscopy and Robotics
Keywords: Inguinal Hernia,Percutaneous,Single-Site
Aim of the Study: The purpose of this study is to examine the feasibility of a single-site laparoscopic percutaneous closure of pediatric inguinal hernia. **Methods:** From November 2013 to April 2016 we operated 59 children aged 1 to 15 years (mean 7,38 years) with a total of 73 inguinal hernias. It is a percutaneous closure of the internal ring with a non-absorbable suture material and the use of a regular needle-holder under direct vision with a 1.7 telescope introduced through an umbilical 2 mm single port. **Main Result:** 27 patients presented with a right sided inguinal hernia, 18 with left sided hernia and 14 bilateral hernias. There were 30 boys and 29 girls. Operative time ranged between 15 and 60 minutes in unilateral cases (mean 34.8 min) and between 30 and 70 minutes in bilateral cases (mean 42,5 minutes). Three children had recurrence of the hernias (Recurrence rate of 4,1%) associated with rupture of the suture material. One of these cases was repaired under the same technique. **Conclusion:** The preliminary results showed that our technique is very promising to achieve a secure closure of the inguinal ring with almost invisible scars.

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Title: The role of laparoscopic surgery in the treatment of intussusception
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Category: Laparoscopy and Robotics
Keywords: intussusception,laparoscopy,
Aim of the Study: This study was undertaken to access the utility of laparoscopic surgery for intussusception. **Methods:** Forty children underwent laparoscopic surgery between 1997 and 2015. Laparoscopic reduction of intussusception was attempted in 32 children using one camera port and two working ports, and diagnostic laparoscopy was performed in the other eight cases because of repeated recurrences of intussusception. **Main Result:** Spontaneous reduction was found at exploration in seven cases. Laparoscopic reduction of intussusception was successfully performed in 17 and failed in 8 of 25 operated children. Laparoscopic-assisted bowel resection was performed in 8 failed cases and 6 cases after successful reduction, because of complicated bowel disorders such as bowel necrosis, Meckel's diverticulum, heterotopic pancreas, and coecal duplication. In diagnostic laparoscopy cases, laparoscopic coecopexy was performed in 4 of 8 cases to avoid recurrence. No postoperative surgical complications were experienced. **Conclusion:** Laparoscopic reduction is a safe and effective procedure for ileocolic intussusception and laparoscopic-assisted technique can be performed with minimal extension of the umbilical wound when bowel resection is required. Laparoscopy also prevents unnecessary open surgery in cases of spontaneous reduction. However, pediatric surgeons must recognize that this is an advanced procedure that requires delicate bowel manipulation.

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Title: LAPAROSCOPIC SURGERY WITH THE USE OF VESSEL SEALING DEVICE FOR ADNEXAL PATHOLOGY IN PEDIATRIC PRACTICE
Authors: Anatole Kotlovsky, PhD(1), Timur Sharoev, PhD(2), Dmitry Brovin, PhD(3), Oleg Chernogoroff, MD(4)
Institutions: St Luka's Clinical-Research Center of Medical Care for Children, Moscow(1), St Luka's Clinical-Research Center of Medical Care for Children(2), Children's Endocrine Center, Moscow(3), Central Children's Hospital for Oryol Region, Oryol(4)
Category: Laparoscopy and Robotics
Keywords: Laparoscopic techniques,Adnexal pathology,Children
Aim of the Study: To demonstrate the rationale for the use of electrothermal bipolar vessel sealing device (EBVSD) in laparoscopic surgery for pediatric adnexal lesions as applied in our practice. **Methods:** From February 2012 to February 2016, 20 female patients, aged between 2 and 16 years, diagnosed with various adnexal lesions underwent laparoscopic surgery. In all cases the excision of the lesions was primarily carried out with the use of EBVSD. A retrospective review of patients' records was conducted. **Main Result:** The following cases were presented: large and giant benign ovarian cysts with /or without ovarian torsion (6 and 4 respectively), mature teratomas (4), malignant teratomas (2), gonadal dysgenesis in Turner syndrome with Y-mosaicism (3), gonadoblastoma in dysgenetic gonad in

DSD with Y-chromosome (1). The following laparoscopic procedures were performed: ovary-sparing excision of a lesion (14), unilateral salpingo-oophorectomy (3), bilateral gonadectomy (3). The dissection of the lesions was carried out bloodlessly and precisely at the plane of demarcation between the lesion margins and remaining ovarian tissue or surrounding tissue. All procedures were successfully performed with no tumor rupture occurred in any case. Intraoperative time ranged from 20 to 90 minutes. **Conclusion:** In our experience, the use of EBVSD in laparoscopic techniques for excision of adnexal lesions is an efficacious maneuver facilitating dissection of the lesions at the clear-cut demarcation plane. Furthermore, the minimal lateral thermal impact of EBVSD will potentially render the maximum sparing effect to the preserved ovarian tissue.

183 - PA
Title: Long-term outcome after video-assisted gastrostomy in children
Authors: Ana Santimano, Medical Student(1), Sofia Helmroth, Medical Student(2), Martin Salö, PhD(3), Pernilla Stenström, PhD(4), Torbjörn Backman, PhD(5), Einar O Arnbjornsson, Associate Professor(6)
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Category: Laparoscopy and Robotics
Keywords: Gastrostomy,Children,Laparoscopy
Aim of the Study: The video-assisted placement of a gastrostomy (VAG) is the preferred method for children. The primary aim of this study was to compare long-term with short-term complications after VAG, and to see if age and gender affect the long-term complication rate. The secondary aim was to evaluate if the duration with a gastrostomy influences the spontaneous closure or the need for gastroraphy of the stoma when the gastrostomy device is removed. **Methods:** A retrospective study was conducted of 303 children operated on with VAG from 2008 through 2014. Children who died or migrated from the region were excluded. Ages at operation, gender, complications, duration with gastrostomy, and modality for closure of the stoma, were registered. The long-term complication rate was compared with the short-term complication rate registered at 3-6 months postoperatively. Ethical approved 2010/49. **Main Result:** After exclusion because of missing data (N=65), death (N=27), and removal of the gastrostomy (N= 41), 170 children were included (56% boys, median age at operation was 2 years, range 1 month to 15 years). The mean long-term follow-up was 5 (2–9) years.The rates of complications had decreased from short- to long-term follow-up regarding granulation tissue (42% to 8%), leakage (20% to 4%), infection (17% to 4%), and vomiting (23% and 2%) ($p < 0.001$ for each). Long versus short-term complication rates did not differ between gender and age groups. Children in need of gastroraphy instead of spontaneous closure of the gastrostomy had a significantly longer median duration with gastrostomy compared to children with spontaneous closure; 3.5 and 2.5 years, respectively ($p = 0.01$). **Conclusion:** The rate of complications in children with VAG decrease over time. A longer duration with a gastrostomy decreases the occurrence of spontaneous closure. These findings are important for the preoperative parental information and follow-up.

184 - PA
Title: Robotic approach to symptomatic high grade unilateral primary VUR comparison with Deflux as a day-care treatment: a pilot study.
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Institutions: Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(1), Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(2), Indraprastha Apollo hospital, New Delhi(3), Indraprastha Apollo Hospital, New Delhi(4), Indraprastha Apollo hospital, New Delhi(5)
Category: Laparoscopy and Robotics
Keywords: Robotic ureteric reimplantation,Deflux,
Aim of the Study: To compare the safety, feasibility, outcome and cost of robotic approach versus Deflux injection (STING) for unilateral high grade symptomatic VUR. **Methods:** The results of fifteen children who underwent robotic ureteric reimplantation for unilateral high grade VUR (grade IV-V) were prospectively recorded and compared with similar cohort of fifteen consecutive children who were treated by Deflux injection in the past. The robotic approach group underwent repair by Leich-Gregoir technique. A post procedure cystourethrogram was done in both the groups. Both groups were compared for postoperative analgesia requirement, hospital stay, complications, cost of treatment, recurrent UTI and persistence of reflux. **Main Result:** The mean operating time for robotic and Deflux group was 90 minutes and 30 minutes respectively. The mean time to start feeds in robotic and Deflux group was 3 hours and 2 hours respectively ($p>0.05$). The mean Hospital stay in robotic and Deflux group was 30 hours and 12 hours respectively ($p<0.05$). On average 1.5 ml of Deflux injection was required in these fifteen patients. The average cost in Deflux

patients was 1538 USD and 1923 USD in robotic reimplantation patients (p<0.05). Recurrence of reflux was seen in three (20%) patients in the Deflux group and one (6%) patient in the robotic reimplantation group (p<0.05). Febrile UTI were seen in four (26%) patients in Deflux group and none (0%) patient in robotic group (p<0.05). **Conclusion:** Our findings indicate that robotic approach as a day care procedure for unilateral high grade symptomatic VUR is safe, efficacious, definite and cost-effective as compared to Deflux injection. The sample size is small, larger studies are required to validate this observation.

185 - PA
Title: Laparoscopic Management of Intra-Abdominal Testis: A Retrospective Descriptive Study
Authors: HAMIDOU Faycal, MD(1), BENMOHAMED Nadir, MD(2), MALAH NOURIA, PhD(3)
Institutions: Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA.(1), Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA.(2), Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA.(3)
Category: Laparoscopy and Robotics
Keywords: Undescended testis (impalpable),laparoscopy,children
Aim of the Study: . Undescended testis is one of the most common urological problems in children, affecting about 2% of boys at age of 1 year. Of these, about 20% have a non palpable testis with a very high probability that the testis is absent. This may have a significant impact on the possibility of malignancy in these testes, as well as on the later fertility of these subjects. **Methods:** . We retrospectively analyzed the demographic and clinical findings, as well as immediate and 6-month outcomes, in 131 patients diagnosed with impalpable undescended testes between april 2013 and august 2014. **Main Result:** Of the 131 patients, 17 had bilateral and 114 had unilateral impalpable testes. All 148 testes were managed laparoscopically. we found testicular agenesis in 37 cases; in 04 cases bilateral. Stephens -Fowler technique was practice for 71 testicular with a reduction in a second time after 06 months. 22 testes were lowered by classical way, and 18 by laporoscopy way. after 01-year decline was noted in testicular atrophy in 15 cases. **Conclusion:** . Laparoscopy is extremely useful in both the diagnosis and treatment of impalpable testes. Objectively measured mobility of the testis towards the contralateral internal inguinal ring is an excellent intraoperative indicator for type of orchiopexy. Standardization of management may increase the success rate of orchiopexy.

186 - PA
Title: The Comparison of Operative Procedure against Inguinal Hernia
Authors: Sato Hideaki, PhD(1), Furuta Shigeyuki, PhD(2), Tanaka Kunihide, PhD(3), Kitagawa Hiroaki, PhD(4)
Institutions: (1), (2), (3), St.Marianna University School of medicine(4)
Category: Laparoscopy and Robotics
Keywords: inguinal hernia,laparoscopic surgery,children
Aim of the Study: Laparoscopic surgery (LPEC) for inguinal hernia (IH) in children has become popular, allowing confirmation of a contralateral patent processes vaginalis (CPPV). But the real benefit of laparoscopic procedure compared with standard herniotomy is still unclear. This paper presents our experience with both approaches. **Methods:** The records of 768 patients undergoing operation for IH from 2008 to May 2016 were reviewed comparing age, gender, operative method, operation time, and pre- and post-operative diagnosis. **Main Result:** Standard repair (Potts) was performed for 328 patients, compared with LPEC for 440. In the Potts group 204 were Male. The mean age was 4.07 years old. Bilateral hernia was diagnosed preoperatively in 20 cases and 24 cases developed contralateral hernia (7.8%). In the LPEC group the mean age was 4.11 years, 238 being male. Bilateral hernia was diagnosed preoperatively in 39 cases and CPPV was identified in 176 cases, for a total of 215. Mean operation time in patients < 1 year was 40 minutes for Potts vs 29.5 minutes for LPEC. In the 1 to 5 year group, the mean operation time was 35 minutes for Potts against 25 minutes for LPEC. In the 6 to 10 year group, the mean operation time was 30 minutes for Potts against 25 minutes for LPEC. In the >11 year group, the mean operation time was 35 minutes for Potts against 30 minutes for LPEC. **Conclusion:** In LPEC the CPPV ligation is performed to avoid contralateral recurrences, but the benefit of CPPV ligation remains unclear. Operation time for LPEC tends to be shorter, especially in patients <1.

187 - PA
Title: Single port nephrectomy for dysplastic kidneys in children
Authors: Saloua Ammar, MD(1), Mahdi Ben Dhaou, MD(2), Hayet Zitouni, MD(3), Mohamed Jallouli, MD(4), Riadh Mhiri, MD(5)
Institutions: Department of pediatric surgery, Hedi Chaker Hospital(1), Department of pediatric surgery, Hedi Chaker Hospital(2), Department of pediatric surgery, Hedi Chaker Hospital(3), Department of pediatric surgery, Hedi Chaker Hospital(4), Department of pediatric surgery, Hedi Chaker Hospital(5)
Category: Laparoscopy and Robotics
Keywords: dysplastic kydney,laparoscopy ,single-site surgery
Aim of the Study: To present our experience with umbilical single port surgery (sps) nephrectomy in children with dysplastic kydneys (DK). **Methods:** Six infants underwent SPS using a home made glove port. A conventinal laparoscopic nephrectomy was performed. **Main Result:** The average age at the time of surgery was 4,8 years. All

patients were operated by the same surgeon and there were no complications. The mean operative time was 95min. The mean time of the hospital stay was one day. All patients required paracetamol for analgesia. **Conclusion:** Single port nephrectomy for DK in children seems safe and cosmetic alternative to conventional laparoscopy.

188 - PA
Title: Simple, fast and effective Technique for Laparoscopic Repair of Congenital Diaphragmatic Hernia to Prevent Recurrence .
Authors: Avrianapety Wardani, MD(1), Erik Prabowo, MD(2)
Institutions: Pediatric Surgery Departement, Medical Faculty of Diponegoro University/ Dr.Kariadi Hospital, (1), Diponegoro University(2)
Category: Laparoscopy and Robotics
Keywords: Congenital Diaphragmatic Hernia,V-Loc,Laparoscopic Repair Surgery
Aim of the Study: The purpose of this report is to present a simple techniques that can prevent a recurrence of the CDH repaired using laparoscopic approach. **Methods:** We included all CDH patients with late presentation, and operated at Dr. Kariadi Hospital Semarang Central Java Indonesia in 2015. **Main Result:** There were 2 male and 1 female patients with CDH. Their age when performed laparoscopic repair are 14-month-old, 12-month-old and 13-month-old. All of them repaired with laparoscopic approach, first suture from ventral abdomen whole layer under the skin to the posterior defect using large 1.0 polypropylene thread as an anchor sutured to minimize tension. Then closed the defect by simple running suture using V-Loc™ 3.0. Patients was treated 5 days after surgery in pediatric ICU, knocked down on day 1 and 2. And shifted to ward on day 6 after surgery. Patients was discharged home on day 8 after surgery. We evaluated after surgery in 3 months, all patients in good condition. **Conclusion:** Late clinical presentation of CDH in children is recommended to surgical repair. Laparoscopic repair is the most effective and decreased the complication. The principle of tensionfree closure is paramount but it is often difficult to achieve in CDH repair, with one anchor suture and simple running suture using V-Loc™ offers secure, fast and effective laparoscopic repair. We recommended to treated in pediatric ICU for early days after surgery, and knocked down in day 1-2, and evaluated for 3 days in pediatric ICU before shifted to the pediatric ward for discharged.

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Title: AN INSTITUTIONAL EXPERIENCE WITH GENERAL PEDIATRIC ROBOTIC SURGERY-AT THE CROSSROADS
Authors: Vinci S Jones, MD(1)
Institutions: Good Samaritan Hospital Medical Center(1)
Category: Laparoscopy and Robotics
Keywords: pediatric robotic surgery,pediatric robotic training models,pediatric robotic single site cholecystectomy
Aim of the Study: The applicability of robotics for pediatrics has been questioned and children's institutions have struggled to develop a robotic program for general pediatric surgery **Methods:** A 3 year institutional experience of robotic general pediatric surgery was reviewed. Patient outcomes, operative details, cost and challenges for program development were analyzed and compared with available relevant literature. **Main Result:** Selected 60 patients aged 2-19 years were subjected to robotic surgery. Surgeries performed were 35 single site cholecystectomies (SSC), 7 multiport cholecystectomies (MPC), 5 appendectomies, 4 fundoplications, 4 inguinal hernia repairs, 3 varicocele repairs, 1 Heller myotomy and 1 duodenal diaphragm repair. One conversion to laparoscopy and no major complications were seen. MPC's, appendectomies and hernia repairs were restricted to the initial phase of 20 robotic cases and had total operative times (77-94 minutes) longer than their laparoscopic counterparts. Robotic SSC took 94 minutes which was comparable to single incision laparoscopic cholecystectomy (SILC). Costs of surgical supplies for the operations ranged from $680 to $2120. Compared to their laparoscopic counterparts, costs of supplies for SSC were cheaper, whereas all other robotic procedures were costlier. **Conclusion:** A pediatric general surgery robotic program can be developed at a center with a pre-existent robotic program. Excluding robot purchase and maintenance costs, SSC is cheaper than laparoscopic cholecystectomy. With comparable operative times and being technically easier, SSC becomes a favorable alternative to SILC. Robotic MPC, inguinal hernia repair and appendectomy have value as training models for a pediatric robotic program. The ergonomic advantage with the robot for complex maneuvers is offset by longer operative times and cost. Challenges for the program include inadequate case volume, finding proctors, maintaining skills for assistants, obtaining robotic time and administrative concerns with costs. Till newer generation smaller robots are created, small patient size will continue to preclude universal application of robotic surgery in children.

PA2-4 | MODERATORS: MONSOUR AHMED J. ALI, AMADEO ZANOTTI

210 - PA
Title: The Role of fat transfer in Secondary cleft lip patients
Authors: Dawlat Emara, MD(1)
Institutions: kasr Al Ainy(1)
Category: Misc

Keywords: fat transfer,secondary cleft lip,contour defects
Aim of the Study: Fat transfer is used as tissue filler for contour defects. There are a number of different techniques for fat harvesting, processing, and injection. The potential is to extract adipose-derived stem cells. The advantages of these stem cells include the ability to continue to proliferate after transplantation,to promote neovascularization, and their multipotent differentiation capacity. The cleft lip and nose deformity can be transformed to a minimal variation of normal. Despite careful planning to achieve the best result in the primary cleft repair, secondary cleft deformities are common. Adequate correction of secondary cleft lip and nasal deformities begins with accurate diagnosis of the problem, followed by determination of the underlying anatomic cause. Treatment must address the anatomy of muscle, cartilage, and the underlying skeleton and the deficiency, distortion or excess of each. Deficiency in cleft lip can be augmented by using microfat grafting. **Methods:** 20 patients with secondary cleft lip deformities including unilateral and bilateral cases were included in this study. This was done in faculty of medicine Cairo University between September 2014 and September 2016 with follow up by photos after 1 and 6 months after operation. The microfat is harvested from the abdomen and/or thighs to collect reasonable amount of fat to correct deficient lips using 3mm suction cannula and 20 gauge syringe. The fat is transferred to the deficient areas(upper lip,nasal base and vermilion).This is done for cases that do not require surgical correction. **Main Result:** In 18 patients the symmetry and results are very good and they were satisfied after fat grafting,2 patients were not satisfied. No complications were recorded. **Conclusion:** Structural fat grafting is a safe and effective way to improve symmetry and enhance facial proportions in patients with cleft lip with high degree of patient satisfaction, few complications, and durable results.

211 - PA
Title: Pediatric hospital admissions and surgical procedures in two Ugandan hospitals
Authors: Emily R Smith, PhD(1), Christine Muhumuza, MHSR(2), Henry Rice, MD(3), Michael M Haglund, MD(4)
Institutions: Duke University(1), Makerere University School of Public Health(2), Duke University(3), Duke University(4)
Category: Misc
Keywords: Pediatric surgery,Low and middle income countries,Epidemiology
Aim of the Study: An estimated 85% of children in Africa having a surgically-treatable condition by the age of 15. Although children represent a vulnerable population in need of surgical services, the contribution of pediatric surgical conditions to the healthcare systems in resource-poor settings is largely unknown. The objective of this study was to describe the epidemiology of hospital admissions and surgical procedures at two hospitals in Uganda between January 2012 and December 2012. **Methods:** Hospital admission logbooks and surgical logbooks at two Ugandan hospitals, Mbarara Regional Referral Hospital (RRH) and Gulu RRH were retrospectively reviewed by two study staff members at each hospital. Pediatric patients were defined as persons less than 19 years of age. For each hospital admission and surgical procedure, the patient's age and reason for admission or surgical procedure were recorded **Main Result:** From January 2012 to December 2012, 2,684 children were admitted to Mbarara RRH and 1,370 children were admitted to Gulu RRH. Of these, 22% of children admitted to Mbarara RRH had a surgical procedure while 9% of children admitted to Gulu RRH had a surgical procedure. The most common reason for admission at Mbarara RRH was birth asphyxia and malaria at Gulu RRH. Surgery among pediatric patients comprised a large number of all procedures with 41% of surgeries at Mbarara RRH and 17% of surgeries at Gulu RRH occurring among children. **Conclusion:** Our data suggests that young children represent a significant proportion of hospital admissions among all pediatric patients in Uganda. Likewise, one-third of all surgical procedures performed at these hospitals occurred among children. Differences in type of hospital admission and surgical procedure performed was noted between the two hospitals and by the children's age. Hospital-based data similar to ours can help inform targeted efforts and specific guidelines regarding what resources are needed to adequately scale-up services.

212 - PA
Title: Spinal cord dysfunction and quadriplegia following tracheal resection- A rare complication
Authors: Sheetal Bulchandani, MD(1), David Chang, MD(2), Roger Nuss, MD(3)
Institutions: Lokmanya Tilak Municipal Medical College(1), Boston Childrens Hospital(2), Boston Childrens Hospital(3)
Category: Misc
Keywords: quadriplegia,tracheal resection,spinal cord dysfunction
Aim of the Study: To report on a young male who developed quadriplegia after surgery to relieve tracheal (subglottic) stenosis **Methods:** Case report(In patient review of a young male in USA) and literature review. We searched PUBMED using the words 'tracheal resection + paraplegia' 'tracheal resection + quadriplegia'. All the relevant articles were thoroughly reviewed. **Main Result:** A tracheal stenosis had resulted from long term intubation following premature birth. Patient underwent multiple laryngotracheal reconstructions, the latest one being graft and balloon dilatation. At the age of 16, a tracheal resection and primary anastomosis was performed. At the termination of the procedure, a brace was placed to prevent unintentional hyperextension of neck. Patient could not be extubated on post operative day (POD) 4 and developed paraplegia on the POD 4, prompting an MRI to be performed, which identified spinal cord infarct/myelitis. Repeat MRIs were done and patient continued to detoriate and did not improve despite steroids administration. Literature review revealed very few (five) reported cases of paraplegia/quadriplegia post tracheal resection/ anastomosis. We report this rare complication. **Conclusion:** Quadriplegia after tracheal resection is an extremely 'rare

but there' complication of tracheal resection. Different methods may be used to relieve the tension on the anastomotic site and the most appropriate method must be determined. A daily postoperative neurological examination therefore should be performed in these patients. Immediate MRI should be performed if any abnormal findings are seen to verify the diagnosis. Quadriplegia in this setting likely resulted from compromised blood supply, concomitant edema, hemorrhage (as in this case, although the cause of hemorrhage is not known) or even traction, however, the exact cause of injury remains unclear.

213 - PA
Title: The epidemiology of pediatric surgical disease in Burera District, Rwanda
Authors: Allison F Linden, MD(1), Rebecca G Maine, MD(2), Bethany L Hedt-Gauthier, PhD(3), Emmanuel Kamanzi, MBA(4), Gita N Mody, MD(5), Georges Ntakiyiruta, MD(6), Grace Kansayisa, MD(7), Francine Niyonkuru, MD(8), Joel M Mubiligi, MD(9), John G Meara, MD(10), Robert Riviello, MD(11)
Institutions: Children's Hospital Los Angeles(1), (2), (3), (4), (5), (6), (7), (8), (9), (10), (11)
Category: Misc
Keywords: Global surgery,Pediatric surgery,Global burden of disease
Aim of the Study: Pediatric surgical epidemiology is largely undefined at the population level in low-income countries. Instead, analyses of operative and hospital records has served as a proxy. The goal of this study was to accurately assess the surgical epidemiology of those conditions that contribute the largest burden of surgical disease in Burera District, northern Rwanda, and compare this to current estimates in similar settings. **Methods:** In March and May 2012, we performed a cross-sectional study in Burera District, randomly sampling 30 villages with probability proportionate to size and randomly sampling 23 households within the selected villages. Six Rwandan surgical postgraduates and physicians conducted physical exams on all eligible participants in sampled households. Participants were assessed for injuries or wounds, hernias, hydroceles, breast masses, neck masses, undescended testes, hypospadias, hydrocephalus, cleft lip/palate and clubfoot. Ethical approval was obtained within the United States and Rwanda. **Main Result:** Of the 2165 individuals examined, 46% were 15 years or under (n=994). The overall prevalence of any surgical condition (n=123) in this pediatric population was 12.4% or 124 per 1000 children. Hernias accounted for 69% of the prevalence (n=85) and injuries/wounds accounted for 26% (n=32). No statistical difference in overall prevalence was found when examining sex, household wealth and travel time to the nearest hospital. **Conclusion:** The prevalence of pediatric surgically-treatable disease is high and evenly distributed across demographic parameters in Burera District. Rates of pediatric surgically-treatable disease are higher than previous estimates in comparable low-income countries demonstrating a large untreated burden of disease. Accurate assessments of pediatric surgical disease epidemiology are essential to creating targeted surgical capacity building that will have a broad-based impact.

214 - PA
Title: NASOALVEOLAR MOLDING IMPROVES NASAL SYMMETRY IN UNILATERAL CLEFT PATIENTS
Authors: MANGELES MUNOZ-MIGUELSANZ, MD(1), MARIA GLORIA GARCIA-ESCOLANO,, Dentist(2), RICARDO FERNANDEZ- VALADÉS, PhD(3), ADORACIÓN MARTÍNEZ-PLAZA, MD(4), ANTONIO J ESPAÑA-LOPEZ, PhD(5)
Institutions: (1), (2), (3), (4), (5)
Category: Misc
Keywords: NOVEL,DIRECT,RESOLUTIVE
Aim of the Study: The aim of this study is to assess the aesthetic and morphological results previous to surgery using a nasoalveolar molding therapy (PNAM) in children with unilateral cleft lip and palate through the study of the morphological nasal changes and the assessment of the nasal symmetry after PNAM. **Methods:** 20 children with nonsyndromic unilateral cleft lip and palate were treated with PNAM from 2008 to 2014. The average age was 10 days of life when they started the treatment and the average time was 94 days using the device, before surgery. Three extraoral and two intraoral anthropometric measurements were taken in order to study the nasal symmetry after treatment **Main Result:** The extraoral records showed a statistically significant decrease in CD ($P<0.0001$), CNW ($P<0.0001$) and BAW ($P<0.001$). Furthermore, statistically significant increases in CNH ($P<0.05$) and BIA ($P<0.0001$) were observed. Intraoral results showed a statistically significant decrease in the gap between the greater and lesser alveolar segments and a statistically significant increase in maxillary arch width.The measurements consisted of: bialar width (BAW), columellar deviation (CD), cleft nostril height (CNH), cleft nostril width (CNW), noncleft nostril height (NCNH), noncleft nostril width (NCNW) and the deviation of the columella to the horizontal line represented by bilateral pupil line (BIA). Also two intraoral measurements were taken **Conclusion:** This non-invasive therapy improves the presurgical nasal symmetry and achieves a global improvement of all oral dimensions. This way the upcoming surgeries become easier and better outcomes are achieved.

215 - PA
Title: Dorsal plane shaped advancement flap for treatment of simple syndactyly
Authors: Sherine Elsherbiny, MBChB(1), Mamdouh Aboul Hassan, MD(2), Ayman H Abdel sattar, MD(3)
Institutions: Cairo University(1), Cairo University(2), Cairo University(3)
Category: Misc

Keywords: syndactyly,flap,congenital
Aim of the Study: The purpose of this prospective study is to assess the results of separation of syndactyly using dorsal plane shaped advancement.Syndactyly is the fusion of adjacent digits. It is the most common of all congenital hand deformities. Surgical release of this soft tissue is recommended. The release leaves a raw area can be managed by using dorsal plane shaped advancement flap for web reconstruction and primary closure. **Methods:** Twenty webs in twenty hands and feet in seventeen pediatric patient with simple syndactyly were included. The mean age was 2.35 years ranging between 1.4 years to 3.6 years. A “plane shaped” advancement flap was planned and used for web reconstruction. the flap and skin incision were outlined on the dorsal and palmar sides.The tip of the “plane shaped” flap was marked at the level of the proposed web.A hexagonal flap was marked as the body of the plane, with width for proposed web space and an approximate 3:1 length-to-width ratio as described. Two wings were extended from the middle portion of the flap as two equilateral triangles. In all cases the rest of the interdigital space was separated with zigzag incisions on the dorsal and volar side, taking care that the raised dorsal and volar flaps did not interdigitate on each side of the fingers. **Main Result:** In the study group the mean time of surgical procedure was 43.25 minutes,the mean healing time was 5.95 weeks, web creep occurred in two cases, skin maceration occured in 3 cases, nail fold condition was excellent in 14 cases and parents’ satisfaction was 80%.All the flaps survived completely without early complications such as infection,vascular compromise or delayed healing **Conclusion:** With proper outlining and careful dissection,the dorsal plane shaped advancement flap without skin graft is a solution for web space reconstruction in simple syndactyly.

216 - PA
Title: Acute appendicitis in children: Age, Sex and Seasonal Variations
Authors: Mohammed Khurshid Alam Sarwar, MS(4)
Institutions: Chittagong Medical College Hospital(4)
Category: Misc
Keywords: Acute appendicitis in children, Age, Sex and Seasonal Variations,Age, Sex and Seasonal Variations
Aim of the Study: To assess the trends of variation of age, sex and seasonal impact in Chittagong region of Bangladesh. **Methods:** The age, sex and months of admission in the department of Pediatric Surgery Chittagong Medical College and Hospital, for all the cases of appendicitis were retrieved and analyzed during the period of January 2008 to December 2015. **Main Result:** There were 880 cases of appendicitis during the study period. Male to female ratio was 2.9:1. A continuous increase in number was noticed over the years and the number in 2015 was almost one and half times that of 2008. There were fewer cases in 2-5 years age group (83) and more in 6-12 years age group (797). Percentages of cases were higher in the period between October and December with peaks in October and March; and declining from the month of July. **Conclusion:** There is an increasing number of appendicitis in pediatric age group in Chittagong medical college hospital. Male are affected more than female. There was less number of cases in 2-5 years age group and more in 6-12 years age group. Appendicitis is more common during the beginning of winter.

217 - PA
Title: Anterior Sagittal Anorectoplasty (ASARP) With External Sphincter Preservation in Treatment of Recto-vestibular Fistula : New approach
Authors: Mohamed S Hashish, MD(1), Mohamed Sawaf, MD(2), Akram elbatrany, MD(3)
Institutions: Tanta University Hospital (1), (2), (3)
Category: Misc
Keywords: Anterior Sagittal Anorectoplasty,Recto-vestibular Fistula,sphinecter preservation
Aim of the Study: to evaluate a new modification to the ASARP technique with preservation of the external anal sphincter and placing the rectum in the center of the muscle complex under vision for treatment of RVF **Methods:** This is a prospective study that was conducted on 10 female patients older than 2 months suffering from RVF between period of April to November 2015.After diagnosis of recto vestibular fistula, all patients under regular outpatient’s dilatation and pre operative preparations. All of our patients underwent ASARP with new modification of preservation of the external anal sphincter and placing the rectum in the center of the muscle complex under vision. We introduced a scoring system based on a questionnaire which consists of 6 items to assess the functional habits of the patients and all pt followed up for 6 month **Main Result:** The age of the patients at the time of operation ranged from 2 to 6 months with mean age ± SD (2.95 ± 1.2)m.Vaginal injury occurred in 3 patients (30%).Neither major bleeding, nor accidental cutting of the anterior part of the external anal sphincter was recorded in any patient. Superficial wound infection was reported in 2 cases .Only one of them undergone wound disruption. The majority of our patients (6 patients) had a good result with normal frequency of defecation, no or mild soiling, normal anal position with no or mild anal stenosis **Conclusion:** The sphincter saving technique as a new modification of ASARP procedure in the treatment of RVF offers a lot with almost optimal correction of RVF, with minimal damage to the continence system without adding further difficulties to the original procedure.Also,we introduced a new simple scoring system to evaluate the functional outcome of ARMs patients. However it requires further studies with larger number of patients and longer follow up period

219 - PA
Title: BE WISE: Look Around; Look Back; Look Ahead; Look Within
Authors: Henry B Othersen, Jr., MD(1)
Institutions: MUSC(1)
Category: Misc
Keywords: Wisdom,Handwashing,Knowledge
Aim of the Study: There are many reasons for attending meetings such as this. One of the reasons, the acquisition of knowledge, especially innovative ideas or techniques, which is essential to carry out the theme of this gathering: “Re-Imagining Children’s Surgery through Global Innovation and Integration.” The opportunities here will be many and varied. Returning home from a meeting with one good new idea or technique, makes the trip worthwhile. **Methods:** Once new facts have been acquired, the process of taking that knowledge home and applying it to the care of children requires wisdom. Wisdom enables us to use knowledge by applying our experiences, common sense, and reason to local situations. Wisdom is an acquired skill which involves understanding, perception, judgment and insight. It requires building on past experiences and adding newly-acquired knowledge. **Main Result:** An example of this process is Handwashing and its use in preventing nosocomial infections. The concept is well-established and still valid. It is the application which is difficult. Local obstacles must be surmounted constant attention must be focused on the problem. With resistant bacteria and with spore-formers hand washing again becomes more important than hand sanitizing with alcohol-based solutions. **Conclusion:** New ideas, acquired here, must be combine d with old knowledge in order to address and improve patient safety while, at the same time, improving family communication.

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Title: Surgical Outreach to kids; A Trilogy
Authors: Anette S Jacobsen, MD(1)
Institutions: KKHospital(1)
Category: Misc
Keywords: Surgical Outreach ,Teaching,Fellowship
Aim of the Study: Introduction: Singapore is a City State – merely a Red Dot on the Map. Kandang Kerbau Hospital (KKH) is the Women and Children’s Hospital in Singapore. In line with our Vision and Mission we try to reach out to the less fortunate in our region. Aim: This is a descriptive paper, documenting our surgical outreach achievements in the last 10 years. **Methods:** A. The KKROK fund is a charitable fund which benefits kids in the region requiring complex surgery. B. KK Fellowship training provides a funded training opportunity to regional surgeons and anesthetists within the limitations of Singapore Medical Council regulations. C. Surgical outreach Mission trips augment both of above activities, with hands-on training. **Main Result:** In the last 10 years 71 kids have benefitted from the KKROK Fund receiving complex treatment Concurrently 52 Fellows have spent 3 – 6 months in KKH, and we have travelled on over 30 overseas Mission trips. The kids have had their abnormalities corrected, orphans have become adoptable. Improvements in Regional Surgical Sophistication have resulted in introduction of Laparoscopic surgery and specialty recognition of Fellows in their own Countries. **Conclusion:** As a dedicated Women and Children’s Hospital KKH strives to fulfill its Vision and Mission through Surgical Outreach to kids. This is achieved through the KKROK Program, Our Fellowship program and outreach Mission trips. Challenges: Program funding continues to be a challenge. All Funding to date is Charitable. A Uniform training curriculum should be a goal during Outreach Missions.

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Title: New combination of dressing for the treatment of partial thickness burn injuries in children.
Authors: Jozsa Gergo, MD(1), Toth Eszter, MS(2), Juhasz Zsolt, PhD(3)
Institutions: Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(1), Medical School, University of Pécs(2), Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(3)
Category: Misc
Keywords: Burn injuries,Partial thickness,New treatment
Aim of the Study: A clinical investigation to determine the effectiveness of silver-laden foam (Aquacel Ag foam) and Zn-hyaluronan gel (Curiosa) for the treatment of partial thickness burns was carried out. **Methods:** Prospective study has been carried out between January 1, 2013 and December 1, 2015. A total of 73 children were treated with Aquacel Ag foam and Zn-hyaluronan gel. In order to assess the exact depth of the burn we applied 0,5% silver nitrate solution dressing in 25% of the cases, for the first 24 hours. In the rest of the children we used Aquacel Ag dressing with Zn-hyaluronan gel already as the first intervention, we checked the dressing on the second day, and then removed it (or observed spontaneous separation of the dressing) on the sixth or seventh day. **Main Result:** In the study population hot water scalds were the dominant cause of burn injury, other causes included hot oil, flame, contact, and other types of burns. Wound size was 5% Total Body Surface Area on average. Burns were seen on all body parts; in 38 cases burns were noted in more than one area. Out of the 73 children treated with this dressing, we have not been diagnosed wound infection. We observed the epithelialization of the burned areas on the 6,7 days after the primary treatment. **Conclusion:** These dressings efficiently promote epithelialization, and a further advantage of the Zn-hyaluronan gel is that it enhances the regeneration of the cells and inhibits the fixation of the dressing into the wound. Based on our

experiences, we could achieve gentle, child-friendly, and cost-effective treatment, excellent wound healing and favorable cosmetic results.

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Title: Physiological and behavioral effects of ventriloquist/puppet therapy on post-trauma children hospitalized in a Department of Pediatric Surgery
Authors: Daniela Hadasy, Ventriloquist(1), Smadar Ocampo, Nurse(2), Ina Babyonishev, Nurse(3), Yehuda Suissa, Nurse(4), Alon Yulevich, MD(5), Yechiel Sweed, MD(6)
Institutions: Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(1), Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(2), Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(3), Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(4), Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(5), Galilee Medical Center, Naharia, Israel. Faculty of Medicine in the Galilee, Bar-Ilan University.(6)
Category: Misc
Keywords: Puppet therapy,Post-trauma,Children
Aim of the Study: Children hospitalized in a pediatric surgery department for reasons of surgery, automobile accident, fall from height or burns, experience emotional trauma and are in need of treatment to lessen anxiety. We hypothesized that, by increasing relaxation and comfort, ventriloquist/puppet therapy would be a useful tool for treating post-trauma in these children. In the therapeutic session, the patient listens to the puppet's own story of trauma and forges a deep-seated identification with the puppet. **Methods:** We examined the extent to which ventriloquist/puppet therapy reduces anxiety, pain and fear in hospitalized children by measuring heart rate, pain level and behavioral changes. This prospective study included 22 children, ages 5-17 years, during a six-month period (July 2010-January 2011). About 50% were girls. 60% had undergone surgery, while the others were hospitalized due to burns, automobile accident or fall from height. Each child underwent ventriloquist/puppet therapy. Heart rate and pain level were measured before therapy and 1/2 hour following therapy. The children, their parents and medical staff completed questionnaires to evaluate the child's anxiety level and behavioral change, measured by crying, happiness, sadness, anger, relief and identification with the puppet. **Main Result:** Heart rate decreased from 95.7±17.1 before therapy to 85.0±24.8 beats/min following therapy (P=0.002). Parents and staff cited decreased anxiety (P<0.001) and pain level (P=0.003). Significant improvement was found in behavioral elements (decrease of 2.6±0.7 to 1.7±06, P<0.001). The medical staff reported that puppet therapy helped improve their communication with the pediatric patients. **Conclusion:** Ventriloquist/puppet therapy had a calming effect on patients and lessened fear. Heart rate declined significantly, pain level declined, and behavior improved significantly. Ventriloquist/puppet therapy was an efficient and important treatment for hospitalized children.

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Title: The impact of a devoted center for pediatric colorectal problems in the screening of patients with anorectal malformations
Authors: Carlos A Reck, MD(1), Victoria Lane, MD(2), Kaleigh Peters, RN(3), Kristina Booth, RN(4), Rashaun Getter, PhD(5), Marc Levitt, MD(6), Richard Wood, MD(7)
Institutions: Nationwide Children's Hospital(1), Nationwide Children's Hospital(2), Nationwide Children's Hospital(3), Nationwide Children's Hospital(4), Nationwide Children's Hospital(5), Nationwide Children's Hospital(6), Nationwide Children's Hospital(7)
Category: Misc
Keywords: VACTERL,ARM,Screening
Aim of the Study: The VACTERL association of malformations are well described and screening for them is considered standard. However, we recognized that many patients with anorectal malformations (ARM) referred to our Quaternary Pediatric Colorectal Center had not had complete VACTERL screening in infancy. In the context of the high relative risks of having associated anomalies (renal 50%, spinal 24%, cardiac 20% and sacral 10%) we were concerned that VACTERL associations were going undetected, and that there was potential to improve care. We therefore sought to evaluate screening practices in ARM patients before and after the creation of a specialty Colorectal Center at our institution. **Methods:** A chart review was performed for all patients with a new diagnosis of ARM seen and treated in our institution from 2010-2014 and then after the formation of a dedicated Colorectal Center from 2014-2016. The rate of completed urologic (renal US), spinal (US or MRI), cardiac (ECHO), and sacral (x ray) testing in the first 6 months of life was evaluated over the two time periods. **Main Result:** From 2010-2014, 69 patients were evaluated for an ARM. 95.7% had renal, 71% had spinal, 82.6 had cardiac, and 18.8% had sacral screening performed. Since formation of the Center a total of 33 newborns with a diagnosis of ARM had rates of: renal 97% , spinal 97.1% , cardiac 84.7%, and sacral 73.5% . See results in Table 1. **Conclusion:** With the creation of a specialized center new protocols were instituted for the diagnosis and treatment in patients with newly diagnosed ARM. These protocols included a standardized screening protocol for VACTERL syndrome in the newborn. In our hospital, this has led to a significantly increased screening rate for spine and and sacrum in particular. Renal and cardiac screening was equally high before

and after creation of the center.

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Title: Anorectal Atresia with Rectoscrotal Fistula: a rare type of Intermediate Anorectal Malformation in males
Authors: Bhushanrao B Jadhav, MCh pediatric surgery(1), Ashok Rijwani, MCh, pediatric surgery(2)
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Category: Neonatal Surgery
Keywords: Anorectal Atresia with Rectoscrotal Fistula,A rare type of Intermediate Anorectal Malformation in males,Delayed primary anal transposition
Aim of the Study: In the majority of intermediate level ARM in males, the hindgut terminates as a fistula into the lower urinary tract. Less commonly, one comes across patients without a fistula, or with a fistula terminating externally in the perineum. Patients with a rectoscrotal fistula have been described, though the malformation is seen rarely. On initial examination, it can be mistaken for a low type of anorectal malformation. In this study, we describe the evaluation and management of a newborn male with this rare category of ARM. **Methods:** A full term male baby was referred with a diagnosis of imperforate anus. There was a small midline opening in the midscrotum. As it was possible to decompress the bowel by giving rectal washouts twice a day through the fistula, an emergency colostomy could be avoided. After ruling out any major anomalies, the baby was put on normal feeds. A contrast study was done through the fistula, and this confirmed the diagnosis of an intermediate type of ARM with a long rectoscrotal fistula. At the age of four weeks, child was planned for laparoscopy assisted anorectoplasty. Under general anesthesia, it was possible to dissect the fistula circumferentially without any obvious injury to urethra and delayed primary anal transposition was done after confirming the neoanal site with muscle stimulator. Postoperatively baby developed urethroscrotal fistula on 10th day which healed after continuous bladder drainage for 10 days. **Main Result:** The baby is 1 ½ years old now and passes stools three times a day and is completely free of soiling or leakage of stools during the intervening periods. The anus looks normal except for mild mucosal prolapse on the right side. **Conclusion:** It is possible to correct the rare malformation of anorectal atresia with rectoscrotal fistula, by means of a single stage surgical procedure with good functional results.

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Title: Simple and practical key points to make thoracoscopic esophageal atresia repair (TEAR) easier:
Authors: Mehran Hiradfar, MD(1), Reza shojaeian, MD(2), Reza Nazarzadeh, MD(3), ali Azadmand, MD(4)
Institutions: Mashhad University of Medical Sciences (1), Mashhad University of Medical Sciences(2), Mashhad University of Medical Sciences(3), Mashhad University of Medical Sciences(4)
Category: Neonatal Surgery
Keywords: esophageal atresia,thoracoscopy,MIS
Aim of the Study: Although TEAR has been started from 2000, it is not popularized yet. Prolonged learning curve, the need for small work space suturing experience and many other factors make this procedure frustrating, so pediatric surgeons hesitate to use it. Sharing practical points that could help overcome difficulties of TEAR may help change the attitude of pediatric surgeons to start or upgrade themselves for TEAR. In this article the author shares his experience on treating 51 cases by TEAR. **Methods:** Patients and methods: From 2010 to June, 2016 fifty one TEAR procedures were performed by the author and his team (only center doing TEAR in Iran). 1-Grasping and rotating the upper lobe of the lung by the use of extra 2.5 mm stab incision for grasping forceps 2- Using a simple table side camera holder to prevent vibration of the image in monitor and to prevent camera man tiredness 3- Rotating the position of 30 degree optics relative to the position of the camera instead of moving the optic to find the best view 4- Not to insist on maintaining the working field in the center of monitor and be familiar with work in peripheral fields 5- keeping the distal esophagus accessible and decrease the tension on the first stiches by fixing it to the oro-esophageal tube Catheter holding the distal part with traction.6- Avoid tissue dryness during operation 7- Two teams one for dissection and exposure and second for the repair part 8- Select the suitable suture material and length , needle size and best needle holders for Each needle. 9-Select and learn the best position for camera and ports to perevent surgeon tiredness and confusion. **Main Result:** non **Conclusion:** Conclusion: Sharing the practical points that may seem simple but are very important in TEAR repair may enhance popularity of this technique among pediatric surgeons.

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Title: Neonatal duodenal atresia, malrotation, short bowel and anorectal malformation (ARM); a very rare association
Authors: Wesam Mohamed, MD(1), Mohamad Qinawy, MSC(2), Gamal El-Tagy, MD(3)
Institutions: (1), (2), (3)
Category: Neonatal Surgery
Keywords: Duodenal atresia ,malrotation,ARM
Aim of the Study: Intestinal malrotation is a known association of anorectal malformation (ARM); as high as 8.5% of reported case series in literature. Malrotation is known to be associated with other congenital obstructive anomalies including duodenal atresia. Authors report an extremely rare case of association of malrotation, duodenal atresia, ARM and short bowel which is seldom mentioned in literature as far as known to the authors. **Methods:** A full term 9 days old

male with history of gestational diabetic mother presenting with bilious vomiting since birth. Routine preoperative laboratory screening was done. Echocardiography revealed patent foramen ovale with left to right shunt and plain X-ray revealed double bubble sign. Abdominal ultrasonography revealed hepatosplenomegaly and nephrocalcinosis grade I. Normal cranial ultrasonography. **Main Result:** Exploration via right transverse supraumbilical incision revealed: type I duodenal atresia, malrotation with volvulated ileal loop 10 cm from ileocecal valve and short bowel syndrome with estimated small bowel length 30 cm. Diamond duodenoduodenostomy was done and Ladd's procedure with resecting twisted ileal loop and anastomosis of small bowel ends. Low ARM was detected to which anoplasty was performed. **Conclusion:** This is a very rare association of congenital obstructive malformation that needs to be collected across literature to detect its incidence.

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Title: PRIMARY CLOSURE OF LARGE ABDOMINAL DEFECT IN NEONATE WITH CLOACAL EXSTROPHY (CE) USING POLYPROPYLENE MESH: REPORT OF A CASE AND REVIEW OF LITERATURE.
Authors: Jayant Rajah, MD(1), Nur Aien Hamid Hamzah, MD(2), Hazlina Mohd Khalid, MD(3), Ashok Khrishnan, MD(4), Tan LQ, MD(5), Rajah Shunmugam, MD(6)
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Category: Neonatal Surgery
Keywords: Cloacal Exstrophy,Mesh closure,Large Abdominal Wall defect
Aim of the Study: Successful abdominal wall closure is challenging in CE with major omphalocele and large exstrophy. This study is to illustrate the technique and advantages of abdominal wall closure using Polypropylene Mesh (SIL PROMESH). **Methods:** Review of records of a child with CE treated during March 2015 to May 2106 in SWACH was performed. **Main Result:** A 3 kg baby boy delivered at 39 weeks had major omphalocele, large exstrophied intact bladder plate without protrusion of intestine, imperforated anus and widely separated pubic bones. The abdominal wall defect measured 14.5cm sagittally and 12 cm transversely. After adequate preparations, baby taken up for surgery at 60 hours of age. The bladder plate freed from the abdominal wall and the colon separated from the bladder base and brought out as colostomy at upper abdomen. Posterior urethra was tubulated from bladder strip and brought out as perineal urethrostomy. Omphalocele sac excised and the abdominal cavity was too small to accommodate the contents. A 10cm x 8cm non woven polypropylene mesh with silicon coated surface placed in contact with the viscera was sutured to the edges of the fascia, the periosteum of the pubic bones and fibrous band. The bowel and bladder reduced in to the abdominal cavity without compartment syndrome. Skin mobilized and closed with minimal tension. Patient ventilated for 72 hours and immobilized with modified Bryant Traction. Wound healed primarily and bladder capacity increased to 150 mls at 6 months. Micturating cystourethrogram showed Grade II reflux on the right side. Child voiding good stream with dribbling in between from urethrostomy and awaiting further correction. **Conclusion:** Use of Polypropylene Mesh is helpful to keep the bladder deep in the abdominal cavity and to prevent dehisions.Osteotomy can be avoided, which will reduce osteotomy related complications. Long term follow up is necessary to study mesh related complications.

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Title: Endoscopic Surgery in the newborn. Own experience in a third level hospital in Mexico
Authors: Laura Cecilia Cisneros Gasca, MD(1), Héctor Pérez Lorenzana, MD(2), José Refugio Mora Fol, MD(3), Jaime Antonio Zaldivar Cervera, MD(4), Gustavo Hernández Aguilar, MD(5), Erika Barba Ruíz, MD(6), Paola López Hernández, MD(7)
Institutions: INSTITUTO MEXICANO DEL SEGURO SOCIAL (1), INSTITUTO MEXICANO DEL SEGURO SOCIAL (2), INSTITUTO MEXICANO DEL SEGURO SOCIAL (3), INSTITUTO MEXICANO DEL SEGURO SOCIAL (4), INSTITUTO MEXICANO DEL SEGURO SOCIAL (5), INSTITUTO MEXICANO DEL SEGURO SOCIAL (6), INSTITUTO MEXICANO DEL SEGURO SOCIAL (7)
Category: Neonatal Surgery
Keywords: newborns,endosurgery,congenital anomalies
Aim of the Study: The endoscopic surgery in pediatrics has had an important breakthrough in recent years, owever in newborns its use is limited and controversial, reporting only a 10% in neonates. The purpose is to show the experience in the use of minimal invasive surgery in newborns in an emerging country . **Methods:** A revision was made from January 2013 to January 2016 which included all newborns who had an endoscopic surgery in a hospital in Mexico City. **Main Result:** In three years there were 297 newborns admitted with diseases of surgical resolution, of these only 47 patients(15.8 %) were operated by minimal invasive with a total of 53 procedures; 6 patients required two procedures. The age range at the time of surgery was from 1 day to 28 days with an average of 9.7 days, the weight ranged from 1.48 to 3.5 kilograms. The diseases that were treated were 4 duodenal atresias, 11 diaphragmatic hernias, 1 intestinal

malrotation, 1 ileal atresia, 1 biliary atresia and 29 esophageal atresias. 53 procedures were performed 13 laparoscopic(24.5 %) and 40 thoracoscopic(75.5 %). 4 were converted(7.5 %). **Conclusion:** During the last decades minimal invasive surgery has provided many benefits in resolving thoracic and abdominal diseases in children, however the application in newborns has been redrawn by controversy regarding its physiology. This is the largest series reported in Mexico, even when the percentage of patients who underwent a minimal invasive procedure is low, they are similar to those reported by the international literature. There is still a lot to write on and find out about the minimal invasion, it is necessary to leave aside the report of isolated cases for bioethical protocols where we can establish the true benefits of minimal invasive surgery.

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Title: Neonatal intestinal obstruction patterns, problems and outcome in a developing country like Bangladesh.
Authors: Mohammed Abdul Momin, MS(3)
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Category: Neonatal Surgery
Keywords: Neonatal intestinal obstruction ,NICU ,TPN
Aim of the Study: Neonatal intestinal obstruction is the most common surgical emergency in newborn. Ideally neonatal surgery should be done in an organized neonatal surgical unit. This study was done mostly in general surgical setup in Sylhet without any facility of NICU and TPN. The aim of this study was to detect the patterns of neonatal intestinal obstruction and to find out the problems and outcome of surgical treatment. **Methods:** This retrospective study was done between January 2008 and December 2010, in Sylhet MAG Osmani Medical College Hospital, Sylhet, and few private clinic in Sylhet, Bangladesh. **Main Result:** A total of 205 neonates with intestinal obstruction were treated surgically. Babies of both sexes up to 28 days of age were included in this study. Common causes of neonatal intestinal obstruction were anorectal malformation (ARM), intestinal atresia, Hirschsprung's disease (HD), meconium ileus and malrotation of midgut. Male-female ratio was 1.6:1 and about 13% was premature. Out of 205 neonates, there were ARM-73, HD-47, meconium ileus-38, intestinal atresia-29, malrotation-13 and others-5. Total 172 (84%) survived. Those were ARM (94%), Hirschsprung's disease (91%), meconium ileus (79%), intestinal atresia (55%), malrotation of gut (85%) and others (40%). Overall mortality after initial surgical treatment was 16%. **Conclusion:** Prognosis of surgical treatment depends on early intervention, expert anaesthesia, associated anomaly and complication, gentle handling of delicate tissue and intensive postoperative management. Medical practitioners were the first attending physician in most instances. So both physicians and surgeons have a contributing role in reducing mortality.

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Title: PRENATAL DIAGNOSIS OF SCROTAL MASS
Authors: Leel Nellihela, MBBS,MS,FRCS(Edi)(1), Dorothy Kufeji, FRSCS (Paed),FRCS (Eng),PGCAP(KCL)(2), Meena Agrawal, MBBS,MS,FRCS(Edi),FRCS(Eng)(3)
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Category: Neonatal Surgery
Keywords: Prenatal diagnosis of scrotal mass,Meconium periorchitis,Colonic perforation
Aim of the Study: We report a case of a neonate with prenatally diagnosed scrotal mass of unknown aetiology. Postnatally this mass was found to be due to meconium periorchitis secondary to spontaneous colonic perforation and meconium peritonitis. **Methods:** Review of case notes. **Main Result:** A term neonate was diagnosed with a right scrotal mass of unknown aetiology at 20 week of gestational age. There was no history of amniocentesis. No foetal intra-abdominal problems were noted. The baby was born in good condition and did not require resuscitation. He had an oedematous, indurated right scrotum with a bruised appearance. No obvious intra-abdominal pathology was noted. Ultrasound scan showed echogenic material in the right scrotum, the testis appeared to be normal. Diagnostic laparoscopy showed meconium peritonitis with meconium staining of the omentum and loops of bowel. Laparotomy showed a sealed perforation in the distal third of transverse colon with surrounding 2.5 cm ischemic area. There was no evidence of obstruction, stricture or NEC. Limited colonic resection was done. Meconium was seen traversing through the right inguinal ring into the inguinal canal and scrotum. The right patent processus vaginalis was transfixed and divided. The inguinal and scrotal contents were drained. The testis was very firm and indurated. Testicular biopsy was taken and reported to be normal. Rectal biopsy (frozen section): Ganglionic. Histology of resected colon showed sealed perforation with meconium peritonitis. No vasculopathy was noted. Scrotal contents showed dystrophic calcification in keeping with meconium periorchitis secondary to meconium peritonitis. Test for cystic fibrosis was negative. The baby made an uneventful recovery and remains asymptomatic on follow up. Both testes are normal. **Conclusion:** There are very few reports in the literature with prenatally diagnosed scrotal swellings. We report a case of a baby with a scrotal mass diagnosed prenatally which was due to meconium periorchitis secondary to spontaneous colonic perforation and meconium peritonitis.

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Title: Prenatal Diagnosis And Sequential Intervention Of Neonatal Pyriform Sinus Cysts
Authors: Wang Zhe, MD(1), He Qiuming, MD(2), Shi Tingting, MD(3), Wang Hongying, MD(4), Yu Jiakang, MD(5), Xia Huimin, MD(6), Zhang Guanglan, MD(7), Zhong Wei, MD(8)
Institutions: Guangzhou Women and Chidren's Medical Center(1), Guangzhou Women and Children's Medical Center(2), Guangzhou Women and Children's Medical Center(3), Guangzhou Women and Children's Medical Center(4), Guangzhou Women and Children's Medical Center(5), Guangzhou Women and Children's Medical Center(6), Guangzhou Women and Children's Medical Center(7), Guangzhou Women and Children's Medical Center(8)
Category: Neonatal Surgery
Keywords: neonatal pyriform sinus cyst ,prenatal diagnosis,sequential intervention
Aim of the Study: Pyriform sinus cyst (PSC) is believed resulted from failure obliteration of third or fourth branchial pouch in utero. PSC is rarely diagnosed prenatally. Because of the unawareness of such condition, misdiagnoses and inappropriate interventions given postnatally could lead to life-threatening complications .The main goal of this retrospective study was to emphasis the importance of prenatal diagnosis and sequential intervention of neonatal PSC and share our experiences. **Methods:** Clinical information of 15 patients diagnosed as PSC from January 2011 to October 2015 was collected and analyzed. The patients were separated into two groups, prenatal diagnosis group (PreD group) included eight patients, they were prenatally diagnosed, consulted by a multidisciplinary team and received sequential intervention including close prenatal monitoring, preoperative nasal-gastric tube feeding and cyst resection. Postnatal diagnosis group (PostD group) included seven patients who were transferred from local hospitals without prenatal diagnosis or sequential intervention. Once admitted, they were treated under the same protocol as the patients in PreD group. Outcome was compared between two groups. Data was collected and analyzed by Mann-Whitney test and descriptive statistics methods. **Main Result:** In PreD group, the mean gestation weeks of the first positive ultrasound finding was 27±6.76 weeks. Intracystic fistula orifice was identified in 13 patients (86.7%) during operation, The mean post-operative mechanical ventilation duration was significantly prolonged in PostD group (100.71±80.04 hours vs. 11.5±13.88 hours in PreD group). Patients were followed up for three to 48 months (mean 16.06 months). One patient in PostD group had recurrent left cervical abscess four years later after the surgery. **Conclusion:** pyriform sinus cyst can be diagnosed prenatally, Once it is suspected, a multidisciplinary approach should be performed, and sequential intervention should be provided. Although the neonatal pyriform sinus cyst is an intractable condition, prenatal diagnosis and sequential intervention can offer a favorable outcome.

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Title: Mainstem Bronchial Atresia: Survival in a full term neonate
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Institutions: Louisiana State University(1), Pediatric Surgery of Louisiana(2), Pediatric Surgery of Louisiana(3)
Category: Neonatal Surgery
Keywords: Mainstem Bronchial Atresia,Survival,Case Report
Aim of the Study: Mainstem bronchial atresia (MBA) is a rare congenital anomaly that is considered uniformly fatal in the prenatal or perinatal period. Because no survivors have been reported, many surgeons and obstetricians counsel parents to consider termination of pregnancy once a prenatal diagnosis has been made. This is challenged by our report of survival in a child with MBA. **Methods:** Case report **Main Result:** This report discusses a full term infant diagnosed with mainstem bronchial atresia. Prenatal ultrasound revealed cystic changes in the right lung consistent with CPAM. MRI showed an enlarged right lung with diffuse cystic changes, mediastinal shift, contralateral pulmonary hypoplasia, and intra-abdominal ascites. The child, born at 39 weeks gestation, had immediate severe respiratory distress requiring intubation and rapid escalation to high frequency oscillatory ventilation (HFOV). Chest radiographs showed a non-aerated, enlarged right lung, mediastinal shift, and contralateral hypoplasia. CT was consistent with right mainstem bronchial atresia. Echocardiography revealed significant pulmonary hypertension. The patient was managed with lung protective strategies, and was weaned from HFOV to mechanical ventilation over several weeks. The infant underwent a right pneumonectomy at seven weeks of age. Intraoperative bronchoscopy verified an atretic right mainstem bronchus. Post-operatively, the child required HFOV, and at six weeks, is stable on minimal mechanical ventilatory support, with plans for extubation. Pathology was consistent with right MBA and a right lung characteristic of a type 2 CPAM. **Conclusion:** This case represents the first known survival of an infant with MBA, and demonstrates that mainstem bronchial atresia is not uniformly fatal. In the absence of fetal hydrops, MBA should not be considered an absolute indication for termination of pregnancy.

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Title: Protective effect of a traditional probiotic prophylaxis in experimental necrotising enterocolitis
Authors: Ilke MUNGANAKIN, MD(1), Begum Atasay, MD(2), Serdar Alan, MD(3), Emel Okulu, MD(4), Aylin Heper, MD(5), Saadet Arsan, MD(6), Isinsu Kuzu, MD(7), Melih Akin, MD(8)
Institutions: Istanbul Medeniyet University Goztepe Education and Research Hospital(1), (2), (3), (4), (5), (6), (7), (8)

Category: Neonatal Surgery
Keywords: experimental NEC model,bifidobacterium lactis,kefir
Aim of the Study: Probiotics are shown to be effective in prevention of NEC. Kefir is a fermented dairy product embedded within polysaccharide and protein matrix, formed by bacterial and fungal activity. We aimed to evaluate whether kefir prophylaxis can prevent NEC or not. **Methods:** Wistar-Albino rat pups were randomized into 4 groups on the 1st day of their lives. Pups in Groups 1, 2 and 3 were taken away from their mothers and kept in an incubator for adjusted environment, throughout the study period. Each of these pups were fed with 4×0.2–0.3ml of preterm formula. Group 1(n = 8) received preterm formula+kefir, Group 2(n = 8) received preterm formula+Bifidobacterium lactis, Group 3(n=8) received preterm formula. The control group(Group 4)(n = 6) were kept with their mother. Hypoxia-ischemia+cold injury were performed to create experimental NEC model twice a day. All were sacrificed on the 4th day. Tissues obtained were evaluated by pathological and biochemical tests. **Main Result:** Tissue examples were examined with TUNNEL method for examining apoptotic cell count in 1000 consecutive cells. Apoptotic cell count was 7.7±2.9 and 7.6±2.3 in Groups 1 and 2, respectively ($p > 0.05$), which was lower than 8.8±3.5 of Group 3. As expected, it was significantly lower in the control group, 2.5±1.3 ($p = 0.001$). Among biochemical parameters evaluated, TNF-a level was lowest in the Kefir group (668.9 pg/ml), while PAF level was lowest in the Probiotic group (1348.5 pg/ml). Kefir prophylaxis can decrease apopitosis of intestinal epithelium and can result in partial attenuation in NEC tissue indicators, in experimental NEC model. Kefir + preterm formula is as effective as Bifidobacterium + preterm formula. **Conclusion:** Kefir, which is a traditional probiotic, shows a similar effect with Bifidobacterium which has been demonstrated for its protective effects in NEC in both animal and premature infant studies.

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Title: Anal Position Index in Indonesia’s Newborn
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Category: Neonatal Surgery
Keywords: Anal Position Index,Newborn,Constipation
Aim of the Study: The purpose of this study was to determine the normal position of anus using Anal Position Index in Indonesia’s newborn and its correlation with constipation. **Methods:** This cross-sectional study was performed on 100 male and female neonates equally. The mean result of Anal Position Index and the time of passing meconium were calculated. **Main Result:** The mean result of Anal Position Index in male was 0,47 (±0,09), and 0,36 (±0,06) in female; the mean time of passing meconium was 8 hours after birth. **Conclusion:** The Anal Position Index in Indonesia’s newborn was not different with other research in other countries. Anal position index is considered as a simple method in determining normal position of anus.

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Title: Colonic Atresia – What is the safe surgical approach?
Authors: Yash Panwar, MB(1), Syed rizvi, MD(2), rajendra kumar, MD(3)
Institutions: john hunter children hospital(1), john hunter children hospital(2), john hunter children hospital(3)
Category: Neonatal Surgery
Keywords: Colonic atresia,neonate,management
Aim of the Study: Colonic Atresia is a rare condition cause of intestinal obstruction in the neonate. There is little information available currently about the optimal management of this condition. The aim of the study is to review the presentation of colonic atresia patients and assessing the optimal surgical treatment. **Methods:** A retrospective review of all cases of intestinal atresia from a tertiary level paediatric centre, between the periods of 2002-2016. Children with colonic atresia were further analysed with emphasis on the presence of any associated conditions and the management received and its outcome **Main Result:** Gastroschisis, pouch colon, duplication cysts, vestibular anus and most significantly, an association with Hirschprung disease. Most of the children (6/8) had an initial hemicolectomy which was followed by delayed ileo-colic anastomosis with a colonic mucous fistula in interim. A biopsy of the distal colon was also obtained in all cases to assess for Hirschprung disease. No anastomotic complications and delay in feeding were noted in the delayed closure cases. **Conclusion:** Based on our experience, we suggest that initial hemicolectomy and stoma and distal colonic biopsy followed by delayed anastomosis would be the safe options in all children with colonic atresia. This approach also allows time for bowel discrepancy to be adjusted and complications avoided.

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Title: Analysis of treatment results of infants with biliary atresia
Authors: Halyna Kurylo, PhD(1), Olena Kulyk, PhD(2), Olesya Nykyforuk, PhD(3), Dmytro Hrytsak, MD(4)
Institutions: Lviv City Children's Clinical Hospital(1), Danylo Halytskyy Lviv National Medical University(2), Danylo Halytskyy Lviv National Medical University(3), Lviv City Children's Clinical Hospital(4)
Category: Neonatal Surgery
Keywords: biliary atresia,treatment,prognosis

Aim of the Study: The aim of the study was to analyze treatment results of 21 children with biliary atresia since 2008 to 2015. To evaluate the effectiveness of Kasai portoenterostomy and prognostic factors that affect on the long-term preservation of function of native liver, terms and conditions for further transplantation. **Methods:** Surgical treatment of children with biliary atresia. **Main Result:** We analyzed 21 children with biliary atresia. The male/female ratio was 2:1. Children were admitted in the age of 32 to 160 days. Diagnosis was confirmed before surgery in 19 patients and in 2 patients intraoperatively. All children were conducted Kasai portoenterostomy with excision of fibrous cords of porta hepatis and doing Roux-en-Y-jejunojejunostomy without anti peristaltic valve. Intestinal anastomosis was done 30-40 sm from the ligament of Treitz. There weren't any complications during surgery. Different intensity of bile outflow was identificated intraoperatively in 12 children. The recovery of bile outflow, decrease of conjugated bilirubin level were main positive results in postoperative period. All patients required antibacterial therapy for 2 to 6 months in postoperative period. The 14 children were recorded signs of cholangitis, which were eliminated by using conservative methods. Liver function was in satisfactory condition in 5 children who were operated for 54 days of life, in 7 patients observed recurrent jaundice and worsening of laboratory parameters. Liver transplantation was done in 9 children, in 5 of them liver transplantation was done in terms over 12-36 months and in 4 children prior 12 months after Kasai portoenterostomy **Conclusion:** Early diagnosis of biliary atresia and surgical treatment by Kasai portoenterostomy till 60 days of life are an important factors for preserving of long-term function of native liver. Intraoperative bile outflow is an important for future prognosis and treatment perspectives. Kasai portoenterostomy in most children is an important step in preparing for a successful liver transplantation.

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Title: Pattern and outcome of Neonatal surgery: Experience at King Fahad Hospital Al-Baha Kingdom of saudi arabia
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Category: Neonatal Surgery
Keywords: NEONATES,SURGERY,OUTCOME
Aim of the Study: To share our experience of neonatal surgery regarding varieties of cases, management, outcome **Methods:** Duration: 3 years (Jan 2011 to Dec 2013). Study Design: retrospective analysis. Setting: Department of pediatric surgery and neonatal intensive care unit King Fahad hospital Al Baha KSA. Inclusion and exclusion criteria: Neonates undergoing major surgical procedures were included in the study and minor surgical cases like inguinal hernia and circumcision were excluded from the study. Also cases belonging to pediatric surgery subspecialties were excluded from study. Material and Methods: A retrospective study was conducted from Jan 2011 to Dec 2013.During 3 years period 57 neonates were operated. Data was retrieved from operation theatre register, neonatal surgery register from neonatal intensive care unit and from medical record office. The files of these patients were reviewed regarding Age.sex, weight, gestational age, management and outcome. **Main Result:** In our study males were predominant and majority of cases n=35(64.40%)were less than 7 days of age at time of operation. Congenital diaphragmatic hernia was the most common pathology n=11(19.92%),followed by NEC n=10(17.54%), Hirschsprung's disease n=7(12.28%), intestinal atresia n=6(10.52%) , anorectal malformation =5(8.77%) and Tracheoesophageal fistula n-3 etc.Out of 57 patients, 7 patients expired after surgery, our mortality was 12.28%. **Conclusion:** : We conclude that variety and pattern of surgical neonates undergoing neonatal surgery in our study is similar to other developing countries but there is difference in morbidity and mortality between developed and developing countries. Developing countries should implement cost effective improvement factors like improvement in antenatal care to reduce prematurity and strict implementation of hand scrubbing and hand washing to reduce post operative morbidity and mortality..

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Title: Ultrasound Diagnostics In Neonates with Necrotizing Enterocolitis
Authors: Avazjon A Dekhqonboev, MD(1), Makhmud M Aliev, PhD(2), Rustam Z Yuldashev, MD(3)
Institutions: Republican Specialized Scientific Practical Center of Pediatrics, Department of Pediatric Surgery(1), Tashkent Pediatric Medical Institute, department of pediatric sugery(2), Republican Specialized Scientific Practical Center of Pediatrics, Department of Pediatric Surgery(3)
Category: Neonatal Surgery
Keywords: necrotizing enterecolitis,Doppler Ultrasound,neonates
Aim of the Study: Feasibility of abdominal ultrasound in determining treatment strategy of necrotizing enterocolitis (NEC) **Methods:** 31 infants with stage Ia or IIIa NEC were prospectively included in the study. Infants with preexisting indications for surgery (n=3), such as presence of pneumoperitoneum on abdominal X-ray were excluded. As standard, all patients underwent plain radiography of the abdominal cavity. 8 (29%) had laparotomy **Main Result:** According to abdominal X-ray bowel wall separation or loss of normal mosaic pattern determined in 26 neonates, five of them had pneumatosis intestinalis, 3 patients had signs of "fixed" bowel loop on serial films. On abdominal ultrasound (US), free peritoneal fluid was determined in 13 neonates. Thickened bowel wall (more than 26mm) were found in seven of 28 neonates. Signs of pneumatosis intestinalis were found in 12 patients. Increased perfusion of the bowel wall found in four, two of them had "Y" type pattern. US Doppler demonstrated signs of intestinal necrosis in 8 of the 28 patients, of these 5 had signs of thinning of the bowel wall less than 1 mm. Absent or weakening of peristalsis were obtained in 8

infants. On Doppler US six patients had absent perfusion of bowel wall, only two had weakening. All of these eight infants had surgical interventions. bowel necrosis requiring resection was confirmed in 7 and the other was found to have NEC, but without necrosis of bowel wall. 20 infants based on US signs were assumed to not to have had bowel necrosis, they responded to medical treatment and improved without surgery **Conclusion:** Ultrasound signs of thinning of the intestinal wall less than 1 mm, absence of peristalsis, decreased or absent perfusion of the bowel wall are pathognomonic signs of intestinal necrosis, which determines the need for surgery. Since timely surgical approach defines a favorable outcome

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Title: Short Bowel syndrome in Egypt "Hope and Restriction"
Authors: Mohamed Abdelmalak, MSC(1), Saber M Waheeb, PhD(2), Ragia M. A. Elsayed, PharmD ,BCNSP(3)
Institutions: Alexandria university(1), Alexandria university(2), Alexandria university(3)
Category: Neonatal Surgery
Keywords: short bowel,developing countries,TPN
Aim of the Study: Short bowel cases have the right to live and not only live but with a good quality of life for them as well as for their parents. There is not a survival rate for short bowel cases all over Egypt, considering these cases hopeless requiring high cost and level of care which is still limited in a developing country. "Dying in peace" was the common scenario for those patients once they have become a short bowel syndrome case **Methods:** •Formulate multidisciplinary team who is responsible for management (pediatric surgeon , clinical pharmacist and pediatrician) •Alexandria Pediatric Surgery Department has been renovated and now is having a surgical intensive care unit with Total parental Nutrition (TPN) compounding area. •Non-governmental organization support to ensure the availability of TPN and consumables needed. •Extend medical and scientific back ground by reading articles, attending different webinars and workshops, getting external consultancies from experienced Universities and hospitals as Oxford and Cleveland. **Main Result:** We have been working over 6 months on three patients suffering short bowel syndrome due to delayed diagnosed mid-gut volvulus. One out of 3 died due to refractory anemia . Two out of 3 implanted a port-a-cath and suffered TPN related cholestasic liver disease . All of them received frequent blood transfusion and suffered from recurrent blood stream infections. Now we are managing a case hopefully to receive either intestinal transplant or lengthening. **Conclusion:** In spite of the pessimistic spirit towards these patients in developing countries, they still have a hope by upgrading health care services and applying updates in management of these cases. TPN is a corner stone for these patients' life at least during the first year(s). However, caution should be taken to avoid long-term TPN complications.

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Title: Recurrent trachea-esophageal fistula in five babies: long term outcome.
Authors: Deepak Kandpal, MS, MCh(1), Saroja Balan, FRCP(2), Vidya Gupta, FRCP(3), Shushma Kaul, MD(4), Sujit Chowdhary, FRCS(5)
Institutions: Department of Pediatric Surgery, Indraprastha Apollo Hospital, New Delhi(1), Indraprastha Apollo Hospital, New Delhi(2), Indraprastha Apollo Hospital, New Delhi(3), Indraprastha Apollo Hospital, New Delhi(4), Department of Pediatric Surgery, Indraprastha Apollo Hospital, New Delhi(5)
Category: Neonatal Surgery
Keywords: recurrent tracheo-esophageal fistula,long term outcome,
Aim of the Study: To report the management, postoperative complications and long-term outcome of recurrent tracheo-esophageal fistula in five babies. **Methods:** Sixty-five babies underwent TEF repair between 2004 and 2015 at Indraprastha Apollo Hospital, New Delhi. There were four deaths out of these sixty-five babies (94% survival). Two out of the surviving sixty-one babies developed a recurrent TEF. Three babies were referred from outside with recurrent TEF. Records of these five children were retrospectively reviewed. The presentation, diagnostic workup, operative plan, postoperative complications and long term outcome were assessed. **Main Result:** The age range was from 1 months to 1 year. All presented with choking and bouts of coughing while feeding. Contrast swallow could not demonstrate the fistula in one patient, which was demonstrated on the tube esophagogram. In one patient fistula was diagnosed on bronchoscopy. Postoperative ventilation ranged from 3 days to 10 days. Postoperatively nutritional status was maintained on either nasogastric or nasojejunal feeds. Two developed esophageal leak and required prolonged respiratory support, intercostal drainage and tube feedings. One patient who had developed recurrent TEF two months after surgery underwent endoscopic management with transient relief in symptoms. The baby died six months later with severe aspiration pneumonitis. The total Hospital stay was 10 days to 35 days with a mean of 25 days. The other four are on follow-up ranging from five years to six months. There is no recurrence of fistula in any one of them. All are on aggressive management for gastroesophageal reflux. **Conclusion:** Recurrent TEF is a challenging clinical problem with difficulties in diagnosis and treatment. Reports on endoscopic management are anecdotal with no reliable long term outcome reported. The surgical repair as compared to endoscopic management is challenging but definitive and reliable for recurrent TEF.

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Title: The burden of peripheral vascular access in surgical neonates in a Nigerian tertiary health facility
Authors: Philemon Okoro, MBBS, FWACS(1), Peace Opara, MBBS, FWACPaed(2)
Institutions: University of Port Harcourt Teaching Hospital(1), University of Port Harcourt Teaching Hospital(2)
Category: Neonatal Surgery
Keywords: Peripheral ,Vascular ,Access
Aim of the Study: To evaluate the burden of peripheral vascular access (PVA) and its impact on the management of surgical neonates in our practice. **Methods:** This is a 2 years prospective study of babies 28 days and below who were admitted in our Special Care Baby Unit for surgical conditions between March 2014 and February 2016. A proforma was designed and used to obtain the following data: age, sex, diagnosis, indication for PVA, part of body, cadre of clinician, technique of access, total number of attempts at access and complications. **Main Result:** A total of 167 neonates were included in the study; 98 males and 69 females, (M:F= 1.4:1). The diagnosis was a wide range of surgical conditions, indication for PVA was diagnostic in 62 (37%), and therapeutic in 105(63%). Majority of the attempts were carried out by interns 1344 (35%) and junior residents 1882 (49%), while senior residents and consultants performed it in 614 (16%). The most serious complication was necrotizing fascitis **Conclusion:** Peripheral vascular access(PVA) constituted a significant burden on the neonates who were being treated for surgical conditions. Repeated punctures in attempt to administer fluids and medications or take samples for laboratory tests can constitute significant trauma and may be associated with complications. More senior and more experienced clinicians, rather than junior clinicians should perform the procedure of PVA to reduce the trauma and morbidity attending this procedure

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Title: Maternal presence in the postoperative period as a prognostic factor after neonatal surgery in a resource limited setting.
Authors: Neema Kaseje, MD(1), Willy-Fils Jean Louis, MD(2), Jacquemine Pinard, MD(3), Andre Patrick Jeudy, MD(4), Jean Louis MacLee, MD(5)
Institutions: Hôpital Universitaire de Mirebalais, Partners in Health(1), Hopital Universitaire Mirebalais, Partners in Health(2), Hôpital Universitaire de Mirebalais, Partners in Health(3), Hôpital Universitaire de Mirebalais, Partners in Health(4), Hôpital Universitaire de Mirebalais, Partners in Health(5)
Category: Neonatal Surgery
Keywords: Resource limited settings,Neonatal care,Maternal presence
Aim of the Study: In resource limited settings mortality after neonatal surgery remains high with current conservative estimates at 30%. Our aim was to identify factors that influence survival following neonatal surgery in a resource limited setting. **Methods:** We performed a retrospective review of neonatal surgical cases performed between July 2015 and June 2016 at a tertiary hospital in Haiti. We reviewed patient characteristics, diagnoses, presence of cardiac anomalies, postoperative outcomes, and whether the mother was present at the bedside in the postoperative period. We used the Fisher's exact test to test for significance; a p value<0.05 was considered significant. **Main Result:** A total of 13 patients underwent surgical procedures within the first month following birth. The most common diagnosis was anorectal malformation (54%). Other diagnoses included: esophageal atresia, omphalocele, sacrococcygeal teratoma, and ischemic limb necrosis. 62% of patients were boys. Mean age at surgery was 14 days (range 1-14 days). Overall mortality was 23%. The mother was present in the postoperative period in 1/3 of patients who died versus 9/10 patients who survived. When the mother was absent the mortality OR=6.6, p=0.11. Death occurred on average on postoperative day 5 (range 4-9 days). None of the patients who died had cardiac anomalies on physical exam. **Conclusion:** In a resource limited setting, the presence of the mother in the postoperative period appears to be an important prognostic factor following neonatal surgery; the mother's presence and participation should be actively sought and encouraged in the postoperative period. Larger studies are needed to confirm the above findings.

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Title: THE USE OF NEUROENDOSCOPIC LAVAGE FOR TREATMENT OF PURULENT VENTRICULITIS IN NEONATES
Authors: Viktor Petraki, PhD(1), Andrey Prityko, PhD(2), Boris Semernitzky, PhD(3), Ruslan Asadov, PhD(4)
Institutions: St Luka’s Clinical-Research Center of Medical Care for Children, Moscow(1), St Luka’s Clinical-Research Center of Medical Care for Children(2), St Luka’s Clinical-Research Center of Medical Care for Children, Moscow(3), St Luka’s Clinical-Research Center of Medical Care for Children, Moscow(4)
Category: Neonatal Surgery
Keywords: neuroendoscopy,ventriculitis,neonates
Aim of the Study: To present our experience of using neuroendoscopic lavage (NEL) as a mode of surgical therapy for purulent ventriculitis (PV) in neonates and infants. **Methods:** From 2010 to 2016, 27 patients, born prematurely, aged between 12 and 45 days, with PV and associated multiple occlusions of the ventricular system underwent NEL. The selection criteria for NEL were indicators of the ineffective initial treatment with lumbar and ventricular punctures and/or external drainage. The NEL technique involved the following maneuvers: access via the anterior horn, free pus aspiration, adhesiolysis and drainage of purulent collections, continuous copious wash-outs with N Saline to the point of

“clear water”, followed by restoration of the communications between the ventricles. The patient data and outcomes were retrospectively analyzed. **Main Result:** In total, 29 NEL procedures were performed (in two cases - repeated). All were successfully completed with no intraoperative complications. The mean volume of wash-outs was 2600 ml. The mean operative time was 100 minutes ranging from 30 to 180. There was no perioperative mortality. 25(92.5%) patients made uneventful recovery showing marked improvements in CSF clearing to the normal range within 2 to 10 days. The same results were achieved in two other patients after the second procedure. The survival rate thus was 100%. Subsequently VP-shunt insertion was required in 23(85.1%) patients. **Conclusion:** In our experience, NEL is feasible and very efficient minimally invasive technique of eliminating intra-ventricular infection, resulting in 100% survival rate in neonates and infants with PV. Further development toward neuroendoscopic provision of the reliable communications between compartments of the ventricular system is needed.

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Title: Is prosthetic material necessary in congenital diaphragmatic hernia repair?
Authors: Sebastian Nicolae Ionescu, MD, PhD, FEBPS(1), Daniela Pavel, MD(2), Elena Licsandru, MD(3), Bogdan Andrei, MD(4), Beatrice Bunea, MD(5), Mihai Mocanu, MD(6)
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Category: Neonatal Surgery
Keywords: congenital diaphragmatic hernia,prosthetic repair,pediatric surgery
Aim of the Study: The treatment of congenital diaphragmatic hernia represents a continuous challenge. The surgical technique is of great importance; with a careful dissection of the diaphragmatic borders, the defect can be closed. We present the late checkup results of respiratory function, spinal deformities. **Methods:** We conducted a retrospective study that analyses the files of 46 cases referred between 2008- 2014; 44 were operated. One patient needed prosthetic material for closing of the defect. We revaluated 20 patients by meaning of ultrasound examination, spirometry. **Main Result:** There were 28 boys and 18 girls, with 5 cases of right diaphragmatic hernia. The abdominal median incision was most used - 40, the subcostal in 4 cases, right thoracothomy 1. Careful dissection allowed primary closing of the defect; only one case of prosthetic material was necessary. Survival rate for the neonatal presentation was 67%; main stay in intensive care unit of 14.96 days. Early postoperative complications were: chilothorax drained - 6 cases; relapse of the hernia - 3 cases. Long term results: we were able to follow up 20 patients, aged between 6 -7 years, regarding thorax deformities, the presence or absence of scoliosis and diaphragmatic movement during the respiratory cycle and spirometry. Ultrasound examination showed 19 patients having normal diaphragmatic movements similar with those of the contra lateral side. We found one patient with scoliosis that is currently treated with kineto therapy. Functional respiratory tests detected forced vital capacity between 70-79% of predicted values in 2 patients and forced expiratory volume FVC. **Conclusion:** Mobilisation of the leafs of muscle in particular on the posterio-lateral part, can increase the amount of muscle available, allowing primary closure, thus reducing the risk of prosthetic material induced complications.

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Title: GIANT RETROPERITONEAL MATURE CYSTIC TERATOMA IN AN INFANT: A CASE REPORT
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Institutions: SDM medical college and hospital .Sattur, dharwad,Karnataka(1)
Category: Oncology
Keywords: Retroperitoneum,Teratoma,laparotomy
Aim of the Study: To report a rare case mature cystic teratoma in 6 weeks male baby managed successfully by surgery. **Methods:** A 6 weeks male infant, presented with abdominal mass of 10 days, associated with poor feeding. On examination, the abdomen was distended, a large firm mass was present in central and left upper abdomen. The serum level of alpha-fetoprotein (AFP) was normal. Ultrasound of abdomen and Contrast enhanced computed tomography (CECT) scan of the abdomen and pelvis demonstrates retroperitoneal heterogeneous mass in left suprarenal region, measuring about 12 x 10 x 8 cm with two clumps of calcification, fatty tissue, and cystic contents. The mass crossing the midline was displacing the aorta and Inferior Vena Cava. **Main Result:** On laparotomy a large complex, solid and cystic mass, with well circumscribed smooth border was seen. The pancreas was flattened and stretched over the cranial portion of the tumor, there was no invasion to the aorta or inferior vena cava. The tumor measured 12 x 10 x 8 cm and weighed 700 gms. The entire tumor was then excised and sent for histopathological reporting. Histopathology confirmed the diagnosis of a mature cystic teratoma. Post operative course was uneventful. On follow up, baby is doing well with adequate weight gain. **Conclusion:** Complete removal must be tried in every case of RPT irrespective of its size. The prognosis is excellent for benign RPT, if complete resection can be accomplished.

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Title: GIANT CONGENITAL INFANTILE FIBROSARCOMA MIMICKING A CONGENITAL HEMANGIOMA: CASE REPORT AND LITERATURE REVIEW
Authors: Esther A Saguil, MD(1), Jason R Castro, MD(2)
Institutions: Philippine General Hospital(1), Philippine General Hospital(2)
Category: Oncology
Keywords: vascular malformation,fibrosarcoma,cranial tumor
Aim of the Study: We report a case of ten-month old female with a large congenital infantile fibrosarcoma on the scalp and forehead that was initially thought to be a vascular malformation. **Methods:** . The diagnostic examinations, surgical intervention, and histologic report of this rare case are presented and the literature on the subject is reviewed. **Main Result:** The patient was born with a forehead and scalp mass that was persistently bleeding and causing profound anemia. The highly vascular appearance of the 10 cm tumor prompted a diagnosis of vascular malformation for which medical management was instituted. Due to the non-response, the patient eventually underwent radical excision of the tumor, with skin grafting to cover the large defect incurred. **Conclusion:** We present the successful management of an infant with a large cranial mass which turned out to be a congenital fibrosarcoma. This is the first reported case in Philippine literature.

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Title: CHILDREN CENTRAL LINE COMPLICATIONS IN OSTEOSSARCOMA PROTOCOL.
Authors: Suelen Soares Nogueira, MD(1), Ricardo Carvalho, MD(2), Simone Coelho, MD(3), Fernanda Lima, RN(4), Rondinele Silva, PsyD(5), Monica Souza, PhD(6), Cíntia Santos, PhD(7), Silvana Superti, MPH(8), Ana Mattos-Guaraldi, PhD(9), Carlos Martins, PhD(10), Eduardo Velasco, PhD(11), Raphael Hirata Júnior, PhD(12), Franscisca Gutierrez, MD(13)
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Category: Oncology
Keywords: central venous catheters complications,osteossarcoma,pediatric cancer
Aim of the Study: Venous access is important in pediatric oncology. The aim of this study is to describe the infections and complications in differents types of long term venous access during osteosarcoma (OS) children treatment. **Methods:** Analysis of charts and laboratory database of pediatric patients with OS from February 2008 to December 2012 at Pediatric Oncology Service at Cancer National Institution, Brazil/RJ, treated by Brazilian Group of Cancer Osteosarcoma . Catheter type (Peripheral peripheral insertion central catheters - PICC, Hickman and ports), number of catheteres/patient, and complications were evaluated. **Main Result:** 90 patients were treated with high doses of chemotherapy (Cisplatin, doxorubicin, methotrexate, dexrazoxane, cyclophosphamide), surgery and radiotherapy: 51/90 stage IV (56,6%) and 39/90 localized disease (43,4%). Patients ranged from 5 to 18 year old, median 10 yo. The patients who initially underwent implantation PICC had greater need to another catheter to finalize chemotherapic than those implanted Hickman and port. ($X^2 = 23.5$; GL = 2, $p < 0.0001$). PICC represented 64,5% (58) of patients and Hickman or port, 42,5% (32), the former with greater number of complications (44/58). Suspected of infection were most common cause removal PICC, 45.4% (20/44), but only six were confirmed infeccion by culture and blood culture (Stafhylococcus aureus and epidermidis were more isolated). The second cause removal of the PICC was catheter exteriorization (12/58) followed by fracture of the catheter (8/58), luminal obstruction (3/58), thrombosis(1/58).Hickman and port had fewer complications: suspected infection (5/32), thrombosis (2/32) and obstruction (1/32). Just two confirmed infection by culture and blood culture. **Conclusion:** Complications of venous acess are influenced by multifactorial aspects. The PICC had a larger number of complication in this protocol, might be caused by different aspects: social economic status, high chemotherapic doses and the quality of care. In our context, we should think in precocious indication of Hickman and ports.

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Title: Fetoform teratoma: A case report
Authors: Saiful Islam, MS(1), Md Shahjahan, MS(2), S.M Mahmud, MS(3), K.M.N Ferdouds, MS(4), Md. Abdul Aziz, MS(5)
Institutions: Dhaka Shishu (Children) Hospital(1), Dhaka Shishu (Children) Hospital(2), Dhaka Shishu (Children) Hospital(3), Dhaka Shishu (Children) Hospital(4), Dhaka Shishu (Children) Hospital(5)
Category: Oncology
Keywords: Fetoform teratoma,Female infant,Complete excision

Aim of the Study: Confirmation of diagnosis by excision of mass and histopathology following relieve of abdominal distension and finally complete cure of the patient. **Methods:** A 7months old female infant admitted with gradual abdominal distension since birth. On palpation, there was a firm, non tender smooth surfaced mass involving umbilical, right lumber, left lumber & pelvic region. Ultra sonogram shows intra abdominal mass measuring 13×12×15cm, partly solid, partly cystic, free from liver & both kidney. Intravenous urography shows extra renal mass. **Main Result:** Complete excision of the mass done along with coverings. Most of the mass was covered with skin & hair and covered by vernix caseosa. Loops of intestine & some cartilages are palpable within the mass. Histopathology shows mature teratoma composed of fibrocollagenous tissue, respiratory epithelium, intestinal epithelium, brain tissue, keratinized stratified squamous epithelium & mucous gland. **Conclusion:** Fetoform teratoma is a rare entity that typically presents in infancy & early childhood. Preoperative diagnosis is based on radiological findings. Complete excision histopathology allows confirmation of the diagnosis. Histologically mature teratoma is benign and lowers the risk of recurrence.

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Title: PAROTID GLAND NEOPLASMS IN PEDIATRIC AGE. A SINGLE CENTER EXPERIENCE
Authors: Espiñeira Rico, MD(1), Henar Souto, MD(2), Ana L Luis, PhD(3), Rocío Espinosa, MD(4), Cristina Riñón, MD(5), José L Alonso, MD(6), Fernando Lobo, MD(7), Beatriz González, MD(8)
Institutions: Hospital Niño Jesús(1), (2), (3), (4), (5), (6), (7), (8)
Category: Oncology
Keywords: Parotid neoplasm,Parotidectomy,Acidic cell parotid carcinoma
Aim of the Study: To determine the epidemiologic, clinic and histopathologic characteristics of parotid tumors treated in our center and to describe our experience in their diagnosis and treatment. **Methods:** Hospital records were reviewed for all patients with histopathology-proven parotid neoplasm over the period 2002-2015. The epidemiologic data, clinical symptoms, complementary tests and treatment modalities were recorded. Systematic review of literature was done. **Main Result:** During this period three girls and one boy, with mean age 10.2 years (range 5-14) were treated. The presenting clinical form was a slow growing indurated lump in three of them, and a cystic mass in the other. In this last patient the initial diagnose was mistaken with a first branchial arch cyst, and surgery for extirpation of the cyst was done in first term. Histopathologic analysis demonstrated it was an acinic cell parotid carcinoma, and total parotidectomy was done. In the rest of the patients, histopathology showed mucoepidermoid carcinoma. Superficial parotidectomy was done in all of them, and in one case further total parotidectomy was needed because of affected surgical margin. As surgical complications we recorded three cases of facial nerve paralysis, one of them with spontaneous resolution, and the others needing reconstruction with sural nerve graft. Follow up period was 1-13 years, with 100% survival rate. **Conclusion:** Neoplastic pathology of the parotid gland during infancy is infrequent, and usually misleads into more common benign diagnoses. Pediatric parotid masses are more likely to be malignant. Their election treatment is surgical extirpation, which is a complex procedure with associated postoperatory complications.

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Title: ENDOSCOPIC VS PERCUTANEOUS BIOPSIES IN DIAGNOSIS OF NEUROBLASTOMA AND LYMPHOMA IN CHILDREN.
Authors: Natalia Dr Ivanova, MD(1), Victor Dr Rachkov, PhD(2), Denis Dr Kachanov, PhD(3), Sergey Dr Talypov, PhD(4), Natalia Dr Uskova, PhD(5), Nikolay Dr Merkulov, PhD(6), Raisa Dr Oganesyan, PhD(7), Evgeny Dr Andreev, PhD(8)
Institutions: Federal State Research Center of Pediatric Hematology, Oncology and Immunology(1), (2), Federal State Research Center of Pediatric Hematology, Oncology and Immunology(3), Federal State Research Center of Pediatric Hematology, Oncology and Immunology(4), (5), (6), (7), (8)
Category: Oncology
Keywords: biopsy,children,oncology
Aim of the Study: Histological analysis in pediatric oncology and hematology is basic to choose following therapy. Primary outcome was to compare the success rate and second outcome - safety of two methods: endoscopic and percutaneous biopsy. **Methods:** A retrospective analysis was performed including all patients from 2012 till February 2016 – 39 endoscopic and 24 percutaneous procedures. Laparoscopy had place in 16 cases, thoracoscopy – in 22. Percutaneous biopsy was performed in 24 patients, 91.6% of biopsies were US-guided. **Main Result:** Sample size by endoscopic biopsy was more than 2 cm3 in 74%. Percutaneous biopsy provided 1-10 notches maximal volume 1.8 cm3. Blood loss was minimal in all cases of percutaneous biopsies, and ranged from 40 to 1000 ml in endoscopic procedures (1000 ml in one case with ruptured capsule of tumour). Average duration of procedure was 32 min it percutaneous biopsies, 74 min – in endoscopic. Conversion rate was 2.5% in endoscopic biopsies (1 case - ruptured capsule of tumour), no conversions in percutaneous procedures. Intraoperative complications: percutaneous biopsies – 8.3% (1 – bleeding, 1 – hematuria). Endoscopic biopsies – 10.2% (2 cases - burn of colonic wall, 2 - rupture of tumour capsule, bleeding). Postoperative complications: percutaneous biopsies – 8.3% (hemorrhagic syndrome, ureter perforation). Endoscopic biopsies - 2.5% (colon perforation). Informativeness: percutaneous biopsy – 87.5 % (not informative – 5 cases – small amount of tissue). Endoscopic biopsies: 94.8 % (not informative 1 case - tissue sample fragmented and coagulated). Specific treatment started average 4-th day after procedure. **Conclusion:** Endoscopic biopsies offer

enough and adequate tissue sample for primary diagnosis. It's better to take sample using sharp instrument without using coagulation. At tumour relapse, if pathomorphosis is required, at patients with contraindications to general anesthesia, percutaneous biopsy can be used.

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Title: Bilateral Ovarian Fibroma: Gorlin Syndorme
Authors: Josué E Betancourth-Alvarenga, MD(1), Fernando Vazquez Rueda, MD(2), Francisco J Murcia Pascual, MD(3), Miguel A Cárdenas Elias, MD(4), Ariadna Siu Uribe, MD(5), Rosa M Paredes Esteban, MD(6)
Institutions: Hospital Universitario Reina Sofía, Córdoba(1), Hospital Universitario Reina Sofía, Córdoba(2), Hospital Universitario Reina Sofía, Córdoba(3), Hospital Universitario Reina Sofía, Córdoba(4), Hospital Universitario Reina Sofía, Córdoba(5), Hospital Universitario Reina Sofía, Córdoba(6)
Category: Oncology
Keywords: Gorlin Syndrome,Bilateral Ovaric Fibroma,Odontogenic Keratocysts
Aim of the Study: Gorlin Syndrome (GS) is an hereditary autosomal dominant disease with a prevalence of 1 in every 57,000 to 256,000. GS is characterized by the presence of basal cell carcinomas, maxillary odontogenic keratocysts, palmar and plantar pits, and craniofacial anomalies. Bilateral ovaric fibroma is highly suggestive of GS found in about 15-25% of patients with GS. The aim of this study is to present a case of GS with bilateral ovarian masses. **Methods:** Case Report of a 12-year-old girl with bilateral ovarian fibroma and GS. **Main Result:** A 12-year-old girl with a family history of a maternal aunt with ovarian adenocarcinoma and personal history of congenital hydrocephalus, palmar pits and facial dysmorphism presented for a large, painless and mobile abdominal mass with rapid growth in the last month. Pelvic ultrasound confirmed the suspicion of a big solid left ovarian mass and also reported a small tumor in contralateral ovary. Laparotomy was decided, performing a left salpingo-oophorectomy, right lumpectomy with ovarian preservation and regional lymphadenectomy. Both, left ovary (19x18x9 cm) and right lumpectomy (0.5x0.7x0.6 cm) had replacement of ovarian tissue with ovarian fibroma with isolated pockets of thecal differentiation and stromal collagenization with variable cellularity and low mitotic index. Given the anatomopathological findings, an orthopanthomography confirmed maxillary bone keratocysts and a cranial X-ray showed a falx cerebri calcification. Recovery from surgery went uneventful, and the patient has a 9-month follow-up with ultrasound controls revealing normal ovarian follicle formation with regular menstrual cycles and no signs of new tumors. **Conclusion:** Bilateral ovaric fibroma is highly suggestive of GS. These patients require a stretch follow-up to diagnose and treat potential complications such as basal cell carcinomas. Surgical treatment is mandatory thus normal ovarian tissue preservation should be attempted specially in young nulliparous patients.

PA2-6 | MODERATORS: RALPH COHEN, TIMOTHY KANE

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Title: Evaluation and Management of Hepatoduodenal ligament teratoma in a neonate
Authors: Ana C De Roo, MD(1), Sabina M Siddiqui, MD(2), George B Mychaliska, MD(3)
Institutions: University of Michigan, Ann Arbor(1), University of Michigan, Ann Arbor(2), University of Michigan, Ann Arbor(3)
Category: Oncology
Keywords: teratoma,hepatoduodenal ligament,neonatal liver
Aim of the Study: Pediatric germ cell tumors comprise 1-3% of all malignant pediatric tumors and are found in variable locations. We present the case of a term 3.7kg neonate who was found to have a giant liver mass at birth. Initial imaging and biopsy showed evidence of an immature teratoma that was thought to arise from the liver parenchyma and as such was thought to be unresectable. After a course of neo-adjuvant chemotherapy and re-evaluation, the tumor was noted to be minimally responsive to chemotherapy and thought to be displacing the infant liver rather than involving the actual parenchyma. **Methods:** The techniques of the laparotomy, in which the tumor was noted to arise from the hepatoduodenal ligament is described. A review of the literature is performed and summarized. **Main Result:** This case report and images add to the literature for a very rare presentation of teratomas- our experience is the 12th case reported in the literature **Conclusion:** In conclusion, hepatoduodenal teratomas remain a rare occurrence and those with immature elements on pathology represent a more uncommon subset. It is important to keep this diagnosis in the differential for liver masses presenting in neonates.

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Title: Huge abdominal lipoma in 3 year old child
Authors: MOHAMMAD SH ALONAZI, MD(1)
Institutions: Prince Sultan Military Medical City, Riyadh(1)
Category: Oncology
Keywords: Huge Lipoma,Abdomine,Children
Aim of the Study: To draw the attention of the pediatric surgeons to this disease entity which should be considered in their differential diagnosis when managing a child with huge abdominal mass **Methods:** Report of case and review of

the literature **Main Result:** 3 Year old boy presented with 5 month history of progressive huge abdominal distension. The case radiology, surgical procedure, and histopathology are discussed. The case is supplemented with literature review **Conclusion:** Huge abdominal Lipoma should be included in the differential diagnosis of the children presenting with huge abdominal masses.

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Title: Duplex IVC in a child with Abdominal Neuroblastoma
Authors: Mohit Bajaj, MBBS, BE (Hons)(1), Stephen Evans, MBChB(2)
Institutions: Starship Childrens Health(1), Starship Childrens Health(2)
Category: Oncology
Keywords: Neuroblastoma,Venous Anomaly,Duplex IVC
Aim of the Study: Developmental anomalies of the inferior vena cava (IVC) are rare. Failure to recognize these preoperatively can pose significant challenges in neuroblastoma surgery, potentially leading to major retroperitoneal vascular injury and hemorrhage. We report the first case of a congenital duplex IVC in a child with abdominal neuroblastoma. **Methods:** A 2-year-old Caucasian boy was referred to the surgical service for resection of abdominal neuroblastoma following intensive radio- and chemotherapy. A pre-operative MRI scan confirmed a Grade IV neuroblastoma, with a left adrenal primary and metastatic disease involving the skull base, liver and cortical bones. Additionally, a duplex IVC with the left cava terminating in the renal vein at the level of the hilum was identified. **Main Result:** During laparotomy, knowledge of the anomalous venous drainage allowed safer dissection in the retroperitoneum. The duplex IVC was defined at the level of the renal hilum, and there was no extension of the anomalous venous drainage cranial to the left renal vein. The left renal vein crossed anterior to the aorta to form a single right supra-renal IVC. Bulky retroperitoneal lymphatic tissue was resected from behind the major vessels and gross total resection was successfully completed without any vascular injury. **Conclusion:** Preoperative knowledge of the presence of major venous anomalies facilitates the safe performance of neuroblastoma surgery. The use of detailed cross sectional imaging (CT or magnetic resonance) is mandatory for safe and comprehensive surgical planning.

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Title: Neonatal surgery in a peripheral Medical College hospital of Bangladesh –7 years experience.
Authors: Sabbir Alam, MBBS(1), Mohammad Nurul Alam, MS(2), Kazi Habibur Rahman, MS(3), Shamsur Rahman, MS(4), Shafiqul Islam, MS(5)
Institutions: Bangladesh Medical College(1), Sylhet MAG Osmani Medical College, Sylhet(2), Satkhira Medical College, Satkhira(3), Sylhet MAG Osmani Medical College, Sylhet(4), Rangpur Medical College Hospital(5)
Category: Research
Keywords: Neonatal surgery,Neonatal surgery in Bangladesh,MDG
Aim of the Study: With better understanding of neonatal physiology and improvements in diagnostic facilities and neonatal intensive care units (NICU), the outcome of neonatal surgery has improved in developed countries. In developing countries, however, neonatal surgery is problematic, particularly in the emergency settings, but there are few reports from these countries. In order to achieve the Millennium Development Goal (MDG-4) target of a two-thirds reduction in under five mortality from 1990 to 2015, major reduction was required in neonatal mortality. **Methods:** Two sixty two neonates were admitted in the department of Pediatric Surgery of Rangpur Medical College Hospital from January, 2006 to December, 2012 over a period of 7 years. Male female ratio was 2.74 :1. These patients were evaluated with regard to age, sex, clinical features, physical findings, investigations, diagnosis, treatment, some demographic variables and final outcome. **Main Result:** Among the admitted 13287 child, 262(1.97%) were neonates and 235(89.69%) of them were emergency admission. Most of the neonates 152(58.02%) were presented within their 1st 5 days of life with various types of surgical problems. Male female ratio was 2.74:1. Most neonates had their birth weight within 2-2.5 kg 188(71.76%). Most of the mother have no antenatal check up during their whole pregnancy period. Socioeconomic status was low in 172(65.65%). The most common neonatal surgical problem was anorectal malformations 83(31.68%), followed by Hirschsprung's disease 34(12.98%). Among the 262 patients 184(70.23%) were treated surgically. **Conclusion:** Neonatal surgeons definitely improved the neonatal surgical cares and contributing significantly in reducing infant as well as neonatal mortality rate and thus help in achieving MDG4. For neonatal surgery full work up is required for the baby at birth and timely surgical intervention is important. Surgical outcomes are generally good, the patient can look forward to a full and healthy life.

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Title: Disability weights for pediatric surgical procedures: A systematic review
Authors: Emily R Smith, PhD(1), Stephanie Lim, BS(2), Dan Poenaru, MD(3), Henry E Rice, MD(4)
Institutions: Duke University(1), Duke University(2), Bethany Kids at Kijabe Hospital and McMaster University(3), Duke University(4)
Category: Research
Keywords: Pediatric surgery,Burden of disease,Low and middle income countries

Aim of the Study: Accurate identification of the burden of surgical diseases as well as precise estimation of surgical service capacity is essential for ensuring access to surgical care. Although disability-adjusted life years (DALYs) are the primary metric to measure premature mortality and disability, this methodology often does not take into account factors that affect the outcome of surgical care, particularly in children, such as disease severity, impact of surgical complications, and long-term effects of surgical conditions on health quality. The objective of this study was to summarize existing literature on DWs for pediatric surgical procedures and evaluate whether surgical-specific factors are incorporated into these estimates. **Methods:** We searched MEDLINE (Pubmed) for articles utilizing DWs for children's surgical care published between 1996 and 2016. We extracted DW input data, including weight derivation, and whether surgical-specific factors, such as impact of surgical complications, treatment efficacy and severity of disease, were incorporated. **Main Result:** We identified 26 articles that met the inclusion criteria. There were 41 surgical conditions with an assigned DW, with the most common procedures cited being orthopedic (such as amputations and fractures, 24%), and plastic and reconstructive (such as cleft lip and palate, 23%). The most common DW source was the Global Burden of Disease (GBD) study (48%), followed by expert opinion (27%), and derivation of DWs based on GBD methodology (21%). Of the 26 studies, 46% incorporated pre-surgical severity of disease and 62% incorporated treatment efficacy. Many high burden pediatric surgical conditions, such as gastroschisis, inguinal hernia, hydrocephalus and anorectal malformations, were understudied or did not incorporate severity of disease or treatment efficacy. **Conclusion:** Our findings highlight the need to expand DW calculations to include other burdensome pediatric surgical conditions, as well as refine DW methodology to account for surgery-specific items such as severity of conditions and efficacy of treatment.

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Title: DETERMINATION OF THE VOLUME OF INTRA-OPERATIVE COLON RESECTION IN CHILDREN WITH CHRONIC COLONIC STASIS
Authors: Igor Kirgizov, PhD(1), Vadim Dudarev, PhD(2), Sergei Minaev, PhD(3), Filipp Kirgizov, Medical student(4)
Institutions: (1), (2), (3), (4)
Category: Research
Keywords: COLON RESECTION,The ultrasound research ,intraoperational
Aim of the Study: The ultrasound research (USR) – an invasive method, which is widely used in medicine. The aim of this research is to search after a new method for the intraoperational determination of the optimal level of the large intestine resection in children with the decompensated form of chronic large intestine stasis (CLIS). **Methods:** Tested group of children with the decompensated form of chronic large intestine stasis (CLIS) were examined. **Main Result:** During the large intestine ultrasound research (patent RU № 2204328 since 20.05.2003) of the tested group there were revealed 5 layers of organ`s wall corresponding to its morphological structure. In patients with CLIS (n=25) the biggest changes are defined in the sigmoid intestine, where its thickness increases in 1.4 times (5,3 □0.3 mm). At layer examination, the thickness increase of the serous (0,64 □0,16 mm) than in 2,0 times draws attention. At that time the muscular layer thickness reduction is marked more than in 2,1 time (0,91 of the large intestine mucous layer, the augmentation of its thickness to 1,14 □0,14 mm observed. On the qualitative analysis of the layers structure of sigmoid intestine and descending colon, the hyperechogenic changes are revealed in the muscular layer, which are reduced in the proximal direction and approach to the "norm" indices, that is they become hypoechogenic as in the tested group. **Conclusion:** Thus, the changes, revealed by the ultrasound scanning method, are confirmed by the morphological research. The thickness increase of the serous and submucous layers correlate with the wall thickness reduction and the muscular layer sclerosis. The result of it is mining of the intraoperational ultrasound control way of the pathologically

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Title: THE CHANGES OF INDICES OF THE OUTER BREATH IN CHILDREN WITH CHRONIC LARGE INTESTINE STASIS
Authors: Igor Kirgizov, PhD(1), Sergei Minaev, PhD(2), Vadim Dudarev, PhD(3), Filipp Kirgizov, Medical student(4)
Institutions: (1), (2), (3), (4)
Category: Research
Keywords: chronic large intestine stasis ,outer breath function ,laparometrical examination
Aim of the Study: Chronic constipation are quite common in children and adults, the prevalence of 5,0%. it is advisable to more detailed and in-depth study of external respiratory function in children with chronic colonic stasis in the mandatory relationship with other functional systems. The aim of the research was to study the indices of the outer breath function in children with chronic large intestine stasis. **Methods:** the outer breath function of 127 children with chronic large intestine stasis was examined. **Main Result:** : In the result of the study of the outer breath function (OBF) we revealed that a gradual lowering of its main indices took place, in particular FEV 1.0, FVC, PEFR 25 – 75%. The reduction of the above –mentioned OBF indices and practically not changing the relation FEV 1.0 / FVC (in the compensated form of CLIS – 0.72, subcompensated – 0.74 and in the decompensated form – 0.8) point out that children with compensated and subcompensated forms of CLIS can be referred to patients with the restricted syndrome. The typical changes for a restrictive-obstructive syndrome are observed in children with the decompensated form. In

case of the restrictive-obstructive affection lowering of OBF indices occurs because of the reduction of lungs` extensibility and also as a result of dynamic squeeze of air ways at the expense of high standing of diaphragm. It is proved by the laparometrical indices. In children with the decompensated CLIS there occurs the stomach form with the up-widening base. **Conclusion:** Thus, in children with CLIS the restrictive-obstructive syndrome is revealed during the research. And during the laparometrical examination the pear-shaped form of stomach with the up-widening base is marked.

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Title: THE COMPARATIVE ANALYSIS OF THE DIFFERENT METHODS OF INVESTIGATION OF RECTAL BIOPSIES FOR DIAGNOSIS OF HIRSCHSPRUNG'S DESEASE
Authors: Olga Govorukhina, PhD(1), Alexander Makhlin, MD(2)
Institutions: Center of Pediatric Surgery(1), Center of Pediatric Surgery(2)
Category: Research
Keywords: Hirschsprung's desease,histochemical investigation,rectal biopsy
Aim of the Study: Comparative analysis of diagnostic value of histochemical and immunohistochemical methods of investigation of rectal biopsies in patients with Hirschsprung's desease (HD). **Methods:** For the period from 2010 till 2015 we investigated 362 patients presumably with HD. We performed 758 rectal biopsies, 652 histochemical and 126 immunohistochemical analyses. For histochemical investigation we used reaction for acetylcholinestherase and lactatedehydrogenase, and for immunohistochemical investigation – reaction for calretinine. **Main Result:** Diagnosis of HD in cases of histochemical investigation was based on presence of positive reaction for acetylcholinestherase in rectal bioptate (74 cases). We received doubtful results of AChE activity in newborns and preterm patients (7 cases) and in the case of total aganglionosis (2 cases). Investigation for lactatedehydrogenase activity made it possible to confirm diagnosis. HD is characterized by negative reaction for calretinine (30 cases). Nevertheless in 8 doubtful cases we excluded the diagnosis of HD with the help of histochemistry for AChE and LDG activity. In 96 cases immunohistochemistry for calretinine (positive result) made it possible to exclude diagnosis of HD. In 6 doubtful cases it was necessary to perform histochemistry for AChE activity which made it possible to exclude HD diagnosis. **Conclusion:** We haven't revealed significant difference in the quality of diagnosis of HD with the help of histochemical and immunohistochemical investigations of rectal biopsies in "classic" cases in children older 2yo age. Immunohistochemistry for calretinine is not suitable for patients with ultrashort form of HD. In newborns and preterm babies because of immaturity of neural structures of intestine there is a real necessity to repeat investigation in 1-2 mo. The usage of different morphologic methods may significantly improve the diagnostic process of HD in children.

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Title: Creation of an Esophageal Atresia Animal Model Using a Bifurcated Esophagus to Maintain Digestive Tract Continuity
Authors: Ian C Glenn, MD(1), Nicholas E Bruns, MD(2), Steve J Schomisch, PhD(3), Todd A Ponsky, MD(4)
Institutions: Akron Children's Hospital(1), Akron Children's Hospital(2), Case-Western Reserve University School of Medicine(3), Akron Children's Hospital(4)
Category: Research
Keywords: Esophageal atresia,Animal model,Neonatal surgery
Aim of the Study: Our group has previously developed a porcine animal model for long gap pure esophageal atresia (EA) in order to ultimately test novel devices and techniques to restore continuity. Shortcomings of this model included recurrent aspiration of oral secretions, due to the inability to feasibly decompress the proximal esophageal pouch, and a requirement for gastrostomy tube (G-tube) feeds. Therefore, we sought to create a porcine model with a bifurcated esophagus such that one portion of the esophageal lumen retained patency and the other portion mimicked esophageal atresia. **Methods:** A percutaneous endoscopic G-tube was placed. Then, thoracotomy was performed followed by partial stapled transection of the esophagus in a transverse fashion, with subsequent partial stapled transection of the esophagus proximally and distally. **Main Result:** Proximal and distal esophageal pouches were created while preserving a parallel, narrower segment of continuous esophagus. While G-tube feeds were used initially, the animal was able to receive full nutrition by mouth by post-operative day (POD) thirteen. The animal regained much of the initial weight lost post-operatively and survived to POD #29, whereupon planned euthanasia was performed. Necropsy showed no evidence of esophageal leak. **Conclusion:** A bifurcated porcine model of EA was successfully developed which simulated esophageal atresia while allowing the animal to tolerate oral feeds and clear oral secretions. This model is anticipated to promote animal well-being and ease of care for future studies of devices and techniques for EA repair.

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Title: EVALUATION OF NEW MODELS OF HUMAN TISSUE-LIKE ARTIFICIAL STROMAS GENERATED BY TISSUE ENGINEERING FOR ITS USE IN SURGERY. AN EX-VIVO STUDY
Authors: MANGELES MUNOZ-MIGUELSANZ, MD(1), MIGUEL ANGEL MARTIN PIEDRA, MD(2), INGRID GARZÓN, PhD(3), RICARDO FERNANDEZ- VALADÉS, PhD(4)

Institutions: (1), (2), (3), (4)
Category: Research
Keywords: EXPERIMENTAL,BASIC SCIENCE,TEACHING
Aim of the Study: Several biomaterials have been used for the reparation of damaged connective tissues. However, the use of bioengineered tissues containing cells and biomaterials is difficult in surgery especially due to the lack of consistency and poor biomechanical properties of these tissues, especially in the case of the palate and buccal mucosa. In this work, we elaborated several models of tissue-like artificial stromas (TLAS) and we evaluated their biocompatibility ex vivo to determine the clinical usefulness of these substitutes **Methods:** TLAS models were generated by using 0.1% fibrin-agarose hydrogels seeded with human aponeurosis fibroblasts (2.4 x 104 cells/mL). This was used as control, whereas a biodegradable poliglicolic acid (PGA), a non-degradable polipropilene (PP) or a mixed PGA-PP surgical mesh was included within the hydrogel in the study groups. Type-I collagen (COLI) and cortactin (CORT) expression was evaluated by immunofluorescence after 0 to 5 weeks ex vivo **Main Result:** Cells grew and proliferated in all TLAS. The PGA substitute showed COLI expression after 28 days of development, the PP, after 21 days, and the PGA-PP and the controls, after 14 days of culture (Fig. 1). CORT expression was detectable after 7 days in the control, 14 days in PGA and PGA-PP substitutes, and 21 days in PP TLAS **Conclusion:** These results suggest that these biological models of TLAS were biocompatible ex vivo. Cells were able to synthetize COLI very early when PGA-PP meshes were used, and synthesis was delayed with PGA. This could be explained by the release of metabolites able to inhibit protein metabolism when PGA is biodegraded by cells. The expression of CORT suggests that all surgical meshes could inhibit cell migration, as compared to the control, especially in PGA-PP and PP TLAS These results suggest that mixed PGA-PP TLAS could show the highest biocompatibility ex vivo and should therefore be evaluated in vivo

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Title: THE PATHOGENESIS OF MICRO THROMBUS FORMATION IN PERTHES' DISEASE
Authors: Vadim Dudarev, PhD(1), Igor Kirgizov, PhD(2), I Sinyuk, PhD(3), Sergei Minaev, PhD(4), Filipp Kirgizov, PhD(5)
Institutions: (1), (2), (3), (4), (5)
Category: Research
Keywords: PERTHES' DISEASE ,bone blood circulation,Legg-Calve-Perthes
Aim of the Study: Legg-Calve-Perthes (LCP) is a rather frequent disease in the skeleton of children at the age of 5-14 years old, which is characterized by a necrotic process in the femoral head. The connection of this process with the bone blood circulation has been proved. The aim of this research is to study the blood coagulation system breaches in the ill children with II, III roentgenological stage of LSP. **Methods:** 71 ill children with the LSP of the II, III stages were examined. The evaluation of the coagulative, vascular-thrombocytic, anticoagulative and fibrinolytic changes of the blood coagulative system was done. The «lipoprotein A» content was estimated. **Main Result:** the obtained data of changes in the coagulative hemostasis section were revealed in 21 patients (29,5 %). Hypercoagulation was observed owing to the tissue thromboplastin come into the blood or a tissue factor (TF), which formates an active complex TF / VII a + phospholipids (PhL) and TF / VII a + PhL / X a. The main inhibitor lowering of the blood coagulation ``TEPI`` takes place during this process. In the vascular-thrombocyte section in 58 patients (81,7 %), thrombocytopathy was marked owing to the adenasine-diphosphate increase aggregation with the thrombocyte radius aggregation increase, with the III a factor activity of thrombocytes in 49 cases. It makes up 71,8 % of the total number of patients. Hypofibrinolisis was observed in 17 patients (23.9 %). ``Lipoprotein A`` was higher in 21 patients (25.5 %). **Conclusion:** thus, all preconditions of the beginning and progressing of the local micro-thromboformation on the outer blood coagulation system mechanism were marked in LSP patients.

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Title: Use of Gastric Electrical Stimulation (GES) in children with chronic nausea and vomiting
Authors: Dione L Lother, MBChB(1), Sonny Chong, MBBS(2), Sritharan S Kadirkamanathan, MBBS(3)
Institutions: (1), (2), (3)
Category: Research
Keywords: Pediatric,Gastric Electrical Stimulation,Gastroparesis
Aim of the Study: Clinical trials have shown that GES is an effective and safe treatment for unexplained, intractable nausea and vomiting in adults. Less is known about the efficacy and safety of this treatment in the pediatric population however. We performed a study to assess the feasibility and effectiveness of GES in children with refractory nausea and vomiting. **Methods:** Prospective, single centre study conducted in the United Kingdom. Primary outcomes were presence of gastrointestinal symptoms and requirement for nutritional support prior to, and following GES insertion. Patients were followed up in clinic and via telephone consultation at 12 and 24 months. **Main Result:** Six children underwent surgical insertion of GES for chronic unexplained nausea and vomiting, all were females. Median duration of symptoms prior to GES insertion was 2.25 years (range 1.25-11years). Median age at the insertion was 15.5 (range 13-18 years). Five of 6 patients had proven gastroparesis on gastric emptying studies. Electrogastrography showed gastric dysrhythmias in all 6 (increased episodes of tachygastria in 3, bradygastria in 1 and mixed dysrhythmias in 2). None

were diabetics. Surgical approach was via laparotomy in 2 patients and laparoscopic surgery in the remaining 4 patients (2 robotic-assisted laparoscopic). With regard to symptomatology, there was a statistically significant (p value < 0.05) reduction in gastrointestinal complaints. Specifically, there was a 66%, 88%, 100% and 66% reduction in nausea, vomiting, early satiety and abdominal pain respectively at 24 months. Additionally, there was a 66% reduction in requirement for nutritional support following GES insertion, (p value < 0.05). No peri-operative or immediate/early post-operative complications identified. **Conclusion:** Our study shows GES to be an effective and safe treatment in children with intractable nausea and vomiting. However, the small sample size is a significant limitation of the study. Despite this, these results show promise that warrants further investigation of this novel treatment.

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Title: STATUS IMMUNOGENESIS SYSTEM AND HEMOSTASIS IN COMPLICATED FORMS OF ECHINOCOCCOSIS
Authors: Vadim Dudarev, PhD(1), Sergei Minaev, PhD(2), Igor Kirgizov, PhD(3), Filipp Kirgizov, Medical student(4)
Institutions: (1), (2), (3), (4)
Category: Research
Keywords: IMMUNOGENESIS SYSTEM ,hemostasis indices,echinococcus liver cysts
Aim of the Study: The aim of the research is to study the immune status and the hemostasis indices in the prognosis system of the infectious-inflammatory complications of the echinococcus liver cysts in children. **Methods:** the examination of 27 children with the complicated course of the liver echinicocosis at the age of 5 – 17 years was carried out. The retrospective compared evaluation of the initial level of the immune status and hemostasis of the un- and complicated disease course. **Main Result:** the increase of the absolute number of the peripherel blood leukocytes to 15.81±0.68 and the leukocytic formula shift to the left are revealed. In the immunological status the significant immuno-regulator T-lymphocyte disbalance is marked with the suppressor activity. The phagocytic index is lowered to 60.2±1.3 %. In the humoral section the increase of circulating immune complexes to 88.9±2.19 %. In the coagulation section the prothrombin index lowering is marked to 69.3±2.7 %, the activated partial thromboplastin time grows to 58.3±1.7 sec, that characterizes a compensatory hypocoagulation. In the vascular – thrombocytar section there is observed a moderate lowering of the total thrombocytes number (171.3±6.3), a thrombocyte adenasine-diphosphate aggregation to 68.9±3.5 % . The Willibrandt factor grows to 215±7.3 %, XII-A depending fibrinolysis is sharply depressed more than 25 minutes. **Conclusion:** thus, a long chronical process in progress leads to the second immunodeficiency, to antibacterial activity lowering, to the disbalance of T – cell and of the immune humoral section; to the thrombocyte adenasine-diphosphate aggregation, to a sharp fibrinolisis depression, to endotheliosis, to the increase of the leukocytic-endothelial adhesion. As a result of the above-mentioned breaches the local microcirculation disorders take place, which lead to an inflammatory process progress. The research data allow to raise the prognosis authenticity and to prescribe an effective treatment complex.

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Title: CERVİCAL MEDIASTINOSCOPY FOR PARATRACHEAL MASSES IN PEDIATRIC PATIENTS
Authors: Feryal Gun Soysal, PhD(1), Tansu Salman, PhD(2), Nuran Salman, PhD(3), Başak Erginel, MD(4)
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Category: Thoracic Surgery
Keywords: mediastinoscopy,children,mediastinal masses
Aim of the Study: Mediastinal masses are uncommon tumors in children but the mediastinum is the most common site for an intrathoracic mass. They represent a wide variety of cell types and necessitate many different forms of diagnostic intervention for a correct diagnosis and treatment. A cytological diagnosis is essential for a definitive diagnosis in children who have paratracheal lesions. **Methods:** Twentyone pediatric patients were biopsied using mediastinoscopy. Age, gender, preoperative diagnosis, and postoperative biopsy results and complications were reviewed. **Main Result:** Pediatric patients who had mediastinal masses, but not located in para- tracheal area, were employed posterior mediastinoscopy (n = 5 patients), and subxiphoid mediastinoscopy (n = 1 patient). These patients were excluded. Twentyone patiens had paratracheal mass was performed cervical mediastinoscopy. Six patients had mediastinal lesions residuing or recurring after chemotherapy for either Hodgkin disease or non-Hodgkin lymphoma. In 2 of these patients, the diagnosis was recurrent disease. Among the 15 patients presenting with a paratracheal mass or enlarged lymph nodes, histopathologic diagnosis showed tuberculosis in 7 children, Hodgkin disease in 6 children, and histiocytosis X and non-Hodgkin lymphoma 1 patient in each. **Conclusion:** This study shows that cervical mediastinoscopy gave 100% correct diagnosis for mediastinal residual malignancies or uncommon forms of mycobacterium tuberculosis with paratracheal masses. We believe mediastinoscopy could be safely employed in these patients.

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Title: SUCCESSFUL ENDOSCOPIC MANAGEMENT OF POST REPAIR LEAKAGE OF ESOPHAGEAL ATRESIA WITH TRACHEO-ESOPHAGEAL FISTULA

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Category: Thoracic Surgery
Keywords: EA TEF,Endoscopy,Leakage
Aim of the Study: EA-TEF with estimated life birth of 1 in 3500 to 1 in 4500, remains an epitome of neonatal surgery. The survival depends upon many factors, those patient related include birth weight, associated anomalies and general condition while surgical factors include esophageal gap, pulmonary condition and septicemia. We managed endoscopically a case of leakage due to chest tube migration inside the esophageal anastomosis. **Methods:** A full term male neonate weighing 2300 grams, hospital delivered presenting on 5th day of life with EA-TEF associated with mild chest crepitation. Patient was admitted, resuscitated and received total parenteral nutrition and antibiotics. Chest physiotherapy and nebulization were done. Echocardiography showed PFO with left sided aortic arch. Operation was done on 7th day of life through an open approach with right transpleural thoracotomy on the fourth space and azygous was divided. Fistula was closed with 4/0 proline sutures in piecemeal manner. Primary anastomosis was done with 5/0 vicryl sutures after dissecting upper pouch. Intercostal tube was inserted. Contrast was done 10 days later revealing leakage of 90% of water-soluble dye in intercostal tube which was seen migrating to anastomotic site. Upper endoscopy was done with 5.9 mm flexible endoscope and anastomosis was approached very gently with minimal air insufflation and suction. The tip of chest tube was seen traversing the anastomosis and inside esophageal lumen. The tube was withdrawn 2cm outside with obvious adjacent track to esophagus. Nasogastric tube was inserted along guide wire. **Main Result:** Dramatic response occurred after 3 days and contrast was repeated under fluoroscopy showing about 20% leakage. No leak was detected on third contrast after 6 days. Oral feeding was started. **Conclusion:** Upper endoscopy can be a very useful tool with leaking EA-TEF repair. We suggest future injection of fibrin glue with endoscopic assistance rather than its injection through chest tube.

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Title: THORACOSCOPIC HYDROSURGERY IN PATIENT WITH PLEURAL EMPYEMA. PRELIMENARY EXPIRIENCE.
Authors: Saidkhassan Mr Bataev, PhD(1), Vladimir Mr Rozinov, PhD(2), Nodary Mr Zurbaev, PhD(3), Roman Mr Ignatyev, PhD(4), Murad Afaunov, PhD(5), Alexander Mr Fedorov, PhD(6), Ruslan Molotov, PhD(7), Boris Tkachenko, PhD(8), Nikolay Plotnikov, PhD(9), Sergey Pilyutic, PhD(10)
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Category: Thoracic Surgery
Keywords: pleural empyema,Hydrosurgycal debridement , children
Aim of the Study: Thoracoscopy became a favored modality in pediatric pleural empyema treatment. However, the factors affecting on outcome of thoracoscopic management remain unclear. In this case, we demonstrate capabilities of hydrosurgery system for thoracoscopic debridement of pleural cavity. **Methods:** 8 patients from 1.6 to 15 years of age (mean, 6.2 ± 3.8) with pleural empyema were operated at the Speransky Children’s Hospital in Moscow for the last 1 year. Hydrosurgycal debridement of the pleural cavity was performed in 3 patients (37.5%) during the second stage of empyema, and 5 patients (62.5%) in stage 3 empyema organization. Hydrosurgery system is a surgical instrument based on the impact of high-speed jet of water on necrotic and inflamed tissues, combining the advantages of acute cleansing tissue and processing them by pulsating water jet. The design of the evacuation tube and its close proximity to the liquid jet creates a local vacuum, which effectively removes fibrin and liquid contents by Bernulli effect. Informed consent was obtained from parents, and the procedure received approval from the local ethics committee. **Main Result:** The period of recovery and rehabilitation was uneventful in 7 cases. 1 patient with empyema of the right pleural cavity and severe organic lesion of the central nervous system was treated in our hospital by thoracoscopic adhesiolysis. However, postoperative period was complicated by recurrence of pleural empyema and cortication of right lung. Rethoracoscopy was debridement of pleural cavity, decortications of the lung by hydrosurgery system with good results after surgery. Ultrasound and X-rays examination 4 months after surgery confirmed the absence of inflammation in the lung parenchyma and full lung reexpantion in all patients. **Conclusion:** Application Hydrosurgycal system during thoracoscopy, provide effective debridement of pleural cavity, decortications of the lung without damaging the lung parenchyma and create conditions for early rehabilitation of the compromised lung.

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Title: Comparison between Nuss technique and Park technique for correction of pectum excavatum in pediatric patients.
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Institutions: CMN LA RAZA(1), CMN LA RAZA (2), CMN LA RAZA (3), CMN LA RAZA(4)
Category: Thoracic Surgery
Keywords: TECHNIQUE,NUSS,PARK

Aim of the Study: Comparison of 2 techniques to correct pectus excavatum **Methods:** Observational and descriptive study, between September 2015 and January 2016. 2 groups; Group A: 3 patients were operated using Nuss technique; Group B: 3 patients corrected with Park technique. Studied variables: age, gender, type of defect (symmetric/asymmetric), Haller index, type of surgery performed, length of hospital stay and surgical complications (early: within 30 days after surgery; late: 30 or more days after surgery). All patients were operated under similar conditions. All completed required protocol, including CT, spirometry and cardiologic evaluation. For analysis we applied non-parametric statistics. **Main Result:** 6 patients included: 5 males (83.3%) and 1 female (16.6%). Surgical technique was determined according to type of defect: 3 patients with symmetric defect (50%) operated with Nuss technique, and 3 patients with asymmetric defect (50%), operated with Park technique. Average age: 14.6 years. Haller index: 5.1 on average, standing out in one patient with asymmetric Grand Canyon defect and index of 14.5 (16.6%). Spirometry revealed airflow obstruction pattern with air trapping in 100%. Cardiologic evaluation revealed dextrocardia and hypoplastic left lung in one patient (16.6%), the rest remaining without abnormalities. Average length of stay: 10 days. 2 patients (33.3%) operated with Park technique showed early complications (displacement of the lower bar placed and ulnar nerve compression, handled conservatively), and 2 more (33.3%) had late complications (displacement of the lower bar associated with pain in 1 patient and another had externalized displacement of lower bar), needing hospitalization to rule out pericarditis, and in the second case requiring removal of both bars. 4 patients (66.6%), were discharged without complications. None patient with Nuss technique had surgical complications. **Conclusion:** Nuss technique remains the choice for surgical management of pectum excavatum in pediatric age, demonstrating fewer complications and remains most reproducible and higher success rate technique.

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Title: Successful treatment of esophageal strictures by stricturoplasty in patients after esophageal atresia repair
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Category: Thoracic Surgery
Keywords: Stricturoplasty,Esophageal Stricture,Esophageal Atresia
Aim of the Study: This study aimed at evaluating whether esophageal stricturoplasty is feasible, safe and efficiant in patients after esophageal atresia repair. A significant proportion of patients suffer from recurrent esophageal strictures after the operative correction of esophageal atresia. These strictures mostly occur at the site of the anastomosis of the esophagus, although strictures at other locations are also possible. The most common therapy of an esophageal stricture occuring in patients after esophageal atresia repair is bougienage or dilatation. Injections of steroids and the application of mitomycin are used frequently for the therapy of recurrent strictures refractory to bougienage or dilatation alone. The results of these procedures are mixed. Another option is the placement of an esophageal stent for several weeks, which offers the possibility of dilating the stricture on a daily basis at home. The results are promising, but there is a long list of possible complications. So far, the resection of the stenotic segment of the esophagus is generally accepted as the last option if the forementioned therapies fail. **Methods:** In this retrospective study we present five cases of esophageal strictures in patients after esophageal atresia repair who we succesfully treated by stricturoplasty. The stricturoplasty was carried out in the Heineke-Mikulicz technique. We evaluated the number and type of previous unsuccessful treatments, the operation time, the postoperative course including complications, as well as clinical outcome. **Main Result:** All patients were successfully treated by one stricturoplasty and have remained symptom-free ever since the operation. There were no major complications. **Conclusion:** Our results suggest that stricuturoplasty of esophageal strictures is feasible and is an easy, efficiant and substainable treatment option in patients after esophageal atresia repair.

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Title: NUSS PROCEDURE FOR TREATMENT OF PECTUS EXCAVATUM IN CHILDREN. EXPERINCE OF THE 150 CASES.
Authors: Alexander Mr Razumovsky, PhD(1), Saidkhassan Mr Bataev, PhD(2), Abdumanap Mr Alkhasov, PhD(3), Zoricto Mr Mitupov, PhD(4), Victor Mr Ruchkov, PhD(5), Nikita Mr Stepanenko, PhD(6), David Dallakyan, PhD(7), Roman Ignatyev, PhD(8), Mariya Saveleva, MD(9)
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Category: Thoracic Surgery
Keywords: PECTUS EXCAVATUM,Nuss repair ,Children

Aim of the Study: Nuss repair of funnel chests is used increasingly, but has a high bar dislocation rate. The authors intended to reduce this by technical modifications of the original Nuss technique. **Methods:** In 350 patients from 6 to 17 years of age (mean, 12.4 ± 3.8) were operated by Nuss procedure at the Filatov Children's Hospital in Moscow for the last 10 years. 37% of patients had Sindromalny pathology. Operation technique: The bars were placed from left to right with use of specially metal conductor; introduced of the T-shaped titanic plate; fixing of both ends of a plate. Plate was removed in 4 years after surgery. **Main Result:** Results. Duration of operation averaged 38±7 minutes. Terms of hospitalization averaged 8,5±2 days. Thoracoscopy was used only at 8 (2,2%) patients. From them 4 patients were previous operated by Paltia plate repair, at 3(0,8%) patients – after sternotomiya for correction of CHA and 1 patient after a pulmonectomiya. Simultanny operations were done in 4 (1,1%) patients: Thoracoscopycal ductus arteriosus repair - 2 patients, Thoracoscopycal resection of a lung - 2 patients. Pheumothorax – 2(0,5%), gemathorax– 2(0,5%), plate shift – 1(0,2%) patient. One patient observed hyper correction of the chest. In 98% we had the excellent cosmetic and functional result. Residual deformation was observed - 7 (2%) patients. All patients were reoperated with excellent results. **Conclusion:** The modified technique more safely and has reduced the incidence of bar dislocation.

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Title: Esophageal substitutions in Children. Stomach or colon graft?

Authors: Alexander Mr Razumovsky, PhD(1), Saidkhassan Mr Bataev, PhD(2), Abdumanap Alkhasov, PhD(3), Zoricto Mitupov, PhD(4), Victor Mr Ruchkov, PhD(5), Yuliya Chumakova, MD(6), Nikita Stepanenko, PhD(7), Roman Ignatyev, PhD(8), Anatoliy Pavlov, PhD(9)

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Category: Thoracic Surgery

Keywords: Esophageal substitutions,Stamach or colon graft,Children

Aim of the Study: For a long time colonic esophagoplasty were operations in choice in our institution. From 2009 we introduce stomach esophagoplasty to evaluate the results and long-term outcome of this surgical option as well as to provide a comparative analysis of this technique and colonic esophagoplasty. **Methods:** From January 2009 till May 2015 44 children underwent stomach esophagoplasty in Filatov Children's Hospital, Moscow. The patients were aged from 2 months till 13 years. Esophageal atresia was present in 15 (34%) cases, esophageal strictures – in 16 (36.4%), peptic stenosis – in 8 (18.2%), other disorders – in 5 (%) children.To evaluate both short-term and long-term outcomes we consider the following data: clinical examination, questionnaires, esophagogastroduodenoscopy, X-ray contrast study of GIT. In 32 children (72.8%) the stomach was moved through the posterior mediastinum, in 12 (27.2%) patients – trough the anterior mediastinum. **Main Result:** In early postoperative period we had the following complications: pneumonia, pneumothorax, gastric-intestinal bleeding, eventration, enterocolitis, jejunum perforation. In the long-term follow up we diagnosed stenosis of gastroesophagoanasthomosis, aspiration pneumonia, hiatal hernia. Discussion. Stomachesophagoplasty is more easy from the technical point of view. Operation time makes from 50 minutes till 2 o'clock and 40 minutes. We had no necrosisof transplant. In 8 children this operation was made after unsuccessful colonic esophagoplasty. Average stay in the intensive care unit was 6 days. Feeding behavior of the patients after stomach esophagoplasty is strictly regulated by the compelled guidelines. **Conclusion:** Stomach esophagoplasty has its advantages and drawbacks. Our experience presents the comparative analysis of the outcomes of colonic esophagoplasty and stomach esophagoplasty, guidelines of how to choose the best way of esophageal repair. The above described surgical option gives way to more opportunities for a surgeon and helps to improve treatment outcomes in children with esophageal disorders.

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Title: Surgical treatment of patent ductus arteriosus in children

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Category: Thoracic Surgery

Keywords: patent ductus arteriosus ,Surgical treatment ,Children

Aim of the Study: A persistent patent ductus arteriosus (PDA) is a common problem in premature infants. It can lead to clinically significant cardio respiratory disease and ligation remains an important component of its management. **Methods:** 291 patients from 7 days to 13 years with PDA were operated at the Filatov Children's Hospital for the last 15 years. Method of the operation was determined based on the body weight of the child. All patients were divided into 2 groups. First group - 75 patients, who underwent thoracoscopic clipping of the PDA. Age of children ranged from 2

months to 13 years (mean 6 years) and body weight greater than 2 kg. The second group - 216 patients with body weight less than 2 kg (750 g - 2000 g) and severe hemodynamic and respiratory disorders associated with persistent fetal circulation. In this group due to the small of the pleural cavity for operations performed by 1.5 to 2 cm small thoracotomic incisions in IV intercostals space. All operations in this group ware performed directly in the neonatal center. **Main Result:** There were no deaths, recurrent laryngeal nerve dysfunction or chylothoracs in this series. Complete cessation of blood flow in the CAP achieved in all patients. Mean operative time was 20 - 15 minutes. One child Group 1 was the conversion of access due to bleeding from ductus arteriosus during its mobilization with good post operations results. **Conclusion:** Thoracoscopic clipping of the PDA is the method of choice in children weighing more than 2 kg. Premature babies with weight less than 2 kg of choice is surgery with clipping PDA due to small thoracotomic incisions directly to the ICU without transporting the patient to the operating room.

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Title: Can a plain radiograph predict the gap length in patients with esophageal atresia and tracheoesophageal fistula?
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Category: Thoracic Surgery
Keywords: Esophageal atresia ,Tracheoesophageal fistula ,Gap length
Aim of the Study: This study was aimed at assessment of the gap length between the two esophageal ends in cases of esophageal atresia and tracheoesophageal fistula (EA-TEF) by preoperative radiography with a nasogastric tube in the upper esophagus. **Methods:** All consecutive cases of EA-TEF were prospectively included in this study. Plain radiographs were taken with an 8 Fr nasogastric tube inserted in the upper esophagus up to its arrest. On the basis of radiograph, the patients were grouped into T1-T2; T2-T3; T3-T4; and T4 depending on the thoracic vertebral level of arrest of the tube. During surgery the gap length between the esophageal ends was measured using a vernier caliper and the patients were grouped into A, B and C (gap length >2.1 cm; >1-≤2 cm and ≤1 cm). The operative gap groups were compared with the radiography groups. **Main Result:** A total number of 84 cases were included over a period of 2 years. The arrest of the nasogastric tube at T1-T2 and T2-T3 vertebral level corresponded to gap length group A in 28/29 (96.55%)* patients. In gap length group B the arrest of tube at T2-T3 and T3-T4 vertebral level was seen in 31/31 (100%)* patients, in gap length group C the arrest of tube was noted at T3-T4 and T4 vertebral level in 23/24 (95.83%)* patients (*$p<0.001$). **Conclusion:** Radiographic assessment of gap length by the vertebral level of arrest of the nasogastric tube correlated with intra operative measurement of gap length. Hence the preoperative radiograph can help substantially in surgeon’s preparedness regarding the management of the patient.

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Title: A VERY RARE PRESENTATION OF AN ESOPHAGEAL HAMARTOMA IN A CHILD
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Category: Thoracic Surgery
Keywords: esophagus,hamartoma,esophageal tumor
Aim of the Study: Our aim is to bring awareness over an extremely unusual presentation of massive polypoid esophageal hamartoma mimicking chronic respiratory pathology. **Methods:** We present the case of 9 years old boy who was admitted in our clinic for evaluation and treatment of a large cervico-thoracic mass. We also reviewed the available data from the literature. **Main Result:** The patient’s symptoms started apparently 2 years’ prior, being misdiagnosed and treated for repeated upper airway infections. Because of the persisting symptomatology, further workup with barium enema, CT-scan and esophagoscopy was done which revealed a large cervico-thoracic esophageal tumor. The patient underwent surgery via right thoracotomy revealing a largely dilated cervicothoracic esophagus. An oblique esophagotomy was done and a massive (10/5 cm) pedunculated well-delimited intraluminal tumor was found. Complete excision of the tumor with esophageal preservation was possible. The histopathological examination showed esophageal chondroma. No complications were noted at 6 months follow-up. Available literature research revealed that this type of tumor is extremely rare in children. **Conclusion:** Tumors of the esophagus are uncommon in pediatric population. The clinical presentation, the polypoid aspect and the histological nature of the tumor make this case remarkably rare.

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Title: INTRATHORACIC INFLAMMATORY MYOFIBROBLASTIC TUMORS IN CHILDREN

Authors: Jose Carlos Fraga, PhD(1), Samanta Silva, MD(2), Iara S Lucena, MD(3), Luis F Rivero, MD(4), Orlando Carlos Wender, MD(5), Philipe Monnier, MD(6)
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Category: Thoracic Surgery
Keywords: myofibroblastic inflammatory tumor,thoracic tumor,children
Aim of the Study: Report two children with intrathoracic inflammatory myofibroblastic tumors (IMT), describing clinical presentation, diagnostic e types of treatment. **Methods:** First patient - Girl, 11 years, presented with cough, dyspnea during exercise and two episodes of pneumonia. Thorax x-ray and computed tomography showed persistent atelectasis at right lower and middle lobes. Flexible bronchoscopy identified a pedunculated mass in the right main bronchi causing complete obstruction at lower and middle lobes. Second patient - 4-year-old girl presented enormous right thoracic mass at x-ray done for fever. Computed tomography and magnetic resonance showed 5,1x5,0 cm lesion at right side very close to pericardium and right atrium. **Main Result:** The first child did bronchoscopy mass biopsy and presented important bleeding. She needed intubation and mechanical ventilation for 12 hours. Pathology confirmed IMT. Lesion was posteriorly removed by bronchoscopy and YAG laser. She needed another bronchoscopy with tumor recurrent removal 6 months later. One other bronchoscopy 1 year later did not show any residual lesion. Another girl had complete lesion removal by right anterolateral thoracotomy. She had partial diaphragmatic eventration because right phrenic nerve was very adhered to the lesion, and it needed to be separated for the lesion. Postoperative pathological examination confirmed IMT. Both children are doing well with follow-up of 1 year 8 months and 1 month respectively. **Conclusion:** Because of its rarity and ability to mimic other malignant tumors the intrathoracic IMT can be a diagnostic challenge. Surgical resection remains the diagnostic and therapeutic modality of choice. In case of airway tumor, it is possible to do a bronchoscopy resection.

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Title: Diagnosis and treatment of foreign body aspiration in children treated at a general hospital
Authors: Catalina Correa, MD(1), Dominique D Gonzalez, MD(2), Rafael R Peña, MD(3), Juan P Luengas, MD(4), Luis C Rincon, MD(5)
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Category: Thoracic Surgery
Keywords: Foreign body,Diagnosis,Bronchoscopy
Aim of the Study: To present our experience with diagnosis and management of foreign body aspiration in children treated at a general hospital. **Methods:** Between January 2012 and may 2016, 59 patients were admitted for ingestion or aspiration of foreign bodies. Five patients had a surgical procedure to remove the foreign body from their airway. We reviewed their charts to analyze patient characteristics, symptoms, time from aspiration to emergency consult, findings on chest x-ray, type and location of the foreign body, and treatment. **Main Result:** Three girls and two boys between two and eight years of age had a surgical procedure for foreign body aspiration. Two patients (40%) went to the emergency room two hours after the event, and one of them was sent back home due to a wrong interpretation of x-ray findings. Three patients presented in the emergency room 3-10 days after foreign body aspiration with fever and lower respiratory symptoms, and one was treated for pneumonia for six days before the diagnosis of foreign body aspiration was made. One patient did not have an x-ray film, and the diagnosis was clinical. Three (60%) foreign bodies were metallic, one (20%) was plastic and one (20%) was organic. All foreign bodies were found on the right chest, and those located in the proximal airways were extracted with rigid bronchoscopy. One patient was submitted to thoracoscopy to retrieve a needle from the lung parenchyma. **Conclusion:** Delay in diagnosis and misinterpretation of chest x-ray may lead to complications and morbidity in children with foreign body aspiration. Clinicians must have a high index of suspicion and rely on patient history and symptoms to prompt a timely referral to the pediatric surgeon.

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Title: Previous thoracoscopic repair of congenital diaphragmatic hernia in neonates does not preclude thoracoscopic repair for the recurrence
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Category: Thoracic Surgery
Keywords: CDH,Recurrence,Thoracoscopy
Aim of the Study: Thoracoscopic congenital diaphragmatic hernia (CDH) repair has become popular but has been associated with a higher recurrence rate compared to open surgery. Common practice after thoracoscopic surgery is to repair the recurrent defect using a patch with an open approach. Recurrence of CDH is rarely repaired thoracoscopically. We report our early experience of repairing the CDH recurrence thoracoscopically with or without the use of a Gore-Tex patch. **Methods:** Our cohort included neonates with thoracoscopic CDH repair between January 2013 and May 2016. Patients with CDH repaired by laparotomy during this period were excluded. We identified 12 neonates with CDH repaired thoracoscopically with or without a Gore-Tex patch. **Main Result:** Four patients (33%) developed a recurrence. One patient had an early recurrence of a thoracoscopic primary repair of the muscle defect.

Three patients had a previous repair of their defect with a Gore-Tex patch. In two of these three patients the non-absorbable suture had cut through the diaphragmatic muscle from medial aspect, in one patient the pericostal fixation of the patch had come undone. We were able to repair the recurrent diaphragmatic defect in three patients thoracoscopically. One patient with patch repair was converted due to significant adhesions and difficulty of reducing the hernia content into the abdominal cavity. In all patients the recurrent defect was closed with a Gore-Tex patch. Time to full feeding and length of hospital stay was two days in the thoracoscopic group, 16 days in the patient who was converted to open repair. All patients remain recurrence free after a median follow up of 12 months. **Conclusion:** We recommend the thoracoscopic approach for the recurrence. It is feasible and safe to repair the CDH recurrence even if the previous repair was performed with a Gore-Tex patch. Our results have shown good early outcome with reduced postoperative stay and minimal morbidity.

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Title: Hunger and Interpersonal Violence in School Age Children in Zambia: A Sub-Analysis of the Global School-based Health Survey
Authors: Guy Jensen, MD(1), Laura Goodman, MD(2), Diana Farmer, MD(3)
Institutions: University of California Davis(1), University of California Davis(2), University of California Davis(3)
Category: Trauma
Keywords: Global Health,Trauma,Hunger
Aim of the Study: Children in six countries in Sub-Saharan Africa reporting hunger within the past 30 days on the Global School-based Health Survey (GSHS) have previously been demonstrated to have an increased risk of injury due to any cause, using aggregated data (Peltzer, 2008). We hypothesize a link between hunger and injury due to increased competition for food. However, the effect of hunger on injury has not been widely assessed with regard to assault or abuse mechanisms, or on a country-specific level. This study seeks to gain an understanding of the relationship between hunger and children reporting being a victim of interpersonal violence in Zambia. **Methods:** The GSHS was conducted by the Zambian Ministry of Health in 2004 among 2,257 children in grades 6-10, in cooperation with the United States Centers for Disease Control and Prevention (CDC). The data is now publicly available online through the CDC. Multivariate logistic regression was used to assess the relationship between self-reported hunger, type of injury, and mechanism of injury. **Main Result:** Children who responded that over the previous 30 days they had gone hungry “most of the time” or “always” due to lack of food in the home were 2.41 times as likely to report being assaulted or abused over the previous year (95% CI 1.32-4.42) when compared to children who reported that they went hungry “sometimes,” “rarely,” or “never.” This increased risk persisted when controlling for gender (OR= 2.65, 95% CI 1.41-4.99). **Conclusion:** Self-reported hunger appears to be associated with being the victim of assault, attack, or abuse in children in Zambia. Future analysis and study is warranted to further assess whether this is the result of risky food seeking behavior, competition, or other poverty-related factors.

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Title: Follow up of Isolated pancreatic head laceration and treatment management of children: A case report
Authors: Tamer Sekmenli, MD(1), Metin Gunduz, MD(2), Ilhan Ciftci, MD(3)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1), (2), Selcuk University Medical Faculty Department of Pediatric Surgery (3)
Category: Trauma
Keywords: trauma,pancreas,children
Aim of the Study: Blunt trauma of pancreas is a rare condition. Early diagnosis is important for morbidity and mortality. We aimed to evaluate treatement and management of a patient with pancreatic laseration. **Methods:** We have reported a 4 year old boy with isolated pancreatic head laceration due to falling dawn **Main Result:** On physical examination both peritoneal irritation signs and ultrasonography results were negative. After observing 12 hours patient was discharged. 1 day later he had abdominal pain and vomiting. He had epigasric tenderness and defans. Laboratory findings were as hemoglobin 11g/dl, leucocyte 13000K/ul,amylase 720, lypase 2300. Abdominal coputerize tomography demostrated laseration with diameter of 1.5 cm in pancreas head. During treatement patient had total parenteral nutrition, antibioteraphy, somatostatine, and H2 receptor blocers. In follow up the amylase and lypase values were as 1776-4160 U/Lin second day and 254-323U/L in fourth day respectively. He had oral nutrition at sixth day and discharged two days later. Two weeks later there was not any pathological finding in ultrasonography and also serum amylase and lypase levels were normal **Conclusion:** Upper abdominal pain, leucocytosis, and incremaseof pancreatic enzyme levels are the triad of pancreatic injury. Computerise tomography has an impotratant role in pancreatic traumas.

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Title: The use of negative pressure therapy in severe limb trauma - single institution experience
Authors: Filip Juric, MD(1), Rok Kralj, MD(2), Igor Bumci, PhD(3), Bozidar Zupancic, PhD(4), Zoran Bahtijarevic, MD(6)
Institutions: Children's Hospital Zagreb(1), Children's Hospital Zagreb(2), Children's Hospital Zagreb(3), (4), Children's Hospital Zagreb(6)
Category: Trauma

Keywords: Negative pressure wound therapy,Pediatric,
Aim of the Study: Severe limb trauma management is difficult task especially in children. Those type of wounds are commonly associated with traffic accidents. High risk of infection, lack of tissue, combined bone trauma and visceral trauma are just some of the problems faced by the surgeon in such patients. Negative pressure wound therapy (NPWT) is known for its reduction of bacteria colonization of wound, need for less dressing change (les painful), quicker wound healing, but the information for it use in pediatric population is limited. **Methods:** In last seven years we had four children with severe limb trauma that we treated with NPWT. Children were age 2-10 year. All patient was treated with NPWT. Average time for NPWT application was 35 days. Most of tissue defect were cowered with autologous split skin graft with aid of NPWT. In one patient dermal replacment is used prior to skin graft was applied. **Main Result:** The most severe case is a 10 year old boy who was injured as a cyclist hit by a car. He had intraabdominal, genital and left lower limb injury with major blood vessel injury. Second patient is 2 year old boy which was run over by a forklift truck. He had complete avulsion of lower leg skin. Third patient is a 9 year old girl with an open forearm fractured which was complicated with gas gangrene. The last patient is 5 year old girl hit by a truck. She had visceral trauma and skin deglovement of right femur and abdominal wall. There were no complications during the use of NPWT. Cosmetic result of all patients was satisfactory. **Conclusion:** NPWT is an effective adjunct in wound healing terapy especially in children with severe limb trauma

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Title: Saved by the Gravid Uterus!!! Story of Survival of a Neonate with Intrauterine Gunshot Injury
Authors: Kaniz Hasina, MD(1), Nazmus Sakib Ferdous, MD(2), Abdul Hanif, MD(3)
Institutions: Dhaka Medical College(1), Dhaka Medical College(2), Dhaka Medical College(3)
Category: Trauma
Keywords: gunshot wound,penetrating injury,pregnancy
Aim of the Study: Penetrating trauma during pregnancy is an increasing problem in today's ever- violent society but very rare in peaceful rural areas of developing countries like Bangladesh. We report here a fetus, delivered via cesarean section in 32nd gestational week of a 35-year-old pregnant woman, with history of gunshot in her lower abdomen. **Methods:** She was brought into emergency department of a district hospital. Preoperative ultrasonography determined fetal heart rate severely bradycardic (30 beats/min), uterus filled with coagulum, bullet found in pelvic wall. Patient was taken urgently to operating room for exploratory laparotomy. A 1725g female fetus was taken out by cesarean section. On post-natal evaluation, baby was found preterm, low birth weight, with perinatal asphyxia and multiple injuries over different parts of body. After primary resuscitation baby was transferred to our hospital on day 4 and found preterm, low birth weight but hemodynamically stable. Wounds were identified in right chest, neck, dorsum of right hand, right upper and lower eyelids. Eye problems were diagnosed as traumatic cataract with iris injury with vitriol hemorrhage. Chest X-ray reveals no abnormality. She was managed in multidisciplinary approach including departments of Pediatric, Thoracic, and Plastic surgery, Ophthalmology, Orthopedics, Neonatology, and Cardiology. After proper dressing, closure of wounds were done. Subsequently baby developed jaundice, platelet count was decreasing, and shifted to special care baby unit. Members of medical board sat together every day for optimal management. Several specialist ophthalmologists were called for management of eye problems. **Main Result:** On 10th POD, stitches were removed. She was discharged on day 29 with weight gain 2500g, no complications and advised for follow up of eye problems. **Conclusion:** Although maternal-fetal morbidity-mortality rates are high in intrauterine gunshot wounds, appropriate management may provide survival of both, as in our case. This is the only survival of both mother and baby after such occurrences, ever reported.

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Title: Newborn trauma - predict risk factors
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Institutions: Jagiellonian University , Department of Pediatric Surger and Emergency, Cracow(1), DEpartment of Pediatric Surgery, Jagiellonian Univeristy, Cracow(2), Department of Pediatric Surgery, Jagiellonian University Cracow(3), Departament of Pediatric Surgery(4)
Category: Trauma
Keywords: newborn trauma,prenatal diagnosis,birth delivery trauma
Aim of the Study: To evaluate the risk factors of newborn trauma. We have 3 types of newborn trauma: inborn, acquired and both factors. We analysed the newborn trauma patients in the period from 1996 to 2015. We divided those patients into two groups: life-threatening and nonlife-threatening patients. Retrospectively the analysis of the patietns with newborn trauma was performed. We treated in the Department of pediatric Surgery and Emergency 69 newborn with different organ injuries or multiorgan injuries. **Methods:** Out of 69 newborn with newborn trauma 7 were in life-threatening group and 62 with benign injuries. The 7 newborn patients from lifethreatening group were analysed: 3 newborn died due to newborn traume and 4 survived after surgical treatment. we present the reasons of the injury and the possible ways to avoid or predict those severe injuries **Main Result:** The 7 newborn patients from life-threatening group were analysed: 3 newborn died due to newborn traume and 4 survived after surgical treatment. we present the reasons of the injury and the possible ways to avoid or predict those severe injuries. We also show what kind of surgical

treatment was performed. In the group of 62 newborn with benign trauma were no mortality. **Conclusion:** 1. Prenatal diagnosis is one of diagnostic devices of possible newborn trauma. 2. Gastroschisis requires special care during pregnancy and delivery. 3. Gastroschisis pregnancy should be resolved before 36 gestational week becaus of vanishing gastroschisis syndrome 4. Long lasting natural delivery can be a trauma producing factor.

416 - PA
Title: Complete gastric transection with pancreatic injury with SCIWORA
Authors: Ruchir Vats, MBBS(1), DEEPAK MITTAL, MBBS, MCh(2), SK Singh, MS, MCh(3)
Institutions: SRHU, Jolly Grant, Dehradun, India(1), SRHU, Jolly Grant, Dehradun, India(2), SRHU, Jolly Grant, Dehradun, India(3)
Category: Trauma
Keywords: Gastric Transection,Pancreatic Injury,SCIWORA
Aim of the Study: To present a case of complete gastric transection and associated complication **Methods:** Case study of patient with traumatic gastric transection was reviewed. **Main Result:** We are presenting a case history of the 8 years old male patient treated at our institute who was brought to emergency department in severe shock with history of blunt trauma abdomen. Xray abdomen revealed pneumoperitoneum. Patient underwent exploratory laparotomy which revealed complete distal gastric transection along with serosal tear of small bowel. Gastric transaction was repaired primarily. Patient developed complaints of inability to move both lower limbs which was concluded as cord edema from T10-T12 level without any bony injury and was managed accordingly. He was having neurogenic bowel and bladder which was managed with regular enema and clean intermittent catheterization. Patient had anastomotic leak on POD 18. Gastrostomy, feeding jejunostomy and mesh laparostomy was done. Patient again had leak from anastamosis. Patient managed conservatively but was referred to higher centre due to financial constraints. **Conclusion:** There are few cases of complete gastric transaction published in literature and most of them are reported in children. These patients had significant morbidity in post operative period. In our case associated pancreatic injury and spinal cord injury had led to severe morbidity.

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Title: OESOPHAGOTRACHEAL FISTULA DUE TO UNCOMMON FOREIGN BODY: DIAGNOSTIC DILEMMA AND MANAGEMENT CHALLENGES IN AN AUTISTIC CHILD
Authors: Shunmugam Rajah, FRCS(ENG)(1), Halimuddin Sawali, MD(2), Jayaram Menon, FRCP(3), Ashok Krishnan, MD(4), Jane Chuah Wai Yee, MD(5), Sabrina Jane Dass, MD(6)
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Category: Trauma
Keywords: OESOPHAGEALTRACHEAL FISTULA ,FOREIGN BODY - SPOOL ,AUTISM
Aim of the Study: To illustrate the management and diagnostic difficulties of traumatic oesophageal tracheal fistula in a child due to uncommon foreign body(FB) **Methods:** Prospective study and follow up of a child presented to SWACH during October 2015 to April 2016 **Main Result:** A 6 years old autistic child suspected to have swallowed a spool probably during April 2015. It went unnoticed because the child could not express. Child was treated as asthma by General Practitioner. A chest radiograph after 6 months revealed the FB at the level of thoracic inlet. Attempted removal by the otolaryngologist and gastroenterologist failed. Child required ventilation post procedure. Computed Tomography showed the FB in the oesophagus between C7 and T2 vertebral spines and suspected to have pierced the trachea with evidence of mediastinitis. Cervical exploration was performed and the sternal head of sternocleidomastoid muscle was divided 5cm from its attachment for better access. The body of the spool was in the oesophagus and the 2 flanks pierced through the oesophagus with one flank cutting through the trachea vertically and the other behind the trachea. One of the wheel of the spool broke while negotiating and the spool could be removed after excising the necrotic part of the esophagus. The oesophageal defect repaired by transversely with Polydioxanone Sutures(PDS) 6/0. Trachea mobilized taking care of the recurrent laryngeal nerve and the 2cm long defect was closed with PDS. The sternocleidomastoid muscle flap was interposed between the suture lines to prevent fistula recurrence. Post-operative oesophagogram and bronchoscope did not show any leak or stricture. **Conclusion:** Delay in diagnosis of ingested FB will lead to major complications in children. Early recognition and a multidisciplinary team approach is essential in managing FB of esophagus and trachea. Interposition of muscle flap will prevent recurrence of fistula.

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Title: Painless circumcision with a combination of penile base and sub-mucosal sub-coronal lidocaine infiltration
Authors: Ahmad Khaleghnejad Tabari, MD(1), Nasibeh Khaleghnejad Tabari, MD(2), Mina Moulaie, MSC(3)

Institutions: Pediatric Surgery Research Center, Shahid Beheshti University of Medical sciences, Tehran, Iran(1), Pediatric Surgery Research Center, Shahid Beheshti University of Medical sciences, Tehran, Iran(2), Pediatric Surgery Research Center, Shahid Beheshti University of Medical sciences, Tehran, Iran(3)
Category: Urology
Keywords: Circumcision,lidocaine,Local anesthesia
Aim of the Study: Circumcision is the most common surgical procedure in boys in most of the Islamic Countries. Painless surgery is the demand of most of the parents. In this study we used a combination of penile base and sub-mucosal sub-coronal infiltration of 1% lidocaine to achieve full anesthesia. **Methods:** From March 2012 to March 2016, 788 boys underwent circumcision with local anesthesia. The technique of anesthesia was 2 ml 1% lidocaine of which 1 ml was infiltrated at the base of penis circumferentially and 1 ml in the sub-coronal submucosa circumferentially. All cases were followed at one week, one month and 6 months. The surgical technique was three clamps and repair was done with 5/0 plain catgut. **Main Result:** Seven hundred and eighty eight boys with a mean age of 45 days (20 days to 4.5 months) and a mean weight of 4.8 kg (2500 gram to 7 kg) underwent circumcision by local anesthesia in front of their parents. In 700 0f cases after a few minute of penile base infiltration of 1 ml 1% lidocaine; separation of prepuce from glans was still severely painful and they required sub-coronal submucosal infiltration of 1 ml lidocaine for full anesthesia in order to tolerate the rest of the procedure. Eighty eight boys mostly at age less than one month did not experience any pain after penile base infiltration alone. Five boys had early post operation bleeding which was controlled by suture ligation. Longest follow up time was 6 months and 5 boys developed severe meatal stenosis that needed meatoplasty and 10 developed preputial adhesion that was managed by separation of adhesions followed by lubricant administration during child nappy change. **Conclusion:** A combination of subcutaneous administration of 1 ml of 1% lidocaine at the base of penis with 1 ml of 1% lidocaine in the sub-mucosal sub-coronal can give a full local anesthesia and maintain a painless circumcision.

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Title: 46,XY DISORDERS OF SEX DEVELOPMENT(DSD), AMBIGUOUS GENITALIA, PERSISTENT MULLERIAN DUCT AND WILMS TUMOR WITHOUT NEPHROPATHY: 18 YEARS FOLLOW UP OF A PATIENT AND REVIEW OF LITERATURE
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Institutions: Department of Pediatric Surgery, Sabah Women and Children Hospital (SWACH) Kota Kinabalu, Sabah(1), Sabah Women and Children Hospital (SWACH) Kota Kinabalu, Sabah(2), Sabah Women and Children Hospital (SWACH) Kota Kinabalu, Sabah(3), Department of Pediatric Surgery, Sabah Women and Children Hospital (SWACH) Kota Kinabalu, Sabah(4), Department of Pediatric Surgery, Sabah Women and Children Hospital (SWACH) Kota Kinabalu, Sabah(5), Department of Pediatric Surgery, Sabah Women and Children Hospital (SWACH) Kota Kinabalu, Sabah(6)
Category: Urology
Keywords: Disorder of Sex Development,Wilms Tumor,Mullerian Duct
Aim of the Study: The diagnosis, treatment and sex assignment of a child with ambiguous genitalia is challenging to clinicians and parents. This study analyses the complex clinical presentation, management problems and follow up of a child with DSD. **Methods:** Prospective follow up study of a child referred to our institution for DSD during 1998 to till date. **Main Result:** A 2.2kg baby delivered at term in district hospital with ambiguous genitalia was referred to Gynaecologist for sex assignment. During initial examination the genital anomaly was suspected as clitorial and labial hypertrophy and assigned as a girl. Subsequent chromosomal study revealed 46, XY and hormonal assay was inconclusive. At 7 months, the child developed Wilms tumor of the left kidney. During laparatomy for Wilms tumor, found to have small uterus with tubes, a streak gonad on the right and ovary like structure on the left. Biopsy of the left gonad and radical nephroureterectomy was performed. Stage II Wilms Tumor was treated with chemotherapy for 6 months. Biopsy of the gonad was reported as testicular tissue without any ovarian tissue. Upon disclosure the family opted to rear the child as a boy. There was slight increase in testosterone level and the size of the penis. Left orchidopexy and excision of the right streak gonad was performed at 4 years of age. Chordee correction and urethroplasty was done at 6years. Child attended school performed well academically. Urogenitogram done at 18 years of age showed large uterus like structure with fallopian tube, which was excised taking care of the vas deferens at the request of the patient. Psychoscocial development of the child and parental support are good so far. **Conclusion:** 46,XY with Ambiguous Genitalia, Mullerian Duct and Wilms Tumor without nephropathy maybe a new mutation of WT1 gene. Further detailed molecular genetics study would be beneficial.

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Title: CRYPTORCHIDISM AND HYPOSPADIAS IN A COHORT OF 195 BOYS WITH HYPOSPADIAS: THE ROLE OF BIRTH WEIGHT, GESTATIONAL AGE, BODY DIMENSIONS, AND FETAL GROWTH
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Institutions: Hamad General Hospital(1), Hamad General Hospital(2)
Category: Urology

Keywords: Hypospadias,Undescended Testis,Birth Weight
Aim of the Study: It was demonstrated that early delivery and low birth weight are strong predictors of some urogenital anomalies, cryptorchidism (undescended testis) and hypospadias. Several questions regarding the association of fetal growth restriction with urogenital anomalies remain unanswered. The aim of this study was to evaluate the prevailing hypotheses on the role of fetal growth restriction as a risk factor for cryptorchidism and hypospadias. **Methods:** The possible associations of birth weight, gestational age, body dimensions, and fetal growth on the risks of cryptorchidism and hypospadias were studied in a large population-based cohort. The study population was composed of 195 boys with hypospadias born alive between 2010 and 2014. Risks of urogenital anomalies according to birth weight were evaluated in both singletons and twins; when possible, relative birth weight of male singletons in a family was compared with other singleton brothers, and that of twins was compared with their male cotwins. **Main Result:** The data showed an association of low weight for gestational age with both cryptorchidism and hypospadias. This association was strengthened by early delivery. **Conclusion:** These findings suggest that identifying shared causal factors may provide new important information on the biology and prenatal etiology of urogenital anomalies and other male reproductive conditions, including testicular cancer and poor semen quality.

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Title: A Comparison of a Holmium YAG laser and Electrokinetic Lithotripter in Pediatric Ureteral Stone Treatment
Authors: Metin Gunduz, MD(1), Ilhan Ciftci, MD(2), Tamer Sekmenli, MD(3), Ahmet Midhat Elmacı, MD(4), Harun Peru, MD(5)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1), Selcuk University Medical Faculty Department of Pediatric Surgery (2), Selcuk University Medical Faculty Department of Pediatric Surgery (3), Dr Faruk Sükan Maternity and Children's Hospital Department of Pediatric Nephrology,Konya,(4), Selcuk University Medical Faculty Department of Pediatric Nephrology(5)
Category: Urology
Keywords: pediatric urolithiasis,lithotripsy, ureterorenoscopy
Aim of the Study: We evaluated endoscopic treatment of ureter stones with a holmium:yttrium-aluminum-garnet laser (Ho:YAG) lithotripter and an electrokinetic lithotripter (EKL) in children. **Methods:** Patients with ureteral stones who were admitted to the Pediatric Surgery Department of our hospital between Novembe-2011 and January-2015 were evaluated retrospectively.Demographic data, initial symptoms, age, sex, stone size, preoperative renal pelvis diameter, use of a jj stent, and complications were recorded.A 4.5 Fr semirigid ureterorenoscope was used. **Main Result:** In patients treated with Ho:YAG lithotripter, a total of 17 ureteroscopic procedures were performed on seven female and six male children having a mean age of 7.62±4.46 years. Seven patients had right ureteral stones, five had left ureteral stones, and one had bilateral ureteral stones, with a mean diameter of 8.96±3.52 mm. Preoperative pelvis renalis diameter was 16.22±11.45 mm.A jj stent was used in all patients.Abdominal pain, hematuria,nausea–vomiting,and pollakiuria were the initial symptoms,hematuria,ureteral damage,infection, and spontaneous jj stent removal were complications. In three cases, fragmentation was not successful and we needed a second session.In the EKL group, a total of 18 ureteroscopic procedures were performed on ten female and six male children with a mean age of 6.81±3.67 years.Six patients had right ureteral stones,eight had left ureteral stones,and two had bilateral ureteral stones,with a mean diameter of 8.26±2.83 mm.Mean preoperative pelvis renalis diameter was 10.18±2.66 mm.We did not use any jj stents.Initial symptoms were abdominal pain,hematuria, nausea–vomiting,vomiting,dysuria,and pain in the costovertebral region,while hematuria was the postoperative complication.In two cases,fragmentation was not successful and we needed a second session.Statistically,there were no differences between age,stone size,or preoperative pelvis renalis diameter in either group (pvalues:0.522,0.688,0.421 respectively). **Conclusion:** Both Ho:YAG lithotripter and EKL are effective and can be successfully used in ureteroscopic management of pediatric ureterolithiasis.The complication rate was slightly lower when an EKL was used.

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Title: A case of unilateral solitary renal cyst with hydronephrosis of a baby girl correctly diagnosed by prenatal sonography
Authors: Sharmin Seraz, MS(4)
Institutions: Bangladesh Institute of Child Health(4)
Category: Urology
Keywords: Solitary Renal Cyst,Prenatal diagnosis,Hydronephrosis
Aim of the Study: To present a case of unilateral solitary renal cyst with hydronephrosis , its diagnosis and the treatment carried out. **Methods:** A 2 days old girl was brought to pediatric surgery outpatient department as antenatal diagnosed right renal cyst with hydroneprosis. There were no other symptoms. On examination baby was healthy .On palpation, right kidney was palpable and ballot able. No other organomegaly was found. A fairly big right renal cyst (5.4 x 4.1cm) with moderate right sided hydronephrosis & markedly dilated right renal pelvis (1.99cm) was found on USG scanning of the baby at her age 2 days. For further evaluation 99m TC DMSA renal scan was done which revealed non visualized right kidney with a big photon deficit area in right renal area and 99m TC DTPA renal scan revealed gross parenchymal insufficiency in right kidney. For confirmation CT-urogram was done and reveled a fairly big well define

right renal cyst compressing right renal parenchyma as well as moderately dilated right renal pelvis. Patient was observed for 2 months and call for a follow up visit after then. Baby was occasionally febrile during this period. We reviewed an USG scan at age 2 month and revealed a fairly big clear cyst measuring about 5.45 4 x 4.15 cm. Calyceal system was dilated with marked dilatation of right renal pelvis (1.99cm). **Main Result:** Total nephrectomy was performed with perenteral antibiotic therapy. Macroscopic structure of kidney was closely similar as that of antenatal & postnatal sonographic picture. Histopathology revealed simple right renal cyst with no malignancy.The patient's clinical evolution has been satisfactory. **Conclusion:** Early diagnosis of disease & appropriate intervention with good patient compliance was achieved by correctness of sonographic report.

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Title: Eosinophilic Cystitis, mimicking Bladder Rhabdomyosarcoma in a male Child & review of the literature.
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Institutions: University of Malaya Medical Centre, University of Malaya(1), University of Malaya Medical Centre, University of Malaya(2), Professor & Chief Of Paediatric Surgery, University of Malaya Medical Centre, University Malaya(3), Trainee in Pathology, Sime Darby Medical Centre(4), Senior Lecturer & Consultant Ped. Urology, University of Malaya Medical Centre, University Malaya(5), University of Malaya Medical Centre, University of Malaya(6), Senior Lecturer, University of Malaya Medical Centre, University Malaya(7), Senior Consultan Pathologist, Sime Darby Medical Centre(8)
Category: Urology
Keywords: Eosinophilic cystitis,Rhabdomyosarcoma,Anti-inflammatory agents
Aim of the Study: Eosinophilic Cystitis (EC) is a rare inflammatory lesion. The clinical features, pathology, diagnosis, etiology, management & outcome of EC are discussed **Methods:** A 7-year-old male child presented with history of hematuria, dysuria, weight loss & suprapubic & right loin pain of 2-month duration. He was seen by an adult urologist, & a paediatrician. His symptoms persisted. Contrast CT scan was performed by a pediatric surgeon, which showed thickening of the bladder wall posteriorly & laterally, & was diagnosed as rhabdomyosarcoma (RMS) & was referred. Cystourethroscopy was performed, which showed elevated, velvety, polypoidal & edematous masses. The lateral wall contained bullous lesions "mimicking" RMS. Biopsies were taken. The lesion was obstructing the right orifice. He had a percutaneous nephrostomy. He had Posterior urethral valves & it was fulgurated. Rectal examination showed a large firm mass in the prostatatic region & extending upwards. HPE showed eosinophilic cystitis. Microscopy revealed polypoidal fragments of bladder mucosa. The surface epithelium was partly eroded and showed foci of urothelial hyperplasia. The underlying subepithelial stroma was infiltrated by sheets of mature eosinophils. Charcot Leyden crystals were present. Peripheral blood examination showed 12% eosinophils. Culture for bacteria & viruses were negative. He was started on antibiotics, anti-inflammatory agents, diclofenac sodium & prednisolone. Deworming was given twice. **Main Result:** He responded well to therapy. His eosinophils was 2%. Rectal examination was normal. He continued his treatment & cystoscopy two month later, showed complete resolution. **Conclusion:** Benign tumours of the bladder with infiltrates of eosinophils is often misdiagnosed as malignant tumours. About 135 cases were reported & children formed 21%. Unlike adults, a male preponderance has been reported. Genetic predisposition has not been observed. The pathophysiology of this benign condition is unclear and has been related to an exaggerated disorder of the immune regulatory response to foreign protein substances.

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Title: Vesicostomy, is it treatment option for the Posterior urethral valves in children.
Authors: Hadjou Belaid Fatma, PhD(1)
Institutions: (1)
Category: Urology
Keywords: Posterior urethral valves ,Vesicostomy,efficiency, morbidity
Aim of the Study: Objective: To evaluate the results of the treatment of Posterior urethral valves in children by a vesicostomy. **Methods:** Materials and Methods: Retrospective study of 25 holders of valves, aged from one week to 02 years, supported and followed over a period of 06 years. **Main Result:** Results: The Appeals symptomatology is an abnormality of the urinary stream 15 (60%), urinary retention 6 (24%), Abdominal mass 4 (16%). Before vesicostomy, all patients underwent an ultrasound, a voiding cystourethrogram, objectifying dilated excretory cavities, thickened bladder wall, dilated posterior urethra associated with reflux. The associated morbidity, represented by stenosis vesicostomy 2 (8%), Prolapse of the bladder mucosa 1 (4%). 08 (32%) patients underwent endoscopic resection with closure vesicostomy between 2-4 years with disappearance of all clinical symptoms, regression of the expansion, the bladder capacity between 115-280 ml with normal renal function on a on a monitoring of 03 years, 17 (68%) always derived with good clinical- radiological evolution. **Conclusion:** Conclusion : The efficiency, low morbidity make the vesicostomy a temporary bypass for the treatment of post urethral valves to preserve the upper urinary tract.

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Title: The effect of Alfuzosin on Renal Resistive Index, Urinary Electrolytes and β2 Microglobulin levels and TGF ß-1 levels of Kidney Tissue in rats with Unilateral Ureteropelvic Junction Obstruction
Authors: Faik Kose, MD(1), Zafer Turkyilmaz, MD(2), Kaan Sonmez, MD(3), RAMAZAN KARABULUT, MD(4), Aylar Poyraz, MD(5), Ozlem Gulbahar, MD(6), Arzu Aral, MD(7), Cagri Damar, MD(8), Cem Kaya, MD(9), A.Can Basaklar, MD(10)
Institutions: Gazi University Medical Faculty(1), Gazi University Medical Faculty(2), Gazi University Medical Faculty(3), Gazi University Medical Faculty(4), Gazi University Medical Faculty(5), (6), (7), (8), (9), (10)
Category: Urology
Keywords: experimental unilateral partial ureteropelvic junction ,obstructive renal damage,Alfuzosin treatment
Aim of the Study: In this study, it was aimed to determine the renoprotective effects of alfuzosin in experimentally generated unilateral partial ureteropelvic junction obstruction(UPO) in rats. **Methods:** Thirty Long Evans rats were randomly allocated into 5 groups, each consisting of 6 rats. In control group (C), nothing was performed; in group Sham (S) only laparotomy was done, in Alfuzosin group (A) only alfuzosin was administered for two weeks (10 mg/kg/day p.o.) without any surgery; in UPO group, unilateral UP junction obstruction was produced; and in the group UPT, alfuzosin was administered for two weeks (10 mg/kg/day p.o.) in addition to UPO production. In all groups, renal pelvic anteroposterior diameters were determined ultrasonography (USG) and renal arterial resistivity indexes by color Doppler USG. Urine was collected after 24 hours from all groups and at the end of the experiment, blood samples were obtained. Blood and urine electrolytes and TGF-β1, urine density, urine β2 microglobulin were determined. Renal tissue samples harvested from all of the rats were histopathologically evaluated. Results were determined using Oneway Anova T-test; $p < 0.05$ was accepted as significant. **Main Result:** When groups were compared, it was seen that the urine density in the UPT group was lower with respect to the UPO group; and blood electrolytes were preserved as close to normal ($p <0.05$). In the UPT group, urine TGF-β1 and blood TGF-β1, blood β2 microglobulin and histopathologic damage levels were lower compared to the levels of the UPO group ($p <0.05$). **Conclusion:** It is shown that, in this experimental unilateral partial ureteropelvic junction obstruction model, alfuzosin treatment prevents obstructive renal damage.

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Title: Severity of malcircumcisions and circumcision related complications in three tertiary health facilities in Southern Nigeria
Authors: Philemon Okoro, MBBS, FWACS(1), Ngozi Ekeke, MBBS, FWACS(2)
Institutions: University of Port Harcourt Teaching Hospital(1), University of Port Harcourt Teaching Hospital(2)
Category: Urology
Keywords: Circumcision,Complications,Severity
Aim of the Study: To evaluate the spectrum of malcircumcision and circumcision related complications in our region , identify the major challenging ones, and suggest **Methods:** Data was prospectively obtained from all male children presenting with malcircumcisions or circumcision-related complications in three tertiary health facilities in southern Nigeria over an 8 year period. Data included complication presented, age, circumcisionist, method of circumcision, treatment offered, outcome. **Main Result:** A total of 126 male children with 143 malcircumcisions or complicated circumcisions were seen within the period. The spectrum ranged from minor glandular adhesions to penile amputation and life threatening excessive bleeding. Procedures included: manual removal of plastibell, suture ligation of bleeding vessel, adhesiolysis, preputial trimming, meatoplasty, urethroplasty , fistuloplasty, glanuloplasty and penile repair. Most tasking were urethral loss, fistula closure and glanular amputation. There were no deaths **Conclusion:** Circumcision related complications are common in our region. Penile amputation, urethral loss, and fistulae are the most challenging complications. There is need to educate the health workers and general public on the hazard of untrained circumcisionists.

PA2-8 | MODERATORS: ZACHARIAS ZACHARIOU, SHILPA SHARMA

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Title: ECTOPIC ANOMALIES OF THE KIDNEY IN SERIES OF 45 PATIENTS
Authors: Irena Maric, MD(1), Zoran Krstic, PhD(2), Zoran Bukumiric, PhD(3)
Institutions: Department of Pediatric Surgery Clinical Center of Montenegro(1), (2), (3)
Category: Urology
Keywords: ECTOPIC,KIDNEY,ANOMALIES
Aim of the Study: Ectopic kidneys are thought to occur in approximately 1 in 1000 births, but only about 1 in 10 of these is ever diagnosed. They have variable clinical presentation. There is no single protocol for diagnostic and treatment. We tried to identify anatomical, clinical and radiological characteristics of certain forms of these anomalies. **Methods:** In this study 45 consecutive patients were retrospectively reviewed from 2010-2016. Age from 0 to 18 years,53% boys. Patients were divided into three groups: 1. Symptomatic patients (by urinary tract or other symptoms); 2. Asymptomatic patients and 3. Patients with solitary ectopic kidney We selectively used Ultrasonografy, VCUG, MR

urography, nuclear medical methods **Main Result:** In the group of RE 29(58%)are pelvic;6(13%) iliac;3(7%)thoracis;6 (13%)crossed ;1(2%) cranial. 3(7%) patients with solitary ectopic kidney .Symptomatic patients were 23(51%) and 22(49%) were asymptoms. Associated anomalies were present in 31(69%)patients: hydronephrosis 12pts, VUR 7pts, vesicaurinarianeurogenes 6pts, ARM in 4pts and calculosis in 2pts.There were right sided 23(51%), and bilateral ectopy was found in 2(4%) cases.Ultrasound is used for all 45 patients. VCUG was done in 22(49%)pts .Magnetic urography was performed in 26(58%) patients with EK.Some kind of surgical procedures underwent 18(40%) patients. **Conclusion:** When HK is detected, associated renal and urinary anomalies should be evaluated. Patients need long-term follow-up and should be examined regularly for potential complications. Diagnosis should be kept to the minimum and thus avoid radiation,reduce medical expenses.Clinical presentation and ultrasound findings dictate the need for other diagnostic methods.

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Title: MINIMAL INVASIVE TECHNIQUE FOR REMOVAL OF SPONTANEOUS KNOTTED CATHETER IN THE BLADDER IN AN INFANT
Authors: dr venkatesh annigeri, MS(1)
Institutions: SDM medical college and hospital .Sattur, dharwad,Karnataka(1)
Category: Urology
Keywords: : Urinary catheterization,infant feeding tube,knotting
Aim of the Study: To report a case of intravesical spontaneous knotting of infant feeding tube in an infant treated successfully by minimal invasive technique. **Methods:** An eight months male infants, admitted for evaluation of fever, poor feeding and lethargy of 3 days. Direct catheterization for urinalysis using a 5 French feeding tube was done, then catheter removal became difficult. Pelvis roentgenogram showing a true knot in the catheter in posterior urethra. On examining along the urethra, the knotted catheter could be palpated at the perineum. Several attempts of forceful introduction of sterile saline and contrast material under fluoroscopy failed to unwind the loop. Under general anaesthesia another attempt was made to untie the knot and straighten the catheter with 3 French ureteric catheter stylet through the catheter lumen. Failing this maneuver, catheter was pushed into bladder from posterior urethra with the help of ureteric catheter stylet Knotted feeding tube removed by minimal invasive technique from the bladder. **Main Result:** The bladder was filled with normal saline through feeding tube, a 5mm laparoscopic port was introduced in the bladder in the suprapubic region. A 6-7.5 French ureterorenoscope was introduced through the laparoscopic port and catheter was removed.The child had been passing urine in good stream on follow up. **Conclusion:** Spontaneous knotting of a catheter is a rare complication. With availability of appropriate catheters and adequate knowledge and skill, this complication can be reduced to the barest minimum. If at all this clinical scenario is encountered this could be tackled by minimally invasive means.

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Title: Balanitis Xerotica Obliterans – is circumcision given enough attention?
Authors: Nikica Lesjak, MD(1), Rok Kralj, MD(2), Zoran Bahtijarevic, MD(3), Fran Stampalija, MD(4), Mislav Bastic, MD(5), Anto Pajic, MD(6), Bozidar Zupancic, PhD(7)
Institutions: Children's Hospital Zagreb(1), Children's Hospital Zagreb(2), Children's Hospital Zagreb(3), Children's Hospital Zagreb(4), Children's Hospital Zagreb(5), Children's Hospital Zagreb(6), Children's Hospital Zagreb(7)
Category: Urology
Keywords: balanitis xerotica obliterans,circumcision,urinary obstruction
Aim of the Study: Balanitis xerotica obliterans (BXO) is a chronic, self sustaining inflammation of the prepuce and glans of unclear pathology, characterized by cicatrization of the preputial skin, ultimately leading to dysuric and obstructive complications if not treated. The aim of the study is to accentuate the existence and incidence of this condition and possible complications which may arise from inadequate treatment and follow-up of these patients. **Methods:** We have retrospectively analyzed the data of all patients with suspected BXO treated in the period from 2011 to 2015. Age distribution, subjective complaints, incidence of complications and the need for further surgical treatment were analyzed, as well as the correlation between pathohistological results and intraoperative suspicion for BXO. **Main Result:** Over the period of 4 years we circumcised 1397 boys and have done 185 PH analyses for suspicion of BXO. 120 of them have confirmed the diagnosis. Clinical findings include the span from simple phimosis to chronic renal disease due to urinary obstruction caused by urethral stenosis. Average age of our patients is 9 years and 8 months, and average follow up 64 days. In the BXO group average age is 10 years and 2 months, and average follow up 83 days, ranging up to 3 years in some cases. 26 patients required additional surgical treatment such as meatoplasty or dilatation. we performed 24 uroflowmetries. **Conclusion:** It is imperative to take into consideration the possibility of BXO in patients with phimosis. Pathohistological analysis of the prepuce should be performed in all patients. If circumcision isn't performed or if it is performed partially, the condition may worsen and cause the patient to deal with serious complications and morbidity. Follow-up of these patients is crucial and objectification of suspected urinary flow obstruction is required by uroflowmetry, to assess the need for further surgical treatment.

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Title: Non obstructive Non Refluxing Mega ureter with dysplastic contralateral kidney in a child with High Anorectal Malformation (ARM) and segmental dilatation of colon (SDC): 21 years follow up of a patient and Review of literature.
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Institutions: Paediatric Surgery Sabah Women and Children Hospital Sabah, Kota Kinabalu(1), Paediatric Surgery Sabah Women and Children Hospital Sabah, Kota Kinabalu(2), Paediatric Surgery Sabah Women and Children Hospital Sabah, Kota Kinabalu(3)
Category: Urology
Keywords: Non Obstructive Non Refluxing Mega ureter,Segmental Dilatation of Colon,Anorectal Malformation
Aim of the Study: To present the interesting clinical, radiological findings, management and follow up of a child treated for high anorectal malformation (ARM) associated with SDC and mega ureter. **Methods:** Retrospective analysis of records of a child treated for high ARM with mega ureter in single kidney and SDC in Paediatric Surgery Department Queen Elizabeth Hospital and SWACH during August 1995 to May 2016. **Main Result:** 3.2kg baby boy delivered vaginally at term was referred for absent anal orifice. Ultrasonography revealed gross hydroureteronephrosis of left kidney and absent right kidney. Pronogram at 18 hours showed high ARM. Family was against colostomy, hence primary Posterior Sagital Anorectoplasty was done on day 2 of life with prophylactic antibiotics. Follow up ultrasound showed Grade III left mega ureter. Intravenous Urogram (IVU) at 3 months showed prompt excretion of contrast at 5 minutes with gross left hydroureteronephrosis. Renal function confirmed to be good with dilated ureter and pelvis remained static, on follow up USG on 6 monthly interval. Child had persistent constipation from 1 month of age requiring bowel wash. Contrast enema showed segmental dilatation of left colon. Laparotomy and resection of the dilated segment and primary anastomosis was performed. Bowel habits were normal and follow up USG and IVU revealed remarkable regression in size of ureter and pelvis after resection of SDC. Isotope nuclear renal scan at 20 years showed good renal function without any obstruction or scarring. Growth and development was good and the patient will be completing his diploma to become Assistant Medical Officer. **Conclusion:** Careful follow up and non-Operative management of non-obstructive non-Refluxing mega ureter is safe even in single kidney. Early surgical resection of SDC will relieve pressure over the bladder and help to improve the obstruction of the urinary tract. Muscular deficiency of ureter and colon may have the same embryogenesis.

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Title: Age at referral for Undescended Testes: Has anything changed in a decade?
Authors: Mohit Bajaj, MBBS, BE (Hons)(1), Vipul Upadhyay, FRCSEd (Paed. Surg); FRACS (Paed. Surg.)(2)
Institutions: Starship Childrens Health(1), Starship Childrens Health(2)
Category: Urology
Keywords: Orchiopexy,Undescended Testes,Referral Patterns
Aim of the Study: Undescended testis (UDT) affects 1-6% of males and is one of the most common disorders in pediatric surgery [1]. Updated consensus guidelines now recommend surgical management of UDT by 18 months [2-4]. We compare the age at referral and subsequent timing of orchiopexy with data published from 1996-1998 at our institution [5], prior to the advent of updated guidelines. **Methods:** A retrospective review of all patients undergoing an orchiopexy for UDT from 2014 to 2016 was conducted. The age at time of first referral, first outpatient review and age at date of surgery were recorded. Calculations were made for time between referral and clinic visit (T-1) and between clinic visit and surgery (T-2). This data was compared with data from a previous 2-year period of orchiopexies performed at our institution between 1996- 1998. Data are reported as median (range). **Main Result:** In the 2014-2016 group (n=216), the median age at time of referral was 5.3 (range 0–182) months. Following referral, children were seen in the clinic at a median interval 1.84 (T-1: range 0.16–17) months. The median interval between the clinic visit and operation was 2.95 (T-2: range 0–30.7) months. The median age at time of surgery was 12.6 (range 4.6-191.3) months. Compared to the data from 1996-1998 (n=325), there was a drop in the median ages both at time of referral (23 months vs. 5.3) and at time of operation (38.8 months vs. 12.6). However, median times between referral and clinic visit (T-1: 1.7 months vs. 1.84), and between clinic and operation (T-2: 3.3 months vs. 2.95) were essentially unchanged. **Conclusion:** Our second snapshot in time (2014-2016) shows improvements in median age at referral (under 6 months) and age at time of operation (at 12.6 months) when compared to the older snapshot (1996-1998). These timings are more in keeping with recommendations for orchiopexy.

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Title: ANTENATAL HYDROURETERONEPHROSIS (HUN) DUE TO SEGMENTAL DILATION OF SIGMOID COLON (SDSC): REPORT OF A CASE AND REVIEW OF LITERATURE.
Authors: Siti Nur Aien Hamid Hamzah, MD(1), Jayant Rajah, MD(2), Hazlina Mohd Khalid, MD(3), Ashok Khrishnan, MD(4), Rajah Shunmugam, FRCS(5)
Institutions: Department of Paediatric Surgery Sabah Women and Children Hospital Kota Kinabalu Sabah(1), Department of Paediatric Surgery Sabah Women and Children Hospital Kota Kinabalu Sabah(2), Department of Paediatric Surgery Sabah and Women Hospital Kota Kinabalu Sabah(3), Department of Paediatric Surgery Sabah and

Women Hospital Kota Kinabalu Sabah(4), Department of Paediatric Surgery Sabah and Women Hospital Kota Kinabalu Sabah(5)
Category: Urology
Keywords: Segmental Dilation of Sigmoid Colon,Hydroureteronephrosis,Bladder outlet obstruction
Aim of the Study: 15% of the fetus may have hydronephrosis during antenatal ultrasound scan, and rarely it can be secondary to intestinal pathology. This study is to illustrate the interesting clinical, radiological findings and management of an infant presenting with hydronephrosis secondary to retention of stools in SDSC. **Methods:** Retrospective analysis of records of an infant treated for SDSC causing hydroureteronephrosis (HUN) during November 2013 to May 2016 in SWACH and review of literature was performed. **Main Result:** A male baby delivered by induction of labor at 39 weeks for antenatally detected HUN with oligohydramnios was admitted for investigations in Paediatric ward. Baby had dysmorphic features and cleft palate. Ultrasound confirmed bilateral hydronephrosis. Baby was started on Trimetoprim as prophylaxis. Baby developed constipation at 2 months and plain radiography abdomen showed soft tissue shadow at lower abdomen. Ultrasound revealed worsening HUN. Micturating Cystourethrogram (MCUG) showed Grade V Vesicoureteric reflux (VUR) with HUN. Contrast enema showed grossly dilated sigmoid colon with large faecaloma.The bowel distal and proximal to the dilated part was normal. Suction rectal biopsy to exclude Hirschsprung's disease was reported as normal. Laparotomy showed grossly dilated sigmoid colon with large faecaloma. Resection of dilated segment, multiple biopsies of proximal and distal colon and colostomy was performed. Normal ganglion cells were seen in all biopsy specimens. There was complete resolution of HUN and VUR in ultrasound and MCUG performed 3 months after surgery. Closure of colostomy was performed later. Child passing normal stool without any urinary tract infection during the past 15 months of follow up. **Conclusion:** Rare intestinal pathology like SDSC can cause hydronephrosis in fetus or infants. It may be due to bladder outlet obstruction or spasm cause by the dilated segment of colon. Awareness, early investigations and adequate surgical resection can avoid extensive investigations and renal damage.

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Title: Congenital Prepubic Sinus: A developmental enigma ?
Authors: Bindey Kumar, MS(1)
Institutions: All India Institute Of Medical Sciences, Patna(1)
Category: Urology
Keywords: Congenital prepubic sinus,voiding cysto urethrogram, Dorsal urethral duplication
Aim of the Study: Congenital prepubic sinus is a rare clinico-pathological entity with uncertain aetiology. Only thirty cases have been reported in English literature. Many theories are proposed for the development of these sinuses. We present a case report which supports the theory of dorsal urethral duplication. **Methods:** A 5year old male child presented with a small opening at the peno-pubic junction since birth. He had complains of recurrent foul smelling sero-purulent discharge from the opening. There was no other complains like dysuria or stream distortion. On clinical examination, a small opening at prepubic area was present. Phallus of the child was looking normal except for anti clockwise mild penile torsion.The sinus tract admitted a 5 french infant feeding tube only up to 3 cm and was directed upwards. Voiding cysto urethrogram was done showing normal bladder and urethra without any communication with the sinus tract. **Main Result:** Penile degloving was done to correct penile torsion.sinus tract was excised completely. Histology revealed tubular structure having transitional epithelium at mid portion covered with muscle bundle around the lining epithelium and the distal end showed stratified squamous epithelium with unremarkable sub-epithelial tissue. On follow up visits there were no complains. Radiological investigations are helpful to delineate bladder or urethral communication. Complete surgical excision is curative without recurrence. **Conclusion:** Many theories are proposed to explain formation of Congenital prepubic sinus(CPS).First theory suggests CPS as a localized failure of midline fusion in the lower abdominal wall. second view CPS as a congenital fistula of the primitive urogenital sinus.Third view claims its formation due to a residual cloacal membrane and umbilicophallic groove.Fourth view considers it as a variant of dorsal duplication of the urethra. The present case fulfils the criteria of congenital prepubic sinus and the characteristic histopathological finding support the theory of dorsal urethral duplication.

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Title: Do JJ stents increase the effectiveness of extracorporeal shock wave lithotripsy for pediatric renal stones?
Authors: Metin Gunduz, MD(1), Tamer Sekmenli, MD(2), Ilhan Ciftci, MD(3), Ahmet Midhat Elmacı, MD(4)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1), Selcuk University Medical Faculty Department of Pediatric Surgery (2), Selcuk University Medical Faculty Department of Pediatric Surgery (3), Dr Faruk Sükan Maternity and Children’s Hospital Department of Pediatric Nephrology,Konya,(4)
Category: Urology
Keywords: renal stones,extracorporeal shock wave lithotripsy,pediatrics
Aim of the Study: We aimed to evaluate the effects of preoperative urinary catheterization in nephrolithiasis treatment with extracorporeal shock wave lithotripsy (SWL). **Methods:** Patients admitted to the Department of Pediatric Surgery for renal stones between June 2012 and June 2014 were evaluated retrospectively.They were divided into two groups based on JJ stent placements. Group 1 did not receive JJ stents,while group 2 did.The recorded demographic data for each group included age,sex,stone size,location,sessions,and complications.The Elmed Complit ESWL system was

used with 11–13 kV,and 1,000–1,200 shots in patients 2–4 years of age,and 11–14 kV,and 1,000–1,500 shots for patients over 4 years. **Main Result:** In group 1,18 sessions of SWL were performed on 8 female and 2 male children with a mean age of 4.5(range: 2–12) years and stone diameter of 9(range: 7–15) mm.The locations of the renal stones were in the upper pole in one patient,seven in the lower pole,and two in the pelvis renalis.Postoperatively,one patient had hematuria,two had dysuria,and one had a stone in the external urethral meatus.Eighty percent of patients were stone free,there were no fragmentations in two patients,and one patient did not continue treatment.In group 2,15 SWL sessions were performed on five female and five male children with an age of 4(range: 3–5) years and stone diameter of 9(range: 7–16) mm.The locations of the renal stones were in the upper pole in six patients,three in the lower pole,and one in the ureteropelvic junction.JJ stents were placed in all patients preoperatively.Postoperatively,three patients had hematuria and one had dysuria.All of the patients were stone free.Statistically,there were no differences in age,sex (female ratio),stone size,location (right ratio),and the number of sessions(p values were 0.243,0.350,0.300,1.000,and 0.329 respectively). **Conclusion:** Our results indicate that SWL without preoperative ureteral stenting is effective and safe in the pediatric population.Preoperative JJ stenting is unnecessary in patients, especially in those with smaller stone diameters.

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Title: Persistent pure urogenital sinus: which surgical technique?
Authors: Essam Elhalaby, MD(1), Amel A Hashish, MD(2), Ashraf A Elatar, MD(3), Abdelmotelb Effat, MD(4)
Institutions: Tanta University(1), Tanta University(2), Tanta University(3), Tanta University(4)
Category: Urology
Keywords: pure urogenital sinus ,hydrometrocolpos,urinary retention
Aim of the Study: Persistent urogenital sinus (UGS) without associated anorectal malformation or disorders of sex development is very uncommon anomaly in females. The aim of this study was to outline various clinical presentation, and to evaluate the choice and the outcome of different surgical techniques used in management of these patients in our institution **Methods:** The medical records of 14 female patients with pure UGS were retrospectively reviewed. the ages ranged from one day to 4 years . they were treated during the period from 2005-2015. The pattern of clinical presentations, the surgical technique, and the functional and cosmetic outcome were analysed. **Main Result:** The main presenting symptoms were: neonatal abdominal /pelvic mass(n=9), urinary retention/ obstructive uropathy (n=4); Neonatal sepsis (n=1 Recurrent urinary tract infection (n=1) The used definitive surgery techniques were : flap vaginoplasty (n=4), perineal UGS mobilisation (n=4), UGS mobilisation (ASTRA) (n=3), vaginal pull through (abdominal& perineal) (n=2), and sigmoid colon vaginoplasty (n=1) The cosmetic results were satisfactory in all patients, Vaginal stenosis occurred in two patients necessitated repeated vaginal dilatation. Stress urinary incontinence in two patient. Faecal continence was noted in all patients. **Conclusion:** 1. Persistent UGS should be ruled out in every female neonate with palpable lower abdominal cystic mass, 2. The surgical technique should be chosen carefully according to the length of common channel, 3.The cosmetic and functional outcome are satisfactory when treated properly

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Title: APHALLIA: CASE REPORT AND LITERARTURE REVIEW
Authors: Clecio Picarro, PhD(1), Paulo CF Cruzeiro, PhD(2), Marcelo E Miranda, PhD(3), Thiago LN Lazaroni, PhD(4), Fabio M Botelho Filho, MD(5)
Institutions: Faculty of Medicine of the Federal University of Minas Gerais(1), Faculty of Medicine of the Federal University of Minas Gerais(2), Faculty of Medicine of the Federal University of Minas Gerais(3), Faculty of Medicine of the Federal University of Minas Gerais(4), Faculty of Medicine of the Federal University of Minas Gerais(5)
Category: Urology
Keywords: aphallia,penile agenesis,urinary anal fistula
Aim of the Study: The aim of this manuscript is to describe a rare case of true aphallia, associated with urinary fistula to the anal border, and do a review of the literature of this challenging urologic anomaly. **Methods:** The manuscript consists in a case report of a baby boy with absence of the penis, well-developed scrotum and urinary fistula to the anal border. The testes were normal, and there were no signals of other malformations. The defect was not diagnosed by prenatal ultrasonography, and the new parents were hoping a baby girl. No familiar or parental urinary malformations were related, nor drug or mediacation use during pregnancy. **Main Result:** It is a case report. **Conclusion:** Penile agenesis is a rare malformation, and maybe, the incidence in the literature is overestimated, because erroneous diagnosis. There are some surgical reconstruction strategies, no one of them ideal. The management of these cases should be deeply discussed, with a multidisciplinary experienced team. The patient and family also nedds a psychological and social work support, to minimize the efects of this severe malformation.

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Title: Endoscopic Correction Of Vesico-Ureteric Reflux In Children
Authors: MALAH NOURIA, MPH(1), HAMIDOU FAYCAL, PhD(2), HADJOU BALAID FATMA, PhD(3), BENMOHAMED NADIR, MD(4)

Institutions: (1), Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA(2), Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA(3), Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA(4)
Category: Urology
Keywords: Vesico ureteral reflux ,Endoscopic treatment ,Children
Aim of the Study: * Vesico ureteral reflux is the most common urological malformation in the pediatric population. . * The purpose of this study: - Report experience of 02 years using deflux as bulking agent in the treatment of V.U.R. - Value efficacy, safety of this approach (TE) in the management of V.U.R. -Advantages, adverse of (TE) over the others options antibiotic prophylaxis, antireflux procedures. **Methods:** * This is a retrospective study from March 2010 to July 2012. * Patients demographics: Number of patients: 40. Number of ureters : 75. Gender: Male: 18. Female: 22 Age ranging: 18 months to 12 years. V.U.R grad : II 35 (46,6%). III 16 (21%). IV 113 (17,3%). V 11 (14,6%). Type of V.U.R : Primary : 60 ureters. Secondary : 15 ureters **Main Result:** * The VUR was cured after one injection in 70,6 %. * The VUR down grad in 10,8 %. * TE failed to correct VUR in 18,6 %. **Conclusion:** * Endoscopic correction of V.U.R is a minimally invasive treatment option in children; it's an established alternative to long term ATB and open surgery. * Since it is introduction in our hospital it's be offered as first line option in the management of all grads , number of anti reflux procedures has decreased dramatically. * We believes that there is a learning curve for this approach, since the cure rates in our experience was increasing with time. * Despite the ideal injectable materiel is still under discussion, our experience using deflux was no associated with any adverse events but large and long-term follow-up results regarding these must be performed.

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Title: Transurethral correction of high degree of vesicoureteral reflux in children
Authors: Akmal A Rakhmatullaev, PhD(1), Makhmud M Aliev, PhD(2)
Institutions: Tashkent pediatric medical institute, department of pediatric surgery(1), Tashkent pediatric medical institute, department of pediatric surgery(2)
Category: Urology
Keywords: vesicoureteral reflux,HIT,endoscopic correction
Aim of the Study: To improve the endoscopic treatment of high degrees of vesicoureteral reflux (VUR) in children
Methods: 149 patients (197 ureters) aged 1 to 14 years performed transurethral correction VUR IV-V degree.For endoscopic treatment, we used the drug "DAM + (Contents 3-Dimensional Polyacrilamid)" according to the procedure HIT1 and HIT2. In HIT1 level of bolus formed in the lumen of the ureter andin HIT2 bolus formed in the lumen and the uretersubmucosa **Main Result:** According to the International Classification of VUR (IRSC, 1986.) IV grade reflux was identified in 124 cases, V grade in 73 ureters.In all cases revealed lateralization and short submucosal segment of ureters (5 ± 3mm). The effectiveness of interventions in the early period after surgery was assessed by regression of urinary syndrome in Doppler US ureteral urine ejection and adverse of vesicoureteral reflux.Delayed ureteral urine ejection was observed in 5 patients with IV grade of VUR, whom performed HIT2 procedure, and relief was observed at the time of hospital discharge. In long time follow up 132 children (96 children with grade IV, 36 children with V grade) noted stable elimination of urinary symptoms and the absence of VUR. Preservation of VUR were found in 16 patients, 5 of them had grade IV and 11 V grade.However, these patients had a reduction of VUR to III grade, and they were required to repeat transurethral correction. HIT2 procedure performed in these patients resulted in elimination of VUR and urinary syndrome in 84.5% of cases **Conclusion:** Transurethral correction at high grades of VUR in children with HIT1 and HIT2 techniques yield positive results and indications for transurethral re-correction are reduce or maintaining the degree of reflux with urinary syndrome

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Title: New clinical sign for diagnosis of Intermittent Testicular Torsion (ITT)
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Institutions: The Nairobi Hospital, Nairobi, Kenya.(1)
Category: Urology
Keywords: diagnosis of Intermittent,Testicular,Torsion
Aim of the Study: ITT cases are 10 time more likely to develop acute testicular torsion than normal poulation ,it was also found that 50% of acute testicular torsion cases reported previous attacks of Intermittent testicular which was always passed without diagnosis and hence no action. The purpose of this paper is to describe a new clinical sign for the diagnosis of ITT to improve the diagnosis hence the outcome of testicular torsion. **Methods:** Retrograde study of 15 cases presenting with ITT between 2010- 2015 were reviewed. The age ranged between 11 and 17 years. The main complaint was acute unilateral testicular pain at puberty or pre puberty which continues for minutes to some hours and resolve spontaneously, usually they complain of multiple distant attacks. The new method was developed because classic methods failed to anticipate torsion. **Main Result:** In 6 cases the classical diagnostic method used, torsion could not be proved and all patients refused surgery, three of them presented later with acute torsion , one was saved and two lost their testis. In nine patients diagnosis was confirmed with a new method of inducing manual torsion by rotating the testis anticlockwise (laterally), 180o to 360o and maintaining it for 30 seconds. If this reproduce the same pain that

the patient experienced during the previous attacks , then prophylactic bilateral orchidopexy performed and the testicular salvage rate was 100%. **Conclusion:** The diagnosis of ITT by inducing manual torsion is very useful, providing certainty of diagnosis and clear indication for surgery for both the surgeon and the patient, thus enabling early intervention and preventing testicular loss due to torsion.

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Title: THE CLINICAL IMPLICATIONS AND RENAL FUNCTION IN CHILDREN WITH SOLITARY FUNCTIONING KIDNEY (SFK): A PROSPECTIVE STUDY.
Authors: VEERABHADRA RADHAKRISHNA, MCh(1), Krishnakumar G, MCh(2)
Institutions: Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(1), Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(2)
Category: Urology
Keywords: Solitary functioning kidney (SFK),primary SFK (pSFK),ipsilateral congenital anomalies of kidney and urinary tract (ipsilateral CAKUT)
Aim of the Study: 1. To evaluate the etiology, clinical status and renal functional status in children with SFK 2. To compare primary SFK (pSFK) with secondary SFK (sSFK) 3. To assess the effect of ipsilateral congenital anomalies of Kidney and Urinary tract (CAKUT) in SFK **Methods:** A prospective study was conducted in the Department of Paediatric Surgery, JIPMER, India for 26 months from March 2014 to May 2016. All children with SFK presented during the study period were included in the study. Children with malignancy were excluded. Demographic data were recorded. Microalbuminuria was tested in spot urine. Estimated GFR (eGFR) was calculated using Modified Schwartz formula. Chronic kidney disease (CKD) was defined as per NKF's Kidney Disease Outcomes Quality Initiative (KDOQI). **Main Result:** A total of 45 patients with SFK were studied. 31 (68.9%) patients belonged to pSFK while 14 (31.1%) patients belonged to sSFK. 13 (28.9%) patients had ipsilateral CAKUT. 14 (31.1%) patients were asymptomatic while the same number of patients developed urinary tract infection. 11 (24.4%) patients were found to have hypertension.15 (33.3%) were wasted, 14 (31.1%) stunted while 12 (26.6%) were both wasted and stunted. The patients having microalbuminuria, reduced eGFR and CKD were 27 (60%), 31 (68.9%) and 18 (40%) respectively. sSFK was found to have significantly higher rate of microalbuminuria (12/14 vs. 15/31; p-0.018) compared to pSFK but no statistical difference was found in terms of hypertension, reduced eGFR and CKD. SFK with ipsilateral CAKUT was found to have higher rates of hypertension (6/13 vs. 5/32; p-0.031), reduced eGFR (12/13 vs. 19/32; p-0.031), CKD (10/13 vs. 8/32; p-0.06) and microalbuminuria (12/13 vs. 15/32; p-0.005) compared to SFK without ipsilateral CAKUT. **Conclusion:** Children with SFK are at risk of poor somatic growth, hypertension and renal failure. The presence of CAKUT in SFK aggravates the risk of associated morbidity.

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Title: Single piece artificial urinary sphincter (ZSI 375, universal biomedics): sixty months follow up after perineal implantation in a child.
Authors: Sujit Chowdhary, FRCS(1), S Rawat, MS, MCh(2), Deepak Kandpal, MS, MCh(3)
Institutions: Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(1), Indraprastha Apollo Hospital, New Delhi(2), Indraprastha Apollo Hospital, New Delhi(3)
Category: Urology
Keywords: urethral injury,incontinence,artificial urinary sphincter
Aim of the Study: To report the management of urinary incontinence after successful post traumatic urethral stricture surgery following road traffic accident in a child. **Methods:** A 14-year boy came to us with incontinence after post pelvic fracture related urethral injury repair. The child had a road traffic accident in the year 2000 and suffered extensive pelvic injury. Suprapubic cystostomy was done and subsequently he underwent multiple pelvic and urethral reconstructions. Since then he had no control over voiding and leaked urine on walking, coughing and even on standing. He came to us in 2011 at the age of 14 years for urinary incontinence. The upper tracts were normal and he had a normal capacity bladder with normal detrusor pressures. He had insignificant residual volume of urine and no urethral stricture. **Main Result:** He was placed on conservative management with anticholinergics, Clean intermittent catheterization, pelvic floor exercises, timed voiding, but significant leak persisted. The universal biomedics artificial urinary sphincter ZSI 375 was selected for implantation. This is a single piece silicone device with adjustable cuff moulded in circular form. The single piece design and manufacturing of the device makes the implantation easier and decreases the risk of mechanical and infectious complications. The details of the sphincter mechanism and surgery will be presented. He is now five years in follow-up with remarkable change in the quality of life after surgery with spontaneous voiding and continence. **Conclusion:** Single piece artificial urinary sphincter (ZSI 375, universal biomedics) is a reliable option as compared to continent diversion for intractable urinary incontinence following post traumatic urethral injury repair.

480 - PA
Title: Comparison between Preoperative Intramuscular and Topical testosterone therapy in microphallic hypospadias
Authors: Jasmine Bajracharya, MS(1), Md. Abdul Aziz, MS(2), Swapan Kumar Paul, MS(3)
Institutions: (1), (2), (3)

Category: Urology
Keywords: Hypospadias,Microphallic,Testosterone
Aim of the Study: To compare the effect of intramuscular testosterone therapy and topical testosterone therapy in microphallic hypospadias patients. **Methods:** A total of 40 male children having microphallic hypospadias were included in the study after fulfillment of inclusion and exclusion criteria. They were randomly assigned to intramuscular testosterone therapy group (Group 1) and topical testosterone therapy group (Group 2). The comparative parameters between two groups were alteration of penile length and glans width and the adverse effects of testosterone therapy. In each follow up visit, penile length, glans width were measured and adverse effects were noted. **Main Result:** In both groups, the penile length and glans width increased significantly ($p<0.05$). There was statistical significant difference in increase in penile length and glans width between the two groups ($p<0.05$). There was statistical significant difference in developing dermatitis and genital pigmentation between the two groups ($p<0.05$). **Conclusion:** Significant penile growth was observed in both groups but there was less adverse effects in parenteral group. Parenteral is preferable than topical testosterone therapy in microphallic hypospadias in terms of less complications and compliance.

481 - PA
Title: Urethral duplication in boy
Authors: HAMMOU BENSLIMANE, MD(1)
Institutions: medical school of oran(1)
Category: Urology
Keywords: URETHRAL,DUPLICATION,UTI
Aim of the Study: The supernumerary urethra, also called urethral duplication or accessory urethra is a rare congenital anomaly interesting primarily the boy. It is defined by the juxtaposition of two or more channels in smooth muscle. **Methods:** This is a boy aged 02ans with épispadias, clinical examination revealed a complete foreskin; two openings through which the child urine, normal glandular apical hole and another hole epispadias from joining forces is the root of the penis. The passage of two urinary probes confirms duplication **Main Result:** After treatment catheterization of both ureters by two probes and clouding; we find the confluence was about 3 cm of the neck confirmed by the endoscope. The procedure is the dissection of the ectopic urethra epispadias to confluence and resection at this level. **Conclusion:** Urethral duplication is rare malformation. Only the symptomatic form requir surgical repair.

482 - PA
Title: A rare case of mixed gonadal dysgenesis: 45, X0/ 46, X, +mar 1/ 46, X, +mar 2
Authors: CAROLINA TALINI, MD(1), MARIA HELENA CAMARGO PERALTA DEL VALLE, MD(2), KARIN LUCILDA SCHULTZ, MD(3), LETICIA ALVES ANTUNES, MD(4), BRUNA CECILIA NEVES DE CARVALHO, MD(5), TAÍS SOARES DE CARVALHO, MD(6), Anne Twadowsky Didonato, MS(7), VERUSKA PERON, MS(8)
Institutions: HOSPITAL PEQUENO PRÍNCIPE, CURITIBA/PR(1), (2), (3), (4), (5), (6), (7), (8)
Category: Urology
Keywords: Mixed gonadal dysgenesis,mosaicism,mar+2
Aim of the Study: Mixed gonadal dysgenesis is a sexual development disorder in which the individual presents an unilateral testicle and streak or an absent gonad at the other side, associated or not to persistence of Müllerian duct structures. This study aims to report a rare case of mosaicism pattern 45X0/46,X, +mar 1/46,X, +mar 2. **Methods:** The study was based on the review of medical records and evaluation of the current literature. **Main Result:** Right after the baby was born it was not possible do determine the baby's gender. The first physical examination showed micropenis measuring 2,5cm, posterior hypospadia, right gonad palpable at bifid scrotum and left gonad palpable in the inguinal canal. The cariotype was inconclusive: 45, X0. Contrast genitography and uretrocystogram were performed and showed a single perineal orifice below the micropenis and between the bifid scrotum, opacification of the bladder with male aspect urethra during urination and short penile portion. There was also opacification of the posterior vaginal cavity with low junction to the posterior urethra and a linear opacity image suggesting uterine canal. No fistulous path to the rectum was present. The initial approach was laparoscopy that revealed bilateral gonad bands and spermatic elements in the inguinal canal. Müllerian derivatives and intraabdominal ovaries were absent. Gonadal biopsy was performed and concluded that these were infantile testicles. Microarray testing took a few months and resulted in: 45X0/46,X, +mar 1/46,X, +mar 2. Patient was kept on topic hormone use for 6 months and then underwent hypospadia correction (Duckett technique). He developed a small fistula that was surgically corrected six months after the initial hypospadia correction. **Conclusion:** Mosaic chromosomal pattern is a rare condition that can present with a wide variety of phenotypes. Early recognition has important implications on these patients' social and psicological life and also for their proper management.

483 - PA
Title: PROXIMAL HYPOSPADIAS REPAIR AT A TERTIARY CARE CENTER
Authors: Somboon Roekwibunsi, MD(1)
Institutions: Chulalongkorn University & King Chulalongkorn Memorial Hospital, Bangkok(1)
Category: Urology

Keywords: Proximal hypospadias,urethroplasty,tertiary center
Aim of the Study: Proximal hypospadias repair represents a major challenge for pediatric hypospadiologists. We describe our experience in surgical treatment of this severe form of hypospadias in the last 4 years. **Methods:** A retrospective, descriptive study was conducted from January 2011 thru October 2015 in all children undergoing Proximal hypospadias repairs using different techniques. Proximal hypospadias was defined as a urethral opening defect occurring from penoscrotal junction downward to the perineum. **Main Result:** 51 children with Proximal hypospadias,average age=47.8 months, were admitted for Urethroplasty. Penoscrotal hypospadias were the most common (34=66.6%), followed by Scrotal (13=35%) and Perineal (4=7.8%) hypospadias. Preoperative antibiotics (cefazolin (50 mg/kg))were given intravenously, then continued for at least 7 days. We retained the urinary catheter after surgery for 14 days. During the observation period, six surgical techniques were used, i.e.(in order of frequency): Pedicled Scrotal Flap, Combined tubularized island flap (Duckett technique) and tubularized ventral skin (Thiersch-Duplay) procedures in 1 or 2 stages, Konayagi or Modified Konayagi-Durham Smith, TIP (tubularised incised plate urethroplasty), Combined transverse preputial onlay flap and tubularized ventral skin (Thiersch-Duplay) procedures and Transverse preputial tubularisedurethroplasty alone, respectively. The most frequent long term complication was urethral fistula, (thirteen patients , 25%). Others were meatal stenosis and urethral stenosis (four cases, 7.8%), meatal retraction (four cases, 7.8%) and tethering (two cases, 3.9%). The average follow-up time was 30.2 months. **Conclusion:** An accurate preoperative assessment of the anatomical alignment of each patient determined the appropriate surgical technique. Although one stage repair might suffice, in severe forms we preferred Combined Duckett technique and Thiersch-Duplay procedures in 2 stages. Despite concern over hair-bearing penoscrotal skin, we found one-stage urethroplasty using pedicled midline hairless penoscrotal skin flap an effective technique for proximal urethral reconstruction.

484 - PA
Title: Urethral duplication in girl
Authors: HAMMOU BENSLIMANE, MD(1)
Institutions: medical school of oran(1)
Category: Urology
Keywords: urethra,duplication,uti
Aim of the Study: urethral duplication is extremely rare in girls. what we do? **Methods:** a girl aged 01 year and a half admitted for UTI. Examination revealed a distended bladder, and a slightly hypertrophic clitoris. meatus accessory epispadias ULTRASOUND: bilateral ureteral hydronephrosis ,a large capacity bladder thick walls. UCR: right unilateral reflux .second path epispadias meatus . **Main Result:** Initially :a straight-sided configuration Cohen guy with a blindness of the second path by epispadias bladder way. Secondly treatment of hypospadias. **Conclusion:** - The ureteral duplication of the girl are easy to diagnose when viewing the meatus épispadias. II- Given the small number of cases described in this pathology no classification has been described. Conclusion The duplication of the urethra is one of the rarest abnormalities of the urinary tract. Its diagnosis and determining its type rely on VCUG and endoscopy If resection of the accessory urethra is relatively easy prognosis depends mainly on the sub bladder obstacle whose surgical treatment is difficult.

485 - PA
Title: Replacing Mathieu for TIP to improve outcome in hypospadias repair
Authors: Winberg Hans, MD(1), Magnus Anderberg, PhD(2), Einar Arnbjörnsson, PhD(3)
Institutions: Lund University, Skane University Hospital, Department of paediatric surgery, Lund(1), Lund University, Skane University Hospital, Department of paediatric surgery, Lund(2), Lund University, Skane University Hospital, Department of paediatric surgery, Lund(3)
Category: Urology
Keywords: Hypospadias,Outcome,Fistula
Aim of the Study: Does a shift in surgical method affect the complication rate in hypospadias surgery? **Methods:** During six years the Mathieu procedure was replaced by the TIP repair as the most favored method of degree 1-2 hypospadias repair at our clinic. Every boy consecutively operated on was registered prospectively during those years. Two periods were outlined: 2010-2012 and 2013-2015, equal in time and numbers, but reversed in preferred method of repair. The end point was any complication calling for a reoperation. The study was accepted by the Ethical committee, registration number 2010/49 **Main Result:** In the first period 72 boys were operated whereof 53 Mathieu and 19 TIP. 36 (50%) boys required a reoperation. In the second period 74 boys were operated whereof 20 Mathieu and 54 TIP. 16 (21%) required a reoperation. P = <0.001. **Conclusion:** The study is prospective but the technique preferred was the choice of the surgeon. Follow up will be continued due to acknowledged accumulation of complications over time. Up till now we have no dropouts. Method seems to matter. Advantage TIP! We are not aware of any other prospective study following a shift in paradigm and at the same time comparing these two procedures for hypospadias repair.

PA3. POSTER ABSTRACTS
Tuesday, October 11 | 12:30 – 13:30 | Exhibit Hall A

PA3-1 | MODERATORS: DAVID HACKAM, YUTAKA KANAMORI

098 - PA
Title: Laparoscopic cholecystectomy does not resolve abdominal pain and associated symptoms in all patients with cholelithiasis.
Authors: Bruno A Martinez-Leo, MD(1), Victor Portugal-Moreno, MD(2), Humberto Mejia-Alvarez, MD(3), Brenda Cunjama-Caso, MD(4), Jorge Vidal-Medina, MD(5), Heladio Najera-Garduño, MD(6), Arturo Godoy-Esquivel, MD(7)
Institutions: Moctezuma Children's Hospital, Mexico City Health Secretariat(1), Moctezuma Children's Hospital, Mexico City Health Secretariat(2), Moctezuma Children's Hospital, Mexico City Health Secretariat(3), Moctezuma Children's Hospital, Mexico City Health Secretariat(4), Moctezuma Children's Hospital, Mexico City Health Secretariat(5), Moctezuma Children's Hospital, Mexico City Health Secretariat(6), Moctezuma Children's Hospital, Mexico City Health Secretariat(7)
Category: General Surgery
Keywords: Cholelithiasis,Postoperative symptoms,Laparoscopic cholecystectomy
Aim of the Study: To report our experience with the persistence of symptoms of a cohort of pediatric patients subjected to laparoscopic cholecystectomy for cholelithiasis **Methods:** Revision of all cases operated on for cholelithiasis in a Children's Hospital (January 2010 - August 2014). Demographics, presenting symptoms, ultrasound reports, surgical findings and postoperative evolution were recorded. After discharge a telephonic standardized questionnaire was applied asking for symptoms related to cholecystectomy. Statistical analysis included Fisher's exact test. **Main Result:** 71 patients underwent cholecystectomy during the study period. We excluded patients with associated pancreatitis, biliary malformations, choledocholithiasis and open cholecystectomies. 46 patients were studied: 13 boys (28.3%) and 33 girls (71.7%), average age at surgery was 13.5 years (SD: 2.3). Surgery was performed using the same technique (One 10 mm port for optics and specimen retrieval, two 5 mm working ports, prophylactic ceftriaxone, no drains, same analgesic regimen). Only one patient had an umbilical wound infection in the immediate postoperative period. Average follow up was 29 months after surgery (range: 9 - 60). 10 patients were reported asymptomatic (21%) whereas the rest had some symptoms after cholecystectomy, being the most frequent fatty foods intolerance (postprandial pain, nausea and/or vomiting) (44%), same abdominal pain that prompted cholecystectomy (12%), steatorrhea (10%) and others [peptic acid disease, (11.8%), vomiting (13%) weight gain (4.5%)]. Performing cholecystectomy after the first 30 days after the initial diagnosis was done had a statistically significant association with symptoms at 1 year. [n = 3 (symptomatic) Vs. n = 14 (asymptomatic) p = <0.05]. **Conclusion:** Postoperative symptoms had a high prevalence in our cohort and waiting 30 days after the initial diagnosis seems to have a protective effect against symptoms at one year after surgery. These findings may challenge effectiveness of laparoscopic cholecystectomy for pain associated with cholelithiasis.

099 - PA
Title: DUODENO-JEJUNAL INTUSSUSCEPTION IN THE MANAGEMENT OF BLUNT DUODENAL INJURY: A CASE REPORT.
Authors: Lofty-John C Anyanwu, MBChB(1), Aminu M Mohammad, MBChB(2), Lawal B Abdullahi, MBChB(3), Aliyu U Farinyaro, MBChB(4)
Institutions: Aminu Kano Teaching Hospital Kano Nigeria(1), Aminu Kano Teaching Hospital Kano Nigeria(2), Aminu Kano Teaching Hospital Kano Nigeria(3), Aminu kano Teaching Hospital Kano Nigeria(4)
Category: General Surgery
Keywords: Duodenal injury,Bilious vomiting,Haematoma
Aim of the Study: Blunt duodenal injury is a rare condition which is often misdiagnosed. The incidence of this condition has been put at between 11.2% - 26%. We report herein the case of a boy managed for blunt duodenal injury in our unit **Methods:** A 12 year old boy presented to us with a 4 week history of an upper abdominal pain and a one week history of a projectile bilious vomiting. His abdominal pain started after being hit in the abdomen by a hand pushed truck. On examination, he was afebrile, anicteric, but dehydrated. His abdomen was flat, and moved minimally with respiration. He had a marked tenderness on the upper abdomen. A diagnosis of blunt abdominal trauma with intestinal injury was made. An abdominal ultrasound scan showed intraperitoneal free fluid collection. After an initial non-operative management, the decision was made to explore the abdomen following persistence of the presenting symptoms **Main Result:** At laparatomy, the duodenum was dusky, and its complete kocherisation revealed a circumferential grade II haematoma involving all of its 3rd and 4th parts. There was no duodenal laceration, and no other visceral injury was seen. The injured parts of the duodenum were intussuscepted into the adjacent jejunum and the intussusceptum tacked onto the 2nd part of the duodenum with interrupted absorbable sutures. A gastrojejunostomy was also done. The post operative recovery was uneventful, and the patient has been doing well on follow up. **Conclusion:** We recommend

complete kocherisation of the duodenum when assessing the extent of a duodenal injury.

100 - PA
Title: Management Overview of Acute Appendicitis in Children: A Single-centre Experience (2000 – 2015).
Authors: Mohit Kakar, MD(1), Arnis Engelis, PhD(2), Aigars Petersons, PhD(3), Vilnis Titans, MD(4), Astra Zviedre, MD(5)
Institutions: University Children's Hospital, Department of Pediatric Surgery, Riga(1), University Children's Hospital, Department of Pediatric Surgery, Riga(2), University Children's Hospital, Department of Pediatric Surgery, Riga(3), SIA " Lati & Co " , Riga(4), University Children's Hospital, Department of Pediatric Surgery, Riga(5)
Category: General Surgery
Keywords: appendicitis,management,incidence
Aim of the Study: Recently, management of acute appendicitis has changed substantially with improved antibiotic regimes, advances in diagnostic techniques, initial non-surgical management in selected cases and laparoscopy. Since, 2010 on-wards conservative treatment was initiated for the treatment of acute appendicitis at our centre. The aim of this study was to find out the incidence and management of patients with primary diagnosis of acute appendicitis and measure the rate of complicated appendicitis. **Methods:** This single centre study included retrospective data analysis from the medical records between 2000 – 2015. Data was analyzed using descriptive and statistical methods. **Main Result:** During the analyzed time period 3901 children were hospitalized with the primary diagnosis of acute appendicitis. Till 2014, a decrease in trend in the number of hospitalized patients was observed. Since 2014, there has been an increase in the number of patients: 2013 – 204, 2014 – 233, 2015 – 289. Increase in complications was also observed since 2010 on-wards – i.e. increase in number of complicated acute appendicitis, although the overall percentage remains almost unchanged. In the period 2000-2009 only 3 % underwent successful conservative treatment while from 2010 to 2015 it raised to 11 %. **Conclusion:** During the study, in the preliminary period a decline in number of patients with acute appendicitis was observed but on the contrary we observed a gradual gain in the number of patients in the later half of the study period. Total number of appendectomies has gradually decreased lately. Although the perforated or complicated appendicitis incidence is increasing, it is still under the literature allowed maximum limit of 30 %. In our opinion the above mentioned changes correlates with the increasing number of patients treated non-surgically.

102 - PA
Title: Liver Pseudoaneurysm Post-Blunt Abdominal Trauma: A Case Report In A 6-Year-Old And Review Of Literature
Authors: noora H alshahwani, MD(1), Mansour A Ali, Fachartz in Pediatric Surgery(2), Muthana Ghazi, MD(3)
Institutions: (1), (2), (3)
Category: General Surgery
Keywords: hepatic artery pseudo-aneurysm,blunt liver injury,angio-embolization
Aim of the Study: Traumatic hepatic artery pseudoaneurysm (HAP) is a rare complication of blunt liver injury, reported <1% in adult population and is less known in pediatric population. We present a case of a 6-year-old girl who sustained Grade III liver injury following blunt abdominal trauma, complicated by HAP, which was successfully embolized. A review of literature was conducted to highlight the occurrence and natural history of such complication in children. **Methods:** Pubmed search was conducted using the words “liver pseudoaneurysm,” “traumatic liver pseudoaneurysm,” and “hepatic artery pseudoaneurysm” limited to English papers and child < 18 years. The results were reviewed and the references were searched for further case reports. **Main Result:** The case at had presented with blunt abdominal trauma with grade III liver injury, which responded well to conservative treatment. She was discharge home on day 5 to present back 13 days post trauma with re-bleed from HAP. After stabilization, Angio-embolizaion was attempted and succeeded in occluding the pseudoaneurysm. Review of the English literature yielded 27 cases of post trauma HAP in children <=18 years of age since 1967. Most cases sustained blunt abdominal trauma, with grade of injury II-IV in those specified. HAP was detected on initial imaging and on re-imaging upto 2 months post-trauma detected on re-imaging. Indications for re-imaging were persistence of hemoglobin drop, shock, abdominal pain, and GI bleeding. Asymptomatic cases were reported. Angio-embolizaion was successful in 19 of 23 reported cases as primary treatment and in 2 of the 4 failed cases as secondary treatment. Other treatment modalities include percutaneous thrombin injection and surgical resection. Spontaneous resolution was reported in two cases. **Conclusion:** Traumatic HAP is a rare entity in children. Management options have been greatly affected by the experience of the adult trauma, which shows anecdotal numbers of spontaneous resolution and a chance of significant life threatening bleed.

103 - PA
Title: Abdominal lymphangioma - a unusual cause of acute abdomen
Authors: Vijai Datta D Upadhyaya, MS(1)
Institutions: S G P G I M S(1)
Category: General Surgery
Keywords: Lymphangioma,Abdominal,surgery

Aim of the Study: To report lymphangioma as a cause of acute intestinal obstruction **Methods:** We present the case of a 10 year old male child with a cystic lymphangioma involving the mesentery of distal jejunum and proximal ileum, approximately involving 35 cm of small intestine presented with pain in abdomen and signs of acute intestinal obstruction. Histology was consistent with a cystic lymphangioma. Another case present with acute abdomen, imaging revealed multicsytic lesion involving almost whole of abdomen. Exploration revealed that it was involving the SMA, SMV, IMA hence cannot be excised, the larger cyst were deroofed and was continued on antibiotics. Patient did well in follow up and after 3 year of follow up no residual disease left. **Main Result:** In first case patient did well in postoperative period and discharged on 6th day were as in second case patient was continued on intravenous antibiotics for 2 weeks and was followed up month for first 6 month than 6 month for next two years. **Conclusion:** Abdominal lymphangioma is a rare cause of bowel obstruction. Clinical presentation varies and may be misleading due to a lack of awareness for this entity. General awareness of this entity with a high index of suspicion is needed to avoid complication

104 - PA
Title: Fetus in fetu with jaundice- a rare presentation of a rare disease
Authors: Sifat Zereen Khan, MRCSEd(1), Mohammad Ashraf Ul Huq, PhD(2)
Institutions: Dhaka Medical College Hospital, Dhaka.(1), Dhaka Medical College Hospital, Dhaka.(2)
Category: General Surgery
Keywords: Fetus in fetu,Obstructive Jaundice,Liver cirrhosis
Aim of the Study: Fetus in fetu (FIF) is a rare congenital anomaly,reported around 69 times among pediatric age group very rarely present with obstructive jaundice. **Methods:** Case report **Main Result:** 7 months old girl child of her nonconsanguinous parents admitted with the complaints of, Abdominal lump for 3 months,Yellowish discoloration of skin for 1 month and Itching over whole body for 1 month The abdominal lump was incidentally found 3 months back which gradually increased in size. She developed yellowish discoloration of skin and itching all over the body with no associated rash for last one month.The playful baby was mildly anemic and moderately icteric. The intra-abdominal, non-pulsatile lump with well defined margins ,occupying the right side of umbilical region and part of right hypochondriac region was firm to hard in consistency, about 11x10 cm in size, globular in shape, non tender,smooth surfaced, did not move with respiration, slightly mobile from side to side and less in above downwards. The lump seemed to be fixed to the underlying structures but free from the overlying abdominal wall. The lump is free from lower border of the liver. Liver was Just palpable, about 1 cm from costal margin in mid clavicular line. Her breath sound was bilateral vesicular with ronchi in both lungs. LFT was raised. USG of whole abdomen revealed Abdominal swelling corresponds to huge complex mass (about 11×10 cm),a deformed fetus within the cystic component. Exploratory laparotomy followed by removal of deformed fetus with liver biopsy done on 15.04.2014 after optimizing the patient. Liver biopsy showed: Cirrhosis- Active, Total Knodell score- 3/22. **Conclusion:** An abdominal lump with obstructive jaundice in a child is diagnosed as a case of choledochal cyst, but FIF can be a remote possibility.Prenatal diagnosis in this case might cause a better prognosis as our patient already had Active liver cirrhosis.

105 - PA
Title: Esophageal bezoar after fundoplication: case report and literature review
Authors: Shigeru Ueno, MD(1), Takeshi Hirabayashi, MD(2), Masaharu Mori, MD(3), Hitoshi Hirakawa, MD(4), Eri Tei, MD(5)
Institutions: Tokai University School of Medicine(1), Tokai University School of Medine(2), Tokai University School of Medicine(3), Tokai University School of Medicine(4), Tokai University School of Medicine(5)
Category: General Surgery
Keywords: Esophagus,Forein body,Endoscopy
Aim of the Study: Bezoar is an unusual phenomenon which is accumulation of ingested material within the gastrointestinal tract and the esophagus is an extremely rare site of its formation. A case with huge esophageal bezoar resulting from a long-term foreign body ingestion after pediatric fundoplication is presented with a literature review. **Methods:** Case presentation: A 20-year-old male patient with a history of Nissen fundoplication with gastrostomy 7 years before was admitted because of incidental finding of the safety pin image on his chest radiogram, which had been revealed as part of a huge esophageal bezoar. He was mentally retarded and had been diagnosed to have 9p+ syndrome. After the surgery he had been fed solely through gastrostomy. On endoscopy, the bezoar was found to be a pile of debris including carpet fibers, papers and other small items, which was supposed to have been picked up and ingested by the patient himself. After complete endoscopic retrieval of the bezoar in two sessions, the scope could be passed to the stomach and postoperative contrast study demonstrated smooth liquid passage through the gastroesophageal junction, which suggested feeding via gastrostomy has resulted in accumulation of the debris without causing any obstructive symptom. **Main Result:** Literature review: Esophageal bezoar is rare but has been reported to be caused by several conditions. Pediatric cases reported include those caused by drugs such as sucralfate and luxatives, by dietary fibers, chewing gums and trichobezoars after surgery. Endoscopic removal was the choice of therapy after confirming the diagnosis endoscopically though the enzyme degradation has been reported effective for

phytobezoars. **Conclusion:** A review of published literature found no case of this huge esophageal bezoar after pediatric fundoplication.

106 - PA
Title: Why so late? Barriers to timely access to Pediatric Surgical care at Mbarara Regional Referral Hospital, Uganda
Authors: Mercedes Pilkington, MD(1), Martin Situma, MBChB MMed(2), Andrea Winthrop, MD(3), Dan Poenaru, MD(4)
Institutions: Queen's University(1), Mbarara University of Science and Technology(2), Queen's University(3), McGill University(4)
Category: General Surgery
Keywords: Health services accessibility,Congenital abnormalities,Uganda
Aim of the Study: Outcomes in pediatric surgery are dependent on timely access to care. This study aimed to identify and quantify delays in patient referral and treatment for congenital anomalies, pediatric tumours, and hernias in Mbarara, Uganda. **Methods:** Pediatric surgical referrals and operative interventions were retrospectively collected at Mbarara University Teaching Hospital during 2014. Delays were classified using the 3-Delay Model into care seeking (Type 1), arrival at health facility (Type 2), and provision of definitive care (Type 3). Average age of referral (surrogate for Type 1 + 2 delays) and wait time from referral to definitive surgery (Type 3 delay) was calculated by diagnosis. **Main Result:** There were 656 outpatient referrals recorded: 357 (54%) for congenital anomalies, 226 hernias (34%) and 73 tumors (11%). Average age of presentation was 2.8 years for congenital anomalies, 4.0 years for hernias, and 6.2 years for tumours. Matched definitive care delays were determined for 63 patients. Average delay to surgery was 25 days (range 0-166) for congenital anomalies, 36 days (3-166) for hernias, and 17 days (2-200) for patients with abdominal tumours. **Conclusion:** Pediatric surgical patients in Mbarara, Uganda face significant delays in obtaining definitive surgical care for congenital anomalies, hernias, and tumours. Delays in care-seeking and arrival to health facilities play a significant role, as reflected by the advanced age at first presentation. Surgical wait times are typically short but vary widely. A prospective study is planned to identify the contributing factors and their relative contribution for each type of delay.

107 - PA
Title: Irreducible indirect inguinal hernia Containing Uterus, Fallopian Tubes, and Ovaries in a female child : Case Report
Authors: Ahmed Azzam, MRCS(1), Gamal ElTagy, MD(2)
Institutions: Cairo University Specialized Pediatric Hospital (CUSPH)(1), Cairo University Specialized Pediatric hospital (CUSPH)(2)
Category: General Surgery
Keywords: Irriducible indirect inguinal hernia,Faloopian tubes,uterus
Aim of the Study: Hernia uteri inguinale (HUI), or uterus-containing inguinal hernia, is an extremely rare condition in which the uterus and uterine adnexa are found in the inguinal hernia sac. The uterus may be free within the sac adherent to the wall by adhesions or a true sliding component. However, in true sliding-type HUI, one of the walls of the hernia sac is formed by the uterus itself . **Methods:** The present report describes the very rare case of an 18 months old female child weighing 9 kgs was delivered at 34 weeks of gestation by vaginal delivery. She presented with an irreducible mass in the right inguinal region. An ultrasonography a hypoechoic mass containing a hyperechoic region suggesting endometrium of the uterus passing through the inguinal canal. Surgery was emergently performed through an inguinal approach; the uterus, fallopian tubes and ovaries were found in the hernia sac . Dissection of the uterus from the wall of the sac, reduced in the pelvic cavity, high ligation of the sac and an additional repair of the internal ring were performed. **Main Result:** The presence of the uterus within the hernia sac (hernia uterus inguinale) and incarceration of the adnexa of the uterus are an extremely rare condition in infants. Patient was discharged on the postoperative 1st day with no complications. After one year of follow-up, there have been no signs of recurrence. **Conclusion:** Surgeons should be aware of the possibility of presence of the uterus or another organ in the hernial sac in phenotypic female children, and sliding components should be replaced carefully into the abdomen to prevent any damage. We advise ultrasonography to be performed in all cases when an incarcerated inguinal hernia is suspected in female infant, because it’s relatively straight forward and accessible diagnostic procedure for assessment of hernia contents

108 - PA
Title: Same-Day Discharge After Incision and Drainage of Soft Tissue Abscess in Diaper-Age Children is Safe and Effective
Authors: Nicholas E Bruns, MD(1), Alexander T Gibbons, MD(2), Danial Hayek, BS(3), Ian C Glenn, MD(4), Neil L McNinch, MS(5), Todd A Ponsky, MD(6), Oliver S Soldes, MD(7)
Institutions: Akron Children's Hospital(1), Akron Children's Hospital(2), Akron Children's Hospital(3), Akron Children's Hospital(4), Akron Children's Hospital(5), Akron Children's Hospital(6), Akron Children's Hospital(7)
Category: General Surgery
Keywords: abscess,incision and drainage,soft tissue abscess

Aim of the Study: Many pediatric centers admit patients for intravenous antibiotics following incision and drainage (I&D) of soft tissue abscesses. The purpose of this study is to assess the safety and efficacy of same-day discharge following I&D. **Methods:** A retrospective review was performed on diaper-age children (age > 3 months and < 4 years) who underwent I&D of an abscess of the buttock, perineum, lower abdominal wall, or thigh in the operating room followed by same-day discharge at a children's hospital between June 2012 and December 2014. Patients with concurrent infection requiring antibiotics in the 2 weeks prior to presentation were excluded. Treatment failure was defined as readmission or repeat procedure related to the initial abscess. Statistical analysis was performed using Wilcoxon Rank Sum Test and Fisher's Exact Test. **Main Result:** 442 procedures were performed in 408 patients. Eight patients were excluded due to concurrent infection. Mean age was 1.8 years. Mean abscess size was 3.5 cm. 25.8% were febrile (temperature > 37.9 C). Of 231 patients that had a white blood cell (WBC) count drawn, 59.7% had leukocytosis (WBC > 14.4). 84.3% had packing or a vessel loop drain placed. Mean time from procedure to discharge was 2.3 hours. 85.0% were discharged home with oral antibiotics. 80.4% of cultures grew methicillin-resistant Staphylococcus aureus. Treatment failure occurred in 4 (0.9%) patients within 14 days and 10 (2.3%) patients within 30 days. Mean WBC count was higher in the 14-day treatment failure group but was not statistically significant (24.1 vs. 16.3; p = 0.10). In 138 patients with leukocytosis, there were 2 (1.4%) treatment failures compared to none in 93 patients without leukocytosis. **Conclusion:** Same-day discharge for I&D of abscess in diaper-age children is safe and effective. Although there is a tendency for treatment failure in patients with leukocytosis, the absolute failure rate is low.

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Title: Sigmoid vaginoplasty and restoration of uterovaginal continuity for menstrual function in cervicovaginal or vaginal agenesis: A study of 15 cases
Authors: VIJAYA KUMAR, MD(1), SANTHOSH PRABHU, MD(2), SUNDEEP THOTAN, MD(3)
Institutions: KASTURBA MEDICAL COLLEGE, MANIPAL(1), KASTURBA MEDICAL COLLEGE, MANIPAL(2), KASTURBA MEDICAL COLLEGE, MANIPAL(3)
Category: General Surgery
Keywords: Cervicovaginal agenesis, Utero-colonic neovaginal anastomosis,Sigmoid vaginoplasty
Aim of the Study: Functional endometrial preservation with restoration uterovaginal continuity for menstrual function in cervicovaginal or vaginal agenesis **Methods:** All the girls (13 -26 years) presented with cyclical painful cryptomenorrheoa. Magnetic resonance imaging (MRI) confirmed Hematometra and distal cervicovaginal or vaginal agenesis. The patient counselling revealed that girls were very keen to conserve their uterus for social and cultural reasons but want to get relieved of painful cyclical cryptomenorrheoa. A sigmoid colon conduit was planned as neovagina and anastomosed to the uterus through posterior uterine wall in 12 girls with cervicovaginal agenesis. It was anastomosed to upper vaginal pouch in 3 girls with vaginal agenesis. Three patients also underwent anterior sagittal anorectoplasty as there was no space available between the urethra and anal opening to accommodate the neovagina because of the anterior ectopic anal opening. A circular portion of the posterior uterine wall needs to be excised for wide colo-uterine anastomoses. **Main Result:** Recovery of painless menstrual activity was possible in all the cases. Two patients had stenosis of perineal neovaginal orifice, out of which one responded for dilatation and the other for Y-V plasty of the orifice. One patient developed obstruction at colo-uterine anastomosis and managed by redoing the anastomosis. Neovaginal prolapse seen in one patient underwent excision of prolapsed portion of the neovagina. Four girls got married and reports satisfactory intercourse. **Conclusion:** The surgical technique described herein allows an egress for regular painless menstruation. We believe that this is an important achievement in a young woman, helping her to acquire psychological fulfilment as a woman. However, they should be cautioned against pregnancy in cases of cervicovaginal agenesis and against vaginal delivery if they have vaginal agenesis.

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Title: Topical Intraperitoneal Papaverine to Minimize Non-viable Bowel Resection from Non-Occlusive Bowel Ischemia in Neonatal Segmental Volvulus: A Case Report
Authors: Roger C Zhu, MD(1), Gamal Marey, MD(2), Vadim Kurbatov, MD(3), Jason Sulkowski, MD(4), David Kashan, MD(5), Gainosuke Sugiyama, MD(6), Francisca Velcek, MD(8)
Institutions: SUNY Downstate College of Medicine(1), (2), (3), (4), (5), (6), (8)
Category: General Surgery
Keywords: Case Report,Papaverine,Mesenteric Ischemia
Aim of the Study: Nonocclusive mesenteric ischemia (NOMI) is a feed-forward loop of vasoconstriction that aggravates the primary ischemic injury. It is an initially reversible process and a potential point of intervention for preservation of viable bowel. Intravascular papaverine infusion has been used in the management of adult NOMI. We present a modified version of this approach using topical papaverine in the setting of neonatal post-ischemic NOMI, with the goal of minimizing bowel resection. **Methods:** The baby boy, delivered at 40+3 weeks from uncomplicated pregnancy, presented at day 11 of life with malrotation and midgut volvulus. An emergent exploratory laparotomy with Ladd procedure and detorsion of malrotation was performed without complication. Subsequently the patient presented on POD 13 with vomiting after feeding and lactic acidosis. Abdominal x-ray showed pneumatosis coli and portal venous gas. The baby was admitted for aggressive resuscitation and emergent exploratory laparotomy. At exploration, ischemia

of majority of the small bowel was noted. Topical papaverine was introduced into the peritoneal cavity over the intestines before closing the abdomen. A second look laparotomy was done 24 hours later with the findings of marked bowel improvement. **Main Result:** The use of the topical papaverine in our patient allowed for the reduction of the length of small bowel resection. The length of viable small bowel increased from 62 centimeters (15.6%) to 92 centimeters (23.1%). The baby has been thriving well with normal growth and development without signs of short gut syndrome. **Conclusion:** Topical intraperitoneal application of papaverine potentially allowed for reduction of length of small bowel resected, decreasing the risk of morbidity from potential sequelae of extensive small bowel resection. A prospective randomized control study should be considered to investigate potential benefits of topical papaverine administration in the setting of need for massive small bowel resection.

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Title: DISORDERS OF ACID-BASE STATUS IN CHILDREN WITH CHRONIC LARGE INTESTINE STASIS
Authors: Igor Kirgizov, PhD(1), Vadim Dudarev, PhD(2), Sergei Minaev, PhD(3), Filipp Kirgizov, Medical student(4)
Institutions: (1), (2), (3), (4)
Category: General Surgery
Keywords: blood acid-base status and microbiocenosis,CHRONIC LARGE INTESTINE STASIS,link in the pathogenesis
Aim of the Study: The aim of this research is to study the blood acid base condition indices in children with different clinical forms of chronic large intestine stasis. **Methods:** 100 children with different clinical forms of chronic large intestine stasis were examined. **Main Result:** the compensated form of CLIS an insignificant acidosis, with the blood bicarbonates deficit (21.2±0.9 mmole / l), the increase of anion difference (15.7±1.1 mmole / l), the lactate concentration growth to 2.1±0.1 mmole /1 . In case of the subcompensated form an explicit acidosis (7.28±0.03), with a considerable base deficit (- 2.6±0.2 mmole / l) and the reduction of the blood bicarbonates concentration (19±0.6 mmole /l), the anion difference increase on the background of the continuous lactate grow (3.2±0.3 mmole / l) and hypovolemia were revealed. In blood reduced more considerably by comparison with the compensated form (Na 133±0.7 mmole / l, K 3.35±0.05 mmole / l, Cl 94.5±1.3 mmole / l). In patients with the decompensated form of CLIS the changes were more explicit. Acidosis was revealed with the indices pH 7.2±0.02, the blood bicarbonates concentration lowering (17.1±0.7 mmole / l) and the base deficit increase (3.5mmole / l) were marked. The lactate concentration reached 4.5±0.5 mmole / l at a considerable increase of the anion difference (21.7±1.3 mmole / l) and the growing hypovolemia, hyponatremia (130mmole / l), hypopotassemia (2.9±0.2 mmole / l) and hypochloremia (91.2±0.9 mmole / l) were marked.
Conclusion: Thus, in patients with CLIS the acid-alkaline balances breaches were defined. Metabolic acidosis with the lactate grow was marked and the exhaustion of organism`s buffer systems was revealed on the background of hypovolemia and the blood electrolytes reduction (Na, K, Cl).

112 - PA
Title: Transanal Endorectal Pullthrough for Recurrent and Acquired Recto-Urethral Fistulae
Authors: Venkata Sathyanarayana KOTTE, M.Ch pediatric surgery(1)
Institutions: Niloufer hospital for women & children. Osmania medical college(1)
Category: General Surgery
Keywords: TRANSANAL ENDORECTAL PULLTHROUGH,RECURRENT AND ACQUIRED,RECTO-URETHRAL FISTULAE
Aim of the Study: To assess the outcome and feasibility of Transanal Endorectal pullthrough for treating recto-urethral fistulas recurred following failed surgeries of Anorectal Malformations, and other acquired and traumatic fistulas.
Methods: Between 2012-2014, Transanal Endorectal pullthrough was performed in 6 children with variable surgical problems other than Hirschsprung's Disease. Three cases of anorectal malformations, who had under gone definitive surgical procedures like PSARP and Anoplasty, but developed recurrent recto-urethral fistulae. One child with posterior urethral valves developed an iatrogenic recto-urethral fistula following cystoscopic fulguration. A 12 year old boy developed a recto-urethral fistula following accident with pelvic fracture. A case of pelvic malignancy, acquired recto-urethral fistula following rupture of the tumour. In all these cases Transanal Endorectal Pullthrough was performed after diversion colostomy. **Main Result:** Five children did well with complete correction of fistulae. One child of anorectal malformation had persistent fistula, missed as it is lying just above the anal verge distally, and at prostatic urethra proximally as seen on cystoscopy. No other complications involving continence of bowel and bladder could be observed. **Conclusion:** worldwide most surgeons prefer Posterior Sagittal approach for recurrent recto-urethral fistulae. Because of the rarity of this condition, the series describing the success of various repairs are limited by small number of patients. Here we practised Transanal Endorectal approach, owing to the advantage of beginning the dissection from a virgin area in this procedure. That made the dissection easier to perform and less destructive to the surrounding pelvic structures and urinary bladder plexuses. We look in to the future to propagate Transanal endorectal pullthrough as an alternative procedure for recto urethral fistulae of acquired or recurrent origin.

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Title: The simple and novel method to decompress intestinal obstruction using long intestinal tube
Authors: So Hyun Nam, PhD(1)
Institutions: Division of Pediatric Surgery, Department of Surgery , Dong-A University Medical Center(1)
Category: General Surgery
Keywords: intestinal obstruction,decompression,anastomosis , surgical
Aim of the Study: We introduce simple method to decompress the small bowel and protect intestinal anastomosis for small infants to relieve postoperative intestinal obstruction. **Methods:** My first trial was very complicated. He was born at gestational age 27 weeks and underwent end ileostomy from meconium plug syndrome at 6 days after birth. We repaired the ileostomy after 5 months, but postoperative intestinal obstruction was aggravated. 2nd operation was side to side anastomosis for decompression, but bowel movement was not recovered. After 5 days, peritoneum was opened and 3rd operation was planned. To prevent creating stoma, we did ileocecectomy and inserted the 12Fr nasogastric tube via anus. It passed through whole colon and anastomosis. Stool was drained via long intestinal tube and abdominal distension was improved. After he could eat well and defecate by himself, the tube was removed. After this success, we used trans-anal long intestinal tube for the infants who underwent intestinal anastomosis with luminal discrepancy and postoperative obstruction from anastomosis stricture or compression was not resolved. **Main Result:** 10 infants (M:F=6:4) underwent 1st operation at median 4.5 days after birth because of meconium plug syndrome (5), necrotizing enterocolitis perforation (2), post necrotizing enterocolitis stricture (2), fetal volvulus (1) and ileal atresia (1). Nine were premature baby born at median gestational age of 28 weeks and birth weight of 1110g. All except one of transanal rectal tube was well functioning and anal defecation was observed median 4.5 days. They could start milk feeding median 5 days and full enteral feeding was reached median 20.5 days after operation. The long intestinal tube was removed median 16 days. **Conclusion:** It is not routine procedure for intestinal anastomosis. Rather, I suggest that this simple procedure could be a safe and simple option to maintain intestinal lumen and effective decompression of intestine. Anastomosis twisting and folding could be prevented.

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Title: Comparison of Hirschsprung-associated enterocolitis following Soave and Duhamel procedures
Authors: . Gunadi, MD(1), Isidora Parahita, B.Med(2), Akhmad Makhmudi, MD(3)
Institutions: Pediatric Surgery Division, Department of Surgery, Faculty of Medicine, Universitas Gadjah Mada/Dr. Sardjito Hospital(1), Faculty of Medicine, Universitas Gadjah Mada(2), Pediatric Surgery Division, Department of Surgery, Faculty of Medicine, Universitas Gadjah Mada/Dr. Sardjito Hospital(3)
Category: General Surgery
Keywords: HAEC,Soave,Duhamel
Aim of the Study: The current treatment for Hirschsprung disease (HSCR) is surgical resection of the aganglionic segment of the intestines. There is currently some debate over which technique offers the best outcome. The absence of enterocolitis after pull-through procedure remains the most important marker of a good outcome. In this study, we wished to compare the frequency of Hirschsprung-associated enterocolitis (HAEC) following Soave and Duhamel techniques. **Methods:** After ethical approval, a retrospective chart review was performed to identify all Soave and Duhamel pull-through done at our hospital between 2010 and 2015. The diagnosis of HAEC was determined using Delphi method. **Main Result:** One hundred patients (Soave 71 vs. Duhamel 29) had adequate data for analysis, consisted of 52 males and 19 females, and 23 males and 6 females for the Soave and Duhamel groups, respectively (p=0.62). There was significant difference in mean age at pull-through procedure (Soave: 29.9±45.2, Duhamel: 50.8±47.5 months, p=0.04), but the mean age of HSCR diagnosis did not differ between two groups (Soave: 25.4±41.0, Duhamel: 43.7±48.1 months, p=0.06). Pre-operative enterocolitis has been found in 5/71 (7%) and 4/29 (14%) patients for the Soave and Duhamel groups, respectively (p=0.44). As for the HAEC frequency, there was significantly difference between the Duhamel and the Soave groups (28% vs. 10%; p=0.03). Furthermore, the pre-operative enterocolitis showed a significant association with HAEC following pull-through procedures (p = 2.7 x 10-4). **Conclusion:** Our study shows that the frequency of HAEC was significantly higher in the Duhamel group than the Soave group. In addition, patients with pre-operative enterocolitis are more likely to have HAEC following pull-through procedures.

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Title: Conservative treatment of hemangiomas in infants by using nonselective β-blockers (propranolol)
Authors: Andriy Kuzyk, PhD(1), Iryna Avramenko, PhD(2), Ihor Lukavetskyy, MD(3), Bohdan Romanyshyn, MD(4), Andriy Synyuta, MD(5), Roman Kizyma, MD(6), Ostap Mohylyak, MD(7), Maryan Zakharus, MD(8), Yarema Voznytsya, PhD(9), Andriy Dvorakevych, MD(10)
Institutions: Danylo Halytsky Lviv National Medical University(1), Danylo Halytsky Lviv National Medical University(2), Western Ukrainian Specialized Children's Medical Centre(3), Western Ukrainian Specialized Children's Medical Centre(4), Western Ukrainian Specialized Children's Medical Centre(5), Western Ukrainian Specialized Children's Medical Centre(6), Western Ukrainian Specialized Children's Medical Centre(7), Western Ukrainian Specialized Children's Medical Centre(8), Western Ukrainian Specialized Children's Medical Centre(9), Lviv Regional Children's Clinical Hospital "Ohmatdyt" (10)

Category: General Surgery
Keywords: hemangioma,newborns,beta-blockers
Aim of the Study: Analyze the effectiveness of hemangiomas therapy in infants using nonselective β-blockers (propranolol). **Methods:** Propranolol therapy was used in 72 patients (52 girls, 20 boys) with hemangiomas of various sizes, quantity and localization aged 2 to 11 months. The treatment was performed during April 2010 till December 2015. Hemangiomas were diagnosed in the phase of proliferation in all patients at the start of treatment with propranolol. Most patients hemangiomas were located on the head and neck (46 children, 63.9%), 10 patients – different parts of the trunk and perineum (13.9%), 9 patients – hemangioma of the extremities (12.5%). In 6 children (8.3%) multiple hemangiomas (> 4) were observed. All patients received propranolol at a dose of 2-3 mg/kg/day. Completion of treatment occurred after the proliferation phase and after obtaining a positive clinical and radiological response. **Main Result:** Positive clinical response occurred in 65 patients (90.3%) resulting in a phase of proliferation and subsequent reduction of tumor. At the majority of patients from the very first days of treatment, response was noted in changes of skin color (pale), reducing the volume and intensity. Therapy was completed in 51 patients (70.8%), duration of treatment – 2-12 months. In 3 cases removal of the drug after 3-5 months of treatment led to the recurrence. After 1-2 months pause in treatment, therapy was restored and positive response was received. Any disorders of the cardiovascular system or glycemic indexes were not revealed. There were no clinically significant side effects that caused discontinuation of treatment. **Conclusion:** Early assessment of propranolol treatment indicates its high efficiency simultaneously with good tolerance. Further study has to focus on border age of the patient taken before treatment, the criteria for the end of therapy, duration of therapeutic effect, effectiveness of propranolol in cases of recurrence.

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Title: Mucosal Colonic Tube (MCT): long-term follow-up of a novel technique for antegrade colonic lavage.
Authors: Kiarash Taghavi, MBChB, PGDipSurgAnat(Dist), PGDipPaeds(1), Brendon D Bowkett, MBChB, FRACS.(2)
Institutions: Wellington Children's Hospital(1), Wellington Children's Hospital(2)
Category: General Surgery
Keywords: Spina bifida,Antegrade enema,Bowel management
Aim of the Study: Antegrade colonic lavage is a life-altering treatment for fecal incontinence. If appendicostomy is not possible because the appendix is utilized for another purpose (Mitrofanoff) or absent (previous appendicitis) other options need to be considered. Chait cecostomy tubes can provide access to the colon, however are often associated with breakages, accidental removal and leakage. Full thickness colonic tubes are also associated with significant leakage of both gas and fecal material. The construction of a MCT with an anti-reflux wrap provides a solution. Technique: At a variable colonic location, even across the antimesenteric border a 1x5cm full thickness flap is opened and swung laterally. The mucosa alone is sutured to form a tube. Fundoplication is performed at the base and the tube is exteriorized. A chait tube stent is placed for six weeks, then removed. Daily intermittent catheterization is then performed. **Methods:** A chart review and patient survey of MCTs was performed at Wellington Children's Hospital, NZ. **Main Result:** Eight patients underwent MCT for severe fecal incontinence; a total of 10 MCTs were constructed. Average age was 14 years (10-21). Indications: spinal dysraphism (5), intractable constipation with soiling (1), Hirschsprungs (1) and microcolon (1). After a period two tubes were no longer required. Of the five tubes currently in use median tube life is 6.7 years (range 5.0-13.6). Seven patients had dramatic improvement in their fecal continence with complete resolution of soiling. One tube was abandoned soon after construction due to breakdown. Two tubes required minor revision; for leakage (1) and stenosis (1). Two tubes initially successful were replaced for leakage with excellent ongoing results. **Conclusion:** In the absence of an available appendix a MCT tube provides excellent plastic-free access to the colon. Many children can expect long-term use of the tube with dramatic improvement in quality of life.

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Title: First Step Results of a New Intestinal Anastomosis Technique
Authors: Metin Gunduz, MD(1), Tamer Sekmenli, MD(2), Ilhan Ciftci, MD(3)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery(1), Selcuk University Medical Faculty Department of Pediatric Surgery (2), Selcuk University Medical Faculty Department of Pediatric Surgery (3)
Category: General Surgery
Keywords: intestinal anastamoses,enterostomy,pediatric surgery
Aim of the Study: In pediatric surgery, there are many techniques of anastomosis in intestinal diseases. We want to describe a different, simple,useful, and safety technique that can be used in patients with intestinal diseases like jejunoileal atresia and perforation that have proximal dilated segments. **Methods:** In this technique an atraumatic bowel clamp is applied on the proximal dilated bowel at a 90- degree angle. In distal narrow segment we resect the bowel with 0-degree angle and continuing with30-degree angle from antimesenteric side. Two-layer interrupted anastomosis is performed lastly. We applied this technique to three patients. A 31 day old patient was the first who had divided jejunostomy due to malrotation and perforation with proximal dilated bowel. Second patient was a 78 day old patient in whom jejeunocolic anastomosis was performed due to necrotizing enterocolitis with prematurity. A 33 day old girl had

colo-colic anastamosis due to stenosis in transverse colon. **Main Result:** Neither anastamoses complications nor feeding and passage problems were seen in all patients. Postoperative recovery was uneventfull. **Conclusion:** Anastamoses technique we have described is safety, simple, and usefull. Due to physiologic passage in this report complications such as anastamosis leak, functionel obstruction and feeding intolarence would be seen rarely. Also there is not an angulation due to anastomosis. We recommend this method of intestinal anastamoses in cases of proximal dilated segments.

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Title: Wandering spleen in children - case prasentation.
Authors: Ljudevit Sović, MD(1), Marko Mesić, MD(2), Nikica Lesjak, MD(3), Mirko Žganjer, MD(4), Ante Čizmić, PhD(5)
Institutions: University Children's Hospital Zagreb(1), University Children's Hospital Zagreb(2), University Children's Hospital Zagreb(3), University Children's Hospital Zagreb(4), University Children's Hospital Zagreb(5)
Category: General Surgery
Keywords: wondering spleen,surgical procedure,children
Aim of the Study: With this article we would like to present a rare pathology of the spleen, wandering spleen. **Methods:** Wandering spleen is defined as a spleen without peritoneal attachments with only attached with its pedicle. Wandering spleen is rare condition in which spleen is located anywhere in the abdomen. The syndrome may be diagnosed during infancy or childhood but is not infrequently an incidental finding in adults. In world literature there are two methods of treating ectopic spleen - splenopexy and splenectomy. **Main Result:** We report our 3 patients and in all patients we done splenectomy. All patients had recurrent pains in lower parts of abdomen. In all patients we found torsion of the ectopic spleen. In one patient we done open splenectomy, in one patient laparoscopy splenectomy was done and in one patient we tried to do laparoscopic surgery which we had completed with conversion. **Conclusion:** Wandering spleen is uncommon problems with quite rare clinical presentation. Method of treatment depends on clinical presentation and findings at operative surgery.

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Title: SEROSAL APPENDIX SWABS: A NEW METHOD TO OBTAIN POSITIVE MICROBIOLOGY RESULTS WITH HIGH YIELD DURING LAPAROSCOPIC APPENDICECTOMY IN CHILDREN
Authors: Stephen Stonelake, MRCS(1), Oliver Gee, FRCS(2), Ingo Jester, MD(3)
Institutions: Birmingham Children's Hospital(1), Birmingham Children's Hospital(2), Birmingham Children's Hospital(3)
Category: General Surgery
Keywords: Appendicitis,Laparoscopic,Microbiology
Aim of the Study: 1. To evaluate the use of multi-site swabs for obtaining microbiology in children undergoing prospective appendicectomy. 2. To audit the change in swab taking practice during appendicectomy in subsequent cases. **Methods:** 123 children undergoing appendicectomy over two 6 month periods were examined. In the first 6 months (2014) we prospectively observed swab taking from three sites (peritoneal fluid, appendix serosa and rectal) at the time of appendicectomy. The growth results, length of time to identify results and number of post-operative collections were reviewed. In the second 6 month period (2015) we retrospectively audited swab taking practice following recommendations arising from the first period of study **Main Result:** In the first 6 month period, from 55 appendicectomies (84% laparoscopic), 27 peritoneal, 32 appendix serosa and 26 rectal swabs were obtained. Pathogens were grown from 18/27 (67%) and 23/32 (72%) of the peritoneal fluid and appendix serosal swabs respectively. From rectal swabs, 9/26 (35%) grew pathogens, all being Escherichia Coli. Only one swab (rectal) revealed multi-resistant Escherichia coli. This patient developed an intra-abdominal collection requiring operative drainage. In the second 6 month period, from 68 appendicectomies (75% laparoscopic), 25 peritoneal, 46 appendix serosa and 0 rectal swabs were obtained. Pathogens were grown from 21/25 (84%) and 35/46 (76%) of the peritoneal fluid and appendix serosal swabs respectively. Overall (123 appendicectomies) there was similar yield of positive microbiology obtained from both peritoneal fluid (39/52=75%) and appendix serosal swabs (58/78=74%). **Conclusion:** Swabs from the serosal surface of the appendix gave the highest yield of bacterial growth in the prospective study group. Subsequent audit showed increased uptake of serosal appendix swabbing with a consistently high yield of bacteria. Appendix serosal swabbing is a newly described technique offering an additional or alternative source for microbiology in appendicectomy, particularly when free peritoneal fluid is absent

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Title: ABDOMINAL ULTRASONOGRAM IN TYPHOID FEVER: A USEFUL DIAGNOSTIC TOOL
Authors: MIRZA KAMRUL ZAHID, MS(5)
Institutions: Shaheed Suhrawardy Medical College (5)
Category: General Surgery
Keywords: Ultrasonogram,Bowel wall thickening ,Typhoid fever
Aim of the Study: To see the use of abnormal ultrasonographic in the diagnosis of Typhoid fever. **Methods:** This cross sectional study on enteric fever was carried out during the period of July 2008 to 2009 on 30 patients between 2 months 12 years of age of either six admitted with the clinical diagnosis of enteric fever having positive hemoculture for

Salmonella typhi or paratyphi and or significant Widal test. Abdinimal USG was done atCentre for Nuclear Medicine and Ultrasound, Bangladesh atomic energy commission, Sir Salimullah Medical College & Mitford Hospital. **Main Result:** On ultrasonogram, hepatomegaly observed in 93.3% cases, splenomegaly in 53.3% cases, thickened bowel wall in 46.7% cases, enlarged mesentric lymph node in 63.3% cases and 30% cases showed gall bladder changes. Ultrasonogram was done on first week of fever in 33.3% cases, on second week in 43.3% cases and third week in 23.3% cases. Out of them ultrasonogram done on first day of admission in 6.6% cases, on second day in 80% cases and third day in 13.3% cases. In first week the bowel wall thickening found in 10% cases, lymph node enlargement in 23.3% cases and gall bladder changes in 3.3% cases, in second weekthe bowel wall thickening found in 23.3% cases, lymph node enlargement in 26.6% cases and gall bladder changes in 20% cases, in third week the bowel thickening found in 13.3% cases, lymph node enlargement in 13.3% cases and gall bladder changes in 6.6% cases. **Conclusion:** In endemic areas like Bangladesh ultrasound findings of hepatomegaly, spleomegaly,mesenteric lymphadenopathy, bowel wall thickening, gall bladder changes are useful diagnostic features of typhoid fever.

PA3-2 | MODERATORS: LOUIS MARMON, KENNETH WONG

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Title: A clinico-radiologic scoring system for prediction of Hirshsprung disease

Authors: Saloua Ammar, MD(1), Hayet Zitouni, MD(2), Imene Maaloul, MD(3), wiem feki, MD(4), Mahdi Ben Dhaou, MD(5), Mohamed Jallouli, PhD(6), Hela Fourati, MD(7), Zeineb Mnif, PhD(8), Riadh Mhiri, PhD(9)

Institutions: Department of pediatric surgery, Hedi Chaker Hospital(1), Department of pediatric surgery, Hedi Chaker Hospital(2), Department of radiology, Hedi Chaker Hospital(3), Department of radiology, Hedi Chaker Hospital(4), Department of pediatric surgery, Hedi Chaker Hospital(5), Department of pediatric surgery, Hedi Chaker Hospital(6), Department of pediatric surgery, Hedi Chaker Hospital(7), Department of radiology, Hedi Chaker Hospital(8), Department of pediatric surgery, Hedi Chaker Hospital(9)

Category: General Surgery

Keywords: Hirschsprung,Diagnosis,Radiology

Aim of the Study: We set out to determine the probability of Hirshsprung Disease (HD) by divising a scoring system that uses clinical and radiologic findings. **Methods:** All charts of patients with clinical manifestation of HD from 2005 to 2015 were included in the study. Seven items were evaluated. Patients were classified as low score (0-3) and hogh score (4-9). Items were sex, constipation or delay in passing meconium within 48 hours of life and 4 contrast enema sub scales including transitional zone, rectosigmoid index, delay in passing contrast product in the 24h contrast enema and a positive rectal tube test. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPP) were calculated for identifing HD. We compared our diagnostic scoring system with results of intestinal biopsy. **Main Result:** There were 52 children. Thirty five had HD. There were 36 boys and 16 girls. The mean age was 8months ranging from 3 days to 5 years. The sensitivity and specificity of our scoring system were 87% and 83% respectively. PPV and VPV were 92% and 80% respectively. **Conclusion:** Our clinico-radiologic scoring system may be used as a useful diagnostic tool in HD. Further multicentric studies are needed to assess diagnostic accuracy.

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Title: Splenic infarction following cholecystectomy – case report of a rare presentation of sickle-cell anemia and review of literature.

Authors: Camila G Fachin, MSC(1), Adria K Farias, MD(2), Emanoela R Azevedo, MD(3), Leilane Oliveira, MD(4), Luiz F Scarabelot, MB(5), Mariane M Monteiro, MB(6), Fernando AB Amado, MD(7), Maria Helena P DelVale, PhD(8), Marcelo M Stegani, PhD(9), Andre IBS Dias, PhD(10), Miguel A Agulham, PhD(11)

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Category: General Surgery

Keywords: splenic infarction,sickle cell disease,splenectomy

Aim of the Study: To report a case of a child with sickle cell anemia presenting with splenic infarction following an elective cholecystectomy, which is a rare event in sickle cell patients, and accompanied of an acute thoracic syndrome. And also to review literature and discuss the role of splenectomy. **Methods:** Massive splenic infarction (MSI) is a rare and recognized complication of sickle cell anemia, a genetic hematological disorder defined by the predominance of hemoglobin S. The natural history is splenomegaly during the first decade of life and then auto splenectomy as a result of repeated attacks of vasocclusion and infarction. A recent review showed 15 cases in 21 years, and 7 of them had a precipitating cause as high altitude, acute chest syndrome, septicemia and severe vasoclusive crisis. From the 15, only 4 were not initially treated with splenectomy, but of these, 3 required splenectomy due to secondary abscess formation. **Main Result:** An eight-year-old boy with sickle cell anemia was diagnosed with asymptomatic cholelithiasis. He

underwent an elective laparoscopic cholecystectomy with no post-operative complications. He was discharged on the post-operative day 3, but was readmitted one day after for presenting cough, fever and abdominal pain, evolving with tachypnea and desaturation. At admission he was diagnosed with acute thoracic syndrome. Due to persistent and severe abdominal pain, a CT was performed and demonstrated extensive splenic necrosis. Because of the severity of his acute thoracic syndrome, conservative treatment was attempted. The patient improved from his respiratory symptoms and was discharged with no abdominal pain. Few weeks after discharge, the patient was submitted to an elective laparoscopic splenectomy to avoid infection complications, and has done well. **Conclusion:** Although massive splenic infarction is a rare complication of sickle cell disease, it is important to identify possible precipitant factors and clinical features that facilitate early diagnosis allowing any necessary treatments.

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Title: Effect of human chorionic gonadotropin (HCG) injection on position of undescended testis
Authors: Wesam Mohamed, MD(1), mahmoud Elshahawy, MSC(2), Ayman Hussein, MD(3), Tamer yassin, MD(4), Gamal El-Tagy, MD(5)
Institutions: Cairo university(1), (2), Cairo university(3), Cairo university(4), Cairo university(5)
Category: General Surgery
Keywords: human chorionic gonadotropin ,undescended testis,cryptorchidism
Aim of the Study: The difference of undescended testis initial position has significant effect on expected surgical results. The authors evaluate effect of HCG injection on testicular position in palpable undescended testis. **Methods:** Sixty patients with 77 palpable undescended testes were clinically examined and underwent ultrasonographic examination followed by intramuscular HCG injection according to WHO recommended dosage system; 250 IU in age <1year , 500 IU in age 1-5years, 1000 IU in age >5 years, twice a week for 5 weeks for all age groups. Another clinical and ultrasonographic examination was done 1 week and 2 months after last injection of HCG. The results were compared to a control group of sixty patients with cryptorchidism and palpable testes. **Main Result:** From total 77 testes of patients injected with HCG; 14 testes failed to improve in position (18.2%), 62 testes showed 1 degree of improvement (from inguinal to prescrotal or from prescrotal to scrotal location) (80.5%) and 1 testis showed 2 degrees of improvement (from inguinal to scrotal location) (1.3%) compared to the control group in which no anatomical improvement occurred prior to surgery. **Conclusion:** Intramuscular injection of HCG as neoadjuvant therapy in cryptorchid boys induced testicular descend to scrotum in 45.5% of cases and improved position of testis prior to orchidopexy in 36.3% of study group. Total 81.8% of the injected study group gained benefit from suggested therapy.

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Title: Treatment of short-segment Hirschsprung disease in our department.
Authors: Jozsa Gergo, MD(1), Oberritter Zsolt, PhD(2), Tornoczki Andras, MD(3), Farkas Andras, MD(4)
Institutions: Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(1), Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(2), Department of Pathology, Medical School, University of Pécs(3), Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(4)
Category: General Surgery
Keywords: Hirschsprung disease,Bentley procedure,
Aim of the Study: The authors report the experience they gained with the application of Bentley (extraluminal posterior myectomy) surgery in the treatment of short-segment Hirschsprung disease and the results of the short-intermediate-term follow up of the patients. **Methods:** Between 2009 and 2012, 7 children, 6 boys and 1 girl were diagnosed with Hirschsprung disease and underwent Bentley surgery in the Department of Pediatrics at University of Pecs. The age of the children was 4-17 (mean: 7.7) years. The average follow-up duration was 28-75 (mean: 16) months. The authors studied the occurrence and characteristics of the clinical symptoms (defecation), dose of laxative before and after the surgery. They compared the histological results of the pre-surgical rectum biopsy sample with those of the sample collected during myectomy. **Main Result:** The interval between defecations shortened by 60% during the follow up. The occurrence of soiling was reduced from 90% before surgery to 10% after the operation, the dose of the laxative decreased by 50% as compared to the dose before the surgery. Regarding the extension of the disease, there was one case, when the histological result of the sample harvested during myectomy did not match with that of the sample collected before surgery. In one case, rectum perforation occurred as a surgical complication, which was not accompanied with symptoms of systemic inflammation. **Conclusion:** The Bentley surgery improves the life quality of children suffering from short-segment Hirschsprung disease. The soiling is fully abolished in the majority of the cases. Based on the mid-term results, the laxative treatment can not be aborted, but the dose can be reduced. The conduction of the surgery and finding the appropriate layer and thickness of the myectomy require vast experience. The Bentley surgery is accompanied by minimal contamination and it is somewhat easier to control compared to the transanal posterior myectomy.

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Title: Is Color doppler study is optimum modality of diagnosis in midgut volvulus with malrotation?
Authors: Bindey Kumar, MS(1), Prem Kumar, MD(2)

Institutions: ALL INDIA INSTITUTE OF MEDICAL SCIENCES,PATNA.(1), ALL INDIA INSTITUTE OF MEDICAL SCIENCES,PATNA.(2)
Category: General Surgery
Keywords: Malrotation,Midgut Volvulus,Whirl Pool Sign
Aim of the Study: Aim of this study is to see efficacy of Color Doppler signs like relative positions of Superior Mesenteric Vein (SMV) and Superior Mesenteric Artery (SMA) and Whirlpool Sign(WS) in diagnosing mid gut volvulus with malrotation. **Methods:** 52 Paediatric patients of suspected malrotation with midgut volvulus were studied at IGIMS & AIIMS Patna between 1998-2016. All patients underwent plain abdominal X-Ray, Color Doppler routinely and contrast upper GI study in some patients. All cases were operated and diagnosis was confirmed. A subset of 60 paediatric patients of some nonspecific gastrointestinal complains were also examined to see relative position of SMV/SMA in control population. **Main Result:** The median age of children was 12 months (IQR: 1.6 months to 39Months). There were 42 males and 10 females cases. Out of 52 suspected cases, 43 were diagnosed as inversion of SMA/SMV and 9 were diagnosed as anterior of SMA. Out of 43 cases of inversion of SMA/SMV, all 43 were cases of mal-rotation after surgical confirmation. Out of 9 cases of anterior of SMA, 5 were diagnosed as mal-rotation after surgical confirmation. In control subjects,none of them were found to have any core signs like inversion of SMA/SMV or anterior of SMA. The median age of the control subjects was 8 years (IQR: 1.25 year to 16 years), and male to female ratio was 3:2 with 36 males and 24 females. The sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV) and accuracy in inversion of SMV/SMA was 100%. Proportion of mal-rotation was significantly higher among the cases presented with anterior of SMA as compared to control subjects ($p<0.001$). **Conclusion:** Color doppler is not only a screening modality but the diagnostic modality in suspected case of mid gut volvulus with malrotation of gut.

126 - PA
Title: double intussusception of ileum through patent vutellointestinal duct:case report
Authors: nuru ahmed, MD(1), endris alkadir, MD(2)
Institutions: bahirdar university(1), bahirdar university(2)
Category: General Surgery
Keywords: patent VID,double intussusception,anastomosis
Aim of the Study: Case report **Methods:** Case study **Main Result:** There was a prolapse of ileum through patent vitellointestinal duct in a 31 day old boy presented to our hospital.on examination There was a y shaped protrusion of bowel which was ischemic.That was covered with warm saline soaked gauze and the Child resuscitated and under general anaesthesia through circum umbilical incision the bowel was dissected off of the skin,réduction of the bowel and end to end anastomosis was done and umbilical reconstruction.The Child was fine during his subsquent visit.
Conclusion: Double intussusception through patent VID is a very rare anomaly.Prolapse of the bowel through the patent duct can be precipitated by factors like increased intra abdominal pressure and if the condition is not detected early can result in strangulation and gangrene of the segment that needs resection with primary anastomosis or exteriorization as ileostomy.But with early diagnosis and intervention simple repair of the defect can be done if the defect is small

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Title: Congenital anorectal malformations are equally distributed among male and female patients
Authors: Jara Jonker, BSc(1), Monika Trzpis, PhD(2), Paul Broens, MD, PhD(3)
Institutions: University of Groningen, University Medical Center Groningen(1), University of Groningen, University Medical Center Groningen(2), University of Groningen, University Medical Center Groningen(3)
Category: General Surgery
Keywords: anal atresia,anorectal malformation,gender distribution
Aim of the Study: Congenital anorectal malformations (CARM) comprise a wide spectrum of presentations. There is a male preponderance described in the literature. Contrarily, in our clinical practice we noticed an equal gender distribution. We aimed to determine whether the frequency of CARM is influenced by gender. **Methods:** We included 129 patients (0–319 weeks old) diagnosed with CARM, referred to the Department of Pediatric Surgery between 2004 and 2013. Patients with recto-perineal or recto-vestibular fistula were classified as mild CARM, all others as severe. We analyzed the patient´s age at the time of CARM diagnosis and the gender. We considered the diagnosis to be early when the patient was diagnosed with CARM =48 hours after birth, all others as late. **Main Result:** There were 75 (58%) female and 54 (42%) male diagnosed with different forms of CARM. Significantly more patients had mild CARM form than severe (67% and 33%, respectively, $P<0.001$). Of 75 females 89% suffered from mild CARM whereas of 54 males 65% from severe CARM ($P<0.001$). Additionally, all the severe CARM forms were diagnosed early, whereas only 55% of mild CARM were diagnosed early and 45% late. Among patients diagnosed early with mild CARM, 34 (72%) was female and 13 (28%) was male ($P<0.05$). Among patients diagnosed late with mild CARM, 33 (85%) were female and 6 (15%) were male ($P<0.001$). **Conclusion:** We demonstrate that the number of female patients suffering from CARM is currently underestimated. Our study shows that there is an equal gender distribution among CARM patients. However, females more often have mild forms and males more severe forms. Mild forms of CARM often require more time to be diagnosed compared to severe CARM. Therefore, many female patients are diagnosed with CARM at an older age, or

may even never be diagnosed.

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Title: Italian survey for bariatric surgery in adolescent: long time follow-up
Authors: Nicola Zampieri, associate professor for pediatric surgery(1), Roberto Castellani, MD(2)
Institutions: University of Verona, A.O.U.I., Pediatric surgical Unit(1), Casa di Cura San Francesco, Department of Surgery(2)
Category: General Surgery
Keywords: bariatric surgery ,weight loss,mini-invasive surgery
Aim of the Study: The role of bariatric surgery and its role in adolescent is still under discussion worldwide. The aim of this study is to report a multicentric Italian survey for bariatric procedures in adolescents and the outcomes with a medium and long time follow-up. **Methods:** We analyzed consecutive data added into the Italian register of the society for bariatric surgery between 2000 and 2010. We evaluated all patients treated in a 10 years period with a mean follow-up of 5 years. Inclusion and exclusion criteria were created. All patients were aged between 13 and 18 yers. We evaluated and compared clinical and surgical data. **Main Result:** After reviewing medical charts, 173 patients were considered for the study (at least 5 yrs follow-up); 85 patients were treated with lap-band, 47 with intragastric balloon, 26 with sleeve gastrectomy and other 15 patients with malassorbitive techniques. Among clinical data, there was a statistical difference in term of EWL between techniques only after 1 year post-op ($p>0.05$); at 5 years, considering the % of patients studied, sleeve gastrectomy had the best EWL respect to other techniques ($p<0.05$); at 5 year more than 90% resolved their comorbidities especially hypertension, dyspnea, orthopedic problems and dyspnea. **Conclusion:** This is the first study reporting a National survey in adolescent; more than 80% of patients are followed till 5 years post-op but only few patients (less than 5%) till 10 years after surgery. Our results demonstrated that sleeve gastrectomy in adolescent is safe and had a better EWL respect to other techniques.

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Title: Significant Diagnosting Criteria to Differentiate Acute Appendicitis from Acute Mesenteric Lymphadenitis in Children
Authors: Astra Zviedre, PhD(1), Arnis Engelis, PhD(2), Peteris Tretjakovs, PhD(3), Vilnis Titans, MD(4), Aigars Petersons, PhD(5)
Institutions: Department of Pediatric Surgery, University Children’s Hospital, Riga, Latvia; Department of Pediatric Surgery, Riga Stradinš University,Riga,Latvia (1), Department of Pediatric Surgery, University Children’s Hospital, Riga, Latvia; Department of Pediatric Surgery, Riga Stradinš University,Riga,Latvia (2), Department of Physiology and Biochemistry, Riga Stradinš University, Riga, Latvia(3), Outpatient Clinic "LaTi & Co" Ltd, Riga, Latvia(4), Department of Pediatric Surgery, University Children’s Hospital, Riga, Latvia; Department of Pediatric Surgery, Riga Stradinš University,Riga,Latvia (5)
Category: General Surgery
Keywords: Acute appendicitis,Acute mesenteric lymphadenitis,diagnostics
Aim of the Study: To determine whether a scoring system and laboratory tests could differentiate patients with acute appendicitis (AA) from mesenteric lymphadenitis (AML). **Methods:** From October 2012 - October 2015, 57 patients (7-18 years) with suspected AA were included in prospective study. 31 patient underwent surgery for AA, 26 were not treated surgically and were diagnosed AML on ultrasonography. Alvarado score (AS), white blood cell count (WBC) and serum interleukin-6 (IL-6) were obtained on admission and were compared between groups. Data were analyzed as positive/negative predictive value (PPV/NPV), sensitivity, specificity and accuracy rate (AR). Receiver operating characteristic (ROC) curves and the areas under curve (AUC) were defined. **Main Result:** 57 patients with the mean age of 12.9 (SD 3.2), 35 (61.4%) boys. The most often AS of 7 or more was observed for AA with 71.0% of sensitivity, 76.9% of specificity, 78.6% of PPV, 67.0% of NPV, and 73.7% of AR ($p=0.001$). Initialy IL-6 and WBC showed to be a valuable diagnostic tool in AA. AUC of 0.77 (95% CI 0.64-0.89; $p=0.001$) for IL-6 with the cut-off value of 4.3 pg/mL before the operation (sensitivity 67.7%, specificity 76.9%). AUC of 0.72 (95% CI 58.4-85.0; $p=0.005$) for WBC with cut-off value of $10.7 \times 103/\mu L$ (sensitivity 74.2%, specificity 53.8%). AR of AA (89.5%) was provided combining AS of 7 or more with WBC and IL-6 (sensitivity 94.1%, specificity 50.0%, PPV 94.1%, NPV 50.0%). **Conclusion:** AS of 7 or more, WBC with cut-off value of $10.7 \times 103/\mu L$ and serum IL-6 with the cut-off value of 4.3 pg/mL appear to be an early diagnostic criteria for discrimination between AA and AML.

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Title: Outcomes of Non-Operative Management of Children with Non-Perforated Appendicitis with Expanded Inclusion Criteria
Authors: Andrew Scott, MD(1), Steven L Lee, MD(2), Daniel A DeUgarte, MD(3), Stephen B Shew, MD(4), James CY Dunn, MD(5), Shant Shekherdimian, MD(6)
Institutions: UCLA, Mattel Children's Hospital(1), UCLA, Mattel Children's Hospital(2), UCLA, Mattel Children's Hospital(3), UCLA, Mattel Children's Hospital(4), UCLA, Mattel Children's Hospital(5), UCLA, Mattel Children's Hospital(6)

Category: General Surgery
Keywords: Appendicitis,Non-Ooperative Management,Outcomes
Aim of the Study: Non-operative management (NOM) of non-perforated appendicitis has emerged as a treatment alternative to surgery for carefully selected children. The purpose of this study was to evaluate the outcomes for NOM of all children with suspected non-perforated appendicitis, including those patients with an appendicolith. **Methods:** Parents of all children with suspected non-perforated appendicitis were offered NOM versus laparoscopic appendectomy. NOM included administration of intravenous antibiotics and hospital admission. If clinically improved, patients were discharged with oral antibiotics to complete a 7-day course. If patient worsened or failed to improve within 24 hours, laparoscopic appendectomy was performed. We reviewed our registry (October 2014-December 2015). The primary outcomes were the initial success rate and recurrence rate. **Main Result:** Fifty patients (median age, 9 years[IQR 7-12]) selected NOM. The initial failure rate for NOM was 20%. Of the 10 who failed, 7 (70%) had complicated appendicitis (contained perforation-5; gangrenous appendicitis-2). The recurrence rate was 13% (median follow-up period of 305 days). The median time to recurrence was 60 days [42-116]. All patients with failure of NOM and recurrence underwent laparoscopic appendectomy. One patient elected to have interval appendectomy. Overall, 34 (68%) patients avoided appendectomy. Patients with an appendicolith had a higher initial failure rate (7/19, 37%) compared to patients without an appendicolith (3/31, 10%; p=0.03). The recurrence rate in patients with an appendicolith (2/12, 17%) was similar to patients without an appendicolith (3/28, 11%; p=0.61). The median LOH was 1 day[IQR 1-2] for all patients. **Conclusion:** NOM is feasible and effective in pediatric non-perforated appendicitis. Nearly two-thirds of patients with non-perforated appendicitis with expanded inclusion criteria were able to avoid appendectomy. The presence of an appendicolith was associated with a higher failure rate, but is not an absolute contraindication for NOM.

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Title: EPIDEMIOLOGY AND CLINICAL SPECTRUM OF PEDIATRIC NONTRAUMATIC SURGICAL EMERGENCIES
Authors: Bhushanrao B Jadhav, MCh Pediatric surgery(1), Bibekanand Jindal, MCh Pediatric surgery(2), Bikash Naredi, MCh Pediatric surgery(3), S Kumaravel, MCh Pediatric surgery(4), G Krishanakumar, MCh Pediatric surgery(5)
Institutions: Department of Pediatric surgery, JIPMER, Pondicherry (1), Department of Pediatric surgery, JIPMER, Pondicherry (2), Department of Pediatric surgery, JIPMER, Pondicherry (3), Department of Pediatric surgery, JIPMER, Pondicherry (4), Department of Pediatric surgery, JIPMER, Pondicherry (5)
Category: General Surgery
Keywords: Pediatric nontraumatic surgical emergencies,Epidemiology and clinical spectrum,Team approach
Aim of the Study: Pediatric nontraumatic surgical emergencies (PNTSE) are a major part of pediatric surgical emergencies associated with varied spectrum and high morbidity. The aim of this study is to understand the clinical spectrum and epidemiology of PNTSE. **Methods:** All the children in the age group of 1 month to 14 years admitted in the department of Pediatric surgery in emergency were studied retrospectively from Jan 2014 to Nov 2015 in JIPMER, a tertiary care center, Pondicherry, India.Children with h/o trauma were excluded from the study. **Main Result:** Total of 404 patients were admitted in emergency during the study period.Of these 404, 34(8.4%) were traumatic surgical emergencies and 370 (91.6%) were PNTSE. Of the 370, 92(24.9%) cases were managed conservatively and 278(75.1%) required surgical intervention. Vomiting(59%) and pain in abdomen(51%) were the most common symptoms followed by fever, abdominal distension and blood in stools. USG was the most common radiological investigation (331 cases= 89.5%) used followed by x rays and CT scan respectively. Appendicitis was the most common diagnosis (114 cases= 30.8%) and Intestinal obstruction was the second most common diagnosis (75 cases= 20.3%). Intussusception was the most common cause of intestinal obstruction(55 cases= 14.9%) followed by adhesive intestinal obstruction (11 cases= 2.9%). Average hospital stay was 5.19 days.36 cases (9.7%) cases developed complications, of which 35 were in operated cases and 1 was in conservatively managed cases. Surgical site infection (52%) and sepsis (16.66%) were the most common complications in operated cases and only one had mortality due to aspiration pneumonia. Other mortality occurred due to septic shock in the conservatively managed group. **Conclusion:** PNTSE have better outcome with the team approach involving radiologist, pediatric intensivist and pediatric surgeon. Wound infection is the major cause of morbidity and increased hospital stay. Sepsis is an important cause of mortality in both operative and nonoperative group.

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Title: Exposure in Refugee Communities as a Risk Factor for Unusual Case of Acute Abdomen
Authors: Qadir M Salih, MD(1), Sabina M Siddiqui, MD(2)
Institutions: University of Dahok, College of Medicine Pediatric Surgery Center(1), University of Michigan, Ann Arbor(2)
Category: General Surgery
Keywords: Acute Abdomen,Omphalitis,Refugee Conditions
Aim of the Study: Acute abdomen and omphalitis is rare in older children. We report an unusual case of omphalitis with associated acute abdomen in a child secondary to an infestation with a tick (Dermacentor sp). **Methods:** Case Report and a Review of the Literature for Omphalitis **Main Result:** A 10 year old refugee child presented with a 2 day history of abdominal pain with periumbilical abdominal wall erythema and an exam consistent with an acute abdomen.

After a thorough workup and examination decision was made to proceed to the operating room where a living tick was removed from the umbilicus during examination under anesthesia **Conclusion:** In children at risk for exposure, infestation of the umbilicus with local insects can be included in the differential for omphalitis and peritonitis.

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Title: Surgical treatment of idiopathic constipations in children
Authors: Igor Kirgizov, PhD(1), Sergei Minaev, PhD(2), Ilya Shishkin, PhD(3), Mihail Axelrov, PhD(4), Alexandr Gladkiy, PhD(5)
Institutions: (1), (2), (3), (4), (5)
Category: General Surgery
Keywords: chronic constipations with idiopathic megarectum ,effectiveness of existing methods ,operation selection
Aim of the Study: Analysis of results of treatment, development of an optimal method of surgical treatment of idiopathic constipations. **Methods:** The study included 117 children. Children to whom were performed surgical treatment by Soave method from 2006 to 2010 were integrated in group 1(n=32). From 2010, we use laparoscopic-assisted anterior low resection of colon with hardware endorectal anastomosis in our modification, with laparoscopic ultrasound control of volume of resection of colon, group 2 (n=85). Average children age 15,3 years. Boys 25%, girls 75%. The indication for surgery was a persistent lack of effect of ongoing conservative therapy for 2 years, decompensation of constipations with appearance of encopresis, which was observed in all patients admitted to surgical treatment, with characteristic X-ray picture. For all children anal profilometry, ergography, colonoscopy with biopsy of the mucosa and fully-layered biopsy of rectal wall was performed. Morpho-histochemical research excluded Hirschsprung's disease. Clinical effect was evaluated by the positive dynamics of previous symptoms. **Main Result:** In children from 1 group constipations were noted in 5 of 32 children, in children from 2 group 7 out of 85, statistical differences in the level of clinical results were not found (p≥0,05) Encopresis in children of 1 group was detected in 11 of 32, in 2 group in 4 of 85. Exact bilateral test of Fisher (p≤0,001) Serious compilations, required removal colostomy in 1 group was noted in 7 of 32 children, in 2 group in 5 of 85 (p≤0,05) **Conclusion:** Thus, for chronic constipations with idiopathic megarectum in children, selected operation is laparoscopically assisted low anterior resection of colon, with hardware endorectal anastomosis and laparoscopic ultrasound control of volume of colon resection in our modification, rather then various modifications of Soave operation, both in basic functional results and the number of complications.

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Title: Autosite Parasitic Twin , Dilemma of Presentation and Management Frame To The Parents And Surgeon : A Case Series .
Authors: Mohammed Aboud, FICMS, FACS,MD(1), Noor Abudi, MBChB(2)
Institutions: The Maternity and Child Teaching Hospital , Al Qadisiya(1), College of Medicine , Al Qadisiya University(2)
Category: General Surgery
Keywords: Autosite,Parasitic ,Caudal twinning
Aim of the Study: Heteropagus type of parasitic twinning is a very rare event of conjoined twining whose incidence is between 1 in 50,000 to 1,00,000 live births. To plane a strategy for assessment and parent surgery offering . **Methods:** We here present 5 cases managed and operated in single pediatric surgery unit with varied clinical morphology forms of parasitic a cardiac caudal twinning . All initial assessment , clinical , laboratory , radiology and histopathology workup were done . **Main Result:** Case 1 The baby was born at a gestational age of 34 weeks. There were 3 upper limbs (one with three fingers attached to the parasitic mass in thoracolumber at the back) and 2 lower limbs . Case 2 A 20 day old baby was presented with a mass in the gluteal region with bisexual ambiguity . On evaluation, both vaginal structure and well developed phallus were present . Case 3 A term female neonate was presented with polymelia (third limb with well defined accessory femur articulating with iliac bone) , spinabifida and sacrococceageal teratoma . Case 4 A 40 day old boy presented with caudal mass grossly resembling testis with well prominent phallus covering the anal opening , surgery done , histopathology revealed a parasitic testicular and phallic tissues with rudimentary urethra. Case 5 A 2 moths old male with lumbosacral occult dysraphism and secondarily formed the predominant exterior parasitic finger like structure. **Conclusion:** Conjoined twinning is rare and has broad spectrum of presentation , bizarre and confusing picture can result . Management of the parasitic twinning may look easy but usually the auto site carry high incidence of associated anomalies , their effects in many occasions altering the outcome of surgery . Knowledge of embryology, classification , clinical and radiology findings essential in decision making for the pediatric surgeons.

135 - PA
Title: A 12 year old boy with upper abdominal swelling
Authors: Nazmus Sakib Ferdous, MS(1), Abdul Hanif, MS(2), Ashraf Ul Huq, PhD(3), Shahnooor Islam, MS(4)
Institutions: Dhaka Medical college hospital(1), Dhaka Medical college hospital(2), Dhaka Medical college hospital(3), Dhaka Medical college hospital(4)
Category: General Surgery
Keywords: Epigastric Swelling,Splenectomy,Dermoid

Aim of the Study: Department of Pediatric Surgery, Dhaka Medical College and Hospital, Bangladesh Dermoid cysts rarely occur in spleen. Such cysts include dermoid elements within mesodermic structure, the pathogenesis of which is controversial. Here we describe the rare case of dermoid cyst in spleen in a 12 year old boy. **Methods:** A 12 year old boy with complaint of left upper abdominal swelling, which was non tender, a swelling about (9x8) cm in left hypochondriac region, firm in consistency, surface was smooth, and insinuation was not possible. He had no significant history of trauma to abdomen. Routine, biochemical and hematological parameters were normal. Ultrasonography demonstrated a cystic mass in epigastric region filled with hazy content. CT scan revealed cystic lesion compressing the stomach. Based on these investigations patient was diagnosed as a case of splenic cyst. At laparotomy, almost whole of the spleen contain the cystic lesion,serous yellowish fluid was aspirated. Splenectomy was performed. Biochemical study revealed no abnormality. **Main Result:** The histopathological aspect of description wass compatible with the diagnosis of dermoid cyst. To avoid the risk of infection due to splenectomy the polyvalent pneumococcal, meningococcal and hemophillus influengae-b vaccine was administered on the 10th post operative day. **Conclusion:** The clinical cases previously presented, generally respects the descriptions of the specialized literature. The diagnosis has been incidentally established during the investigation for a painless left hypochondriac swelling. The surgical treatment has been the first recommendation, given the size of the cyst and some symptoms. We have favored the open surgical approach given the dimensions of the cyst, the tight connection to the left kidney and the possibility of occurrence of some serious surgical complications, such as hemorrhage and injury to the neighboring organs.

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Title: Isolated Giant Multicystic Peritoneal Mesothelioma Developed In The Parenchyma Of The Stomach
Authors: Mohammed Aboud, FICMS, FACS,MD(1), Manal Kadhim, PhD(2)
Institutions: The Maternity and Child Teaching Hospital , Al Qadisiya(1), College of Medicine , Al Qadisiya University(2)
Category: General Surgery
Keywords: Isolated Giant ,Mesothelioma ,Stomach
Aim of the Study: Multicystic mesothelioma is a well recognized, but uncommon lesion of the serosal membranes. The lesion can manifest as a discrete localized mass, or as multiple nodules diffusely involving the serosa. In this report, we present our case with such rare entity. **Methods:** A 4 years old male was admitted to hospital with a preliminary diagnosis of appendicitis. For 15 days prior to admission, he had been complaining of a crampy abdominal ,episodes of non bilious vomiting , progressive abdominal distention and constipation . Laboratory findings were not specific. Abdominal ultrasonography showed a large, multicystic reservoir filled with fluid full both right and left upper quadrants extending to the umbilicus. Abdominal contrast-enhanced computed tomography (CT) showed a 27x19x15 cm multicystic mass extending from the greater curvature of the stomach to the dome of bladder with no solid components and no infiltration to adjacent organs . The patient was operated with a supraumbilical transverse incision. The patient had an uneventful recovery and was closely followed-up by US and CT . He remained free of symptoms and had no recurrence two years after surgery. **Main Result:** Operation revealed a cystic mass filled with dark brown-dark green serous fluid which was attached to the greater curvature of the stomach with a 8 cm thick peduncle. Total excision of the mass was performed by clamping and cutting the narrow attachment (Figure 1-6).For histopatology the cells lining the cysts stained positive for cytokeratin and calretinin markers on immunohistochemical stains. A diagnosis of benign multicystic mesothelioma was made (figure 7). **Conclusion:** Multicystic mesothelioma is an uncommon benign mesothelial proliferation. Histological examination with the aid of immunohistochemical techniques is essential for diagnosis. The prognosis is generally good. Benign cystic mesothelioma should be kept in mind as an unusual reason for an abdominal mass in children .

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Title: Role of nasogastric tube in children undergoing elective distal bowel surgery
Authors: Subhasis RoyChoudhury, MD(1), Niyaz Khan, MS(2)
Institutions: Lady Hardinge Medical College and Kalawati Saran Children's Hospital, New Delhi-110001, India.(1), Lady Hardinge Medical College and Kalawati Saran Children's Hospital, New Delhi-110001, India.(2)
Category: General Surgery
Keywords: nasogastric tube,oral feeds,distal bowel surgery
Aim of the Study: Nasogastric drainage tubes are being routinely used in children and adults undergoing abdominal surgery without much scientific evidence supporting their true usefulness. The aim of our study was to assess the role of nasogastric tube in children undergoing elective distal bowel surgery. **Methods:** In this randomised control study, pediatric patients undergoing elective distal bowel surgery were enrolled and pre-operatively divided into 2 groups: those with nasogastric tube (NG group) or without nasogastric tube (NNG group). Patient demography, operative and post operative data and outcome parameters such as, resumption of bowel function, enteral feeding, post-operative complications, hospital stay and patient with their parent satisfaction were recorded. The parameters were compared between the groups. **Main Result:** A total number of 60 patients were included with equal distribution in the NG and NNG groups. Patient variables were comparable in both the groups. Patients in NNG group progressed to full oral feeds significantly earlier (57±18 hrs vs. 106.07±18.35 hrs, $p<0.001$) and had shorter duration of hospital stay (91.93 ± 26.03

hrs vs. 114.67 ± 18.83 hrs, p<0.001) as compared to the NG group. Significant number of patients with nasogastric tube reported sore throat (9 vs. 1, p=0.03) and nausea (5 vs. 0, p=0.010). There were no significant differences in return of bowel function (39.43 hr ±15.92 vs. 43.60 hr±17.77, p=0.171), hiccups, sleep disturbance, post operative complications and nasogastric tube reinsertion rate between the two groups. The satisfaction rate was higher in the NNG group. **Conclusion:** Routine use of nasogastric tube after elective distal bowel surgery in children is not necessary. Patients without nasogastric tube had shorter hospital stay, fewer complications and better satisfaction.

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Title: Increased resource utilization associated with emergency appendectomy at pediatric specialized hospitals
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Institutions: University of Maryland Medical Center (1), University of Maryland Medical Center (2), University of Maryland Medical Center (3)
Category: General Surgery
Keywords: appendectomy,emergency surgery,health expenditure
Aim of the Study: Acute appendicitis is a frequent indication for emergent surgery, with most healthy children undergoing prompt appendectomy with a brief hospital stay. Children may receive care at local hospitals (LH), or at specialized hospitals (SH) which have more resources available. We hypothesize that care is more resource intensive at SH. **Methods:** The 2009 to 2013 Maryland Health Services Cost Review Commission database (including all non-federal hospitalizations) was queried for children ages 0-17. We defined the emergency appendectomy population as all patients admitted through the emergency department or as urgent / emergent admissions, with an ICD-9 procedure code for appendectomy or appendiceal abscess drainage (470.1, 470.9, 472). We excluded patients transferred out or any child with a length of stay (LOS) > 10 days. The All Patients Refined Severity of Illness (APR-SOI) was defined by extent of physiologic decompensation, and rated as minor, moderate, major, or extreme. Three hospitals had availability of pediatric anesthesia and PICU and were defined as specialized hospitals (SH). Children at LH and SH were compared on the basis of total charges (TC), LOS, and charges per day (CPD) by Wilcoxon test. **Main Result:** 4021 children met criteria, with 60.4% male. Children treated at LH were older (13 years [IQR 10-15] vs 10 years [IQR 7-13], P<0.0001). Most children (87.9%) were treated at LH, where most patients (54.8%) had minor APR-SOI. Children treated at SH more commonly had moderate APR-SOI (51.0% and 39.1% minor, P <0.0001). In comparing only children with minor APR-SOI (N=2127), children treated at SH had higher TC ($8867 [IQR 7215-10,888] vs $6372 [IQR5304-7759], P<0.0001), longer LOS (1 [IQR 1-2] vs 1, P=0.03), and higher CPD ($7188 [IQR 5121-9436] vs $5564 [IQR 4311-6936], P<0.0001). **Conclusion:** SH utilize more resources than LH, even in children with minor APR-SOI. Further research will examine why CPD at SH is significantly higher.

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Title: Anterior sagittal anorectoplasty: A more conservative approach for management of ANORECTAL MALFORMATION in female pediatrics
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Institutions: Alexandria university(1), Alexandria university(2), Alexandria university(3)
Category: General Surgery
Keywords: female anorectal malformation,ASARP,long outcome
Aim of the Study: Evaluation of the long-term outcome of ASARP as a management of female anorectal malformation with comparison of the outcome in regard to different types of anorectal anomalies and the outome of one-stage operation in comparison to that done after preliminary colostomy. **Methods:** Retrospective study included 495 females suffering anorectal anomalies operated on at Alexandria pediatric surgery department, from 1996 to 2016, with ages from 1 day to 15 years. They were classified into Rectovestibular fistula (n=374), Vestibular anus (n= 63), Anterior ectopic anus (n=46), Rectovaginal fistula (n=7) and Rectoperineal fistula (n=5). They were all treated by ASARP. 416 patients underwent a one-stage operation, while 79 patients underwent ASARP after a preliminary colostomy was done. Follow-up period ranged from 3 months to 4 years. 198 patients were evaluated for continence as they reached the age of 3 years using Kelly's scoring system. All the patients were evaluated for the appearance of the perineum, constipation and soiling. **Main Result:** All patients showed good appearance of the perineum. 198 patients were evaluated for continence. Out of 158 patients in whom the one-stage operation was done, 153 patients (96.8%) had a score of (5-6), while 5 patients (3.2%) had a score of (1-4). Out of 40 patients that had a colostomy before ASARP was done, 38 patients (97.5%) had a score of (5-6), while 2 patients (2.5%) had a score of (1-4). Constipation was encountered in 45 patients (9.1%). **Conclusion:** One stage ASARP is the ideal management of anorectal anomalies in females, with better cosmetic results. There is no proof that doing the operation under the cover of a protective colostomy has any significance in improving the long term outcome.

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Title: Trans-umbilical approach as a Minimal access surgery and scare-less operation in pediatric population (Kabul-Afghanistan)
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Institutions: French Medical Institute for Children (FMIC)(1)
Category: General Surgery
Keywords: Minimal access surgery,Trans-umbilical approach ,Minimal access surgery without telescope
Aim of the Study: Minimal access surgery is considered the best approach in surgical procedures. This includes the trans-umbilical approach, which is operation by a circum-umbilical incision, without the use of a telescope or gas insufflation. The trans-umbilical approach is mentioned by many authors in pediatric surgery, but unfortunately most pediatric surgeons do not employ this approach. Propose of this study is to show the usefulness and results of trans-umbilical approach in children. **Methods:** Between January 2015 and May 2016, a total 12 children under 5 years of age with surgical illnesses and need for surgical procedures (appendicitis, pyloric stenos, Meckel's diverticulum, jejunoileal atresia, intussusception, biopsy, and exploratory laparotomy) underwent trans-umbilical laparotomy; the median age of the patients was 4 years (5days-5years) and Male female ratio was 1:3. The results and usefulness of it were evaluated. **Main Result:** All the procedures using the trans-umbilical approach were successful, without any peri- and post-operative complications. Length of stay and post-operative pain was also less than open surgeries. **Conclusion:** Trans-umbilical approach is an accessible approach for the same pediatric surgical diseases with scare-less results. This approach is superior to laparoscopic approaches because it yields better cosmetic results and there is no need for gas insufflation, limiting the possibility of gas-related complications.

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Title: Duodeno-duodenostomy or duodeno-jejunostomy for duodenal atresia: Is one repair better than the other?
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Category: General Surgery
Keywords: Duodenal atresia,Duodeno-duodenostomy,Duodeno-jejunostomy
Aim of the Study: The surgical management of neonates with duodenal atresia (DA) involves re-establishment of intestinal continuity, either by duodeno-duodenostomy (DD) or duodeno-jejunostomy (DJ). Although the majority of pediatric surgeons perform DD repair preferentially, we aimed to analyze the outcome of DA infants treated with either surgical technique. **Methods:** Following ethical approval (REB:1000047737), we retrospectively reviewed the charts of all patients who underwent DA repair between 2004 and 2014. Patients with associated esophageal/intestinal atresias and/or anorectal malformations were excluded. Outcome measures included demographics (gender, gestational age and birth weight), time to first and full feed, length of mechanical ventilation, length of hospital admission, weight at discharge (z-scores), and postoperative complications (anastomotic stricture/leak, adhesive obstruction, need for re-laparotomy. DD and DJ groups were compared using parametric or non-parametric tests and data are presented as meanSD or median (interquartile range). **Main Result:** During the study period, 92 neonates met the inclusion criteria. Of these, 47 (51%) had DD and 45 (49%) DJ repair. All procedures were performed open, apart from one laparoscopic DJ. Overall, DD and DJ groups had similar demographics. Likewise, we found no differences between the two groups for time to first feed (p=0.5), Time to full feed (p=0.4), length of ventilation (p=0.6), length of admission (p=0.6), prokinetic use (p=0.5), weight at discharge (p=0.1). When the 30 (33%) patients with trisomy-21 (DD= 16, DJ= 14) were excluded from analysis, the groups still had similar weight at discharge (p=0.2). Postoperative complication rate was not different between the two groups. One patient per group died, due to respiratory failure (DD) and sepsis (DJ). **Conclusion:** This study demonstrates that in neonates with duodenal atresia, duodeno-duodenostomy and duodeno-jejunostomy have similar outcome. These findings are relevant for surgeons who perform elective open or laparoscopic duodeno-jejunostomy, as this technique has equal clinical outcomes and in some cases could be easier to perform.

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Title: Assessment of Patients with Hirschsprung' disease and use of laparoscopy
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Institutions: Istanbul Sisli Hamidiye Etfal Training and Research Hospital, (1), Istanbul Şişli Hamidiye etfal Training and Research Hospital(2), Istanbul Şişli Hamidiye etfal Training and Research Hospital(3), Istanbul Şişli Hamidiye etfal Training and Research Hospital(4), Istanbul Şişli Hamidiye etfal Training and Research Hospital(5), Istanbul Şişli Hamidiye etfal Training and Research Hospital(6), Istanbul Şişli Hamidiye etfal Training and Research Hospital(7)
Category: General Surgery
Keywords: hirschsprung ,laparoscopy,transanal pullthrough
Aim of the Study: The aim of the study was to evaluate patients who were diagnosed and treated due to Hirschsprung' disease (HD) in our clinic. **Methods:** We retrospectively evaluated the demographic and clinical findings of the patients with HD, who were operated between January 2010 and December 2015. **Main Result:** 28 patients (19 male 9 female)

were found to be operated due to HD Mean age was 16.8 months (1-168). “Transanal Endorectal Pull–through (TERPT)” was performed to20 of them, Duhamell procedure to five and Soave procedure to three of them. TERPT was applied as laparoscopy assisted in 4 of them and biopsies were taken laparoscopically preoperatively from one of the patients from each group. Soave were performed in three patients; one had anal stenosis and history of recurrent enterocolits after TERPT procedure and pathologic analysis revealed neuronal intestinal dysplasia, and the other one had total colonic HD and performed Soave procedure with colonic patch.Seven (25 %) patients had enterocolitis. Five of 7 patients with enterocolitis were operated with TERPT, 2 were operated with Duhamell procedure. Only one of them had total colonic HD. Three patients had total colonic HD diagnosis. Two of them were operated with Duhamell-Martin procedure and one was with Soave procedure with colonic patch according to Kimura tecnique.Anal stenosis developed in 2 patients after TERPT and treated with dilatations. Soiling rate was 3%. Mean duration of hospitalization was 8.7(2-14) days. Mean lenght of removed intestinal segment was 23.6 (5-38) cm. Mean follow-up was for 35.5(2-56) months. Neither of the patients were followed in intensive care unit postoperatively, nor died. **Conclusion:** TERPT procedure win priority in HD, but other procedures keep importance. Recently, laparoscopy assisted TERPT is preferred in our clinic in HD therapy due to easy biopsy, full exposure to transitional zone, the advantage of meso preparation of colon and prevention of strained anastomosis.

PA3-3 | MODERATORS: TAHMINA BANU, TOMOAKI TAGUCHI

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Title: Giant gastro duodenal Duplication with Juxta-Pancreatic communication.
Authors: Adriana Pinilla Orejarena, MD(1), Jhon Martinez, MD(2)
Institutions: Hospital Universitario de Santander(1), Universidad Industrial de Santander(2)
Category: General Surgery
Keywords: Giant ,Gastro-duodenal,Duplication
Aim of the Study: Gastrointestinal tract duplication or Enteric duplication cyst are uncommon and rare congenital malformations formed during the embryonic development of the human digestive system (incidence 1:4.500 births). These malformations most frequently occur in the esophagus, ileum and colon. The clinical presentation of this pathology is within a wide diversity of signs and symptoms. We present a case of a Giant Gastroduodenal Duplication with Juxta-Pancreatic communication. **Methods:** This Report was made by the Pediatric Surgery Department of the Hospital Universitario de Santander, Colombia. The case was attended in 2015, the clinical presentation, radiological features, and intraoperative findings were analyzed. **Main Result:** A 16 month-old boy with a prenatal diagnosis of a possible duodenal atresia (postnatal discarded) arrived to the pediatric emergency unit with postprandial emesis, abdominal distention, and a palpable 10x10x5cm hypogastrium mass. A tomography reported a hypodense cystic mass with a diameter of 11x12.8x6cm interpreted as a possible mesenteric cyst vs. enteric duplication. A boot-shaped 15x12cm cystic mass was found during laparotomy, which occupied 70% of the abdomen, it was hyper-vascularized, sharing the serosa and muscular layers of the major stomach curvature, the mass also had a blood supply from the Left gastric artery, gastroepiploic, splenic, short gastric arteries, and the pancreatic artery. A duct that communicates the mass with the pancreas was identified too (with a normal intraoperatory cholangiography). The final diagnosis was a Gastroduodenal Duplication with Juxta-Pancreatic communication, which was confirmed histologically). **Conclusion:** The Gastroduodenal duplication with Juxta-pancreatic communication is a rare condition, which in this case was presented as a giant cystic mass associated with abdominal distention and vomit. The evaluation of the pancreatic drainage’s integrity is important during the procedure as well as the careful resection with the preservation of adjacent structures.

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Title: Patient selection criteria for optimal results using a transumbilical laparoscopic assisted appendectomy approach
Authors: Alexander Siles Hinojosa, MD(1), Paolo Bragagnini Rodríguez, MD(2), Yurema González Ruíz, MD(3), Natalia Álvarez García, PhD(4), Rafael Fernández Atuan, MD(5), Juan Elías Pollina, MD(6), Jesús Gracia Romero, PhD(7)
Institutions: Miguel Servet Children´s University Hospital(1), Miguel Servet Children´s University Hospital(2), Miguel Servet Children´s University Hospital(3), Miguel Servet Children´s University Hospital(4), Miguel Servet Children´s University Hospital(5), Miguel Servet Children´s University Hospital(6), Miguel Servet Children´s University Hospital(7)
Category: General Surgery
Keywords: Appendectomy,Transumbilical,Laparoscopy
Aim of the Study: To identify the factors that influence postoperative morbidity in patients operated using a TULAA (Transumbilical laparoscopic assisted appendectomy) approach. **Methods:** Retrospective study of patients operated through a TULAA approach between 2007-2014. Data concerning the appendix location, conversions, type of appendicitis, surgical time and complications. We used Student T test and Chi-square test for statistical analysis. **Main Result:** We analyzed 111 appendectomies by TULAA. The average operating time was 79 minutes (45-150). Simple appendicitis was found in 90% of patients with 10% being complicated appendicitis. In 35,13% of cases, additional trocars were used, usually, when the appendix was in an atypical position (89.5%). When the appendix was found in its

typical position, a need for extra trocars decreased to 25.9% (p <0.05). The surgery was converted in 6.3% of cases to open surgery. The appendix with atypical position had a conversion rate of 20.8% compared to 2.3% in cases with an appendix in its typical location (p <0.05). We found a 3.6% of cases with surgical site infection, which is explained by iatrogenic appendix perforation in during extraction (p <0.05). All the perforated appendixes were considered complicated appendixes. **Conclusion:** The abnormal position of the appendix is significantly related with the need to install additional trocars or conversion to open surgery. We believe this technique is adequate in cases when the appendix is located anteriorly and in uncomplicated appendicitis.

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Title: The role of diagnostic and therapeutic laparoscopy in the management of disorders of sex development (DSD) patients with multiple previous surgeries.
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Category: General Surgery
Keywords: laparoscopy,disorders of sex development,multiple surgeries.
Aim of the Study: The patients whit DSD are often subjects to multiple surgical times, in attempt to correct the genital alterations related to this disease. An important proportion of these surgeries are intra peritoneal procedures, the need to identify internal gonads and take tissue samples are the more frequents. The open techniques in this multiple surgical times are related whit multiple scares and higher risk to intestinal obstruction by adherences. **Methods:** We register all the patients who went to surgery by DSD whit three or more surgical events. We find eight patients who comply whit these characteristics. A total to 38 laparoscopic surgeries was realized. To four patients, four surgeries were made, at two patients five surgeries was made, and in the other two, six surgeries was realized. All this procedures was made by laparoscopic way **Main Result:** All these patients were operated by laparoscopic approach whit 3 laparoscopic ports, one umbilical and two more paramedium, all of them to 5 mm or lees. We don't have any mayor complication. Not bleeding or need to converse to open procedure was registered. Any scar was removed and any adherence was noted in the peritoneal cavity. The aesthetics result was very satisficing to parents **Conclusion:** Laparoscopic surgery has a lot of advantages over the open approach in patients with DSD. The laparoscopic approach is the standard procedure in a lot of other diseases but, in DSD, there are are less medical literature. The less invasive approach is benefic to these patients because are lees traumatic and very less scares are generated. We recommended the laparoscopic approach for everything surgical procedure in DSD pediatrics patients.

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Title: Near the ileocecal valve anastomosis at the distal ileum pathologies, how safe is it?
Authors: Tamer Sekmenli, MD(1), Metin Gunduz, MD(2), Ilhan Ciftci, MD(3)
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Category: General Surgery
Keywords: Ileocecal valve ,Ileoileostomy ,Child
Aim of the Study: We aimed to evaluate the operative findings, and follow-up of a patient with partiel ileal necrosis due to brid ileus,who had ileo-ileal anastamoses 5 cm proximal to ceacum. **Methods:** We reported a 1.5 year old boy with brid ileus. **Main Result:** A 1.5 year old boy was admitted to the pediatric emergency department with abdominal pain and vomiting.The image of flat soft tissue mass at a abdominal midline radiography was seen.During the abdominal examination,a palpable painful mass sense was present.In exploration,an adhesion band taking approximately 60 cm of the terminal ileum and clamping the mesentery vessels was seen, excised,as the lukewarm water compress for 5-10 minutes we decided to resectsion, gangrenous ileal segments were also removed.Considering the current toxic condition,a temporary double- barrel ileostomy was made with the distal ans at a 5 cm proximal to terminal ileum and proximal viable ileal segment.The preoperative weight of the case,14 kg,decreased due to the intensive loss of fluid from the stoma,despite medical support form the pediatric gastroenterology department,after 14 days to 11.5 kg.Here upon the decision for stoma closure on the 16th postoperative day was made.In order to preserve ileocecal valve end to end anastomosis was performed at a 5cm proximal to terminal ileum.Stool frequency decreased,content became darker,and at the 12th postoperative day patient was discharged without any problems. During the control visit in the 1st month following hospital discharge the clinical findings of the case were normal and became 14.5 kg. **Conclusion:** In cases well prepared before the operation and intervened with the most appropriate surgical technique and tools,we consider that anastomosis close to the terminal ileum will not lead to any problems clinically.We believe that anastomosis preserving ileocecal valve will increase the quality of life especially in children with high lifetime expectance.However larger series are necessary to verify the findings of the present study.

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Title: Congenital Anorectal Malformation severity does not predict severity of Congenital Heart Defects
Authors: Jara Jonker, BSc(1), Eryn Liem, MD, PhD(2), Nynke Elzenga, MD, PhD(3), Bouwe Molenbuur, MD(4), Monika Trzpis, PhD(5), Paul Broens, MD, PhD(6)

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Category: General Surgery
Keywords: congenital heart disease,anal atresia ,anorectal malformation
Aim of the Study: To determine the incidence of congenital heart defects (CHDs) in patients with mild or severe congenital anorectal malformations (CARMs) and whether all CARM patients need pediatric cardiology screening. **Methods:** We included CARM patients born between 2004 and 2013, and referred to University Medical Center Groningen. Recto-perineal and recto-vestibular fistulas were classified as mild CARMs, all others as severe. Significant patent foramen ovale, secundum atrial septal defect, and small ventricular septum defect were classified as minor CHDs, all others as major. **Main Result:** Out of 129 CARM patients 67% had mild CARM, 33% severe CARM, and 17% were additionally diagnosed with CHD. CHDs were distributed equally in patients with mild or severe CARMs. Patients with multiple congenital abnormalities were more frequently diagnosed with CHD (n=16, 36%) than patients without multiple congenital malformations (n=5, 9%, P = .001). CARM patients diagnosed with CHD using pediatric cardiac echo screening were younger than three months at diagnosis. Earlier general pediatric examinations missed seven (50%) children with mild and four (50%) with severe CHDs. **Conclusion:** The CARMs severity could predict neither incidence nor CHDs severity. More than half of CHDs were missed during the first physical examination. No new CHDs were found in patients older than three months at the time CARMs were diagnosed. We recommend screening for CHD all CARM patients younger than three months at the time CARM is diagnosed. Preoperative echocardiography may not be necessary in all patients, but should be the rule in children with multiple congenital anomalies and neonates.

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Title: INDICATIONS AND OUTCOMES OF THE DUODENUM PRESERVING HEAD RESECTION OF THE PANCREAS IN CHILDREN
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Category: General Surgery
Keywords: Duodenum preserving head resection of the pancreas,Pancreatic surgery,Pancreatic tumor, Trauma, Congenital anomaly
Aim of the Study: The duodenum preserving head resection of the pancreas (DPHRP) with Roux-en-Y pancreaticojejunostomy is a technique that is used in adult patients for the treatment of pathological focal lesions of the pancreatic head. However, this technique is safe and effective even in children. We reviewed our indications, complications and long-term outcomes of the technique. **Methods:** Retrospective analysis of pediatric patients who underwent DPHRP between 1994 and 2015 was performed. The collected data included diagnostic evaluation, description of the pathology in operation protocol, histology, complications and long-term follow-up results. **Main Result:** There were 21 patients operated on, 14 girls and 7 boys, who on average were 11.8 years old (3 months – 18.4 years). In 17 of the patients with involvement of the pancreatic head only DPHRP and the end-to-end anastomosis of the excluded jejunum to the pancreatic body (Roux-en-Y anastomosis) were performed. In 4 of the patients the head and also part of the body of the pancreas was resected. The indication for DPHRP was a solid pseudopapillary tumor of the pancreas (SPTP) in 10 children, trauma in 8, pancreas divisum, focal congenital hyperinsulinism and pancreatic cyst in one. All the patients have been followed up 9 months to 21 years postoperatively (8.3 years on average). One patient developed a biliary fistula which closed spontaneously within two weeks after stent insertion. Two patients complained of recurrent abdominal pain one year and 7 months post-operatively respectively. Currently 21 patients had no endocrine pancreatic insufficiency, 6 need low-fat diet and 5 need pancreatic enzyme supplementation. **Conclusion:** The duodenum preserving head resection with Roux-en-Y pancreaticojejunostomy is a safe and effective procedure for the treatment of large focal pathological lesions of the pancreatic head in children. Compared to duodeno-pancreatectomy, it is less invasive and mutilating and therefore more appropriate for the developing child.

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Title: Three-dimensional print of portal venous system models in children with extrahepatic portal hypertension
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Center of Pediatrics, Department of Pediatric Surgery(3), Tashkent Pediatric Medical Institute, department of pediatric sugery(4), Republican Specialized Scientific Practical Center of Pediatrics, Department of Pediatric Surgery(5)
Category: Hepatobiliary Surgery
Keywords: 3D print,extrahepatic portal hypertension,MSCT angiography
Aim of the Study: To improve the visualization of portal venous system before and after surgical treatment of children with extrahepatic portal hypertension **Methods:** From January to May 2016, six patients with extrahepatic portal hypertension accepted contrast enhanced MSCT angiography scans for procedural planning and postoperative evaluation. Patient-specific, portal-venous phase models was attempted using data from a patient's MSCT angiographic scan. Axial images were segmented and a digital 3D surface model was created. The surface model was then exported to stereolithography (STL) file format and imported into free open-source 3D modeling software **Main Result:** The extrahepatic portal venous system was visualized in all patients by MSCT angiography. All patients showed extrahepatic portal vein obstruction. Using the 3D printing scale plastic models were successfully produced. Physical models of all patients were used for preoperative surgical planning. All models showed good correspondence to patient portal vascular anatomy **Conclusion:** For the surgeon it is important to represent the pathologic process in portal venous system in three dimensions, to understand before the surgery, which side should go to it, and how to act. 3d printed models feasible for specialized surgical planning, and can help to make preoperative planning for improving the safety of complicated procedures

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Title: Characteristics of children with hereditary spherocytosis who underwent cholecystectomy concomitant with splenectomy
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Institutions: Kobe Children's Hospital(1), Kobe Children's Hospital(1), Japanese Red Cross Society Himeji Hospital(2), Japanese Red Cross Society Himeji Hospital(3), Kobe Children's Hospital(4), Kobe Children's Hospital(5), Kobe Children's Hospital(6), Kobe Children's Hospital(7), Kobe Children's Hospital(8), Kobe Children's Hospital(9), Kobe Children's Hospital(10), Kobe Children's Hospital(11), Kobe University Graduate School of Medicine(12), Kobe Children's Hospital(13), Kobe Children's Hospital(14)
Category: Hepatobiliary Surgery
Keywords: Hereditary spherocytosis,cholecystectomy,hyperbilirubinemia
Aim of the Study: The purpose of this study was to investigate the characteristics of children with hereditary spherocytosis (HS) who undergo cholecystectomy concomitant with splenectomy. **Methods:** Nineteen children with HS who underwent only splenectomy (Group S, n=11) or splenectomy concomitant with cholecystectomy (Group SC, n=8) between 2007 and 2014, were identified and reviewed retrospectively. The two groups were compared in term of characteristics, indication for surgery, operative findings, results of preoperative and postoperative blood tests, and postoperative follow-up. **Main Result:** Patient age [9 vs. 8 years (median); p=0.24] and body weight [33 vs. 23 kg; p=0.21] were similar between Groups S and SC. Their preoperative symptoms included splenomegaly and jaundice or anemia. In addition to these symptoms, cholelithiasis or cholecystitis occurred in Group SC. All surgeries were performed laparoscopically. Median follow-up was 744 days. In Group S, further cholecystectomy has been unnecessary so far. On preoperative blood testing, Group SC had significantly higher total bilirubin (T-bil) [6.9 vs. 3.3 mg/dL; p=0.048] and indirect bilirubin (ID-bil) [6.2 vs. 2.7 mg/dL; p=0.02] than Group S. On the most recent postoperative testing, Group SC also had significantly higher T-bil [1.5 vs. 0.8 mg/dL; p=0.01] and ID-bil [1.4 vs. 0.6 mg/dL; p=0.003]. On further examination, a female patient in Group SC was found to have coexisting constitutional jaundice, characterized by mild and chronic indirect hyperbilirubinemia. **Conclusion:** When young HS patients require cholecystectomy concomitant with splenectomy, they tend to show high levels of T-bil and ID-bil on pre- and postoperative blood testing. Those cases have possibilities of combining with constitutional jaundice.

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Title: Surgical Management of Hepatic Hydatid cyst in Children
Authors: Dinesh Prasad Koirala, Resident(Final Year) in paediatric surgery(1), A.K.M Zahid Hossain, Associate professor(2)
Institutions: Bangabbandhu Sheikh Mujib Medical university(1), Bangabbandhu Sheikh Mujib Medical university(2)
Category: Hepatobiliary Surgery
Keywords: hepatic ,hydatid cyst,Conservative surgery
Aim of the Study: This study aims to demonstrate our conservative surgical treatment and outcome of hydatid cyst in liver in children. **Methods:** Hospital based analyses of six patients with hydatid cyst in liver . They underwent conservative surgery and were on follow up from January 2013-December 2015. **Main Result:** The age of presentation vary from 8-11 years. Four Patients were male and two patients were female. All patients had abdominal pain, four had lump in right hypochondrium and 2 patient had fever .Hydatid cyst serology was positive in four patients and negative

was found in 2 patients. Indirect hemaglutination test was done in all patients. There was no significant finding in plain x-ray of abdomen which was done in all patients.Ultrasonography and CT scan were implemented in all the patients. The mean cyst diameter was 6.8 cm. In two patients two different cysts were found in right lobe and left lobe measuring about 8.2 cm and 10.1 cm. The most common radiological finding was hepatomegaly. Histological examination supported the diagnosis of hydatidosis since the cyst wall contains outer laminated and inner germinal layer. All the patients had relief of their preoperative symptoms after surgery in follow up periods. Two patients had positive serology after surgery. So they were given two regimen of Albendazole and turned out to be serologically negative. **Conclusion:** Hydatid cyst management in children is not consensual. However Conservative surgery remains the treatment of choice to avoid serious complication in the endemic region of Indian subcontinent

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Title: A METHOD FOR ENHANCING LIVER REGENERATION
Authors: Vadim Dudarev, PhD(1), Sergei Minaev, PhD(2), Igor Kirgizov, PhD(3), I Sinyuk, PhD(4)
Institutions: (1), (2), (3), (4)
Category: Hepatobiliary Surgery
Keywords: hepatology,laparoscopic operative treatment methods,liver tissue regeneration
Aim of the Study: Despite the modern surgical hepatology development nowadays, the small-invasive methods of the liver tissue regeneration stimulation are insufficiently worked out. The aim of this research is the elaboration of the liver regeneration stimulation way for small-invasive and laparoscopic operative treatment methods. **Methods:** The appointed aim was achieved by the following way: through the laparoscope with the help of an electrode, the diameter of which was 0.3 cm by the electric current of the high frequency of 8mA, successively on the liver diaphragm surface in 2 cm the liver cauterization capsule was conducted with the duration of 10 sec of tissue pressure in the organ`s wall by 5-10 % from the initial point (patent RU ? 2198621 since 20.02.2003). The experiment was carried out on 15 mongrels with the weight of 3 – 10 kl. **Main Result:** For the liver tissue regeneration evaluation, the morphological picture of the stromal – parenchymal interrelation in the animal`s liver in the tested group and during the experimental affection on the 10-th, the 30-th and the 60-th days. The real augmentation of the processes of the regeneration indices in the liver, fibers4.1 ± 0.3*(%),hepatocytes 68.4 ± 1.5*(%), acini 27.5 ± 0.2*(%). **Conclusion:** Thus, the elaborated method of the liver regeneration stimulation allows to obtain a steady regeneratoric reaction of the liver tissue, the result of which is a real increase of hepatocytes number in the square unit in comparison with the norm on average by 10-12 % and an adequate lowering of the stroma elements concentration, that is proved by the morphological investigations. The clinical application of this method on 20 patients with the different clinical forms of chronical hepatitis proved its high clinical effectiveness.

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Title: Children with infantile hepatic hemangioendothelioma: Two Case Evaluation
Authors: Tamer Sekmenli, MD(1), Metin Gündüz, MD(2), Ilhan Ciftci, MD(3), Yavuz Koksal, MD(4), Serdar Ugras, MD(5)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1), Selcuk University Medical Faculty Department of Pediatric Surgery (2), Selcuk University Medical Faculty Department of Pediatric Surgery (3), Selcuk University Medical Faculty Department of Pediatric Hematology and Oncology(4), Selcuk University Medical Faculty Department of Pathology(5)
Category: Hepatobiliary Surgery
Keywords: hemangioendothelioma,liver tumor,children
Aim of the Study: Infantile hepatic hemangioendothelioma (IHE) is a rare, benign tumor in children. The size and location of the lesion determines patient's clinic. During the first weeks of life, massive hepatomegaly, abdominal distension, and heart failure are symptoms that could be seen in patients. Surgery might be necessary in patients with the relevant clinical findings. The aim of the present manuscript is to evaluate two cases diagnosed with hemangioendothelioma in the liver, under the joint follow up of pediatric surgery and children oncology departments. **Methods:** The first case is a 56 days old male baby who was displayed a 4x3 cm IHE mass in electro-magnetic resonant imaging at the 6th segment of the right liver lobe subsequent to the abdominal examination in which a mass was determined and asserted with ultrasound. The second case is a 55-day female baby who was reported with an abdominal mass after ultrasound examination at an out-clinic to which the parents referred for complaints of malnutrition and unrest. A IHE mass of 6x5 cm was determined at the 2nd and 3rd segments of the left liver lobe during CT. Patient’s alpha fetoprotein (AFP) was 1210ng/ml. **Main Result:** In first patient segmentectomy was conducted using radio frequency cautery and at the 5th postoperative day het was discharged. In second patient left hepatic lobectomy was performed using radio frequency cautery she was discharged on third postoperative day. **Conclusion:** In the treatment of IHE, systemic, intralesional, or topical steroid and interferon therapy are among the treatment modalities. IHE, mostly witnessed during the first 6 months of life, can lead to complications such as liver rupture, heart failure, and consumption coagulopathy. Successful surgical interventions have been reported in centers with the necessary technical equipment and infrastructure. IHE that might lead to severe even fatal complications is to be considered in the

differential diagnosis of hepatic neoplasia.

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Title: Biliary atresia disease burden in developing countries-a report from Vietnam
Authors: Max Liu, medical student(1), hoa nguyen, MD(2), Thanh Hai le, MD(3), aixuan Holterman, MD(4)
Institutions: U of Illinois Peoria(1), National Hospital of Pediatrics(2), National hospital of Pediatrics(3), U of Illinois Peoria(4)
Category: Hepatobiliary Surgery
Keywords: Kasai,surgical burden,Developing country
Aim of the Study: Biliary atresia (BA) is an idiopathic neonatal liver disease of bile duct destruction with a 3-4 fold higher incidence in South East Asia and in some developing countries. The natural evolution of BA is known in LMIC countries. This study describes the clinical course of BA in Vietnam, aiming for a need assessment with the goals to identify targeted interventions. **Methods:** Retrospective chart reviews were undertaken of consecutive patients treated with Kasai (KBA) and no Kasai surgery (NoK) between January 2010 and July 2013 at a children's hospital in Vietnam. **Main Result:** Of 287 BA, 149 (52%) were NoK and 138 (48%) were KBA. Mean age at diagnosis was 3.14±2.57 months (median 2.4mo) for NoK versus 2.57±1.59 months (median 2.3mo) for KBA. Diagnosis was established with hepatobiliary sonogram, liver function enzymes, negative hepatitis serology, and for KBA, intraoperative porta hepatis inspection, liver biopsy and as needed, cholangiogram. The percentages of patients presenting at <2 months, 2-<3 months, 3-<4 months, 4-6 months and >6 months of age in NoK were 31%, 35%, 15%, 10%, and 9%, respectively, compared to KBA at 36% (p=0.38), 44% (p=0.12), 16% (p=1.0), 4% (p=0.037), and 0% (p<0.001), respectively. NoK had 1- and 2-year survivals of 52% and 28%, respectively (median survival 6.6 months). KBA 1- and 2-year transplant-free survivals were at 84% and 71%. No patients had liver transplantation because of the lack of a liver transplant program. The majority of NoK parents refuse the Kasai procedure. **Conclusion:** The majority of BA in Vietnam remains untreated despite early presentation and reasonable Kasai outcome relative to western countries. Nearly 10% of BA presented outside the window of time to quality for Kasai treatment. These data illustrate the high health care burden for BA in Vietnam. Some of the efforts can be directed at screening, follow-up care, chart system and medical literacy

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Title: Outcomes of Laparoscopic Nissen Fundoplications in Children Younger than 2-years: Single Institution Experience
Authors: Armando Rosales, MD(1), Jill Whitehouse, MD(2), Glenda Herbello, MD(3), Julie Long, MD(4)
Institutions: Cleveland Clinic Florida(1), Joe DiMaggio Children's Hospital(2), Joe DiMaggio Children's Hospital(3), Joe DiMaggio Children's Hospital(4)
Category: Laparoscopy and Robotics
Keywords: Nissen ,Fundoplication,Laparoscopic
Aim of the Study: Antireflux surgery (ARS) for gastroesophageal reflux disease (GERD) is frequently performed in children. The surgical indications remain controversial, particularly because the diagnosis of GERD is challenging. The aim of this study is to describe our results of ARS in children (=2 yrs). **Methods:** We retrospectively reviewed all children (=2 yrs), who underwent a laparoscopic Nissen fundoplication (Lap-N) from 2012-2015. **Main Result:** There were 84 patients (Male: 57%) with mean weight of 5.06±2.34 kg. Fifty-five percent were premature with median gestational age of 35 weeks (range: 22 – 40). Fifty-seven percent had developmental delay, 57% cardiopathy [33% had cardiac surgery], 58% pneumopathy [38% on mechanical ventilator support]. Sixty-three were taking acid inhibitors. Sixty-four percent were receiving nasoduodenal feeding with respiratory status improvement. The majority were ASA class 3: 70% and 4: 20%. Of the Lap-N, 93% were with gastrostomy tube. The operative time was 116.26±44.99 min. There were no conversions or intraoperative complications. The complication, readmission and reoperation rates were each 6%. The median time to start feeds was 1 day (range: 1–14) and to reach goal was 4 days (range: 0–280). The median total hospitalization was 39 days (range: 2–484), median intensive care stay was 17 days (range: 0–44) and median postoperative hospitalization was 14 days (range: 2–370). The 30-day mortality was 0% and long-term it was 5%, though deaths were non-surgical. The median follow-up was 58 weeks (range: 0–228). Reoperation rate was 5%, all related to GT problems. Resolution of symptoms occurred in 93%. **Conclusion:** In high-risk children younger than two-years, after failure of medical therapy, improvement in pulmonary symptoms with a trial of ND feeds should be considered as another indication for surgery. Reoperations were related to GT. No wrap breakdown or bowel obstruction occurred. Lap-N can be safely performed in high-risk patients.

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Title: standard versus low abdominal pressure during laparoscopy in pediatric age: impact on post-operative pain
Authors: Nicola Zampieri, associate professor for pediatric surgery(1), Gabriella Scirè, MD(2), Francesco Camoglio, associate professor(3)
Institutions: University of Verona, A.O.U.I Pediatric surgical Unit(1), A.O.U.I Pediatric surgical Unit-Verona Italy(2), University of Verona, A.O.U.I Pediatric surgical Unit(3)
Category: Laparoscopy and Robotics

Keywords: laparoscopy,pneumoperitoneum,pressure
Aim of the Study: The aim of this study is to compare the effect of low pressure and standard pressure pneumoperitoneum in post laparoscopic pain. **Methods:** a prospective study was done in 75 ASA grade I and II patients (patients treated for varicole and low grade acute appendicities). There were 4 groups:group A: patients underwent laparoscopic varicocelectomy with low pressure pneumoperitoneum (8 mmHg), group B:patients underwent laparoscopic varicocelectomy with standard pressure pneumoperitoneum (12 mmHg), group C patients underwent laparoscopic appendectomy with low pressure pneumoperitoneum (8 mmHg) and group D patients underwent laparoscopic appendectomy with standard pressure pneumoperitoneum (12 mm Hg).all procedure were permormed with standard three ports laparoscopic approach. All patients were compared for post-operative analgesic requirement. All patients received local anesthesia (levobupivacaine 2.5 mg/mL maximum dose 2.5/kg) via transmural injection after trocars removal. IRB approved the study. All patients were between 10 and 14 yrs. Inclusion and exclusion criteria were created.All patients recived i.v. Paracetamol if required after surgery. Data were analyzed after 48 hours after surgery. We considered the number of somministrations. Statistical analysis were performed using T student tests and fisher exact test when indicated. P value less than 0.05 was considered significant. **Main Result:** Post operative analgesic request was significantly less in low pressure groups as compared to standard pressure groups indipendently from varicolectomy or appendectomy. Number of patients requiring rescue analgesic doses was more in standard pressure group. **Conclusion:** this study demonstrates that the use of low pressure pneumoperitoneum results in reduction of post-op pain and use of analgesic also in pediatric age.

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Title: A novel approach to diagnosis and reconstruction of bilateral ectopic ureters: role of hybrid surgery (laparoscopic and robotic).
Authors: Sujit Chowdhary, FRCS(1), A Vasudev, MD(2), Deepak Kandpal, MS, MCh(3)
Institutions: Division of Pediatric Urology, Indraprastha Apollo Hospital, New Delhi(1), Indraprastha Apollo Hospital, New Delhi(2), Indraprastha Apollo Hospital, New Delhi(3)
Category: Laparoscopy and Robotics
Keywords: incontinence,bilateral ectopic ureter,robotic trans uretero-ureterostomy
Aim of the Study: To present diagnostic and management difficulties in a case of bilateral duplex with ectopic ureters presenting with incontinence. **Methods:** A nine-year old girl was referred to us with incontinence since birth. She had undergone full diagnostic workup for incontinence at several Hospitals and was being treated as neuropathic bladder. There was no relief in her symptoms. A detailed evaluation failed to reveal any cause for incontinence. Diagnostic laparoscopy, cystoscopy and intraoperative retrograde pyelogram revealed bilateral complete duplex system with upper pole ureters opening at the anterior vaginal lip. **Main Result:** The child underwent disconnection of the ectopic ureters from the vagina, end to side uretero-ureterostomy of the ectopic ureters with reimplantation in the bladder by the robotic approach. The operative time was 180 minutes with no need for blood transfusion. Postoperatively the urethral catheter was removed on day 7 after surgery. She is now twenty-four months on follow-up and completely free of wetting. **Conclusion:** Uretero-ureterostomy (end to side) for bilateral ectopic ureters and reimplantation of one ureter in to the bladder is an elegant minimally invasive approach for this complex anomaly.

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Title: : Hormonal augmentation of collateral circulation after spermatic vessel ligation for abdominal testis and its impact on staged laparoscopically assisted orchidopexy
Authors: Abdelhady Dr samaha, MD(1), mansour Dr Ali, MBChB(2), prakash dr mandhan, MBChB(3), Ashraf Iibrahim, MBCHB, FRCS(4)
Institutions: Hamad Medical Corporation & Weill Cornell Medical College, Doha, Qatar(1), Hamad Medical Corporation & Weill Cornell Medical College, Doha, Qatar(2), Hamad Medical Corporation & Weill Cornell Medical College, Doha, Qatar(3), Hamad Medical Corporation & Weill Cornell Medical College, Doha, Qatar(4)
Category: Laparoscopy and Robotics
Keywords: laparoscopically assisted orchidopexy, Hormonal ,
Aim of the Study: PURPOSE Staged laparoscopically assisted orchiopexy (SLAOP) for abdominal testis entails initialspermatic vessels ligation, preserving the vas and its vessels as a sole source of testicular blood supply. The present study was designed to determine whether use of HCG hormone before 2nd stage orchiopexy could augment the collateral circulation and its possible effects on the viability of the testis after staged orchidopexy **Methods:** During the last two years thirty-eight patients with unilateral abdominal testis were included in this study and divided in study (20) and (18) control groups. In both groups, laparoscopic clipping of spermatic vessels was carried out between 9-12 months of age followed by 2nd stage orchidopexy after 6 months interval. In study group patients received hCG 500 iu (4 doses) weekly 1-month prior to 2nd stage and no therapy was used in control group. Post operatively all patients were examined in clinic at 1, 3 and 9-months and also had Doppler ultrasound to access vascularity. **Main Result:** Based on the visual and digital images, during 2nd stage SLAOP prominent collateral circulation was noted in the study group children compared to control group. A significant decrease in the testicular volume and poor collateral vessels were noted in the control group. In postoperative follow up 18 (90%) testes in the study group were of adequate size

and showed good vascular flow. In control group, only 7 (39%) testes had acceptable size and vascular flow. **Conclusion:** The results of the present study demonstrate that the use of hCG hormone prior to 2- stages of orchidopexy for abdominal testis may have a role in the augmentation and development of collateral circulation and possibly in the preservation of the testicular volume with low risk of postoperative testicular atrophy. Long-term follow up is awaited. A larger cohort of patients with long-term follow-up is needed to substantiate these findings.

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Title: Laparoscopic correction of communicating hydrocele
Authors: Iurii Tkachyshyn, surgeon(1), Andriy Dvorakevych, surgeon(2), Andriy Pereyaslov, PhD(3), Mykola Mykyta, surgeon(4)
Institutions: (1), (2), (3), (4)
Category: Laparoscopy and Robotics
Keywords: Laparoscopy,Hydrocele,PIRS
Aim of the Study: To minimize intraoperative complications and to achieve a good cosmetic effect. Reduce the patient's hospital stay duration and provide the patients' active physical and psychosocial rehabilitation. **Methods:** The data based on 44 patients diagnosed hydrocele, who were operated during the period from 2011 to 2016. All patients were boys between the ages of one and eight years and suffered from communicating hydrocele. The patients were operated laparoscopically with a hernia "PIRS" method correction, invented by Prof. D.Patkowski, with some specific traits. **Main Result:** One-year follow-up period has shown that 42 children (95.5%) out of 44 had no complications. Only in two cases (4.5%) we observed residual hydrocele which in a short period spontaneously disappeared. The mean operation time was 16,4±0,6 minutes versus open surgery, which takes 27,1±0,4 minutes. In all of the cases, surgery was performed using PIRS method, without conversion. All the operations were performed smoothly, without any complications. **Conclusion:** The laparoscopic surgical correction method of using the "PIRS" is mini-invasive, less time consuming and causes less damage to tissues. As a result, it's less stressful for children and little patients can go home on the same day.

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Title: Influence of pneumoperitoneum on serum concentrations of cytokines: an experimental study
Authors: Alfonso Papparella, MD(1), Laura DeRosa, MD(2)
Institutions: II University of Naples (1), II University of Naples Pediatric Surgery(2)
Category: Laparoscopy and Robotics
Keywords: Pneumoperitoneum ,Laparoscopy,cytokines
Aim of the Study: Pneumoperitoneum affects the integrity of peritoneal serosa, leading to an inflammatory reaction, characterized mainly by eosinophil granulocytes, macrophages, mast cells and lymphocytes . Aim of the study was Evaluate, the TNFα, IL-6, IFNr, IL-1α, IL-1β, MCP-1, Rantes MIP serum levels due to CO2 Pneumo-peritoneum (Pnp) at different levels of pressure after 24 hours in rats. **Methods:** A total of 40 rats were objects of the study, randomly divided into three groups. C02 Pnp was maintained for 30 minutes, at a flow rate of 0.5 L/min and at a pressure of 10 and 6 mm Hg (group S1–S2, n= 32). Only anesthesia was done in the third group (group C, n = 8). After 24 hours from the Pnp, serum levels of cytokines (ELISA), TNFa, IL-6, IFNr, IL-1α, IL-1β, MCP-1, RANTES were compared with those of control rats **Main Result:** "Rantes" serum levels were significantly varied after 24 hrs of pneumoperitoneum in the experimental respect to control groups(ng/ml ± DS, C 29,66 ± 4,03, PnP 6-10 mm/hg 58,23 ± 4,32 - 70,3 ± 2,26).The determination of theTNFα, IL-6, IFNr, IL-1α, IL-1β, MCP-1, serum levels did not show significant changes **Conclusion:** The study has shown significant modifications in RANTES/CCL5 seric levels. Different pressures of Pnp seem not to have an influence on CCL5 levels. CCL5 is a chemoattractant for T cells, monocytes=macrophages, eosinophils, basophils, NK cells, granulocytes, and therefore induce cascade reactions following immune responses in the peritoneal cavity together with CCL3, CCL4, and CXCL8, eventually leading to peritoneal adhesion. Targeting CCL5 may prevent postoperative peritoneal inflammation and post-operative adhesions

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Title: LAPAROSCOPY AS A DIAGNOSTIC AND INTERVENTIONAL TOOL FOR CRYPTORCHIDISM – SINGLE INSTITUTION EXPERIENCE
Authors: Fran Stampalija, MD(1), Zoran Bahtijarevic, MD(2), Mislav Bastic, MD(3), Anto Pajic, MD(4), Nikica Lesjak, MD(5), Ivan Petracic, MD(6)
Institutions: Children's Hospital Zagreb(1), Children's Hospital Zagreb(2), Children's Hospital Zagreb(3), Children's Hospital Zagreb(4), Children's Hospital Zagreb(5), Children's Hospital Zagreb(6)
Category: Laparoscopy and Robotics
Keywords: cryptorchidism,laparoscopy,children
Aim of the Study: We aim to present our results in the treatment of cryptorchidism using laparoscopy as a diagnostic tool as well as an interventional tool. **Methods:** We have retrospectively analysed treatment results of 54 patients during a 4 year period. 68 testes have been treated overall – 13 patients had bilateral cryptorchidism. All patients were examined by a pediatric surgeon, ultrasound (US) exam was performed in 47 patients and all had indication for

laparoscopic exploration. Absolute indication for laparoscopy was impalpable testis. We analysed age of patients, type of procedure performed and outcome was measured according to testicular size in relations to the healthy testis. **Main Result:** During diagnostic laparoscopy 13 testicular agenesis were noted. Testicular prosthesis implantation has been offered to the parents in the future. Eleven impalpable testes have been confirmed entering the inguinal canal and open orchidopexy was performed. In eleven patients the testis was more than 1,5 cm from the internal inguinal ring and two stage procedure was performed. Two of those patients are awaiting the second stage. Laparoscopically assisted orchidopexy was performed in 26 patients. We had one early testicular necrosis, one late testicular atrophy and two postoperative hypoplasia still in follow-up. 29 testes have been treated with good results. **Conclusion:** Laparoscopy is the only 100% accurate diagnostic modality that can confirm the position of the impalpable testis, or its absence. It can be converted into an interventional method on the spot and further procedure depends on the surgeons assessment of the possibility to do a single or two stage procedure.

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Title: LAPAROSCOPIC APPROACH TO MECKEL'S DIVERTICULAR RESECTION IN CHILDREN
Authors: Anatole Kotlovsky, PhD(1), Yuri Sokolov, PhD(2), Sergei Korovin, PhD(3), Oleg Chernogoroff, MD(4)
Institutions: St Luka's Clinical-Research Center of Medical Care for Children, Moscow(1), Central Children's Hospital named after Z.A. Bashlaeva, Moscow(2), Central Children's Hospital named after Z.A. Bashlaeva(3), Central Children's Hospital for Oryol Region, Oryol, Russia(4)
Category: Laparoscopy and Robotics
Keywords: Laparoscopy techniques,Meckel's diverticular,Children
Aim of the Study: To define the optimal MIS techniques for Meckel's diverticula resection as summarized in our experience at three pediatric surgery centers. **Methods:** From 2008 to 2016, 84 patients, aged between 1 month and 16 years underwent laparoscopic/laparoscopically-assisted Meckel's diverticula (MD) resection. The patient data were retrospectively reviewed. **Main Result:** The following MD cases were presented: gastro-intestinal (GI) bleeding 25(29.76%), diverticulitis 26(30.95%), small bowel obstruction (SBO) 21(25%), intestinal-umbilical fistula 1(1.19%), incidental finding 11(13.1%). The following diverticulectomy techniques were used: intracorporeal stapling resection (ICSR) 55(65.48%) cases, extracorporeal stapling resection (ECSR) 3(3.57%), extracorporeal wedge resection (ECWR) 17(20.24%), extracorporeal SB resection with end-to-end anastomosis (ECSBRA) 9(10.71%). The surgeon's preference for the technique used was primarily determined as follows: ICSR and ECSR in 58(69.05%) cases with no pathological changes at the MD base; ECWR and ECSBRA 20(23.81%) when finding inflammatory/necrotic changes at the MD base or without those changes 6(7.14%) to avoid the risk of leaving the ectopic mucosa. Postoperative recovery of the GI function took the following intervals: 24-48 hours after both ICSR and ECSR, 48-72 – ECWR, more than 72 - ECSBRA. At follow-up, from 3 to 18 months, all patients were asymptomatic with no recorded episodes of GI bleeding or SBO. **Conclusion:** The MIS techniques for MD resection as applied differentially, according to the intra-operative findings, are very efficacious in achieving the best possible patient outcomes. The ICSR and ECSR stapling techniques appear to be preferable when the MD base is evidently intact. ECWR and ECSBRA should be reserved for situations when pathological changes at the MD base are obvious.

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Title: Single-incision laparoscopic 90% pancreatectomy for the treatment of persistent hyperinsulinemic hypoglycemia of infancy
Authors: jinshan zhang, DO(1), long li, MD(2)
Institutions: captial institute of pediatrics(1), capital institute of pediatrics(2)
Category: Laparoscopy and Robotics
Keywords: SILS,hyperinsulinemia,children
Aim of the Study: In this article, we report single-incision laparoscopic 90% pancreatectomy for the treatment of persistent hyperinsulinemic hypoglycemia of infancy. **Methods:** Between July 2011 and February 2015, the single incision laparoscopic 90% pancreatectomy was performed in three children with PHHI. All patients underwent 18F-FDOPA PET/CT before the surgeries. The scans showed diffuse physiologic 18F-FDOPA activity in entire pancreas. The levels of blood sugar and insulin were recorded postoperatively. **Main Result:** The time required for surgery was 120 to 230 min, and blood loss was minimal. The hospital stay was 6 days. The duration of postoperative abdominal drainage was 4 to 5 days. The levels of fasting blood glucose after surgery were higher than those before surgery (4.38-8.9mmol/L vs. 0.54-1.8mmol/L). The levels of fasting insulin after surgery were lower than those before surgery (2.4-5.5uU/ml vs. 14-33.3uU /ml). The duration of following-up was 4 to 46 months. During following-up, the levels of blood glucose and insulin were normal in three patients. There was no the recurrence of hypoglycemia after operation in all patients. **Conclusion:** Single incision laparoscopic 90% pancreatectomy for children with PHHI is feasible and safe in well-selected cases in the experienced centres.

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Title: Ante-grade balloon anal dilatation
Authors: Hiranya Borah, Wofaps observer Fellow,1988(1)

Institutions: Pirvate Practice(1)
Category: Misc
Keywords: Balloon antegrade,anal ,dilatation
Aim of the Study: Anal dilatations are mandatory post-operative follow-up procedures of reconstructive surgery such as anoplasty or pull-through for imperforate anus.Such dilatations are usually done by thrusting a lubricated metal dilator of into the rectum. Rectal dilatations are very painful procedures, hence, in the medieval world, the shoving in of a bamboo pole or some similar objects into the rectum was practised as one of the cruel methods of torturing convicts. Therefore, I tried to device a less painful way to perform such anal dilatations in children. There is a adage that the best dilator of the anus is a “Good Bolus of Stool”, which meant, that to be more effective , the dilatation procedure has to be ‘ante-grade’ i.e., from inside –out, instead of being in the other way ,like it is being traditionally performed. **Methods:** To achieve this objective, I use a balloon endotrachreal (ET) tube. After inserting a lubricated ET tube into the rectum of the child patient, its balloon is inflated .Then while pulling it out from the rectum, by alternating deflation and inflation of the balloon, I could dilate the anus without causing any pain or local bleeding. **Main Result:** This form of ante grade dilatation is very child- friendly. The parents quickly learn the method and perform it enthusiastically at home when advised to do so, because the procedure does not make the baby cry. **Conclusion:** I feel that tubes of different sizes and lengths, with inflatable balloons, blunt rounded tips and a bigger side hole near the tip for the escape of flatus can be made commercially available. Ante-grade anal dilatations are “more precise, less invasive, and less painful” and can replace traditional method ,a thing, dreaded by babies, children and their parents .

PA3-4 | MODERATORS: AZAD MATHUR, MARSHALL SCHWARTZ

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Title: Trainee pediatric surgeon coping as a second victim: Our unsung nightmares
Authors: Sifat Zereen Khan, MBBS(1)
Institutions: Dhaka Medical College Hospital, Dhaka.(1)
Category: Misc
Keywords: Second victim,Emotional stress,Trainee dropout
Aim of the Study: To err is human, a wise saying, we the surgeons always try to prove wrong. But error is constant and we have to deal with it. Coping as second victim, succumbed by complex sorrow due to sufferings and death of patients is intrinsic to the work of a healthcare provider. Trainee pediatric surgeons face the worse as they encounter uncorrectable anomalies and deadly malignancies in an affectionate age group daily basis. **Methods:** The objective of our study was assessing the number of second victim, pattern of events, and awareness among the trainee pediatric surgeons in 3 teaching hospitals of Dhaka. Data from semi-structured interviews were analysed by qualitative content analysis. **Main Result:** Among 45 trainees 14(31.11%) were second victim. Unnecessary measures, no measures taken, delayed or insufficient measures (5 events), invasive procedures including operations (4 events), drug treatment (3 events), diagnostics (2 events). There was an wide array of response and reactions.Two trainees dropped out from the residency program. Many reported that support from colleagues and faculty helped them to gain confidence. **Conclusion:** When the bright and promising trainee surgeons start their surgical journey, they gather skill, knowledge and experience, the road ahead takes them to many dark places from where they will never return as same.The second victim phenomenon has a significant impact on surgeons and subsequent patients. Because of this broad impact it is important to offer support for second victims. There is no recognized support system in Bangladesh to alleviate second victim syndrome, which is very important as it can identify at risk group and expedite emotional and physical recovery.

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Title: preoperative botulinium toxin injection in unilateral cleft lip
Authors: Dawlat Emara, MD(1), Mamdouh Aboulhassan, MD(2)
Institutions: kasr Al Ainy(1), kasr Al Ainy(2)
Category: Misc
Keywords: botox injection,unilateral complete cleft lip,muscle shortening
Aim of the Study: The unilateral complete cleft lip is characterized by progressive tissues deficiency and tethering of structures to either side of the cleft. On the medial side, the lip is short, the philtral column is flattened, and the vermilion is narrow. Similarly, on the lateral cleft side, the vermilion and red line start parallel to one another, but converge as they approach the cleft. Botulinum toxin works by blocking the release of acetylcholine from the cholinergic nerve end plates leading to relaxation of the muscles. **Methods:** 20 patients were included in the study with unilateral complete cleft lip. One week preoperatively 5 units/kg were injected into orbicularis muscle on both sides of cleft. Modified Millard technique was used for repair. **Main Result:** Postoperative photos were taken 1 and 3 months for the patients. Philtral length, scar and nasal width were compared to those of normal side. In 18 patients the philtral length was similar to the normal side, the other two were not. Scar width was accepted. **Conclusion:** Preoperative botox injection helps in relaxation of the orbicularis muscle and promotes tension free repair.

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Title: Psychological burden of care in Parents/Caregivers of children with surgical conditions - A local experience
Authors: Olumide A Elebute, MBChB(1), Elizabeth A Campbell, MD(2), Adesoji O Ademuyiwa, MD(3), George C Ihediwa, MD(4), Christopher O Bode, MBChB(5)
Institutions: Lagos University Teaching Hospital(1), Lagos University Teaching Hospital(2), College of Medicine of the University of Lagos(3), Lagos University Teaching Hospital(4), College of Medicine of the University of Lagos(5)
Category: Misc
Keywords: Psychological burden,Caregivers,
Aim of the Study: There is a paucity of literature of the psychological burden in parents/caregivers of children with surgical conditions. Knowledge of the peculiar psychological challenges faced by the parents/caregivers would serve as a platform to advocate for the incorporation of psychologist or psychiatrist as part of a multidisciplinary approach to patient care, particularly in centres lacking psychological facilities/support. **Methods:** The study was a cross sectional descriptive study of consecutively consenting caregivers of Paediatric patients who had surgery at the Lagos University Teaching Hospital Lagos, Nigeria, over a six month period. The Zarit's Caregiver Burden Scale (ZCBS) and the General Health questionnaire – 28 (GHQ-28) were used to obtain data on burden of care and psychiatric morbidity. Data obtained was analyzed using SPSS (version 20). **Main Result:** A total of 120 caregivers were recruited into the study. The median GHQ score was 6.6 (SD ± 5.9) and the mean ZCBS was 28.1 (SD ± 27.7). Fifty-one (47.2%) of caregivers had a GHQ score in excess of five and seventy-one (67.8%) had a ZCBS score greater than 21. A statistically significant relationship was observed between patient's diagnosis (acquired > congenital; p=0.02) and caregivers/parents' GHQ score. **Conclusion:** Care of children undergoing surgical procedures is associated with significant burden among first degree family caregivers and this is also associated with psychological distress among same group of individuals. There is a need for more work to know the pattern of psychiatric diagnosis as their psychological ill health could impede on their quality of care.

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Title: SMARTPHONE AND TABLET APPS IN THE PAEDIATRIC SURGERY DAILY PRACTICE.
Authors: MANGELES MUNOZ-MIGUELSANZ, MD(1)
Institutions: (1)
Category: Misc
Keywords: Technological,innovative,2.0
Aim of the Study: To present, explore and promote new interactive work tools in the paediatric surgery daily practice as well as to provide an easy and interactive access to the surgical and medical contents for the health professionals and for the children and their families in order to improve the doctor-patient relationship. **Methods:** A literature review and research on different application servers for different paediatric surgery topics including urology, general surgery, plastic surgery, neonatal surgery , thoracic surgery , pharmacology and miscellaneous were included. Also some surgical and medical games for children were included in the research. **Main Result:** The findings were classified depending on the area of expertise: urology, general surgery, plastic surgery, neonatal surgery, thoracic surgery, pharmacology and subdivided in three different categories: firstly the apps addressed to the health professionals, secondly to the families and the third one directed to the children. Urology and pharmacology were the most popular ones with a relatively high number of apps. Neonatal, thoracic and plastic surgery were nearly lacking and a plenty of hospital-related children games apps were found. **Conclusion:** Smartphone and tablet apps have proliferated in the past years , particularly in the surgical and medical field A reduced number of paediatric surgery specialised apps were found compared to other specialities and its reunion is important to facilitate the work of the researcher. A great benefit could come from these work tools. They provide a quick access to basic information for the trainees, a useful work tool for the health professionals in order to improve the disease understanding and management of the families and the patients. Plenty of interactive games for children were found that could also help in the understanding of their surgical processes and minimising the hospital stay stress.

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Title: Should we reconsider staged repair for complete bilateral cleft lip
Authors: Dawlat Emara, MD(1), Mamdouh Aboulhassan, MD(2)
Institutions: kasr Al Ainy(1), kasr Al Ainy(2)
Category: Misc
Keywords: premaxilla protrusion,molding,two stage repair
Aim of the Study: Cleft lip and palate are the second common congenital anomaly in the head and neck. The common type is complete bilateral cleft lip with protrusion of the premaxilla. The treatment is a challenge for the surgeon. Two staged repair is used for wide clefts to narrow the cleft to improve final results. **Methods:** This was done on 20 patients with non syndromic complete bilateral cleft lip with or without palate at Cairo University children hospital. First stage lip repair was done at age 2 months followed by definitive repair at age 10-12 months. Photos were taken for follow up, lip and collumellar length and nasal width were measured. **Main Result:** 5 cases with dehiscence following first stage occured. Short lip and scar hypertrophy were recorded. In patients with wide clefts and protruding premaxilla benefit from using two staged repair due to: reduction of tension for lip closure, transferring complete lip to incomplete one,

slow molding of the premaxilla and aligning alveolar arch. **Conclusion:** In this work the outcome of bilateral cleft using two staged repair is improved with good results. There are additional operations and longer time but it worth to reach good results

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Title: Vacuum assisted closure dressings for complicated abdominal wounds in pediatric surgery
Authors: Kanokrat Thaiwatcharamas, MD(1), Tawan Imvised, MD(2), Korbkarn Samuthananon, MD(3), Nathathai Kanoknark, MD(4), Katawaetee Decharun, MD(5), Paisarn Vejchapipat, MD(6)
Institutions: Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok, Department of Surgery, Faculty of Medicine, Khonkaen University, Khonkaen(1), Department of surgery, Faculty of Medicine, Thammasat University, Pathumthani(2), Sirindhorn hospital, Bangkok(3), Surin hospital, Surin(4), Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bangkok(5), Department of Surgery, Faculty of Medicine, Chulalongkorn University, Bagkok(6)
Category: Misc
Keywords: VAC,pediatric,wound dressing
Aim of the Study: An advantage of Vacuum Assisted Closure (VAC) dressing is its comfort for patients and medical staff. Our objective was to describe the use of VAC dressings in pediatric patients with complicated abdominal wounds. **Methods:** All pediatric patients treated with VAC dressings at our institution between 2007 and 2016 were included in the study. Retrospective study of the patients' files were reviewed and analyzed. Institutional review board approved the study. **Main Result:** There were 25 pediatric patients (neonate to 14 years) managed by VAC dressings for abdominal wounds. These included 8 enterocutaneous fistulas, 3 dehiscence wounds, 4 seriously infected wounds, and 10 opened abdomens with high risk for abdominal compartment syndrome after damage control surgery. Enterocutaneus fistula was spontaneously closed in one patient whereas fistula output of the other 7 patients decreased and was easily managed. Two dehiscence wounds needed VAC changes at a 3-day interval before closure of the abdomens. However, VAC dressing could not promote granulation due to foreign body (synthetic patch) in the other one. Four patients with wound infection needed 1 to 3 VAC changes without complications. Ten patients, who had VAC for potentials of abdominal compartment syndrome, mostly needed less than 5 VAC changes before closure of the abdomen. Of all patients, one patient died from disseminated strongyloidiasis. Three patients were considered as VAC dressing failure. Two patients had difficulty in VAC change due to significant fistula output. The wound dressing was converted back to conventional wet dressing. One patient had giant omphalocele and serosal tear resulting in the change of dressing type. **Conclusion:** VAC dressing is a simple and effective method in pediatric patients. The use of VAC for complicated abdominal wounds can be used as an alternative to conventional open dressing method.

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Title: Muscle Z-plasty with Modified Millard Technique for Unilateral Cleft Lip Repair
Authors: Mamdouh Aboulhassan, MD(1), Dawlat Emara, MD(2), Mona mahmoud, MSC(3)
Institutions: Cairo University -Kasr ElAiny School of Medicine (1), Cairo University -Kasr ElAiny School of Medicine (2), Cairo University -School of Dentisry (3)
Category: Misc
Keywords: cleft lip,millard repair,muscle Z plasty
Aim of the Study: The need to achieve adequate lip length with semi-natural scar is hard to achieve in cleft lip repair.Various modifications on Rotation Advancement technique were added to overcome lip shortening.In this work combining the advantage of the Z-plasty on the orbicularis muscle and oral mucosa which increase the lip length , while having the skin cuts as millard described for rotation advancement technique with resultant philteral line scar is performed. **Methods:** 24 patients with non syndromic complete cleft lip and palate were included. The operation starts by marking the desired lower Z plasty on both sides of the cleft. The apexes of the triangles are then tattooed by methylene blue by a needle through the muscle. Then these marking are wiped and the marking of skin cuts for rotation advancement technique is done. Dissection of the skin from orbicularis is done to the level of the previously tattooed triangles. The cuts in muscles is performed and the suturing of the muscle and oral mucosa is done using 4/0 Vicryl. Finally closure of the skin in a curved line is performed by 6/0 Vicryl. Post operative measurements of the philteral length were compared the normal side 1 and 6 months post-operatively. **Main Result:** 20 patients the philteral length was similar to the normal side postoperatively for 6 month while in 4 cases the length was shorter by less than 10% of the normal side. The scar was accepted as excellent by the parents **Conclusion:** We believe from our study that combining the lengthening effect of Z plasty on the muscular level with curvilinear scar of the rotation advancement technique on the skin level is a worthy operation. Although it adds a little extra time in the preoperative planning but surely would lower the need for secondary lip procedure for the cleft patient

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Title: SURGICAL REPAIR OF COMPLEX RECTOVAGINAL FISTULAS. REPORT OF TWO CASES.
Authors: Karla H Santos Jasso, MSC(1), Antonieta H Cabrera, MD(2), Antonio Medina, MD(3), Jorge H Maza, MD(4)

Institutions: National Pediatric Institute(1), National Pediatric Institute(2), National Pediatric Institute(3), National Pediatric Institute(4)
Category: Misc
Keywords: Rectovaginal fistula,posterior sagital approach,transanal pull through
Aim of the Study: Rectovaginal fistulas (RVF) are abnormal epithelial-lined connections between the rectum and vagina. Multiple approaches have been described to treat this surgical problem. Complex fistulas have limited treatment options. This work describes the repair of two pediatric patients with rectovaginal fistulas using a combination of two colorectal surgical techniques. **Methods:** We present two cases of pediatric patients with rectovaginal fistulas. One had a high RVF and the other case had a 2cm diameter recurrent traumatic RVF. SURGICAL TECHNIQUE. Under general anesthesia, the patient is positioned prone. Asepsis and antisepsis is made. A posterior sagital incision is made running from the lower edge of the sacrum with distal extension until anal dimple. Layers are dissected until the posterior rectal wall is reached. The rectum is incised 1.5cm above the pectin line. A suture line is made around the rectum to provide traction on the proximal rectum and achieve full mobilization. The perirectal tissue is dissected with proper hemostasis until the peritoneal reflection. Once sufficient rectum length is achieved, the affected rectum portion is resected and a coloanal anastomosis is made transanal using a lone star dissector and with simple stitches of absorbable material. Finally, the closure by layers of the sagital posterior approach is made. **Main Result:** The two patients had normal constrast studies and no local infection or dehiscence complications during short term follow up. **Conclusion:** RVF have been classified according to etiology, length and localization. Can be simple and complex. This approach we propose uses two surgical techniques: posterior sagital approach and the Swenson trasnanal pull-trough with resection of the affected rectum and colo-anal anastomosis. Complex fistulas need an approach that can guaranty less local infectious complications, dehiscence and recurrence.

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Title: ENTERIC DUPLICATION CYST OF CAECUM: A MIMICKER OF INTUSSUSCEPTION
Authors: VEERABHADRA RADHAKRISHNA, MCh(1), ASHOK RIJHWANI, MCh(2)
Institutions: Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(1), (2)
Category: Misc
Keywords: Caecal duplication,Intussusception,Resection
Aim of the Study: Enteric duplication cyst is a rare congenital anomaly and its affliction to caecum is much rarer. Less than 35 cases reported in the literature till date. Most of them present within 2 years of life. Here, we report a case of enteric duplication cyst of caecum presented as ileo-colic intussusception at 5 years of life. **Methods:** A 5 year male child presented with history of pain abdomen for a week duration, with no history of distension of abdomen or vomiting. There was no history of blood in stools, loose stools or constipation. Child was hemodynamically stable. On abdominal examination, no mass was palpable. Per rectal examination revealed no mass or blood stain. USG abdomen & pelvis showed ileo-colic intussusception. Hydrostatic reduction attempted but failed hence posted for laparotomy. Intra-operatively, 4cm x 4cm submucosal solid mass found in the caecum with multiple enlarged lymphnodes. Mass was resected with clear margins and lymph nodes sampled. Multiple sections studied from caecal cyst showed fibro collagenous wall and inflammatory cells with few lymphoid follicles and benign intestinal lining epithelium suggestive of enteric duplication cyst. Multiple sections from rest of caecum and ileum showed marked reactive lymphoid hyperplasia in mucosa and submucosa. No evidence of granuloma or lymphoma was seen. Appendix and sections from proximal and distal resection limits showed no obvious pathology. **Main Result:** Orals started on postoperative day 7 and slowly escalated to normal diet. He was discharged on POD-14. Follow up uneventful. **Conclusion:** Duplication cyst of caecum is a rarer entity with only a few cases reports reported. It mimics intussusception; hence high degree of suspicion is must to avoid delay in treatment. Resection is the optimal treatment and it has an excellent long-term outcome and quality of life.

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Title: Epiploic appendigitis mimicking acute appendicitis in pediatric patient.
Authors: Konstantin Khariton, DO(1), Mitch Price, MD(2)
Institutions: Hofstra Northwell School of Medicine at SIUH(1), Hofstra Northwell School of Medicine at SIUH(2)
Category: Misc
Keywords: epiploic appendigitis,appendicitis,differential diagnosis
Aim of the Study: Present a case report of epiploic appendigitis mimicking acute appendicitis in a pediatric patient. **Methods:** Literature review of epiploic appendigitis in the pediatric population. We present a case report of eiploic appendigitis emulating acute appendicitis in a pediatric patient. **Main Result:** There is no literature in the pediatric population describing epiploic appendigitis mimicking acute appendicitis. We present one such case diagnosed on CT scan. Successfuly managed non-operatively. **Conclusion:** Epiploic appendigitis should be considered in the differential diagnosis of right lower quadrant pain in the pediatric population. It can be diagnosed radiographically and its recognition can avoid unnecassary operative intervention.

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Title: Uncommon foreign bodies ingestion in children
Authors: Ken Shung Tan, MD(1), Yes Wai Chuah, MD(2), Krishnan Ashok, MD, MS (Ped. Surg.)(3), Khalid Mohd Hazlina, MBBS, MS (Ped. Surg.), Fellow in Ped. Surgery(4), Sawali Halimuddin, MBBS, FRCS (ENT)(5), Sriram Nagaraj, MBBS, MD (Med), Fellow in Gastroenterology(6), Rajah Shanmugam, MBBS, MS(General Surg.), MCh(Ped. Surg.), FRCS(UK(7), Anand Shanmugam, MBBS, MS (Ped. Surg.)(8), T.Muthurangam RAMANUJAM, MBBS, MS (Gen. Surg.), MCh (Ped. Surg.), FRACS (9)
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Category: Misc
Keywords: Foreign Bodies,Oesophagus,Tracheooesophageal fistula
Aim of the Study: To create awareness on types of foreign bodies (FB), with hazardous properties & to present their clinical presentation, investigations and management. **Methods:** 3 children (M-2, F-1). aged 1, 5 and 9, injested, uncommon foreign bodies. 2 presented with obstruction and 1 was asymptomatic. A 1 year old girl presented with 2 days of persistent non-billous vomiting and worsening abdominal distension. She was treated for acute gastroenteritis. Abdominal x-rays showed persistent dilated bowel loops. Exploratory laparotomy revealed 3 expandable gel balls obstructing the ileocaecal valve. Enterotomy & removal was performed. A 9 year old boy who had tracheooesophageal fistula (TOF) repair. presented with dysphagia, after consuming sticky glutinous rice. Oesophagoscopy showed a ball of glutinous rice stuck in the esophagus. It was difficult to evacuate through the scope. Powdered pancreatic enzyme tablets, was given for 2 days & it cleared the block. The asymptomatic child swallowed a zip slider which got stuck to the stomach mucosal folds. He successfully underwent endoscopic removal. Plain x-rays were helpful in identifying radiopaque but not radiolucent objects. **Main Result:** All 3 children recovered well. **Conclusion:** Foreign body ingestion is common in children. The diagnosis is usually missed in toddlers who cannot express themselves well. Children with past oesophageal surgery are at higher risk of obstruction. Objects which absorbs fluid and expands like the Gel balls, were banned recently. Glutinous rice balls with sticky properties are a problem in children with TOF. & educating the parents & children is essential.

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Title: Pediatric Neurosurgical Outcomes Following a Neurosurgery Health System Intervention at Mulago Hospital in Uganda
Authors: Tony T Fuller, MS(1), Emily R Smith, PhD(2), Stephanie Lim, BS(3), Michael M Haglund, MD(5)
Institutions: Duke University(1), Duke University(2), Duke University(3), Duke University(5)
Category: Misc
Keywords: Pediatric neurosurgery,Surgical mortality,Low and middle income countries
Aim of the Study: Pediatric neurosurgical cases have been identified as a target for impacting health disparities in Uganda with over 50% of the population being less than 15 years old. The demand for pediatric neurosurgical treatment far outweighs its capacity of approximately 1,000 cases/year with only 5 neurosurgeons and 4 pediatric surgeons in the country. To overcome the lack of neurosurgeons within Uganda, the Duke University Medical Center and the Duke Global Health Institute established a program at Mulago Hospital in Kampala, Uganda to provide essential equipment and expand neurosurgical training through a twinning approach. The objective of this study was to evaluate the effects of the Duke-Mulago collaboration on pediatric neurosurgical outcomes in Mulago Hospital. **Methods:** We performed a retrospective analysis on pediatric neurosurgical cases at Mulago hospital in Kampala, Uganda to examine pre- and post-program outcomes, including mortality, infections, and predictors of mortality. Data was collected from surgical logbooks, patient charts, and Mulago Hospital's death registry. **Main Result:** Post-initiation of the Duke-Mulago collaboration, we identified an increase in procedures, with the greatest increase in complex cases. When comparing pre- and post-program outcomes, mortality among pediatric patients within 30 days after a neurosurgical procedure increased from 7.4% to 13.6%, mortality after 30 days increased from 5.6% to 6.3%, pre-surgical infections decreased by 8.2%, and post-surgery infections decreased by 2.7%. Predictors of mortality pre-program was the child's age while the most significant predictor of mortality post-program was an increase in more complex cases, such as tumors. **Conclusion:** Our data shows provision of more complex neurological procedures alone does not necessitate improved outcomes without proper post-operative care. Rather, combining higher level procedures with essential pre- and post-operative care and continued health system strengthening for pediatric neurosurgical care throughout Uganda will help decrease burden.

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Title: A Comparative Study between Divided and Loop Sigmoid Colostomy for the Management of Anorectal Malformation(ARM).
Authors: Md Delwar Hossain, MS(1), Md Shahjahan, MS(2), M Kabirul Islam, MS(3), Md A Aziz Abdul, MS(4)
Institutions: Dhaka Shishu (Children) Hospital(1), Dhaka Shishu (Children) Hospital(2), Dhaka Shishu (Children) Hospital(3), Dhaka Shishu (Children) Hospital(4)
Category: Neonatal Surgery
Keywords: Anorectal malformation,Divided sigmoid colostomy,Loop sigmoid colostomy
Aim of the Study: Colostomy for patients with ARM decompresses an obstructed colon, avoids fecal contamination of the urinary tract, and protects a future perineal operation. The procedure is associated with several significant complications. The aim of the study was to compare the clinical outcomes between divided and loop sigmoid colostomy for the management of anorectal malformations. **Methods:** A total of 70 neonates age ranges from 1 to 7 days with ARM were included in the study from January 2014 to December 2015. They were randomly assigned to the divided (group 1=35) and loop (group 2=35) sigmoid colostomy. The comparative parameters between two groups were the operation time, wound infection, skin excoriation, prolapse of colostomy, retraction of colostomy and parastomal hernia. All patients were followed up for 2 months post-operatively. **Main Result:** The statistical difference between the two groups regarding operation time was highly significant (0.0001). After operation, 28.6% patients developed skin excoriation in group =1, whereas in group =2, 31.4% patients developed skin excoriation. In group =1, 5.7% patients developed wound infection but none of them developed prolapse, retraction of colostomy and parastomal hernia. On the other hand, in group =2, no patient developed wound infection and parastomal hernia but 14.3% patients developed prolapse and 5.7% patients developed retraction of colostomy. The statistical difference between the two groups regarding prolapse of colostomy was border line significant (p=0.054). **Conclusion:** Loop sigmoid colostomies were found to be associated with a higher incidence of prolapse than divided sigmoid colostomies. Though operation time was significantly more in dividing colostomy than in loop colostomy but skin excoriation, wound infection, retraction of colostomy and parastomal hernia were same in both groups.

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Title: SURGICAL REPAIR OF GIANT OMPHALOCELE WITH BIOLOGICAL MESH IN NEONATAL PERIOD
Authors: Fernando Ayque, MD(1)
Institutions: Maternal Perinatal National Institute(1)
Category: Neonatal Surgery
Keywords: omphalocele,mesh,surgery
Aim of the Study: The surgical repair of giant omphalocele during neonatal period is a challenge. We present a case with a surgical management using biological mesh (surgisis) to close abdominal wall defect > 8cm. The outcome and follow up after 7 years. **Methods:** We have a newborn, male, 37 weeks of gestational age (GA), weight 2,545 gr., had a prenatal diagnosis by sonogram since 24 weeks of GA and the mother was sent from Huanuco province with us for treatment. he was born on april 23 2009 by cesarean and prenatal diagnosis is confirmed with abdominal wall defect >8cm diameter. First step was try to reduce all viscera into abdominal cavity with coban® bandage, this process take 2 weeks. Second step, he was underwent a surgery to closure of abdominal wall defect using a biological mesh (surgisis). then all post operative period was in NICU with mechanical ventilation, total parenteral nutrition, the patient had a pneumonia after 2 weeks in ventilation, He stayed 57 days. **Main Result:** There was no wound infection, but required antibiotics for sepsis (pneumonia). There was no recurrence not even rejection. The follow up was periodic until 1 year age, but in the last year we can to see again our patient with almost 7 years age, in very good conditions, he have a normal life in Huanuco Province and attend a normal school and always asking for your umbilicus. **Conclusion:** We believe that use of surgisis for patch repair in huge abdominal wall defects is possible and offer our patients one alternative to survive in our country where the high mortality is common.

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Title: Neonatal Intestinal Obstructions Causes and Mortality: A Study From Resource Constraint Country
Authors: Jamshed Akhtar, MBBS, FCPS, FRCS(1), Amna Bhatti, MBBS, FCPS(2)
Institutions: National Institute of Child Health Jinnah Sindh Medical University (1), National Institute of Child Health (2)
Category: Neonatal Surgery
Keywords: Neonatal intestinal obstruction ,Neonate-mortality,Small bowel atresia
Aim of the Study: Developing countries face multiple challenges including population boom with high birth rate and limited healthcare facilities. Perinatal and neonatal mortality remains high. This with added surgical anomalies poses huge challenge for pediatric surgeons. The objective of this study was find out causes of neonatal intestinal obstruction, age at presentation, birth weight, treatment provided and outcome in terms of survival and death. **Methods:** This cross sectional study was conducted at National Institute of Child Health Karachi Pakistan. WHO epidemiology formula was used to calculate sample size which turned out to be 120. Data was entered into SPSS version 20. Chi square test was used for statistical significance after stratification based upon cause on neonatal intestinal obstruction. **Main Result:** A total of 120 neonates were included over a period of eight months. There were 77 (64.2%) males and 43 (35.8%). Mean

age at presentation was 11.04 +/- 8.532 days. Mean weight at presentation was 2.24 +/- 0.415 kg. Sixty (50%) patients presented with signs and symptoms of ntestinal obstruction within first week of birth. Most common etiology was intestinal atresia (n=62, 51.7%, duodenal 20, jejunla 20, ileal 22), Hirschsprung's diseases (n=37, 30.8%), meconium ileus (n=11, 9.2%) and malrotation (n=10, 8.3%). The association between age at presentation of proximal and distal atresia was highly significant (0.000). Of the total 84 (70%) patients survived. Out of 36 patients who died 21 were males and 15 females (p=) . The mortality in intestinal atresia group was 32.2% (n=20). High mortality was also observed in meconium ileus group (54.5%). **Conclusion:** Late presentation, low birth weight and sepsis were main factors leading to high mortality. Availability of antenatal ultrasound, hospital deliveries and early referral can help in decreasing the mortality.

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Title: A 7 YEAR EXPERIENCE IN MANAGEMENT OF ESOPHAGEAL ATRESIA WITH OR WITHOUT TRACHEOESOPHAGEAL FISTULA
Authors: Venkatesh Annigeri, MS,MCh(1)
Institutions: Pediatric surgey(1)
Category: Neonatal Surgery
Keywords: esophageal atresia,tracheoesophageal fistula,complication
Aim of the Study: This study is retrospective analysis of esophageal atresia with or without tracheoesophageal fistula patients in our department during 7 years. **Methods:** Retrospective analysis of neonates admitted with diagnosis of esophageal atresia with or without tracheoesophageal fistula in our neonatal and paediatric surgery department between April 2009 and April 2016. Medical records were reviewed for age at diagnosis, sex, birth weight, associated anomalies, aspiration pneumonia, treatment, post operative complication and outcome. **Main Result:** Total 80 babies (52 male and 28female) were studied. The mean birth weight was 2300grams and mean gestational age was 37weeks. 20% were premature neonates. Age at diagnosis ranged from birth to 9 days. At the time of admission 40% had aspiration pneumonia. Associated anomalies were seen in 60% of the patients. Out of 80 patients 85% survived in that 40% had no associated anomaly. Of the 12 deaths 60% were patients with major anamolies and 40% in those were with more than 2 associated anomalies. Post operative complications were seen in 14% (mainly gastroesophageal reflex,stricture, anastomotic, recurrent TEF-,tracheomalacia), similar to those of developed counties but overall operative mortality 18% was high **Conclusion:** Overall morality was high. Major congenital anamoly and sepsis was the most frequent cause of death. Factors contributing to mortality includes prematurity, low birth weight, delay in diagnosis and referral, aspiration pneumonia, Further effort must be taken to reduce mortality and morbidity.

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Title: Surveillance of Risk factors for Surgical site Infection in Neonate from a tertiary care center in India
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Category: Neonatal Surgery
Keywords: Surgical site infections,Neonates,Risk factors
Aim of the Study: There is paucity of data regarding surgical site infections (SSIs) in neonate. Neonates are special population in terms of physiologic differences and immunological immaturity as compared to adults. We aimed to survey the SSIs in neonate and analyze the risk factors associated with it that may influence the clinical practice and prevent SSIs. **Methods:** This prospective observational study included neonates (n=137) admitted in the department of Paediatric Surgery from January 2014 to December 2015 in JIPMER, Pondicherry, India. Different risk factors in relation to demographic factors, perinatal and perioperative factors were identified by review of literature, data were collected for all neonates operated during the study period and analyzed. Neonates were operated in emergency/elective theatre by consultant/trainee surgeons. SSIs were identified and recorded according to CDC guidelines. The pathogens were isolated from the infected wound and looked for antibiotic sensitivity. **Main Result:** The overall SSIs rate was 33.4%. Superficial SSIs (26.2%) were more common than deep and organ/space SSIs. There was statistically significant association of female gender (p=0.006), low gestational age for term babies (p=0.048), perinatal asphyxia (p=0.006), perioperative risk factors like surgical wound contamination (p=0.001), use of non-absorbable suture for skin closure (p=0.002), mean operative time of >120 minutes (p=0.048), perioperative blood transfusion (p<0.001) and reoperations (p<0.001) with increased the risk of SSIs. We encountered Enterobacteriaceae as the most common organism isolated from SSIs and also the emergence of multi-drug resistant organisms in neonatal SSIs. **Conclusion:** Our observations were clinically relevant which can influence the clinical practice. Neonates with perinatal asphyxia, preterm baby and low gestational age child need special attention. Reducing the operative time and blood loss will reduce the risk of SSIs. Judicious use of perioperative antibiotic prophylaxis and simple hand wash may reduce emergence of multidrug

resistant organisms which is a concern noticed in our study.

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Title: CLUES TO SUSPICION OF EARLY POST- OPERATIVE GASTRIC OUTLET OBSTRUCTION IN PATIENTS WITH ESOPHAGEAL ATRESIA (EA): ITS DIAGNOSIS, MANAGEMENT AND OUTCOMES
Authors: Sandeep Agarwala, MBBS, MCh, FRCS(1), Ravi Patcharu, MBBS, MS(2), Aparajita Mitra, MBBS, MS, MCh(3), Nitin Sharma, MBBS, MS, MCh(4), Manisha Jana, MBBS, MD(5)
Institutions: All India Institute of Medical Sciences, New Delhi(1), AIIMS, New Delhi(2), AIIMS, New Delhi(3), AIIMS, New Delhi(4), AIIMS, New Delhi(5)
Category: Neonatal Surgery
Keywords: Esophageal atresia ,gastric outlet obstruction,clinical suspicion
Aim of the Study: To study the cause of suspicion of gastric outlet obstruction, methods of confirmation, management and outcomes of gastric outlet obstruction in neonates with esophageal atresia (EA) with or without tracheo-esophageal fistula (TEF). **Methods:** Retrospective study of patients records of EA who were also diagnosed to have gastric outlet obstruction in the period 2009 till 2015. **Main Result:** Five neonates, one with pure EA, four with EA+TEF were included. Three EA+TEF underwent primary repair for EA and one diversion (with colostomy and repair of right eventration of diaphragm). One patient with pure EA underwent esophagostomy+gastrostomy. One developed major leak following primary repair and was diverted. Gastric outlet obstruction was suspected because of delay in establishment of feeds due to persistent non-bilious nasogastric aspirates(NG) in three following primary repair and high gastrostomy aspirates and early bothersome peri-gastrostomy leakage in the two with gastrostomy. Confirmation of diagnosis of gastric outlet obstruction was made on contrast study and ultrasound. Four (hypertrophic pyloric stenosis) underwent Ramstedt's pyloromyotomy while one(pyloric atresia) had a gastroduodenostmy. One died (EA+TEF+ARM+eventration), while in ICU at 28 days of age, due to sepsis, another in the follow-up at 6 months due to repeated severe chest infection. Remaining three are doing well on follow-up (of whom one is awaiting esophageal replacement). **Conclusion:** High index of suspicion should be there in EA cases with persistent non-bilious NG aspirates, inability to establish feeds or early peri-gastrostomy leaks to prevent delay in diagnosis of gastric outlet obstruction, subsequent morbidity and mortality in early post-operative period.

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Title: Lingual Foregut Duplication Cyst in a Newborn – A Rare Destination
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Category: Neonatal Surgery
Keywords: Foregut duplication cyst,Lingual,Newborn
Aim of the Study: Foregut duplication cysts (FDC) are a rare entity and can involve any part of the alimentary tract. However their location in the tongue is very rare with less than thirty cases reported in the world literature. We operated a case of a lingual FDC in a one-day old newborn successfully. Diagnosis was not established before the surgery. **Methods:** A few-hours old, FT, male baby presented with a big swelling in the anterior part of the tongue. He was unable to swallow and was drooling saliva. In view of this, patient was taken up for surgery after initial stabilization. No presumptive diagnosis was entertained. Entire cyst lining was removed and tongue was reconstructed. **Main Result:** Patient made uneventful recovery. He is doing well and there is no recurrence after more than two years. **Conclusion:** HPE revealed it to be an FDC without any evidence of dysplasia. Duplications of the alimentary tract include a wide variety of mass lesions throughout its course. Lesions in the tongue however are extremely rare. Majority of the lingual duplications present with feeding difficulties. These cysts can be picked up antenatally as well by obstetrical USG depending on their size. Clinically it may not be possible to make a definitive diagnosis. Differential diagnoses include dermoid cyst, lymphatic malformation and ranula. Complete excision of the cyst and its lining is the treatment of choice and is essential for cure. In any lingual mass in the newborns, the possibility of foregut duplication cyst should always be entertained and surgical excision undertaken at the earliest.

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Title: Congenital diaphragmatic hernia in the neonates - review of 10-years experiance
Authors: Tereza Pinkasova, MD(1), Ladislav Planka, PhD(2), Linda Skutkova, MD(3), Petr Jabandziev, MD(4), Tuma Jiri, MD(5), Jan Papez, MD(6)
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Category: Neonatal Surgery
Keywords: Congenital diaphragmatic hernia,Interdisciplinary collaboration,Mortality rate
Aim of the Study: The prognosis of the children with CDH remains unsatisfactory despite recent advances in medical and surgical treatment including gore-tex patches. In our poster we would like to point to the importance of

interdisciplinary collaboration between a gynecologist, obstetrician, neonatologist and surgeon. **Methods:** We retrospectively reviewed medical records of neonates with CDH admitted to the University Hospital Brno. Prenatal and postnatal factors, birth details, management were studied. **Main Result:** We admitted 29 neonates with CDH who fulfilled the study criteria. 28 patients /97%/ had left-sided Bochdalek hernia, only 1 patient had right-sided Morgagni hernia. The mean gestational age was 37,5 weeks /range 31.-41.w/. 9 neonates /33%/ were prenatally diagnosed by using ultrasound or MRI and therefore they were delivered in the perinatal center. The operation was performed in almost all of the patients within 24 hours from their birth. Average duration of the mechanical ventilation was 8,5 days, a severe pulmonary hypertension developed in 5 patients with the need of high frequency oscillatory ventilation. Two neonates died in early postoperative period. The re-operation was needed in 3 patients during the neonatal period. **Conclusion:** The surgery to repair CDH after birth is not an emergency and is usually performed when the baby has stabilized. In our study the size of the defect wasn't the determining factor for the mortality rate which was 7% in our case. We have learned that severity and outcome is determined by 3 factors – other associated malformations, pulmonary hypertension and low gestational age.

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Title: GASTROSCHISIS IN INDIA: CURRENT PRACTICE
Authors: Anu Paul, FRCS Paediatric Surgery(1), Roshan Snehith, MBSS(2), abraham mammen, MBBS, MS, MCh(3), augusto zani, PhD(4), Niyi Ade-Ajayi, PhD(5)
Institutions: (1), (2), (3), (4), (5)
Category: Neonatal Surgery
Keywords: gastroschisis,mortality,india
Aim of the Study: We report the first survey on the management of Gastroschisis (GS) in India. **Methods:** A 10-question survey was administered at the 2014 annual meeting of the Indian Association of Pediatric Surgeons, IAPSCON in Ooty, Tamil Nadu, India. **Main Result:** Questionnaires were completed by 75 delegates from centres across India. 75% work in units that treat?<5 cases/y and only 10% in centres that treat?>10 cases/y. 48% of respondents report that >75% cases are referred from outside their centre. Antenatal screening is offered to <25% women by 14% centres, 25-50% by 14% centres, 50-75% by 45% centres, and >75% by 28% centres. 93% respondents work in centres with neonatal intensive care facilities and 85% with parenteral nutrition available. 63% of respondents do not plan delivery, 28% offer elective delivery at 37-40 weeks and 9% before 37 weeks. Primary closure is adopted by 63%, staged closure by 37% (Figure 1). 87% do not use a preformed silo, but would consider it in the future. 85% utilise general anaesthetic for interventions and 15% local anaesthetic. Enteral feeds are started at a median of 7 (2-28) days after repair. Mortality is reported to be <25% by only 21% of respondents, 25-75% by 31%, 50-75% by 36% and 75-100% by 12%. **Conclusion:** • The perinatal and surgical management of GS varies widely in India • The reported mortality is considerably higher than that reported from high income countries • Further research should focus on detailed epidemiological and outcome data to further define the extent of GS and identify ways to improve outcome

PA3-5 | MODERATORS: HIROOMI OKUYAMA, A. ALFRED CHAHINE

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Title: Developing a de novo neonatal surgery centre of excellence in developing country: Prospective study on 800 consecutive surgical neonates over ten years.
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Category: Neonatal Surgery
Keywords: Neonatal surgery,Developing country,Survival
Aim of the Study: To report the results of neonatal surgery in 800 consecutive newborns over the last ten years and highlight the peculiarities and difficulties in setting up a centre of excellence in the developing world. **Methods:** The clinical data of all newborns that underwent surgery from January 2006 onwards were recorded prospectively in the clinical database without any exclusions. Follow-up visits and relevant investigations were also recorded in the database. The data was analysed for demographic characteristics, indications of surgery, immediate and long term complications, survival at 30 days and one year. **Main Result:** There were a total of 800 babies who underwent surgery between 2006 and 2016. The male to female ratio was 2:1. The gestational age was from 28 weeks to 40 weeks (mean 37 weeks). The mean birth weight was 2.95 kg with a range of 800 gm to 4 kg. The different disease subgroups were anorectal malformation (12%), congenital diaphragmatic hernia (7%), Hirschsprung's disease (6%), neonatal intestinal obstruction (22%), necrotising enterocolitis (9%), tracheo-esophageal fistula (8%), posterior urethral valves (5%), PUJ obstruction (3%), neonatal hernia (12%), neonatal circumcision (2%). Congenital diaphragmatic hernia and TEF had more than 94% survival. The overall survival at 30 days and one year was 93.75% and 91% respectively. The overall

survival reported from the developing countries ranges from 60 to 70% as compared to survival in excess of 90 % from the centers of excellence in developed countries. **Conclusion:** Neonatal surgical survival matching the best centers in world can be achieved in developing countries. It requires lane shift in the entire planning of delivery of care from focus on surgery to risk stratification, retrieval of surgical babies, engaging with partners in care, resuscitation, stabilization, surgical planning before execution and earning the support of management in evolving subsidised care of babies.

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Title: How to obtain better outcomes in gastroschisis with a quality improvement protocol in an emerging country - Translating evidence from developed countries
Authors: Alejandro Peñarrieta-Daher, MD(1), Cristian Zalles-Vidal, MD(2), Eduardo Bracho-Blanchet, MD(3), Roberto Dávila-Perez, MD(4), Daniel Ibarra-Rios, MD(5), Raul Villegas-Silva, MD(6), Antonio Calderón-Moore, MD(7), Jaime Nieto-Zermeño, MD(8)
Institutions: Hospital Infantil de México Federico Gómez(1), Hospital Infantil de México Federico Gómez(2), Hospital Infantil de México Federico Gómez(3), Hospital Infantil de México Federico Gómez(4), Hospital Infantil de México Federico Gómez(5), Hospital Infantil de México Federico Gómez(6), Hospital Infantil de México Federico Gómez(7), Hospital Infantil de México Federico Gómez(8)
Category: Neonatal Surgery
Keywords: gastroschisis,outcomes,protocol
Aim of the Study: To compare outcomes in gastroschisis between a quality improvement protocol with historic controls in a reference Children´s Hospital without an obstetric service in Mexico. **Methods:** Our protocol consisted in facilitating early transport, ward reduction or staged reduction with an Alexis wound retractor and sutureless closure, both without inhaled anesthesia, PICC lines as vascular access and an early feeding regime. Data was prospectively collected for the Protocol Group (PG) of patients treated between June 2014 through March 2016 and was compared to the last Historical Group (HG) before protocol implementation. Comparisons were made regarding demographic data, with primary outcome: mortality. Secondary outcomes: age at arrival, use of mechanical ventilation (MV), nil per os (NPO), parenteral nutrition (TPN), length of stay (LOS) and sepsis. Data were analyzed using x2 and Mann-Whitney U tests for categorical and continous variables respectively (p=< 0.05 significant). **Main Result:** We included 92 patients (46 HG and 46 PG). Demographic data and birth weight were homogeneous except for prenatal diagnosis 15 (32.6%) in HG vs 27 (58.7%) in PG (p=0.021). Mortality decreased from 10 (21.7%) vs 1 (2.2%) (p=0.007), age at arrival was 15 hours median (7.5-19.5) vs 7 (3.2-16) (p=0.002), use of MV: 46 (100%) vs 26 (56.5%) (p=<0.001), MV days: 14 median (4.7-23) vs 3 (2-7) (p=<0.0001), TPN days: 27 median (19-45.5) vs 21 (15.7-32.2) (p=0.026), sepsis: 32 (69.6%) vs 17 (37%) (p=0.003) and inhaled anesthetics 46 (100%) vs 7 (15.2%) (p=<0.001) respectively. No difference was found in NPO or LOS. **Conclusion:** With this new protocol we made a mayor improvement in the morbidity and mortality rates in our Hospital, with outcomes comparable to those reported in developed countries. Furthermore, we reduced markers of resource utilization. It was suitable for all patients with gastroschisis. We believe this protocol can be implemented in other centers.

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Title: INITIAL MANAGMENT OF GIANT OMPHALOCELE WITH NEGATIVE PRESSURE THERAPHY
Authors: David Rafael Cedillo Compean, MD(1), Pedro Salvador Jimenez Urueta, MD(2), Alfredo Machuca Vaca, MD(3)
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Category: Neonatal Surgery
Keywords: Giant Omphalocele ,Conservative,Negative pressure theraphy
Aim of the Study: To describe the first mexican experience epithelialization of giant omphalocele by outpatient negative pressure therapy. **Methods:** A prospective descriptive study which included 8 infants with giant omphalocele in a time period of January 2013 to January 2016 in the CMN November 20 ISSSTE, and National Perinatology Institute in Mexico City, who from the moment of birth negative pressure therapy was applied using hydrophilic sponge of polyvinyl alcohol and silver sponge with a continuous and intermitent pressure of 125 mmHg with change every 7 days, studying the effects of epithelialization, side effects, complications and outcome. **Main Result:** In the 8 patients the defect was isolated maintaining sterile wound using a silver sponge which emits a sustained ion release form and avoiding bacterial growth, in any patient infections were reported. 8 full epithelization were seen in average of 7.6 weeks, observing increase in abdominal cavity and reinsertion of the viscera in all cases. We found no complications in either. In the last five cases epithelialization was achieved by outpatient therapy. **Conclusion:** Through this paper we propose an alternative in the management of patients with giant omphalocele using negative pressure therapy with excellent results.

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Title: Influence of gestational age at birth on the clinical presentation, radiographic findings, and surgical outcome of necrotizing enterocolitis: a cohort study

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Category: Neonatal Surgery
Keywords: necrotizing enterocolitis ,gestational age ,localization and extent of disease
Aim of the Study: To determine whether neonates with necrotizing enterocolitis (NEC) requiring surgery have different clinical and radiographic presentation, localization and extent of disease, beyond the outcomes depending on gestational age at birth. **Methods:** A cohort study of 198 neonates with NEC who underwent exploratory laparotomy at a pediatric tertiary hospital between November 1991 and December 2012. Neonates were divided into four groups according to gestational age at birth (<?30 weeks, 30 to 33 weeks, 34 to 36 weeks, and =?37 weeks) and followed prospectively for 60 days after surgery. **Main Result:** The clinical and radiographic presentation of NEC was significantly different between groups. There were more cases of pneumoperitoneum in neonates born at <?30 weeks (P?=?0.165) and of apnea in those born between 30 and 33 weeks (P?<?0.001) than in other age ranges. Hematochezia and clinical deterioration were more common among = 37-week gestation neonates (P?<?0.001 for both). Pneumatosis intestinal was more common in neonates born at 34 to 36 weeks and > 37 weeks (P?<?0.001) and portal venous gas in neonates born at 34 to 36 weeks (P?<?0.001). The localization and extent of disease change in preterm and term neonates; the last have lower extension of affected intestine and predominance of NEC in the colon. There were no significant differences in surgical outcome, postoperative complications, or mortality among neonates of different gestational ages. **Conclusion:** The clinical and radiographic presentation, likewise localization and extent of NEC varied with gestational age. However, gestational age did not appear to have an impact on mortality and short bowel among surgical patients.

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Title: Perforated Acute Appendicitis with no peritonitis in a 29-week Premature Infant
Authors: Fayza Haider, MD(1), Mona Al Juffairi, MPharm(2), Barrak Ayoub, MBChB(3), Mariam Al Kooheji, MBChB(4), Safa Al Shaikh, MBChB(5)
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Category: Neonatal Surgery
Keywords: Premature infant,Perforated Acute Appendicitis,Peritonitis
Aim of the Study: Background/Introduction: Acute Appendicitis in a neonate and premature infant, is still considered a rare entity, as diagnosis is always made after surgical exploration for acute abdominal findings mimicking Necrotizing Enterocolitis (NEC). The diagnosis is always delayed and is made after perforation has occurred. Although it has been reported for over 100 years, total collective cases reported are around 100 of which most of them presented with peritonitis. **Methods:** Case Report **Main Result:** Case Presentation: We present a Premature baby girl born at 29 weeks of gestation by spontaneous Vaginal delivery, to a 39 year old G6P5 mother. She was kept on ventilator for the first 6 days of life, and had an uneventful Neonatal Intensive care stay until 47th day of life when she developed sepsis that required ventilator support for 3 days. At Day 51 she developed abdominal distension and was referred to the Pediatric Surgeon at Day 54 with pneumoperitoneum. The abdomen was soft with minimal tenderness and no evidence of erythema or edema. In view of pneumoperitoneum and previously reported sepsis, she was taken for exploratory laparotomy. The findings were consistent with a perforated appendix with no evidence of peritonitis or NEC. An appendectomy was performed. She had a smooth postoperative recovery. **Conclusion:** Although rare, Acute appendicitis can be expected to occur with increasing frequency in neonates and Premature infants. A history of prematurity or other significant comorbidities may increase the likelihood of appendicitis. It must be considered in the differential diagnosis of acute abdomen mainly when there is suspicion of necrotizing enterocolitis with perforation in the absence of risk factors. Neonatal appendicitis continues to be a diagnostic challenge. Only with high index of clinical suspicion and Team work that these will be managed successfully and mortality rate will reduce.

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Title: The operative results and the outcomes of treatment for abdominal wall defects- A 30-year single institution experience
Authors: Kazuhiko Nakame, MD(1), Motoi Mukai, PhD(2), Koji Yamada, MD(3), Shun Onishi, MD(4), Takafumi Kawano, MD(5), Waka Yamada, MD(6), Tatsuru Kaji, PhD(7), Satoshi Ieiri, PhD(8)
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Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(5), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(6), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(7), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(8)
Category: Neonatal Surgery
Keywords: gastroschisis ,omphalocele ,abdominal wall defects
Aim of the Study: The treatment outcomes in patients with abdominal wall defects such as gastroschisis and omphalocele have improved because of the ability to perform a prenatal diagnosis, perioperative neonatal management and the induction of secondary closure. We aim to clarify the operative results and the outcomes of treatment for abdominal wall defects in our institution. **Methods:** From 1984 to 2015, 35 patients (omphalocele, n=21 and gastroschisis, n=14) were treated in our institution. The background information, operative procedure, treatment outcome and prognosis were retrospectively reviewed using medical records. **Main Result:** A prenatal diagnosis confirmed 8 cases of omphalocele (38.1%) and 10 cases of gastroschisis (71.4%). Associated anomalies were recognized 18 cases (85.7%) of omphalocele and 5 cases (35.7%) of gastroschisis. Chromosomal anomalies were recognized in 3 cases (14.3%) of omphalocele. The operative procedures for omphalocele were as follows: primary closure, n=14 (66.7%), secondary closure n=6 (28.6%), and silo formation, n=1 (4.8%). Those of gastroschisis were: primary closure n=3 (21.4%) and secondary closure, n=11 (78.6%). The postoperative complications of omphalocele were: abdominal incisional hernia (n=2), anastomotic leakage (n=1) and anastomotic stenosis after intestinal resection (n=1). One abdominal incisional hernia patient underwent herniorraphy, the other underwent the component separate technique. The complications of gastroschisis were abdominal incisional hernia (n=1, treated using CST) and hydrocephalus due to the sepsis after silo formation (n=1). The survival rates of patients with omphalocele and gastrochisis were 81% and 92.9%, respectively. Four patients omphalocele died due to severe associated anomalies; 1 patient with gastroschisis died from progressive acidosis after the abdominal closure. **Conclusion:** Associated anomalies are the main factor in the prognosis of abdominal wall defect patients. We have to resolve long-term problems such as umbilical plasty and abdominal incisional hernia in addition to improving the prognosis.

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Title: Treating the conjoined twin patient – surgical challenges into a spectrum of malformations
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Category: Neonatal Surgery
Keywords: conjoined twins,omphalopagus,thoraco-omphalopagus
Aim of the Study: Conjoined twins is an extremely rare malformation sometimes encountered once in a life-time of a pediatric surgeon. Most cases (40-60%) are stillborn, the majority die soon after birth (35%) and a very small percentage (5%) will survive past the newborn life. Survival is mainly determined by the complexity of malformations but also by a good prenatal and preoperative multidisciplinary planning. **Methods:** We present 3 cases of conjoined twins treated in our center in the past 3 years presenting with a spectrum of complexity of malformations: one xiphopagus conjoined twin, an omphalopagus parasitic twin and a complex thoraco-omphalopagus twin. We analyzed the spectrum of anomalies encountered in each case, how the prenatal and postnatal imagistic evaluation influenced the multidisciplinary surgical treatment and the outcomes in terms of survival and long-term morbidities. **Main Result:** In 2 cases the diagnosis was made prenatal which prompted complex imagistic evaluation continued postnataly. In both cases there were no vital organs shared, parents being counseled that this could be a successful surgical separation. The xiphopagus twins shared the xiphoid process, a small bridge of hepatic tissue and the umbilical vessels. The omphalopagus parasitic twins presented an omphalocel with herniation of the parasitic small bowel into the sac but no common bowel or mesentery and common umbilical vessels. The third case was diagnosed at birth with no prenatal care having complex malformations of the heart, pericardium, diaphragm, liver and proximal small intestine. The malformations were incompatible with life and they died soon after birth. **Conclusion:** Treatment of the conjoined patient involves a good planning, innovation and good coordination of a multidisciplinary team. Survival is mainly determined by the complexity of malformations.

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Title: Are Gastroschisis Patients at Risk for Intestinal Ischemia Identifiable at the Time of Initial Neonatal Evaluation?
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Category: Neonatal Surgery

Keywords: Gastroschisis,Intestinal Ischemia,Bowel Ischemia
Aim of the Study: To identify perinatal clinical factors which may be associated with intestinal ischemia in infants with gastroschisis. **Methods:** Following IRB approval, neonates with gastroschisis managed at our institution between 1/1/2008 and 9/30/2015 were retrospectively reviewed. Patient demographics, neonatal status, such as gestational age, birth weight, Apgar scores and laboratory values within the first 4 hours of birth, maternal behavioral risk factors, indications for and mode of delivery, and hospital course and outcomes were collected. Patients with ischemic bowel at initial evaluation or on subsequent evaluations prior to abdominal wall closure were classified into the “ischemia” category (IC). All other neonates including those with atresia or perforation without ischemic bowel were classified into the “no ischemia” category (NIC). Categorization was performed by two surgical investigators followed by a third surgical investigator to reconcile disagreements. Chi-square, Student’s t-test and Wilcoxon rank-sum test were used for comparison. **Main Result:** One hundred seven (62 males and 45 female) neonates were included. The inter-rater reliability of IC versus NIC categorization was 84%. Eight patients were identified with IC at initial evaluation and 9 at subsequent evaluations (all within 1-3 days of life). There were proportionally more male patients in the IC group as compared to the NIC group (p=0.0392). Having a combination of non-reassuring fetal heart tones and preterm labor was more likely to be associated with IC (p=0.0333). In addition, having a lower pH within 4 hours of birth is also more likely to be associated with IC (p=0.0016). **Conclusion:** A small proportion of neonates born with gastroschisis are at risk for developing intestinal ischemia at birth or during the first days of life. Our findings indicate that male gender, fetal distress and low pH may be associated with perinatal risk for intestinal ischemia. Further collaborative work across institutions can help inform the generalizability of this trend across populations.

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Title: OUT COME OF CONGENITAL DIAPHRAGMATIC HERNIA REPAIR FROM TERTIARY CARE CENTER OF DEVELOPING WORLD
Authors: Bikash Naredi, MBChB(1), Bibekanand Jindal, MBChB(2), Sambdam Kumarvel, MBChB(3), Krishankumar Govindrajan, MBChB(4), Veerbhadra Radhakkrishanan, MD(5), Nishad Plakkal, MD(6)
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Category: Neonatal Surgery
Keywords: congenital,diaphragmatic,Hernia
Aim of the Study: The outcome of congenital diaphragmatic hernia (CDH) despite the available advanced neonatal care is variable from 50-70%. Hence, a study was planned to look for overall survival, outcome regarding open vs. thoracoscopic CDH repair and other factors contributing to the mortality and morbidity. **Methods:** It is retrospective data collected from CDH registry from August 2013 to April 2016 in the Department of Paediatric Surgery JIPMER, Pondicherry, India. Patient particulars with laterality, antenatal diagnosis, associated anomalies and gestational age at birth were collected. Days of ventilation, the presence of pulmonary hypertension, postoperative stay, total hospital stay, pre and postoperative deaths were recorded. Patient outcome in relation chest drain or no chest drain was also evaluated. All patients were followed up for any recurrences, and other complications. Appropiate statistical tests were used to compare different groups **Main Result:** Of the 54 patients registered, 50 were left sided and 33 (61.1%) patients were inborn with 28 (51.9%) diagnosed antenatally. Associated anomalies were present in 36(66.7%) patients with cardiac being most common. Pulmonary hypertension was present in 18 (33.3%) patients. 18 (33.3%) patients expired during stabilization and 36 (66.7%) patients underwent surgery. 23 (63.9%) had open repair via laparotomy with 89% survival and 15 (36.1%) underwent thoracoscopic repair with 100% survival. The overall survival is 32 (59.3%) while survival rate in operated patients was 88.9%. There were 2 recurrences in thoracoscopic repair and 2 patients were re-explored for postoperative adhesive obstruction in open repair. Intercostal chest drain (ICD) wasn’t placed in 11 (30.6%) patients and two (18.2%) among them required ICD placement in the immediate post-operative period. **Conclusion:** Thoracoscopic repair have higher recurrence rate with initial hands which is likely to come down with experience. Placing intercostal drain does not alter recovery and hospital stay.

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Title: NEONATAL INTUSSUSCEPTION: A RARE BUT IMPORTANT CAUSE OF RECTAL BLEEDING IN A NEONATE
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Category: Neonatal Surgery
Keywords: Neonatal rectal bleeding,Idiopathic Intussusception,Ultrasonography
Aim of the Study: Bleeding per rectum in the neonatal period is a common problem with a variety of causes that range from benign to life threatening. Neonatal intussusception is one of the rarest causes. A large number of neonatal intussusceptions are secondary to a pathological lead point. Here we present an interesting rare case of idiopathic

intussusception in a 6 day term neonate presented to our institution with bleeding per rectum. **Methods:** A term, male presented on day 6 of life with history of bleeding per rectum. He was dehydrated with poor perfusion. Abdomen was mildly distended but no mass was palpable. He was admitted and resuscitated. Further evaluation revealed a prolonged prothrombin time (Prothrombin time- 42.4 sec; INR- 3.7), hence diagnosed as hemorrhagic disease of newborn and treated with fresh frozen plasma and vitamin-K. Despite the treatment, bleeding per rectum continued. Ultrasound abdomen revealed mild ascites. Upper GI contrast study was done to rule out volvulus and it was normal. As child had repeated episodes of bleeding per rectum, a repeat ultrasound was done with high index of suspicion, which revealed ileo-colic intussusception. **Main Result:** Neonate was posted for emergency exploratory laparotomy. Peroperatively, ileo-colo-colic intussusception was found reaching up to proximal sigmoid, which got perforated on attempted reduction to reveal gangrenous bowel. Terminal 4cm of ileum to descending colon was resected and end to end ileo-sigmoid colon anastomosis was done. Post-operative period was uneventful. Patient was extubated on POD-1, orals started on POD-5 and discharged on POD-8. Histopathology of the resected specimen showed hemorrhagic infarct and no pathological lead point was found. **Conclusion:** Intussusception is a rare but important cause of neonatal rectal bleeding. Neonatal intussusception differs from classical intussusception as there's no intermittent colic and palpable mass. A high index of suspicion is must to obviate dangerous outcome.

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Title: SURGICAL OPERATIONS BY NEONATES IN INTENSIVE CARE UNIT
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Category: Neonatal Surgery
Keywords: surgery,neonatal intensive care unit,neonates
Aim of the Study: The aim of the study is a report about feasibility and possible volume of surgical operations at the newborns who are treated in intensive care unit. **Methods:** We reported the results of 422 operations which were made in infants placed in neonatal intensive therapy unit. A more then half of operations (285) was performed by patients with hemodynamic significant patent ductus arteriosus. The remained patients had surgical diseases as the main diagnosis - posthemorrhagic hydrocephaly (59), necrotizing enterocolitis and the isolated perforation of stomach and ileum (50), gastroshisis (18), esophageal atresia with distal tracheoesophageal fistula (6) and congenital diaphragmatic hernia (4). **Main Result:** The average weight of patients at the birth was 1286,2 g, gestational age – 29,01 weeks and age at the time of operation – 13,39 days. All newborns were in critical condition. In total 67,77% patients had inotropic support and 97,16% were on artificial lung ventilation (9,72% - high-frequency lung ventilation).The overall mortality of patients was registered at the level of 5.45 %. At 9 patients (2,13%) mortality has been caused by sepsis aftre NEC. Other factors promoting lethality included bronchopulmonary dysplasia, intraventricular hemorrhage, respiratory distress syndrome.The mortality connected with operation wasn't defined. Frequency of wound infections was 1.66 %. These results were comparable to similar parameters which were registered at newborns operated in OP room (5.95% and 1.25%). **Conclusion:** Surgical interventions at newborns in the intensive care unit are feasible and safe, the full range of the emergency operations relating to the newborn is available to them. Such medical approach reduces the risks connected with transportation of the newborns.

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Title: Laparoscopic versus open duodenoduodenostomy for congenital duodenal obstruction in neonates
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Category: Neonatal Surgery
Keywords: congenital duodenal atresia,laparoscopic duodenoduodenostomy,neonate
Aim of the Study: Many reports showed the usefulness of laparoscopic duodenoduodenostomy (LD) for congenital duodenal obstruction (CDO) in neonates. The first LD in our institution was conducted in 2013. We compared the characteristics and outcomes of LD with open duodenoduodenostomy (OD) to evaluate the effectiveness of LD. **Methods:** Between 2009 and 2016, 15 neonates underwent OD or LD. OD group was performed via a traditional transverse laparotomy. LD group was manipulated by 5 ports. In both group, duodenoduodenostomy was performed using the diamond-shaped anastomosis of Kimura et al. We reviewed the operative time, complications, initial feeding and end of parental nutrition in their medical records retrospectively. **Main Result:** Eight neonates underwent OD and 7 neonates underwent LD. The characteristics were not significantly different. In LD group, no cases were converted to an open procedure. The average operative times were 166 minutes in LD group and 98.9 minutes in OD group. Three cases in LD group needed Ladd's procedure because of malrotation. The postoperative initial feeding day was 2.3 in LD

group and 5.3 in OD group. The end of parental nutrition was not significantly different both groups (LD group: 10.7 POD, OD group: 12.6 POD). There were no leakage or stenosis in both group. **Conclusion:** LD for CDO in neonates could provide satisfactory visualization in the operation and cosmetically excellent. LD was a safe and feasible procedure.

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Title: Management of neonatal necrotizing enterolcolitis (NEC) in Sfax
Authors: Saloua Ammar, MD(1), Hayet Zitouni, MD(2), Amira Bouraoui, MD(3), Rahma Gragouri, MD(4), Manel Charfi, MD(5), Mahdi Ben Dhaou, MD(6), Mohamed Jallouli, PhD(7), Riadh Mhiri, PhD(8), Abdellatif Gargouri, PhD(9)
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Category: Neonatal Surgery
Keywords: necrotising enterocolitis,surgery,conservative management
Aim of the Study: To establish the most appropriate procedure for the management of NEC through a retrospective study. **Methods:** A retrospective study including cahrts of infants hospitalized in neonatal unit of Hedi Chaker Hospital in Sfax from january 2010 to december 2014 was performed. Conservative management was performed for important preterm. Surgery was indicated when clinical deterioration or pneumoperitoneum. It consisted on the resection of all areas of the necrotic intestine and fashion a stoma and restoring intestinal continuity at a later stage. **Main Result:** There were 30 newborns with a mean gestational age of 32 SA, including 25 preterm and 5 term babies. A low birth weight was noted in 43.3% of cases, perinatal asphyxia in 3.3% of cases and nosocomial infection was documented in 6.66% of cases. The most common clinical signs were abdominal bloating (50%) and bilious vomiting (26.6%). The most frequent radiological findings were intestinal pneumatosis (73.3%), distension of the loops (53.3%) and wall thickening (46.7%). Pneumoperitoneum was noted in 16.7% of cases. Conservative management by peritoneal drainage was performed for 4 preterms. All of them died. Surgical treatment was indicated in 23.3% of cases, including 4 cases of peritonitis, a case of persistant intestinal obstruction, a case of small bowel volvulus and one case with Hirshprung disease. Among newborns operated, three survived. The lethality in our series was 67.6%. **Conclusion:** Mortality due to NEC remains high and controversies still exists regarding the most appropriate management. Results of surgery seems better than the conservative management.

305 - PA
Title: Management of giant omphalocele with acellular dermal matrix and vacuum therapy.
Authors: Jeronimo Gonzalvez, MD(1), Patricia Deltell, MD(2), Esmeralda Kuan, MD(3), Pedro Alcaraz, MD(4), Nuria Albertos, MD(5), Natalia Gallego, MD(6), Maria Bordallo, MD(7)
Institutions: Alicante University General Hospital(1), Alicante University General Hospital(2), Alicante University General Hospital(3), Alicante University General Hospital(4), Alicante University General Hospital(5), Alicante University General Hospital(6), Alicante University General Hospital(7)
Category: Neonatal Surgery
Keywords: omphalocele,acellular dermal matrix,vacuum therapy
Aim of the Study: The management of ruptured giant omphaloceles can be challenging and usually is associated with a poor outcome. We report a case of a giant omphalocele in a newborn female successfully treated by covering the abdominal defect with non–cross-linked intact porcine-derived acellular dermal matrix (PADM) sutured to the fascia combined with vacuum therapy. **Methods:** A preterm twin female neonate with prenatal diagnosis of omphalocele was born at 34 weeks and 6 days of gestation by elective cesarean section. The birth weight was 1,940 kg and Apgar scores were 7/8 at 1 and 5 minutes, respectively. The omphalocele sac was broken during fetal extraction. The baby had a giant omphalocele with an 80 x 70 mm abdominal wall defect with liver, stomach, spleen and small intestine evisceration. The baby had no further anomalies. Immediately after birth, a Silo bag was used to temporarily cover the defect. A daily plan of sequential reduction of Silo content was initiated from first post-operative day. On the 9th day after bird, we removed the Silo and due to the liver was outside of the abdominal cavity, we placed a 75x70 mm ePTFE DualMesh and a vacuum system was used to cover the abdominal defect with a negative presure of -75 mmHg. On the 20th day, the ePTFE patch had to be removed due to a patch infection and it was replaced with a PADM patch sutured to the fascia combined with vacuum therapy, remaining an abdominal defect of 45x40 mm. **Main Result:** The child patient was discharged home at age 85 days with the vacuum therapy and the wound closed completely at age 3 and a half months. **Conclusion:** The use of a combination of a biological matrix graft PADM and vacuum therapy is an effective technique for treatment of giant omphaloceles.

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Title: ETIOPATHOGENESIS OF NEONATAL GASTRIC PERFORATION: ANALYSIS OF 6 CASES AND REVIEW OF LITERATURE
Authors: Shunmugam Rajah, FRCS(Eng)(1), Hazlina Mohd Khalid, MD(2), Ashok Krishnan, MD(3), Sabrina Jane Dass, MD(4)
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Category: Neonatal Surgery
Keywords: Neonatal ,Gastric Perforation,Preterm
Aim of the Study: The exact cause of Neonatal Gastric Perforation (NGP) is not clear. This study is to analyse the aetiology and prognostic factors for NGP. **Methods:** The case records of six patients treated for NGP at SWACH during January 2013 to April 2016 were analysed retrospectively. **Main Result:** There were 3 males and 3 females babies delivered between 28 to 31 weeks (mean 29.1 weeks) with birth weight ranging from 800gm to 1450gm (mean 1113gm). 4 babies were delivered by Emergency Lower Segment Caesarean Section (EMLSCS) for severe pre-eclampsia. 2 babies were products of two twin pregnancy and one had severe intrauterine growth retardation (IUGR)(Birth weight:800gm). All were intubated and ventilated within 24 hours, among them 2 required High Frequency Oscillatory Ventilation (HFOV). Perforation was diagnosed around 18 hours of life to 8 days by abdominal radiograph. Peritoneal drain was inserted in all babies to optimise and perforation closure was performed later. Two babies referred from the district hospital were operated at day 4 of life had large perforation at the greater curvature survived. Another 2 babies survived the gastric perforation but died after 3 months due to sepsis. 2 babies who required HFOV had massive necrosis of the stomach died within 10 days. There were no other associated intestinal anomalies in our series. **Conclusion:** Preterm babies with IUGR, Low Birth Weight and Product of Twin pregnancies were at high risk for gastric perforation. Mortality is higher in babies presenting with severe respiratory distress, perinatal infection and twin babies. Early onset of perforation has got better prognosis.

307 - PA
Title: The distribution of dilatations of esophageal anastomotic strictures after repair of esophageal atresia – an analysis over time
Authors: Pernilla Stenström, PhD(1), Magnus Anderberg, PhD(2), Anna Börjesson, PhD(3), Einar Arnbjornsson, PhD(4)
Institutions: Lund University, Skane University Hospital, Department of Pediatric Surgery, Lund, Sweden (1), Lund University, Skane University Hospital, Department of Pediatric Surgery, Lund, Sweden (2), Lund University, Skane University Hospital, Department of Pediatric Surgery, Lund, Sweden (3), Lund University, Skane University Hospital, Department of Pediatric Surgery, Lund, Sweden (4)
Category: Neonatal Surgery
Keywords: Esophageal atresia,Stricture,Dilatation
Aim of the Study: Anastomotic stricture is reported in in 9 – 79% of all patients primarily operated for esophageal atresia. The primary aim of this study was to disclose when, during the post-operative course after reconstruction, the anastomotic strictures were dilated. The secondary aim was to study the influence of the postoperative use of proton pump inhibitors (PPI) on the frequency of strictures. The study was approved by the Ethical Review Board, registration number 2010/49. **Methods:** An observational study was conducted, collecting information of the timing of stricture dilatations during three consecutive time periods 1985-1995, 2001-2009 and 2010-2014 at a single tertiary center of pediatric surgery. PPI were not used during the first period, and prophylactic 3 and 12 postoperative months respectively during the latest two periods. Dilatation were performed with balloons during endoscopic view with the child in general anesthesia. Indications for taking the child to stricture dilatation were obstructive symptoms and radiological signs of stricture. **Main Result:** 132 children had esophageal reconstructions, and in total 46% needed at least one dilatation. There was no difference in frequency of stricture dilatation between the periods (28/66, 18/32 and 15/34 respectively; p=0.42). The median number of dilatation were 3 (range 1 -22) in each patient. Four children (2%) had more than 12 dilatations. 50% of the dilatations were performed during the first year of life, 15% during the second year and 35% during year2-15. The lengths of prophylactic PPI-treatment did not influence the distribution of dilatation during the follow-up time. **Conclusion:** The largest need of dilatation of esophageal anastomotic stricture was during the first year but dilatations were also necessary several years later. PPI did not influence neither initial or later frequency of dilatations.

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Title: Preoperative clinico-radiological findings as prognostic factors in neonatal congenital diaphragmatic hernia
Authors: ahmed sobhy, MBChB(1), saber waheeb, PhD(2), hazem ahmed, MBChB(3)
Institutions: Alexandria university hospital(1), Alexandria university hospital(2), Alexandria university hospital(3)
Category: Neonatal Surgery

Keywords: neonatal,diaphragmatic,prognosis
Aim of the Study: Congenital diaphragmatic hernia is a significant cause of neonatal mortality. The objective of this study was to evaluate the clinical and radiological factors associated with death in neonates with congenital diaphragmatic hernia by based on a single center experience **Methods:** This was a prospective cohort study of all liveborn infants with congenital diaphragmatic hernia who were cared for at Alexandria university hospital between January 2013 and December 2015. Factors thought to influence mortality included birth weight, Apgar scores, size of defect, and associated cardiac anomalies. Survival to hospital discharge, duration of mechanical ventilation, and length of hospital stay were evaluated as end points **Main Result:** A total of 62 liveborn infants were studied. The overall survival rate was 68%. 6 patients (10%) did not undergo an operation and died. The defect size was the most significant factor that affected outcome; infants with a near absence of the diaphragm had a survival rate of 52% compared with infants having a primary repair with a survival rate of 95%. Infants without agenesis but who required a patch for repair had a survival rate of 72% compared with primary repair.the finding of the soft tissue shadow of the spleen and the gastric air bubble within the abdomen in an xray was the most significant radiological factor. Patients with these two findings showed 79% survival rate **Conclusion:** The size of the diaphragmatic defect seems to be the major factor influencing outcome in infants with congenital diaphragmatic hernia.. Future research efforts should be directed to accurately quantitate defect size antenatally. the finding of the soft tissue shadow of the spleen and the gastric air bubble within the abdomen in an xray predicted survival as well and should be studied antenatally

309 - PA
Title: The use of Preformed Spring Loaded Silo on delayed primary closure of gastrocshisis patients at the Philippine Children's Medical Center: Its Impact on Hospital Stay and Outcome
Authors: Erika Marie C Gacus, MD(1), Dexter S Aison, MD(2)
Institutions: Maria Reyna - Xavier University Hospital(1), Philippine Children's Medical Center(2)
Category: Neonatal Surgery
Keywords: Gastroschisis,Spring Loaded Silo Bag,Delayed primary abdominal closure
Aim of the Study: The objective of the study was to determine the outcome of using preformed spring-loaded silo bag (PSLS) for delayed primary closure of Gastroschisis patients. **Methods:** A prospective data collection and chart review were done all gastroschisis patients from May 2011 to April 2013. Eligible gastroschisis patients were applied with silo bag, gradual reduction of abdominal viscera and elective abdominal wall closure. **Main Result:** Thirty-four gastroschisis patients were admitted from May 2011 to April 2013, of which 25 patients qualified for the study. Majority of the patients were female, preterm, delivered vaginally, weighed <2 kg and admitted within the first 24hrs of life. 84% had prenatal ultrasound, less 50% were diagnosed correctly. 48% of mothers were less than 20 years old. Fascial closure rate was 88% (delayed abdominal closure done within 10 days). 72% were fed within 10 days after delayed abdominal wall closure. 52% were extubated within 24 hours. Average hospital stay was 35 days. Over-all outome: morbidity rate- 48%; home against medical advice (HAMA)-4%; mortality rate – 12%; survival rate- 84%. **Conclusion:** This study shows that the use of preformed spring-loaded silo bag in the management of delayed closure of gastroschisis patients in the PCMC is comparable to foreign literature (improved fascial closure rates, enteral feedings initiated earlier, less number of days requiring mechanical ventilator, less hospital stay, decreased hospital expenses).

310 - PA
Title: GIANT OMPHALOCELE: BE PATIENT BECAUSE IT'S GOOD FOR YOUR PATIENT.
Authors: Antonio Di Cesare, MD(1), Andrea Zanini, MD(2), Lorena Canazza, MD(3), Giorgio Farris, MD(4), Giovanni Parente, MD(5), Ernesto Leva, MD(6)
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Category: Neonatal Surgery
Keywords: omphalocele,delayed,closure
Aim of the Study: We present our experience treating giant omphalocele (GO) by delayed surgical approach considering benefits and risks. **Methods:** Clinical data of our GO cases from January 2014 to May 2016 were reviewed, with attention to outcomes (complications by the time of definitive repair, ability to close the abdomen, intrabdominal pressure, parents' satisfaction). **Main Result:** We recorded 3 cases. One patient, from a twin pregnancy, was born at 34 weeks, because of premature rupture of the membranes, affected by aortic coarctation and had the omphalocele sac ruptured requiring emergent abdominal wall closure by a Gore-Tex hand fashioned silo and weekly change of silver-coated dressing afterwards, but died at 6 weeks because of complications related to his prematurity and cardiac malformation. Two patients were born at term resulting healthy babies. They were managed by weekly change of silver-coated dressing observing progressive escharification and epithelialization of the sac. One of them had bowel perforation at 2 months, requiring urgent repair with replacement of the omphalocele sac with a Gore-Tex silo and thereafter he continued weekly change of dressing. Local infection of the sac or silo were treated with topic antibiotics. The case with intact omphalocele sac could eventually shift to eosin painting and dressing change made at home by his

parents. Complete epithelialization was observed by 5 months. Spontaneous reduction of the hernia content happened in both patients due to increased abdominal capacity allowing surgical closure respectively at 10 months and 7 months without prosthesis. Intrabdominal pressure post-closure where 14-18 mmHg but the presence of bilateral inguinal hernia was an efficient pressure relief valve. In both cases the parents were compliant with delayed closure management and satisfied of the final result. **Conclusion:** Delayed approach with accurate medications and follow-up is suggested to close giant omphaloceles without the need of prosthesis.

330 - PA
Title: Technology biopsy for tumors of the urinary bladder in children.
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Institutions: Russian scientific center of roentgenradiology(1), Russian scientific center of roentgenradiology(2)
Category: Oncology
Keywords: bladder,biopsy,tumor
Aim of the Study: Among the entities of the bladder in children usually find primary malignant tumors. Of them sarcomas are more frequently (fibromyosarcoma and chondrosarcoma). The "gold standard" for initial diagnostics and “second look” is open biopsy of the bladder. **Methods:** We assessed the possibilities of different minimally invasive bladder biopsy technologies depending on the localization of tumor in 16 patients with tumors of the bladder in the age from 1.5 to 15 years. 8 patients had got bladder rhabdomyosarcoma, 2 with lejomyofibroma, 2 with hemangioma, 2 with bladder cancer and 2 with papilloma. On localization of 6 patients tumor was localized in the the bladder neck and posterior urethra, 5 in the triangle L′eto, 2 on the front wall of the bladder and in the area of the bottom, 3 on the side and back wall. According to the previously performed ultrasound and MRI tumors had its noninvasive growth in 6 cases, in the others it was in all bladder wall. **Main Result:** Transurethral bladder biopsy proved to be informative in 7 cases with noninvasive tumors, as well as in the localization of rabdomyosarcomas in the posterior urethra. In the bladder neck and the back wall tumors trans rectal biopsy under ultrasound control was informative in 4 patients from 5. 1 patient with tumor in the front wall was successfully held percutaneous biopsy under ultrasound control. Thus, the traditional open biopsy of bladder tumors was necessary only in 4 patients. **Conclusion:** Minimally invasive biopsy of tumors of the bladder may be performed. Transurethral biopsy should be used in cases of noninvasive tumors, as well as in the tumor in the posterior urethra. Tumor of the bladder neck miniinvasive biopsy can be performed under ultrasound control transrectal, and front wall tumor should biopsied percutaneously.

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Title: SERTOLI CELL TUMOR IN UNDESCENDED TESTICLE ASSOCIATED WITH GYNECOMASTIA IN A TWO-YEARS-OLD CHILD - CASE REPORT
Authors: Victoria Carneiro Lintz, MD(1), Ilana Lorreine Santos Prado, MD(2), Ricardo Antônio Bertacchi Uvo, MSC(3), Carla Nicolau Mattar, MD(4), Guilherme Rossato de Almeida, PhD(5)
Institutions: University of the City of São Paulo(1), University of the City of São Paulo(2), Menino Jesus Children's Hospital(3), Menino Jesus Children's Hospital(4), Menino Jesus Children's Hospital(5)
Category: Oncology
Keywords: Sertoli cell tumor,Cryptorchidism,Gynecomastia
Aim of the Study: The Sertoli cell tumor, also known as androblastoma, is a rare sex cord–gonadal stromal tumor that occurs in less than 1% of all testiculars tumors. It occurs mainly in two specific periods, a few months after birth or around puberty and can be malignant in both cases, around 10% of cases. The aim of this study is to show a two-years-old patient with bilateral gynecomastia, impalpable testis associated with tumor, surgically treated. **Methods:** A two-years-old child with bilateral gynecomastia, a left cryptorchidism with impalpable testicle was submitted to endocrinological evaluation with hormone levels (total testosterone, follicle stimulating hormone - FSH, luteinizing hormone - LH, androstenedione and dehydroepiandrosterone sulfate), scrotal and inguinal ultrasonography (US), computed tomography (CT) and laparoscopy. Then, the patiente was subjected to a surgical treatment of left cryptorchidism and, later, an orchiectomy. **Main Result:** Hormone levels were within normal values, US and CT revealed the presence of intra-abdominal left testicle with circumscribed, heterogeneous and microlithiasis mass. Videolaparoscopy confirmed the findings of imaging methods. The left inguinotomy with resection of the testicular mass, preservation of the testicle and orchidopexy left was technically possible. Pathological examination showed Sertoli cell tumor stage I, so it was decided performing the orchiectomy. There was progressive regression of the gynecomastia. **Conclusion:** We have shown a case of child with Sertoli cell tumor, cryptorchidism and gynecomastia submited to a successful surgery.

PA3-6 | MODERATORS: BENNO URE, MIKAEL PETROSYAN

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Title: Colorectal Carcinoma in Children
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Category: Oncology
Keywords: Colorectal carcinoma,adenocarcinoma,rectal duplication
Aim of the Study: To present 2 cases of Colorectal carcinoma (CRC) in children less than 15 years. Its occurrence is much rarer in a rectal duplication. **Methods:** Two children (M:F 1:1), aged 13 and 11years, were referred to us after having appendicectomy. The female child, presented a few months later with history of fever and diarrhea for 2 weeks. Rectal examination revealed a large pelvic mass and ultrasound showed a cystic mass. Laparotomy & aspiration of 50ml of thick purulent mucoid fluid was aspirated. Streptococcus faecalis was grown & was treated. 2 months later, she presented with weight loss and recurrence of symptoms. Rectal examination revealed a large indurated mass anteriorly. Ultrasound and CT scan showed a large, cystic & solid mass. HPE showed mucin producing adenocarcinoma(AC). CEA was elevated - 398 ng/ml. A re-laparatomy, showed the wall of the mass resembling bowel, intimately attached to the anterior wall of rectum – a rectal duplication. She had biopsy & a diversion colostomy. She received 5-Fluorouracil and advised to have radiotherapy. Parents refused further treatment. 2nd child presented with acute bowel obstruction, 3 weeks after appendicectomy. Laparotomy showed a mass in the descending colon causing obstruction & had a transverse colostomy. Colonoscopy and biopsy showed a polypoidal lesion (AC). He had subtotal colectomy. Histopathology confirmed a mucinous adenocarcinoma, with carcinoid like features in some areas. Mesenteric nodes were involved. He was given FLEX chemotherapy. Bowel continuity was restored. **Main Result:** one died & the male child is alive and well 18 months after surgery. **Conclusion:** Diagnosis of CRC in children is often delayed due to its rarity & carries a bad prognosis. Lack of suspicion results in, an advanced stage at presentation. Carcinoma in colorectal duplications are even rarer. Less than 15 cases of adenocarcinoma & carcinoids were reported in Colorectal duplications in children & majority were females.

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Title: A RARE SACROCOCCYGEAL LOCATED TUMOUR IN CHILDHOOD MYXOPAPILLARY EPENDYMOMA
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Institutions: (1), (2), (3)
Category: Oncology
Keywords: MYXOPAPILLARY EPENDYMOMA,SACROCOCCYGEAL LOCATED,CHILDHOOD
Aim of the Study: In this article, a 10-year old female case with subcutaneous sacrococcygeal myxopapillary ependymoma was presented. **Methods:** A 10-year old female patient applied to Okmeydanı Training and Research Hospital Paediatric Outpatient Department in May 2015 because of mass in sacral region for 1 year. As a result of USG and sacrospinal MR for mass, a solid mass lesion which does not infiltrate the surrounding tissue near 2x2,5 cm subcutaneous coccyx was observed. Mass and coccyx were excised totally. It corresponded to ependymoma as a result of frozen. Its definitive pathological evaluation corresponded to myxopapillary ependymoma (WHO GRADE 1). **Main Result:** It was determined that there were no local recurrence and distant metastasis in her 7-month follow-up. **Conclusion:** Although subcutaneous sacrococcygeal myxopapillary ependymoma is rare and the imaging findings are nonspecific, it should be considered in the definitive diagnosis of sacrococcygeal masses. (3) It frequently appears as well-defined enhancing bright lesion in magnetic resonance imaging. Cystic changes and bleeding may be rarely seen. (1) It may be clinically confused with pilonidal cyst and sacrococcygeal teratoma. (4) Myxopapillary ependymomas are good prognosis and slowly-growing tumours. They are classified as grade 1 by World Health Organization. Survival time is more than 10 years after partial and total resection. Subcutaneous sacrococcygeal myxopapillary ependimoma has considerable recurrence potential and its distant metastasis is rarely seen. (1) Very few cases were reported in literature.(1,5,6,7,8) Excision of primary tumour is the most significant factor in the treatment and prognosis. In our case, primary tumour was totally excised and there were no local recurrence and distant metastasis in 7-month follow-up. Its follow-up is still continuing.

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Title: Surgical Margins and Outcomes in Childhood Cancer: King Faisal Specialist Hospital & Research Centre-Riyadh (KFSH&RC) Experience

Authors: Zakaria S Habib, MD(1), Ibrahim AlFawaz, MD(2), Amani A AlKofide, MD(3), Afshan A Ali, MD(4), Amer Nadeem, MD(5), Amjad Abbas, MD(6), Viqaruddin Mohammad, MSC(7), Diana Bushnak, RN(8), Mohammad AlQaissi, RN(9), Shamayel F Mohammad, MD(10), Wafaa Ramadan, BSC(11), Menatalla Fayed, BSC(12), Heba Musallam, BSC(13), Leen Tuleimat, BSC(14), Mashayel Foudaneel, BSC(15)

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Category: Oncology

Keywords: Surgical margins,tumors,outcomes

Aim of the Study: While treatment for malignant tumors in children remains surgery, chemotherapy, and radiation, the absence or presence of tumor at the site of surgical margins in soft tissue sarcomas and correlation with outcome have not been studied extensively in children. Patients treated over the past 5 years at KFSH&RC were reviewed with following aims:To compare the histological type of the tumor, site of primary, extent of surgical margins, stage, and treatment response with overall and progression-free survival of pediatric patients with solid tumors. To evaluate the documentation details of the surgical margin reporting in the pathology and operative reports from definitive surgery. **Methods:** Retrospective chart review of patients age 0 to 14 years with malignant tumors with the exclusion of bone tumors, retinoblastoma and brain tumors was conducted. Data was entered in REDCap (Vanderbilt). Descriptive analysis was completed and analyzed using Microsoft SPSS version 20. **Main Result:** 120 cases were reviewed. Date from 56 patients was analyzed: primary sites; renal, 39 patients (69.5%), neuroblastoma 8(14%), liver 9 (17%), adrenal tumors, 7 (13%); Stage I & II 20 (36%), Stage III 15 (27%), Stage IV patients 21 (37%). Negative margins in 29 (52%), positive margins 27 (48%). 46% were treated with surgery, chemotherapy and 41%, surgery, chemotherapy, radiation. Overall three-year survival rate was 92% in patients with negative microscopic margins and 85% in patients with positive margins. Disease recurrence was seen in 15 patients (8 had positive surgical margins). **Conclusion:** This is a limited retrospective review where a positive margin did have some correlation with outcome but was not statistically significant. Marked variability was noted in the reporting of surgical margins. This reporting inconsistency may lead to inadequate information and suboptimal therapy and thus needs better definition and standardization. We have initiated a prospective study to better delineate the significance of surgical margins as prognosticators for survival.

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Title: Different presentations of Thoracic Ganglioneuromas in children

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Category: Oncology

Keywords: Ganglioneuroma intraspinal,Respiratory distress,Hypertension

Aim of the Study: Thoracic ganglioneuromas are uncommon. They are benign lesions and produce symptoms when they are large. Their symptoms may be mild to life threatening. We present the clinical features, emergency management and surgical management. **Methods:** 4 Children (2M:2F), aged 2-16 years were managed. 16 year old boy with past history of excision of ganglioneuroma, presented with weakness and wasting of right lower limb. CT scan & MRI showed intraspinal extension and this was excised first followed by excision of the thoracic mass. A 9year old female child presented with acute life threatening respiratory emergency due to displacement and compression of the trachea. A tracheal metal stent was inserted to stabilized the respiration. CT scan showed the mass was extending into the neck. After stabilization the mass was excised through an open book incision, with preservation of all the major blood vessels and nerves. A 2year old with bilateral ganglioneuroma presented with severe hypertension and convulsions. The BP was stabilized with 4 anti hypertensives & the mass was excised in a staged manner, initially the right & 10-days later the left. The fourth child presented with persistent cough and mild respiratory distress. Chest x-ray showed a large mass in the left chest. Mass was excised along with T1 & T2 ganglia **Main Result:** All of them recovered well. 2 had Horner's Syndrome. The child with neurological abnormality recovered gradually and regained his

strength. The follow up ranges from 3 to 20 years. **Conclusion:** Ganglioneuromas are benign lesions, they grow to large sizes and present with life threatening emergencies. Hormone secreting ganglioneuromas are very rare. Vessel identification, vascular clearance and tumor excision in parts, assures safety and complete clearance. Children with ganglioneuroma situated close to the spine must be followed up closely for neurological symptoms.

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Title: HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY IN PEDIATRIC DESMOPLASIC SMALL ROUND CELL TUMOR – A CASE REPORT
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Category: Oncology
Keywords: Desmoplasic small round cell tumor,Hyperthermic Intraperitoneal Chemotherapy,cytoreduction surgery
Aim of the Study: Desmoplasic small round cell tumor (DSRCT) is a rare disease of children, adolescents and young adults, which begins and spreads within the abdominal cavity. Even with complete excision of the tumor, chemotherapy and radiotherapy, there is a high-risk of local recurrence and metastatic disease. Hyperthermic Intraperitoneal Chemotherapy (HIPEC) has been used for peritoneal carcinomatosis in adults. The aim of this report is describe this case and highlight the indications, techniques and particularities in the clinical management. **Methods:** Case report of a patient submitted to cytoreduction surgery added HIPEC for local treatment of DSRCT. Evaluate clinical and radiologic features, chemotherapy and surgery response and complications. **Main Result:** A 7-year-old boy was referred to our department after diagnosed with an abdominal mass, ascites, fever and weight loss. On CT scan, presented with hipodense lesion on the fourth segment hepatic, colon, mesenteric and peritoneum implants, and parietal thoracic mass. He was submitted to tru-cut biopsy for histopathologic analysis revealed a DSRCT. The GALOP (Phase III) protocol (alternate cycles of vincristin/doxorubicin/cyclophosphamide and ifosfamide/etoposide) was started. After six cycles, partial response had achieved (total response on thorax and partial response on abdomen). After neoadjuvant chemotherapy he was submitted to surgical treatment. The operation consisted in complete excision of all suspicious lesions following by HIPEC with cisplatin. HIPEC was performed according to protocol, and there were no complications. The treatment finalized with adjuvant chemotherapy, and whole abdominal radiotherapy. **Conclusion:** DSRCT is a rare abdominal tumor which requires aggressive approach. HIPEC is a novel therapy that can potentially optimize local control. The main indications for HIPEC are complete macroscopic tumor elimination, absence of other distant metastases and normal heart, kidney, liver function. Surgery with HIPEC increased survival rate up to 70%. Because the rarity of this entity more researchs are needed to confirm the real benefits of these approach.

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Title: Malignant testicular tumors in children and adolescents – Five-years review
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Category: Oncology
Keywords: malignant testicular tumors,pediatric age,radical orchiectomy
Aim of the Study: Pediatric malignant testicular tumors are rare, accounting for 1% to 2% of all pediatric solid tumors and 3% of all testicular tumors. A bimodal age distribution exists with a peak between ages twelve to twenty-four months, followed by a second peak during puberty. Prepubertal boys have a much larger percentage of benign-behaving testicular lesions than postpubertal and adult males. Management of testicular tumors in prepubertal boys thus differs from that group as radical orchiectomy may be curative. **Methods:** A retrospective review was performed of all malignant testicular tumors diagnosed between 2010 and 2015 in males younger than 16 years. We analyzed clinical characteristics, diagnostic procedures, treatment methods, histopathologic findings and outcome. **Main Result:** A total of seven patients were included with ages between twenty-two days and sixteen years. The clinical presentation in 85%

of cases was a painful increase in testis size and palpable mass. All patients underwent ultrasonographic study and measurement of alpha-fetoprotein, human chorionic gonadotropin and lactate dehydrogenase. The two small children were at Stage I (Children's Oncology Group classification), the older ones were at stages IA, IIA, IIIA and IV (TNM system classification). All underwent radical inguinal orchiectomy, four were submitted to chemotherapy and one to radiotherapy. One was submitted to surgery on pulmonary metastases. Histopathologically, in small children all were germ cell tumors; postpubertally, 60% were germ cell tumors and 40% were rhabdomyosarcomas. After a mean follow-up of twenty-two months, all but one patient were disease-free and recurrence-free. **Conclusion:** Malignant testicular tumors in pediatric age are frequently of germ cell origin and so radical inguinal orchiectomy remains the standard of care. This must be included in differential diagnosis of scrotal masses and physical self-examination should be emphasized.

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Title: Uncommon bronchial tumors in children
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Category: Oncology
Keywords: Bronchial tumors in children,Carcinoids,Inflammatory Myofibroblastic tumor
Aim of the Study: Clinical features, investigation, endoscopic findings and management of 3 children with bronchial tumors are discussed. **Methods:** 2 female & one male, aged 5, 9 and 10 years, presented with history of cough and breathing difficulties. They presented with, 1. weight loss and collapse of the left lung , 2. Hemoptysis, & 3. history of cough and collapse consolidation of the left lower lobe. Chest x-ray, CT scan and bronchoscopy were used to diagnose the extent of the lesion. In 2, the tumor was involving the lower part of the left bronchus and extended into the left lower lobe. In the 3rd, a vascular tumor, involved the distal left bronchus & extended into the upper and lower lobe bronchus. She had brochiectatic changes distally, & had a left pneumonectomy. HPE showed, carcinoid tumor. In 2, bronchotomy and biopsy showed. Inflammatory pseudotumor in one & mucoepidermoid carcinoma in the 2nd. Since the carcinoma, was extending from the main bronchus into the lower lobe bronchus, the bronchus and the left lower lobe were removed & the left upper lobe was reattached to the trachea. In the pseudotumor the bronchus & its extension into the lower lobe was cleared. She was treated with NSAIDs for 6 weeks. Repeat bronchoscopy did not show any new lesions. **Main Result:** All the children recovered well. The follow up ranges from 3 to 15 years. **Conclusion:** Bronchial tumors are uncommon in children. High index of suspicion is essential to diagnose these lesions. Bronchial carcinoids occur in children and most of them are low grade malignant lesions with good prognosis. 30% of them are atypical and can behave in a malignant fashion. In IPT, NSAIDS and steroids are effective in clearing the residual tumors. Mucoepidermoid carcinomas, excised completely, carries a good prognosis in children.

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Title: LAPAROSCOPIC RESECTION OF NEUROBLASTOMA. A SINGLE-CENTRE EXPERIENCE
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Institutions: (1), (2), (3), (4), (5), (6)
Category: Oncology
Keywords: Neuroblastoma,Laparoscopic adrenalectomy,
Aim of the Study: To present our experience in laparoscopic adrenalectomy for Neuroblastoma as there are few series published regarding minimal invasive techniques for neural adrenal malignant tumors. **Methods:** Ten patients (4 males and 6 females) with resectable adrenal Neuroblastoma were included. Mean age was 3,9 yo [0.3-18]. All patients underwent laparoscopic adrenalectomy. Results were compared with a similar series treated with open surgery. **Main Result:** We performed 11 laparoscopic adrenalectomies and 1 biopsy. We preffered lateral transperitoneal approach in all patients. We employed 3 ports on the left side and 4 on the right side. Tumor size was 20-70 mm. Extraction was performed into a bag through the most posterior incision. One patient underwent laparotomy because of important adherences and bleeding. All but one patient are alive and free of disease. Mean follow-up 5,5 years [1-11]. No significative differences were found when comparing patients outcome. **Conclusion:** Laparoscopic adrenalectomy is

not a frequent technique in pediatric population due to the scarce adrenal pathology in children. It is useful and safe in paediatric patients with adrenal Neuroblastoma in selected cases. It offers a less painful solution, less hospital stay and better scar results than open surgery without worsening outcome. Laparoscopic adrenalectomy might be a new gold standard in pediatric patients.

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Title: Teratoma That Making Aganglionic Colon Loop in an Infant: A Case Report
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Category: Oncology
Keywords: Teratoma,Retroperitoneal Neoplasms,surgery
Aim of the Study: We aimed to report a hitherto undescribed case of a mature teratoma harboring aganglionic loop of colon in retroperitoneal location. **Methods:** A three months old female child presented with chronic constipation, abdominal swelling and restlessness since birth. On examination, it was a left abdominal mass measuring 20 cm in diameter was found. No congenital anomaly was detected. The laboratory findings, including haematological, biochemical and urine examinations, were within normal limits. Serum alpha-fetoproteins, measured by radioimmunometric assay, was 10 ng/ml (normal < 15 ng/ml). Ultrasonography of the abdomen revealed a round hypoechoic lesion measuring 20x15 cm in the retroperitoneum, located just below and close to the left kidney, along with moderate hydronephrosis of the left kidney. Contrast-enhanced computed tomography (CT) imaging showed a large cystic mass measuring 20x15x15 cm in close approximation and anterior to the lower half of the left kidney, with small areas of solid components present toward the iner peripheral portion of the mass. Radiologically, the possibility of a retroperitoneal teratoma compressing the left ureter leading to hydronephrosis of the left kidney was suggested. **Main Result:** The surgically resected specimen revealed a thin-walled globular cystic mass that measured 20x15x15cm. , with smooth, mildly transparent capsule showing engorged prominent blood vessels and colon loop on its outer surface. Histopathological diagnosis was as mature teratoma with segments of aganglionic colon. **Conclusion:** We have presented a case of a teratoma with aganglionic colon loop that, even as a rare entity, presented atypically. The presence of this entity, with both an retroperitoneal location, aganglionic colon loop and in a 3 month old boy, is unusual.

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Title: Chromosomal Imbalances and Screening of Parkin mutation in Parkinson’s Disease (PD) patients of Coimbatore population.
Authors: Dhivya V, PhD(1), Illakiyapavai D, MSC(2), Balachandar V, PhD(3)
Institutions: Bharathiar University(1), (2), Bharathiar University(3)
Category: Research
Keywords: Parkinson's disease,chromosomal abnormalities,PARK2
Aim of the Study: Parkinson's disease (PD) is a chronic neurodegenerative and progressive movement disorder which causes dopaminergic neuronal loss in the nigro striatal pathway. The aim of our research was to perform the cytogenetic and biochemical analyses and to investigate the polymorphism of Parkin (PARK2) gene in PD patients in Coimbatore Population, Tamil Nadu. **Methods:** A total of 16 samples which includes 8 PD patients and equal number of healthy individuals were selected as control subjects matched with age and sex. Chromosomal abnormalities were observed using Trypsin G banding and mutational analysis was performed using polymerase chain reaction – restriction fragment length polymorphism **Main Result:** the higher degree of anomaly was seen in chromosome 6 and genetic analysis revealed the significance between PARK2 in 6 patients with PD. **Conclusion:** We conclude that by increasing the sample size in future research novel mutations can be examined in PARK2 and epigenetic studies can also be carried out which will be a novel study in Tamil Nadu population.

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Title: A Prospective Study of Botulinum Toxin for Persistent Constipation after Pull-Through in Hirschsprung's disease
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Category: Research
Keywords: Hirschsprung’s disease ,internal anal sphincter achalasia ,botulinum toxin
Aim of the Study: Although botulinum toxin was introduced to solve internal anal sphincter achalasia after the pull-through in Hirschsprung’s disease (HD), evidence of the safety and efficacy is still lacking. **Methods:** Patients with HD

who experienced persistent constipation for more than 6 months after operation were included. Rectal biopsy and colon study were performed before the toxin injection to exclude secondary aganglionosis. Intersphincteric injection was performed on 3, 6, and 9 o'clock direction. Manometry, Wexner's constipation score (WCS), quality of life score related to defecation (QOL), and abdominal distension and enterocolitis score (DES) were checked before, 2 weeks after, and 3 months after the injection. Holschneider incontinence score (HIS) and evaluation of pain or discomfort were recorded 2 weeks and 3 months after the injection. **Main Result:** Ten patients who underwent pull-through procedure for colorectal aganglionosis were analyzed. Nine patients underwent Soave procedure due to rectosigmoid aganglionosis and one patient had multiple operations of Duhamel procedure and ileorectal anastomosis due to total colon aganlionosis. Seven patients showed subjective improvement of symptoms and anal resting pressure decreased in nine patients. WCS and QOL were improved in 5 cases (50%) respectively, and HIS was not deteriorated in six patients (85.7%). Although pain or discomfort were reported in four patients (40%) after 2 weeks after the injection, they were spontaneously resolved. **Conclusion:** Intrasphincteric botulinum toxin is safe and less-invasive procedure that can be utilized as an alternative treatment of internal anal sphincteric achalasia.

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Title: Pattern and management of abdominal solid tumour in children
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Category: Research
Keywords: abdominal solid tumour in children,tumour in children,management of abdominal solid tumour in children
Aim of the Study: Childhood abdominal solid tumor is a common surgical problem and a great challenge for the pediatric surgeons. The aim and objective of the study was to see the pattern of abdominal solid tumor in children and to observe the result of management. Children having abdominal solid tumor, specially the malignant solid tumor are very difficult to manage. The study was carried out to observe the scenario of abdominal solid tumor and its management in our hospital. **Methods:** This study was carried out from January 2011 to December 2012, in the department of pediatric surgery, Sylhet M. A. G. Osmani Medical College Hospital. Among the total admitted 6220 patients, 298 patients were diagnosed as abdominal solid tumor, only 30 cases were taken as sample by random sampling after fulfilling the inclusion and exclusion criteria. **Main Result:** Hospital incidence was 0.48% and study sample was 30 patients. Among them 18(60%) were male and 12(40%) were female. Mean age of the patients were 7.5 yrs. Presentation of malignant tumours differ from benign tumours. Constitutional symptoms like anaemia, cachexia, loss of appetite, low grade fever was very common 19(56%) in malignant tumour. Abdominal lump in both malignant and benign tumours was common. Tumour markers, histopathological findings, imaging studies played important role in diagnosis. Among the 30 cases 27(90%) were malignant and 03(10%) were benign. **Conclusion:** The scenario of children having abdominal solid tumor in our society is not pleasant one. Lack of modern diagnostic facility, poverty, and illiteracy of parents and the consequence of disease itself are major factors for the sufferings of these poor children. Study of cancer biology is still evolving. We hope, in future scientific research on the facts of oncogenesis will tell us the complete solution.

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Title: ACCURACY OF COMPLEMENT ACTIVATION PRODUCT LEVELS TO DETECT INFECTED PLEURAL EFFUSION IN RATS
Authors: Guilherme Peterson, MD(1), Samanta Sarmento da Silva, MD(2), Sergio Amantéa, MD(3), Patrícia Miorelli, MRS(4), Jane Kulczynski, PhD(5), Eliane Roesch, PhD(6), José Carlos Fraga, PhD(7)
Institutions: Universidade Federal do Rio Grande do Sul(1), (2), (3), (4), (5), (6), (7)
Category: Research
Keywords: Pleural Empyema,diagnosis,Complement
Aim of the Study: Pleural empyema is a well-known complication of pneumonia. If treatment is delayed, empyema may increase morbidity and mortality in affected patients. Therefore, the identification of early empyema biomarkers in parapneumonic pleural effusion is desirable. Previous research has suggested complement activation products as candidate empyema markers. Our aim was to compare the levels of complement activation products C3a, C5a, and C5b9 in pleural effusion induced by Staphylococcus aureus (SA), Streptococcus pneumoniae (SP), or turpentine (control). **Methods:** Thirty-nine male Wistar rats (mean weight 414g; 290-546g) were allocated as follows: 17 animals in the SA group, 12 in the SP group, and 10 in the control group. Bacteria or turpentine were injected into the pleural space. After 12h, intrapleural fluid was collected using ultrasound-guided thoracentesis. Levels of complement activation products were determined using ELISA kits. **Main Result:** Two SA and 1 SP animals died before 12h. Mean levels were as follows: C3a: 1066.82 µg/mL (937.29-1196.35 µg/mL) in SA, 1188.28 µg/mL (1095.65-1280.92 µg/mL) in SP, and 679.13 µg/mL (601.29-756.98 µg/mL) in controls ($p<0.001$); C5a: 55.727 ng/mL (41.22-70.23 ng/mL) in SA, 520.107 ng/mL (278.92-761.3 ng/mL) in SP, and 5.268 ng/mL (1.68-8.85 ng/mL) in controls ($p<0.001$); C5b9: 15.02 ng/mL (13.1-16.94 ng/mL) in SA, 16.63 ng/mL (14.37-18.9 ng/mL) in SP, and 14.05 ng/mL (9.8-18.29 ng/mL) in controls ($p=0.692$). ROC analysis revealed an area under the curve of 0.987 (95%CI: 0.953-1) for C3a; 1 (1-1) for C5a; and

0.757 for C5b9 (0.523-0.990). **Conclusion:** In the present rat model, complement activation fragments C3a and C5a accurately detected infected pleural effusion.

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Title: Evaluation of associated anomalies in Anorectal Malformation: Our experience in Bangladesh.
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Category: Research
Keywords: Anomalies associated,Anorectal Malformation,Dhaka Shishu (Children) Hospital
Aim of the Study: The purpose of this study is to review the incidence of other congenital anomalies associated with anorectal malformation (ARM). **Methods:** This retrospective study was carried out in the department of pediatric surgery, Dhaka Shishu(Children) Hospital. A number of 675 cases that were admitted to our hospital included during the period of January, 2001 to December, 2015 and data was collected on the type of ARM and associated congenital anomalies which was categorized according to organ system. **Main Result:** Total study patient were 675. Male: Female ratio was 1.37:1. Majority (55.55%) presented with ARM without fistula, followed by recto vestibular fistula 26.67%, perineal fistula 13.33%, and 30 patients had cloacal anomaly. 480 (71.1%) patients had associated congenital anomaly. Among them, 42%, urogenital anomalies, 37.78% cardiovascular, 20% craniofacial anomalies, 11.11% musculoskeletal and anomalies of central nervous system 11%. Among 480 patients, 57.14% patients had multiple congenital anomalies. **Conclusion:** It is imperative that a thorough clinical evaluation and systemic investigations of all patients with anorectal malformation necessary to exclude or confirm the presence of genitourinary, cardiac and other abnormalities which are directly related with mortality and morbidity.

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Title: Etiology and management of umbilical discharge in children in a tertiary care hospital.
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Category: Research
Keywords: Etiology and management of umbilical discharge,umbilical discharge,management of umbilical discharge
Aim of the Study: This prospective study was conducted in the Department of Pediatric Surgery, Sylhet MAG Osmani Medical College Hospital from January, 2013 to December, 2014 with a view to find out the causes and the management of umbilical discharge in children. The sample size was 46. **Methods:** The age of the patients ranged from 4 days to 11 years with mean age of 1.46(SD 2.48) years. Majority (69.6%) of the patients were below the age of 12 months. Male female ratio was 1.9:1. Out of 46 patients, 4(8.7%) had other associated congenital anomalies such as anorectal malformation, hydrocephalous and malrotation of gut. In this study it was found that early separation of umbilical cord (within 7 days) was significantly associated with umbilical discharge (p=0.008) and umbilical adenoma (41.3%) was the commonest cause of umbilical discharge followed by umbilical granuloma(30.4%). Other causes of umbilical discharge were umbilical sepsis (17.4%), patent urachus (4.3%) and patent vitellointestinal duct (4.3%) and combined patent urachus and patent vitellointestinal duct (2.2%). **Main Result:** In this study 56.5% patients were treated surgically and 43.5% were given medical treatment. Medical treatment was applied in patients with umbilical granuloma and umbilical sepsis which included chemical cauterization by copper sulphate in 14(30.4%) and aseptic dressing in 6(13.0%), while surgical treatment were laparotomy in 24(52.2%), wound debridement in 1(2.2%) and incision and drainage in 1(2.2%) patients. **Conclusion:** The outcome of this study was excellent in 42(91.3%), while 3(6.5%) patients developed some form of complications and one patient died due to septicemia. So, it may be concluded that apparently umbilical adenoma is more common than umbilical granuloma in children although literature review reveals granuloma is the commonest. So, it can be assumed that to get the real picture of umbilical discharge baseline study with bigger sample size should be designed.

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Title: Is CME Effective in Improving Physicians` Knowledge ? Second Order Systematic Review
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Category: Research
Keywords: Continuous Medical Education Activities,Physcians,Knowledge
Aim of the Study: The goal of this review is to determine the effectiveness of continuing medical education (CME) activity on improving physicians` knowledge. **Methods:** It is a Comprehensive Review of the Systematic Review of English literature concerned with CME activity and its impact on physicians' knowledge. The search plan include electronic, bibliographic, and hand searching. The following databases, were utilized for searching: MEDLINE,

EMBASE, the Cochrane Database of Systematic Reviews, The Cochrane Central Register of Controlled Trials (CENTRAL), the Cochrane Database of Abstracts of Reviews of Effects (DARE), and the Educational Resource Information Center (ERIC). Our search covered the period between 2004 till October 2011. **Main Result:** Seven systematic reviews met the inclusion criteria. The overall quality of the primary studies in the included reviews was of poor quality due to insufficient data provided to arrive at a firm conclusion. Although need assessment was not considered in most of the studies, all reviews except one, reported improvement in physicians` knowledge after an interactive, multifaceted educational intervention which ranges from one hour to three years long. Most of the reviews reported sustainability of information at 6 months post educational intervention, after which a re-intervention is advisable to prevent the decay of knowledge. Improvement of physicians` knowledge was evaluated by several instruments in the reviews, the commonest of which is questionnaire. Despite its common use, only few trials utilized validated questionnaires and provided reliability and validity information **Conclusion:** In summary, pre-educational intervention need assessment and an interactive learning activity is required in designing CME to ensure a positive effect on physician`s knowledge. For sustaining such effect a follow up educational intervention should be planned 6 months to one year later

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Title: Effect of polaprezinc on experimental corrosive esophageal burns in rats
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Institutions: (1), (2), (3), (4), (5), (6), (7)
Category: Research
Keywords: corrosive esophageal burns,experimental,poloprezinc
Aim of the Study: Aim of this study is to determine the efficiancy of Polaprezinc in preventing stricture formation after corrosive esophageal burns(CEB). **Methods:** 24 rats were divided into 4 groups. CEB was created by instillation of 1 ml of 10% NaOH solution into the isolated esophageal segment for 3 min. Group C was uninjured and untreated. Group I was injured but untreated. Group T1 and T2 were injured and recived 100mg/kg/day and 200mg/kg/day Polaprezinc respectively via intraperitoneal route for the first 2 weeks, then orally for another 2 weeks. Efficency of the treatment was assesed after 4th week by evaluating stenosis index (SI) and histopathologic damage score, determining tissue hidroxiproline content and measuring the weigth of the rats before and after the experiment. **Main Result:** SI in Group C was significantly lower than the other groups($p<0,05$). Mean SI was statistically lower in treatment groups when compared with Group I($p=0,006$, 0,004, respectively). HP levels were higher in Group I between groups but it was insignificant($p>0,05$). In the means of histopathological damage scor, although it was not as significant as Group C, in treatment groups, collagen deposition, mucosal and submucosal damage were lower than Group I($p= 0,02$, 0,01 respectively). The results were smilar between Group T1 and Group T2 ($p>0,05$) that the treatment was independent of the dosage. Except Group C, gain of weight was detected only in Group T2, though it was statistically insignificant. In Group T1, weight loss was lower than Group I. **Conclusion:** Polaprezinc, which was used for the first time for the treatment of experimental CEB in rats, with its antifibrotic, antioxidant, antiinflamatory, wound healing and antiapoptotic effects; was efficent for reducing stricture formation by decreasing HP levels and histopathologic damage, preventing stenosis and weight gain in higher dosages in treatment group.

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Title: GAIN REGENERATIVE CAPACITY OF BONE TISSUE
Authors: Vadim Dudarev, PhD(1), Igor Kirgizov, PhD(2), Sergei Minaev, PhD(3), I Sinyuk, PhD(4)
Institutions: (1), (2), (3), (4)
Category: Research
Keywords: REGENERATIVE,bone tissue,Perthes disease
Aim of the Study: Despite the development of mordern medicine, the mining of the Perthes disease treatment ways is actual. The aim of the investigation is the mining of the process intensification way of osteal tissue osteogenesis in the femorel head. **Methods:** The nominated aim was achieved owing to that fact that during the operation, metaphysis and femoral neck osteoperforation was done to the intraosteal pressure lowering by 15 % from the initial point (patent RU № 2223706 since 20.02.2004). The experiment was carried out on 30 mongrels at the age of 4-5 months. The periods of observation were 20 and 60 days. No complications were revealed. **Main Result:** For the evaluation of osteal tissue the morphological picture was studied in the tested group and in the experiment on the 20-th and the 60-th days after the operation, where the real enlargement of thickness of osteal beams the 20-th day 439.5 ± 5.9*(mkm), the 60-th day 443.4 ± 5.3*and a cortical plate was observed the 20-th day194.0 ± 4.8*(mkm), the 60-th day 201.1±4.6*(mkm) ($p<0.05$), clinical efficiency on the 17 patients in the hospital. **Conclusion:** Thus, at the intraosteal pressure decrease by 15 % from the initial point, the vivid osteal tissue regeneration with the true thickness increase of the cortical plate and the osteal beams. The significant distinction of the offered method of the stimulation of the femoral head osteal tissue consists in the following: the possibility of the dosed intraosteal pressure lowering, little traumacity; the possibility of the conrol during and after the manipulation; a high efficiency; the real osteal tissue regeneration intensification. This

method application showed its high

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Title: Evaluation of early postoperative complications, after correction of pectus exavatum by a modified D. Nuss procedure.
Authors: Alexander Razumovsky, MD(1), Abdumanap Alchasov, PhD(2), Zorikto Mitupov, MD(3), Maria Saveleva, PhD(4)
Institutions: (1), (2), (3), Russion National Investigation Medical University(4)
Category: Thoracic Surgery
Keywords: Nuss procedure ,pectus excavatum,early postoperative complications
Aim of the Study: The aim of our research is to study the frequency of the appearance of intraoperative and early postoperative complications using the modified method. **Methods:** To minimize the risk of the appearance of these complications we have introduced some changes into the original Nuss method. They are: renunciation of using of thoracoscopy, suggestion to place the bar from left to right to minimize the risk of the heart injury, renunciation of using the stabilizer. Instead we have introduced a special T-shaped bar, which can help minimize injury and rupture of intercostal muscles. The material of the bar has also been changed. We use bars made of titanium alloy, allergic reactions to which occur very seldom. We have analyzed medical cards of 530 patients, who were operated with the diagnoses pectus excavatum in Filatov Children's hospital № 13 (Moscow) according to the modified Nuss method in 2000 - 2016. **Main Result:** In the analyzed material of the modified method we haven't found any cases of heart and liver injuries. We haven't found any cases of allergic reactions to the bar material. The frequency of bar displacements occurrence in the modified method is 1,2%. The frequency of hydrothorax occurrence in the modified method is 15,1%. **Conclusion:** The innovations, that we suggested let us considerably minimize the risk of the early postoperative complications and practically reduce to zero the intraoperative complications.

395 - PA
Title: Thoracoscopy in management of primary lung lesions in pediatric age
Authors: Ayman Hussien, MD(1)
Institutions: cairo university faaculty of medicine(1)
Category: Thoracic Surgery
Keywords: thoracoscopy,lung lesion,pediatric patients
Aim of the Study: A prospective study was presented on feasibility and limitation of thoracoscopy in primary lung lesions in pediatrics. **Methods:** This study was conducted on ten patients who were referred to pediatric surgical division of Cairo university specialized pediatric center presenting with respiratory manifestations. Ten patients under went thoracoscopic management of their lung pathology. **Main Result:** For 5 patients lung biopsy was done with average operative time of one hour. The other 5 patients underwent lobectomy with average operative time of three hours. One case of lobectomy (10%) was converted to open thoracotomy due to uncontrolled bleeding. There was single case of air leak following lung biopsy and intercostal tube remained bubbling for 3 weeks post-operatively. **Conclusion:** Thoracoscopic lobectomy and lung biopsy are feasible, safe and effective. Recent technologic advances have made the procedure technically easier. A thoracoscopic approach results in decreased post-operative pain, shorter hospital stay and superior cosmetic results. The greatest advantage is the avoidance of formal thoracotomy.

396 - PA
Title: Successful treatment of recurrent post-surgical anastomotic stenosis of the left main bronchus with endobronchial metallic stent: Report of a case
Authors: Rahsan Ozcan, MD(1), Senol Emre, MD(2), Ibrahim Adaletli, MD(3), Cigdem Tutuncu, MD(4), Gonca Topuzlu Tekant, MD(5)
Institutions: Istanbul University, Cerrahpasa Medical Faculty, Depts of Pediatric Surgery, Radiology and Anesthesiology, Istanbul(1), (2), (3), (4), Istanbul University, Cerrahpasa Medical Faculty, Depts of Pediatric Surgery, Radiology and Anesthesiology, Istanbul, Turkey(5)
Category: Thoracic Surgery
Keywords: Bronchial stent,Bronchial stenosis,Bronchial rupture
Aim of the Study: To report successful treatment of recurrent post-surgical stenosis of a case with traumatic left main stem bronchial rupture with endobronchial stenting. **Methods:** A 2,5-year-old male patient with blunt chest trauma due to a traffic accident was admitted to an outside center 7 months ago. Chest tube drainage was performed due to bilateral pneumothorax. CT detected rupture in the left main bronchus. Bronchoscopy confirmed that the rupture was in the left main bronchus. The patient was initially followed with intubation for twelve days. There was atelectasis at one month after trauma. Bronchoscopy revealed obliteration 1 cm below the carina. Balloon dilatation was performed three times due to stenosis at the anastomosis. Pneumonectomy was planned due to persistence of symptoms. Following admission, thoracic CT scan of the left main bronchus showed complete obliteration and total atelectasis of the lung. Bronchoscopy confirmed the radiological findings. Seven months after trauma, left thoracotomy was performed. One cm gap was found between the proximal and distal bronchial ends and an anastomosis was done. **Main Result:**

Postoperatively, the left lung progressively collapsed. Bronchoscopy at the 3rd postoperative week showed an intact but collapsing anastomosis. An endobronchial transanastomotic metallic stent was placed with successful expansion of the left lung. The lungs were normal five months after the operation, thus the stent was bronchoscopically removed and the patient is free of symptoms. **Conclusion:** Endobronchial metallic stenting may successfully alleviate symptoms following recurrent post-surgical anastomotic stenosis of traumatic bronchial rupture.

PA3-7 | MODERATORS: ARNOLD CORAN, SHILPA SHARMA

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Title: SPITZ RISK CATEGORIZATION OF ESOPHAGEAL ATRESIA AT PRESENTATION ALSO INFLUENCES OUTCOME IN THE FIRST YEAR OF FOLLOW-UP AFTER DISCHARGE
Authors: Sandeep Agarwala, MBBS, MCh, FRCS(1), Santosh Kumar Dey, MBBS, MS, MCh(2), M Srinivas, MBBS, MS, MCh(3), Veereshwar Bhatnagar, MBBS, MS, MCh(4)
Institutions: All India Institute of Medical Sciences, New Delhi(1), AIIMS, New Delhi(2), AIIMS, New Delhi(3), AIIMS, New Delhi(4)
Category: Thoracic Surgery
Keywords: Esophageal atresia,Spitz risk categorization,First year outcome after discharge
Aim of the Study: To evaluate the outcome, in the first year after discharge, of patients of esophageal atresia (EA), according to the initial Spitz risk categorization. **Methods:** Cases of EA+TEF discharged after surgical intervention in the period July 2011 to July 2013 were considered as the cohort. Kaplan Meier estimate for overall survival and Hazard ratio for risk of death according to various risk factors was done. **Main Result:** Seventy patients were included in the analysis. Of these 70, 48 (69%) had esophageal continuity restored (46 EA+TEF; 2 pure EA), while 22 (31%) had been diverted (3 for pure EA, 8 following major leak and 11 long gap EA+TEF). Fifty-two (74%), 17 (24%) and 1(2%) had been initially risk categorized as Spitz I, II, and III respectively. Of the 52 Spitz I, 11 (21%) and of the 18 Spitz II+III, 10 (56%) had expired by 12 months of age. The OS after discharge was 87% (95%CI 73.8-93.3) and 79% (95%CI 65-87.9) at 3 and 12 months of age among Spitz I, while it was 67% (95%CI 40.4-83.4) and 44% (95%CI 21.6-65.1) at 3 and 12 months for Spitz II+II. This difference was significant (p=0.006, HR 3.04, 95%CI 1.3-7.2). Comparing the 1-year OS between Spitz I and II+III for the various risk factors, the OS was 40% vs 43% for those with poor weight gain, 65% vs 50% for those with history of lower respiratory tract infections and 70% vs 44%for those with other associated anomalies (besides major cardiac malformations). These differences were not significant. **Conclusion:** Esophageal atresia patients categorized as Spitz II or III at presentation, had a significantly (p=0.006) lower surviva,l after discharge from ICU, in the first 12 months of age. This was not affected by the presence of prematurity, other anomalies, poor weight gain or lower respiratory tract infections.

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Title: THORACOSCOPIC REPAIR FOR POSTEROLATERAL AND ANTEROLATERAL TYPES OF CONGENITAL DIAPHRAGMATIC DEFECTS
Authors: Ahmed E Fares, MD(1), Mohamed M El barbary, MD(2), ayman hussien, MD(3)
Institutions: fayoum university(1), cairo university(2), cairo university(3)
Category: Thoracic Surgery
Keywords: THORACOSCOPIC, POSTEROLATERAL AND ANTEROLATERAL,CONGENITAL DIAPHRAGMATIC DEFECTS
Aim of the Study: The aim of this study is to describe the surgical technique and results of thoracoscopic repair for two different types of Congenital Diaphragmatic defects **Methods:** From January 1, 2013, to January 31, 2016, thoracoscopic repair was performed on 56 patients with Congenital Diaphragmatic defects, including 33 boys and 23 girls, of whom there were 3 neonates and 53 infants or older **Main Result:** There were 56 patients, including 39 boys and 17 girls. Three patients were newborns and the other 53 patients were infants or older. The mean operative time was 95 minutes. There were 35 left side and 21 right Diaphragmatic defects. There were 30 with hernial sac and 26 without sac. There were 31 anterolateral and 25 posterolateral Diaphragmatic defects. The method of repair depends on the size of the defect and on the presence of hernial sac. Conversion was required in 2 patients because of extensive adhesions. There were no operative or postoperative complications. There was no postoperative death. There was one recurrence on second month postoperative. Follow-up ranged from 1 to 36 months. A normal chest X-ray was shown in all patients. **Conclusion:** Thoracoscopy allowed more accurate description and classification of posterolateral and anterolateral types of Congenital Diaphragmatic defects, with design of the repair accordingly. Our results indicate that minimally invasive thoracoscopic repair of posterolateral and anterolateral types of Congenital Diaphragmatic defects is a reasonable option in stable patients.

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Title: Pre- and Postoperative CT Validation of an Instrument for Quantifying Improvement after Pectus Excavatum Surgery

Authors: Zeng Qi, MD(1), Nahom Kidane, MS(2), Mohammad F. Obeid, MS(3), Chenghao Chen, MD(4), Ruofan Shen, High School Intern(5), Robert E. Kelly, MD(6), Frederic McKenzie, PhD(7)

Institutions: Children's Hospital, Capital Medical University(1), Old Dominion University(2), Old Dominion University(3), Children's Hospital, Capital Medical University, Beijing, China(4), Ocean Lakes High School(5), Children's Hospital of The King's Daughters and EVMS(6), Old Dominion Universtiy(7)

Category: Thoracic Surgery

Keywords: pectus excavatum,improvement measurement,virtual reality

Aim of the Study: The aim of the study is to validate a tool and method for objectively measuring improvement without ionizing radiation after Nuss Procedure surgery on pectus excavatum patients. **Methods:** The system incorporates a 3-dimensional motion sensor (Microsoft Kinect) that captures a point cloud of 3D surface points of the patient's skin to construct a virtual pectus model. The patient is scanned before surgery and again after surgery for comparison. Anatomical landmarks (nipples, sternal notch, and navel) are identified manually, while registration of pre- and post-surgical scans followed by comparison and measurement are performed automatically by our accompanying software. The output of the tool is a measurement indicating the maximum depth improvement and a color-coded improvement map of the pectus region. We utilized CT scans of six patients who underwent the Nuss procedure at the Beijing Children's Hospital (5 males and 1 female with a mean age of 13±1.6 years). To obtain ground-truth, CT values were subtracted (post minus pre-surgery) at the deepest point of the deformation to compute improvement after surgery. To validate the tool, 3D segmentation was used to construct 3D skin surface models from the CT and imported into our comparison software to obtain an improvement measurement (software-measured) to be compared with the improvement obtained with the CT measurements (ground-truth). **Main Result:** A paired t-test was used to compare improvement differences between ground-truth values versus software-measured values. Theoretically, the differences should be zero. The mean chest-to-spine difference was -0.92 ± 1.21 and the mean chest-to-back difference was 0.84 ± 1.05 with p-values of 0.52 and 0.50 respectively indicating no statistical difference between the software-measured and the ground-truth values. **Conclusion:** Our developed software is able to measure improvement in a patient's chest surface as well as could be obtained from a postoperative CT, but utilizing 3D optical scans with no ionizing radiation.

400 - PA

Title: Thoracoscopic treatment of left-to-right shunt due to anomalous systemic arterial and venous connection in a child with scimitar syndrome

Authors: Zafer Dokumcu, MD(1), Emre Divarci, MD(2), Sevinc Kalin, MD(3), Yasemin Ozdemir Sahan, MD(4), Timur Mese, MD(5), Coskun Ozcan, MD(6), Ata Erdener, MD(7)

Institutions: Ege University Faculty of Medicine Department of Pediatric Surgery(1), Ege University Faculty of Medicine Department of Pediatric Surgery(2), Ege University Faculty of Medicine Department of Pediatric Radiology(3), Ege University Faculty of Medicine Department of Pediatric Cardiology(4), (4) Dr. Behçet Uz Children's Hospital Department of Pediatric Cardiology(5), Ege University Faculty of Medicine Department of Pediatric Surgery(6), Ege University Faculty of Medicine Department of Pediatric Surgery(7)

Category: Thoracic Surgery

Keywords: Scimitar Syndrome,Partial Pulmonary Anomalous Venous Return,Thoracoscopy

Aim of the Study: Congenital bronchopulmonary vascular malformations represent a spectrum of diverse developmental disorders of three main systems (airway, arteries and veins) of the lung. Thoracoscopic resections of pulmonary sequestrations have been performed widely worldwide in last decades but for other part of the spectrum, there is only one article on thoracoscopic approach for an anomalous pulmonary venous connection in a child in literature up-to-date. We aimed to present our experience in the first case of scimitar syndrome with both systemic arterial and venous connections to be treated via thoracoscopic approach. **Methods:** After receiving local ethical committee's approval medical records of a case of scimitar syndrome who has been treated in our institution was reviewed. **Main Result:** Right pulmonary hypoplasia, cardiac dextraversion, atrial septal defect, bicuspid aortic valve and dilated right atrium were incidentally diagnosed in an asymptomatic 10-year old boy. Further investigation with thoracic CT-scan and catheter angiogram revealed hypoplastic right pulmonary artery, an extra vein (8mm) extending from right lower lobe transdiaphragmatically to inferior vena cava at the level of intrahepatic trifurcation and an additional aberrant artery (7 mm) branching from celiac artery extending transdiaphragmatically to right lung lower lobe. He was referred to our institution for evaluation for cardiac transplantation. Embolization was ruled out due to large caliber of the vasculature and instead, ligation of the aberrant vessels was planned to diminish left-to-right shunt and to prevent future cardiac failure. Right thoracoscopic ligation of scimitar vein and aberrant artery was performed. Early postoperative control revealed a significant increase in ejection fraction (from 50% to 75%). Perioperative course was eventless and he was discharged on 4th postoperative day. **Conclusion:** Multi-disciplinary detailed evaluation is obligatory and thoracoscopic aberrant vessel ligation can successfully be performed in selected patients with scimitar syndrome.

401 - PA
Title: Three cases of Triple A syndrome (Allgrove syndrome) in paediatric surgeons' view
Authors: Basak Erginel, MD(1), Feryal Gun Soysal, MD(2), Hakan Kocaman, MD(3), Alaaddin Celik, MD(4), Tansu Salman, MD(5)
Institutions: (1), (2), (3), (4), (5)
Category: Thoracic Surgery
Keywords: Tripple A,Achalasia,Alacrima
Aim of the Study: Our aim is to inform paediatric surgeons about the existence of this rare syndrome and to highlight the need for suspicion of alacrima and ACTH insensitivity in cases of paediatric achalasia. **Methods:** We report three cases of Triple A syndrome. **Main Result:** The cardinal symptoms of the patients' are achalasia, alacrima, and adrenocorticotropic hormone (ACTH) insensitivity. **Conclusion:** Triple A syndrome should be considered in patients presenting with achalasia. should be investigated by a Schirmer test, and adrenal dysfunction should be tested in cases of suspected triple A.

402 - PA
Title: Minimally invasive surgery for congenital thymic cysts in children: a report of 3 cases.
Authors: Nabil Dessouky, MD(1)
Institutions: Cairo University(1)
Category: Thoracic Surgery
Keywords: thymic cyst,congenital,Minimally invasive
Aim of the Study: Congenital thymic cysts are considered extremely rare in children. Approximately 150 cases of cervical thymic cysts have been reported in literature usually as single case reports, 50% of them extend to the mediastinum. With review to the literature, no reports have been documented to use the minimally invasive approach for excision of such lesions in children. The study aimed to evaluate the applicability of use of laparoscopy in this rare anomaly. **Methods:** Three children presented with congenital thymic cysts were excised with video-assisted thoracoscopic approach. Their ages were 11 months, 2 and 8 years. All of them were males. The cysts were on the right-side in 2 patients. In two cases the cysts were cervico-mediastinal . These were dissected thoracoscopicaly and then excision was completed through a small supraclavicular incision in the neck. In one case, the lesion was purely intra-thoraxic with its total excision being achieved via thoracoscopy. The lesions were dissected thoracoscopicaly from the great mediastinal vessels (superior vena cava and right atrium , left common carotid artery…) with excision of the remaining part of the thymic lobe . **Main Result:** All 3 cases were totally excised using MIS with no complications or conversions . Accidental intra-operative opening of the contralateral pleural space resulted in one case that necessitated the insertion of intercostal tube drainage. Histopathological examination of the cysts revealed fibrotic wall with inflammatory cells and foci of cholesterine crystals surrounded by normal thymic tissues with Hassal's corpuscles. Follow-up of 6-18 months revealed no recurrences. **Conclusion:** Thoracoscopy for thymic cyst can be used safely to avoid scars of open surgery with rapid recovery of the patients. It can assist the removal of cervical thymic cysts that extend into the mediastinum , thus eliminating the need for a second thoracotomy incision .

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Title: Thoracoscopic resections for the treatment of spontaneous pneumothorax
Authors: Melih Akin, MD(1), Şeyma Filiz, RD(2), Meltem Kaba, MD(3), Mesut Demir, MD(4), Cetin A Karadag, MD(5), Nihat Sever, MD(6), Ali I Dokucu, MD(7)
Institutions: Istanbul Şişli Hamidiye Etfal Training and Reseach Hospital, Pediatric Surgery Clinic(1), Istanbul Şişli Hamidiye Etfal Training and Reseach Hospital, Pediatric Surgery Clinic(2), Istanbul Şişli Hamidiye Etfal Training and Reseach Hospital, Pediatric Surgery Clinic(3), Istanbul Şişli Hamidiye Etfal Training and Reseach Hospital, Pediatric Surgery Clinic(4), Istanbul Şişli Hamidiye Etfal Training and Reseach Hospital, Pediatric Surgery Clinic(5), (6), Istanbul Şişli Hamidiye Etfal Training and Reseach Hospital, Pediatric Surgery Clinic(7)
Category: Thoracic Surgery
Keywords: Spontaneous pneumothorax ,Thoracoscopic resection,Bleb
Aim of the Study: Spontaneous pneumothorax is especially a disorder for adolescent patients. The main reasons are apical segment bullae formation and blebs. Video-Assisted Thoracoscopic surgery (VATS) is especially advantageous to reach apical segments and for easy resections. We retrospectively evaluated the patients with spontaneous pneumothorax who were treated with thoracoscopic resection. **Methods:** We retrospectively collected the data of patients with spontaneous pneumothorax who were operated with VATS between 2010 and 2016. **Main Result:** Ten patients were admitted to our hospital with spontaneous pneumothorax during the study period and five (3 male, 2 female) of them with an average age of 16.6 (16-17) years were operated with VATS. Computed tomography of lungs presented bleb formation at apical area of two patients and at superior segment of inferior lobe in one patient. All of the patients continuing air leakage on tube thoracostomy were operated with VATS and stapler was used for resection. Apical lobe resection was performed in one patient due to the presence of bullae formation. Average tube thoracostomy time was 3.3 (3-5) days postoperatively. Three of the patients had bleb, one of the patients had Congenital Cystic Adenomatoid Malformation (CCAM) type 2 and the last one had chronic emphysematous tissue on pathological

analyses.Post operative follow up time was 2.2 (1-4) years without any complication. **Conclusion:** Blebs, CCAM and emphysematous lung tissue can cause spontaneous pneumothorax. Thoracoscopic resection must be the first choice as it is an minimal invasive surgery with the advantage to reach lesions even in apical tissues.In patients with CCAM, resection an long term follow up can be done instead of lobectomy.

418 - PA
Title: Mid-term results of syndactyly correction with full-thickness skin grafts.
Authors: Jozsa Gergo, MD(1), Oberritter Zsolt, MD(2), Farkas Andras, MD(3)
Institutions: Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(1), Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(2), Department of Pediatrics, Surgical Unit, Medical School, University of Pécs(3)
Category: Trauma
Keywords: Syndactyly,Reconstruction,
Aim of the Study: The authors analyze the surgical technique and the results of the mid-term follow up of their patients. **Methods:** Between 2007-2013, 10 children has been operated on for complete, simple syndactyly, 8 boys and 2 girls. Bilaterally involvement were diagnosed in 4 children. Middle and ring fingers were affected in 14 hands, among that clinodactyly was seen in one child. The interdigital fold was constructed with dorsal flap, while separation of the fingers was achieved by multiple zig-zag incisions. Full-thickness skin grafts were used to cover the row surfaces at stretching regions. The age range of the patients was 22-48 (on avarage 35,5) months at the time of the surgery. The movement range of the separated fingers was measured with a goniometer 8-61 (on avareg 34) months after the surgery. The esthetical result was assessed with a questionnaire. **Main Result:** In 1 child marked functional impairment was detected of the distal interphalangeal joint in the separated ring finger, while in 2 children moderate (<15°) reduction in the flexion of the proximal interphalangeal joint have been measured. In 5 cases proximal thickening (> 5 mm) of the interdigital fold was seen. In 2 children nail malformations developed. Parents were fully satisfied with the result in 7 cases, satisfied in 2 cases, while unsatisfied in 1. **Conclusion:** The reconstruction with the dorsal quadrangular flap and full-thickness skin graft is an effective technique for the treatment of syndactyly. In 9/10 children we could achieve good functional results and they were satisfied with the esthetical results.

419 - PA
Title: Clinical outcome of traumatic liver injury with a focus on follow-up by imaging evaluation
Authors: Koji Yamada, MD(1), Kazuhiko Nakame, MD(2), Shun Onishi, MD(3), Takahumi Kawano, MD(4), Waka Yamada, MD(5), Motoi Mukai, PhD(6), Kaji Tatsuru, PhD(7), Satoshi Ieiri, PhD(8)
Institutions: Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(1), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(2), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(3), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(4), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(5), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(6), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(7), Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University(8)
Category: Trauma
Keywords: liver injury,follow-up,pseudo-aneurysm
Aim of the Study: There is a definitive consensus regarding the acute management of liver injury, e.g. surgery, interventional radiology (IVR), and conservative management. However, the methods for managing subacute and chronic phases are controversial. We clarified the clinical features and follow-up results based on imaging of liver injury in our institution. **Methods:** We retrospectively reviewed the clinical findings from the medical records of 14 patients with liver injury treated at our institution between 2001 to 2015. **Main Result:** The male/female ratio was 9/5, and the mean (range) age was 6.5 (1-12) years old. The liver injury etiology was traffic accident in 6, falling in 6, and abdominal bruising in 2. The clinical stratification based on The American Association for the Surgery of Trauma was I in 1, II in 8, III in 1, IV in 2, and V in 2. The patients were treated with conservative observation in 11, IVR in 1, operation in 1, and combination of IVR and operation in 1. The mean (range) hospital stay was 14.3 (8-26) days. One case showed adhesive ileus after treatment that was conservatively resolved. Re-bleeding and bile spillage were not recognized. Follow-up by imaging (enhanced computed tomography [CT]) was performed in 11 cases. The mean (range) follow-up period was 8.6 (2-55) months. One patient showed a pseudo-aneurysm on enhanced CT during follow-up. The mean dissolving time for traumatic changes on imaging was 4.3 months (range: 9 days to 8 months). The duration of transaminase normalization was shorter than imaging normalization. No mortalities or morbidities were noted.

Conclusion: The American Pediatric Surgical Association guidelines do not recommend routine follow-up imaging. In our institution, all patients underwent routine follow-up imaging by enhanced CT to detect pseudo-aneurysm. Follow-up management for liver injury should be the minimum necessary evaluation, based on our findings.

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Title: DETERMINANTS OF OCCURRENCE OF NEGLECTED WOUNDS IN CHILDREN IN BAKASSI NIGERIA
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Institutions: Universty of Calabar Teaching Hospital (UCTH), Calabar, Nigeria.(1), Universty of Calabar Teaching Hospital (UCTH), Calabar, Nigeria.(2), Universty of Calabar Teaching Hospital (UCTH), Calabar, Nigeria.(3), Universty of Calabar Teaching Hospital (UCTH), Calabar, Nigeria.(4), Universty of Calabar Teaching Hospital (UCTH), Calabar, Nigeria.(5)
Category: Trauma
Keywords: NEGLECTED WOUNDS,CHILDREN,BAKASSI NIGERIA
Aim of the Study: To investigate the burden of neglected wounds and determinants of their occurrence in children in Bakassi, Nigeria so as to create awareness about the magnitude of the problem and establish the need for adequate treatment of wounds to avoid complications. **Methods:** This was a cross-sectional study in which the health seeking behaviour of parents for their children with respect to wound treatment was surveyed using an interview administered structured questionnaire. Demographic data, mode of onset / causes of wounds, part of the body affected, duration of wound, whether wound was being treated or not, treatment received, reasons for not being treated and complications were collected. Statistical analysis was done using SPSS statistics for windows (Version 20.0. Armonk, NY: IBM Corp). Binary logistic regression was used to explore for factors associated with neglect of wounds in children. Chi-squared test for independence was used to assess relationship between categorical variables. Statistical significance was defined as $p<0.05$. **Main Result:** Trauma (83.5%) was the leading cause of wounds in children. Most of the injuries occasioning wounds occurred at home (70.0%), farm (10.3%), and school (6.5). Majority (67.3%) of the children received no treatment at all. For those whose wounds were treated, topical application of powdered medication (68.5%) at home was most favoured. The type of treatment ($p<0.001$) was the major determinant of wound neglect. Lack of funds and belief that orthodox wound treatment was unnecessary were among reasons adduced for neglecting wounds. Complications of neglected wounds found included pain, chronicity and chronic osteomyelitis. **Conclusion:** Prompt and adequate treatment of wounds in children are required to avoid morbidity and mortality associated with the problem.

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Title: PAEDIATRIC BLUNT TRAUMA ABDOMEN: MANAGEMENT AND OUTCOME AT JIPMER, INDIA.
Authors: VEERABHADRA RADHAKRISHNA, MCh(1), BIKASH KUMAR NAREDI, MCh(2), BIBEKANAND JINDAL, MCh(3), KUMARAVEL S., MCh(4), KRISHNAKUMAR G., MCh(5), ASHOK RIJHWANI, MCh(6)
Institutions: Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(1), Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(2), Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(3), Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(4), Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry.(5), (6)
Category: Trauma
Keywords: BLUNT TRAUMA ABDOMEN,SOLID ORGAN INJURY,HOLLOW VISCUS PERFORATION
Aim of the Study: Trauma is one of the most common causes of mortality in children worldwide, and road traffic injury causes roughly 2/3rd of these injuries. Abdominal trauma constitutes around 10% trauma in children and is the second frequent cause of preventable death. The aim of this study was to analyze the epidemiological, clinical and pathological characteristics of blunt trauma abdomen in pediatric age group at our institute. **Methods:** It is a retrospective analysis of pediatric patients with blunt trauma abdomen presented to JIPMER, Puducherry between 2009 to 2015. **Main Result:** A total of 68 patients were found during the study period. 15 (22%) were less than 5 years while 53 (78%) more than 5 years. M: F ratio was 2.6:1. 40 (59%) cases were due to road traffic accidents, and fall contributed 23 (33%) cases. 19 (28%) patients presented in shock and only 19 (28%) could reach hospital within 6 hours. 15 (22%) had liver injury, 13 (19%) splenic injury, 4 (6%) pancreatic injury, 6 (9%) renal injuries and 13 (19%) hollow viscus perforations. Associated injuries included thoracic injuries (13%) and head injury (9%). 23 (34%) patients underwent surgical interventions with most common indication being hollow viscus perforation (52%). 40 (59%) patients required intensive care with mean hospital stay being 9.5 days. 2 patients (3%) expired due to late presentation and shock. Both of these patients had hollow viscus perforation. **Conclusion:** Road traffic accident and fall from height, combined, contribute more than 90% of blunt trauma abdomen. Hence, steps towards good child care, traffic regulation and road safety rule can prevent more majority of pediatric blunt trauma. Most of the patients with solid organ injury can be managed conservatively. Early intervention is the key to success in hollow viscus injury.

422 - PA
Title: Management of a massive avulsion injury with negative pressure wound therapy and INTEGRA DRT
Authors: Rok Kralj, MD(1), Zoran Barčot, MD(2), Mario Kurtanjek, MD(3), Božidar Župančić, PhD(4)

Institutions: Children's Hospital Zagreb(1), Children's Hospital Zagreb(2), Children's Hospital Zagreb(3), Children's Hospital Zagreb(4)
Category: Trauma
Keywords: avulsion injury,INTEGRA DRT,NPWT
Aim of the Study: Presentation of a technique using negative pressure wound therapy in combination with INTEGRA DRT in the management of a massive avulsion injury of the lower extremity. **Methods:** A 7 year old girl has sustained a massive avulsion injury of the lower extremity after a motor vehicle accident. After a meticulous debridement, negative pressure wound therapy (NPWT) was applied on the 4th day after injury. NPWT enabled bacterial clearance and formation of a thick layer of granulation tissue. INTEGRA DRT was applied after 4 weeks and remained for the next 22 days during which neodermis was formed.A thin split thickness skin graft was applied onto the neodermis. **Main Result:** Reconstruction using Negative pressure wound therapy coupled with INTEGRA DRT enable restitution of a limb with preserved skin elasticity and near normal contour. **Conclusion:** NPWT coupled with INTEGRA DRT as tools in the reconstruction of a lower extremity avusion injury represent a technically feasible and highly efficacious technique.

423 - PA
Title: Difficulty of removing peripherally inserted central venous catheters: Analysis of six cases
Authors: Mikiko Okamoto, MD(1), Kiyoshi Tanaka, MD(2), Noriko Takeda, MD(3), Tomo Kakihara, MD(4)
Institutions: Department of Surgery, Kitasato University, Kanagawa Japan(1), Department of Pediatric Surgery, Kitasato University, Kanagawa Japan(2), Department of Pediatric Surgery, Kitasato University, Kanagawa Japan(3), Department of Pediatric Surgery, Kitasato University, Kanagawa Japan(4)
Category: Trauma
Keywords: peripherally inserted central venous catheters,catheter breakage,surgical removal of catheters
Aim of the Study: Peripherally inserted central venous catheters (PICC) are often required for delivery of medications and nutrition in the neonatal (NICU) and pediatric (PICU) intensive care units. We investigated the difficulty of removing PICCs in neonates and children. **Methods:** This was a retrospective study of 6 neonates and children for whom physicians experienced difficulty when removing PICCs. **Main Result:** Two types of catheters were used: 24-gauge single lumen and a 27-gauge double lumen. Four catheters were inserted in the upper extremities, and 2 were inserted in the lower extremities. The catheters remained inserted for a median of 7 days. In 5 patients, heparin was also used, but this study did not show any significant effect of heparin on catheter removal. Two catheters were removed successfully with conservative treatment, such as urokinase, warm compress, or massage. Catheter breakage during removal was observed in 3 patients, and thrombotic formation in the tip of the PICC was observed in those 3 patients. In one of those patients, multiple thrombotic formations were also observed around the PICC insertion site. Surgical removal was performed under ultrasound guidance in 4 patients, in which about 1cm skin incisions were made superficially in the vein near the breakage. **Conclusion:** There was no correlation between difficulty of removal and the PICC insertion site, reason for PICC insertion, duration of PICC insertion, or the addition of heparin. There was a high incidence of thrombotic formation around the PICC tip. Thus, the PICC could not be removed due to adherence to the vessel walls. With our method of surgical removal, it was not necessary to make a skin incision above the PICC tip.

424 - PA
Title: Histomorphologic and Immunohistochemical evaluation of topical %2 nitroglycerin, silver sulfadiazine %1, and bacitracin-neomycin sulfate efficiency in the zone of stasis in burns: An experimental study
Authors: Metin Gündüz, MD(1), Tamer Sekmenli, MD(2), Ceyhan Ugurluoglu, MD(3), Ilhan Ciftci, MD(4)
Institutions: Selcuk University Medical Faculty Department of Pediatric Surgery (1), Selcuk University Medical Faculty Department of Pediatric Surgery (2), Selcuk University Medical Faculty Department of Pathology(3), Selcuk University Medical Faculty Department of Pediatric Surgery (4)
Category: Trauma
Keywords: burn injury,zone of stasis,nitroglyserin
Aim of the Study: Studies evaluating recovery of the zone of stasis is an important issue in burn research. As known in Jackson’s model based on the severity of thermal injury destruction and blood flow alterations three distinct zones of tissue injury are known. We aimed to evaluate and compare efficiency of an antiischemic and vasodilatory agent topical %2 nitroglycerin with silver sulfadiazine %1, and bacitracin-neomycin sulfate in zone of stasis histomorphologic and immunohistochemically. **Methods:** We performed an experimental study using 30 Wistar-Albino rats each weighing 250-300 gram. They were divided randomly into five groups (six rats in each group). The ‘comb model’, which was deemed to be the most appropriate experimental model to produce an injury with predictable zones and was first described by Regas and Erhlich was used. Topical %2 nitroglycerin, silver sulfadiazine %1, bacitracin-neomycin sulfate, and vaseline-lanolin (sham) were applied to zone of stasis after creating burn model in 0, 24, and 48 hours. After 72 hours biopsies were performed from zone of stasis and evaluated by histomorphological and immunuhistochemical (CD 34 and D 2-40) methods. Results were evaluated with Chi-Square test. **Main Result:** Comparing with other groups there was a statistically significant difference in edema, inflammation, and vascular proliferation in nitroglycerin group ($p<0.05$). **Conclusion:** Topikal %2 nitroglyserin increases vascular proliferation in zone of stasis, effects recovery and

may be a new agent in burn injury treatment.

486 - PA
Title: Glanular rotation procedure with meatal maturation: An easy technique for distal penile hypospadias
Authors: Khaled SaadEldin Ashour, MD(1), Saber Mohammed Waheeb, MD(2), Ahmed Mousa Eshiba, MSC(3), Ahmed alabany, MBChB(4)
Institutions: Paediatric Surgery Department, Faculty of medicine, Alexandria University(1), Paediatric Surgery Department, Faculty of Medicine, Alexandria University(2), Paediatric Surgery Unit, Faculty of Medicine, Alexandria University(3), Paediatric Surgery Unit, Faculty of Medicine, Alexandria University(4)
Category: Urology
Keywords: Hypospadias,Glanular rotation,fistula
Aim of the Study: to evaluate the outcome of a new technique used for distal hypospadias with mobile urethral meatus. **Methods:** Fifteen children with distal penile hypospadias, with mobile meatus, were consented for performing the glanular rotation procedure with meatal maturation (GRP-MM) at the Paediatric Surgery Department, Alexandria University, Egypt. Their age ranged from 9 months to 3.5 years (median 18 months). Initially, a circumferential incision was done, leaving 5 mm of the modified skin. After partial degloving, a hemostatic tourniquet was applied. This was followed by an inverted Y incision in the glans penis surrounding the meatus proximally, and allowing for the development of adequate glanular wings. The dorsal urethral wall was anchored to the upper end of the inverted Y incision.Rotation and closure of the glans penis in front of the meatus was done, with suturing of the upper end of glanular closure to the ventral urethral wall, creating a new meatus over a size 8F urethral catheter that is to be left for 5 days. The excess foreskin was then removed. This procedure is particularly suitable for cases where the ventral ends of both glanular wings are aligned with the upper end of the hypospaedic meatus. **Main Result:** Over a follow up period of 2 to 8 months (mean 4.5 months), all cases showed acceptable cosmetic appearance. One case (6.6%) was complicated by a coronal fistula (in which the catheter slipped out one day postoperatively and was reintroduced), while 2 cases (13.3%) had wound infection. **Conclusion:** GRP-MM is an easy reproducible procedure for the management of distal penile hypospadias with mobile meatus that offers good cosmetic results with a low complication rate. This is a preliminary study, and more cases are being recruited.

487 - PA
Title: Symphysis Glans: A Novel Anatomical Concept and its Implications in Hypospadias Surgery
Authors: Abdul Kumar, MBBS, MS, MCh(1), Nisar Bhat, MBBS, MS, MCh, DNB(2), Satish Aggarwal, MBBS, MS, MCh(3), JM Kaul, MBBS, MS(4)
Institutions: Government Medical College, Srinagar(1), SKIMS, Srinagar(2), MAMC, New Delhi(3), (4)
Category: Urology
Keywords: Glans Penis,Hypospadias,Symphysis
Aim of the Study: To study the anatomy of glans penis with emphasis on the ventral aspect and to discuss its implications on hypospadias surgery **Methods:** Gross glans anatomy was studied in normal children and adults during routine physical examination, catheterization, dilatation and cystourethroscopic examinations. Emphasis was laid on the gross morphology of ventral glans, meatus and the changes in meatal shape and caliber during various instrumentations. To study the cross sectional anatomy and histology of the glans, cadaveric glandes were studied in gross and cross-sectional views including micro-sections stained with Hematoxylin and Eosin and special stains for elastic tissue - Van Gieson's Elastin (VGE) stain. **Main Result:** The ventral glanular margins do not join ventrally leaving triangular deficiency with its base at corona and apex joining the meatus. The deficiency is bridged by shaft skin as an expansion of the frenulum. Meatus dilates more by widening at its ventral angle and hinging at the dorsal angle. Periurethral spongiosum continues as an extension of corpus spongiosum of the penile urethra into the glans except at the ventrum near the tip. Periurethral spongiosum and glanular spongiosum look morphologically different merging into each other at corona along 4 and 8 O'clock positions. The transverse slit-like urethral lumen in the proximal glans becomes an antero-posterior slit as it reaches the tip. **Conclusion:** The ventral deficiency containing loose fibroelastic tissue adds to the expansibility of the glanular urethra functioning like a "symphysis" between the two glans wings. Modifications can be devised to maintain the deficiency to restore near normal glanular anatomy. It has the theoretical advantages of preventing glans dehiscence, meatal stenosis and glans tilt.

488 - PA
Title: A comparative study between preserve the tract and turn it inside out (PATIO) repair and penile dartos flap repair for urethrocutaneous fistula
Authors: Md Abdul Aziz, MS(1), Md Hasanuzzaman, MS(2)
Institutions: Dhaka Shishu (Children) Hospital,Dhaka.(1), Dhaka Shishu (Children) Hospital,Dhaka.(2)
Category: Urology
Keywords: Urethrocutaneous fistula,PATIO,Dartos fascia
Aim of the Study: To compare the surgical outcome between PATIO and penile dartos flap technique for urethrocutaneous fistula repair **Methods:** A total of 42 male children with urethrocutaneous fistula were included in the

study after fulfillment of inclusion and exclusion criteria from January 2014 to December 2015. They were randomly assigned to PATIO technique group (Group 1) and penile dartos flap technique group (Group 2). The comparative parameters between two groups were operation time, length of hospital stay, operation cost and success rate. In each follow up visit, recurrence of fistula was noted. **Main Result:** The mean age of patients was 68.57±25.96 months in group 1 and in group 2 it was 78.57±29.23 months. In group 1, operation time, length of hospital stay and operation cost were 24.95±2.78 minutes, 2.14±0.36 days and 3625.71±215.14 taka respectively. In group 2, operation time, length of hospital stay and operation cost were 44.38±4.03 minutes, 6.29±0.46 days and 6111.43±277.74 taka respectively. Success rate was 100% in group 1 while in group 2, it was 81%. There was statistical significant difference in operation time, length of hospital stay and operation cost between the two groups ($p<0.05$). **Conclusion:** The penile skin advancement flap with dartos interposition technique is successful in majority of primary fistula repair cases and requires long operative time and long hospital stay. On the other hand, the PATIO technique is simple, easy to perform, can be done with short operative time and short hospital stay with 100% success rate.

489 - PA
Title: Presentation of Henoch-Schonlein purpura as acute scrotum in children - a single institution experience
Authors: Nikica Lesjak, MD(1), Stjepan Visnjic, MD(2), Mislav Bastic, MD(3), Zoran Bahtijarevic, MD(4), Fran Stampalija, MD(5), Bozidar Zupancic, PhD(6)
Institutions: Children's Hospital Zagreb(1), Children's Hospital Zagreb(2), Children's Hospital Zagreb(3), Children's Hospital Zagreb(4), Children's Hospital Zagreb(5), Children's Hospital Zagreb(6)
Category: Urology
Keywords: Henoch-Schonlein purpura,acute scrotum,testicular torsion
Aim of the Study: The aim of this study is to highlight an uncommon problem of acute scrotal manifestation in Henoch Schönlein purpura (HSP). HSP is a systemic vasculitis of unknown pathogenesis characterized by the involvement of small vessels. Orchitis may occur in 10-20% of boys with HSP, and may mimic testicular torsion. The involvement of male genitalia presenting as the only initial manifestation of HSP is so unusual that the diagnosis can easily be missed. **Methods:** We conducted a retrospective analysis of all of the patients treated for acute scrotum and HSP in our hospital in the period from 2012-2015. All patients admitted to our hospital with symptoms of acute scrotum were included in the study. **Main Result:** During the period of 4 years from 2012 to 2015, 1705 boys were referred to our hospital emergency department (ED) with symptoms of acute scrotum. Out of whom 429 (25,16%) were operated. In the same period 31 boys were treated for HSP on pediatric ward of our hospital. 6 boys out of 31 (19,35%) developed scrotal symptomatology, and only 3 (9,68%) of them required surgical examination. Those 6 boys make 3,5‰ of all the patients examined for acute scrotum in our hospital. Only 1 of them was admitted to ED with clinical features of acute scrotum. **Conclusion:** HSP although a rare diagnosis, should always be taken into account in a young boy with symptoms of acute scrotum and skin rash. US and Color Doppler are mandatory in boys with acute scrotum to differentiate boys with testicular torsion. Surgical exploration should be avoided in HSP since all explorations have been negative for testicular pathology.

490 - PA
Title: Distal hypospadias : use of dorsal subcutaneous flap as pinafore dress
Authors: Hadjou Belaid Fatma, PhD(1)
Institutions: (1)
Category: Urology
Keywords: Distal hypospadias,dorsal Dartos subcutaneous flap ,uretherocutaneous fistula
Aim of the Study: Objective: the dorsal flap deepithelialized with urethroplasty in distal hypospadias can prevent from uretherocutaneous fistula? **Methods:** Materials and Methods: 90 children were selected using the following criteria: distal hypospadias operated by two operators using the same technique between February 2013- February 2014. Duply technique or Dyplay- Snodgrass was used as urethroplasty, additional covering dorsal flap was applied to the urethral suture using the technique of “pinafore dress”, and catheter drainage was left 72 hours **Main Result:** Results: 64 patients underwent urethroplasty Duplay-Snodgrass and 26 only Duplay. The mean age was 23 months, 3 uretherocutaneous fistula (3, 4%) were observed, 4 stenosis (4, 4%), no residual chordée penis was detected. **Conclusion:** Conclusion: The technique using a dorsal Dartos subcutaneous flap to wrap neourethra after distal hypospadias appears to provide a low rate of fistula.

491 - PA
Title: LAPAROSCOPIC REPAIR OF A CONGENITAL URETERAL STENOSIS. REVIEW OF THE LITERATURE ON OCCASION OF A NEW CASE
Authors: Vassilis Lambropoulos, PhD(1), Carmen Kabs, MD(2), Carsten Krohn, MD(3), Jan Berndt, MD(4), Stuart Hosie, PhD(5)
Institutions: 2nd Department of Pediatric Surgery Aristotle University of Thessaloniki G.H Papageorgiou(1), Klinik für Kinderchirurgie Klinikum Schwabing. Städtisches Klinikum München GmbH(2), Klinik für Kinderchirurgie Klinikum

Schwabing. Städtisches Klinikum München GmbH(3), Klinik für Kinderchirurgie Klinikum Schwabing. Städtisches Klinikum München GmbH(4), Klinik für Kinderchirurgie Klinikum Schwabing. Städtisches Klinikum München GmbH(5)
Category: Urology
Keywords: congenital ureteral stenosis ,mid-ureteral stricture,diagnosis
Aim of the Study: The aim of this study is to present an unusual cause of severe hydronephrosis. Congenital ureteral stenosis is a rare entity that affects the main ureteral segment. If left untreated it leads to severe hydronephrosis and progressive loss of renal function. 50% of cases or even more are misdiagnosed as pelviureteric junction obstruction (PUJO), or less frequently as primary megaureter. **Methods:** We report a case of 5-year old girl suffering from congenital ureteral stenosis. Initially she was misdiagnosed as PUJO but intraoperatively the underlying cause of stenosis was depicted and treated appropriately. In order to present the clinical manifestations, diagnostic tools, preoperative strategy, intraoperative options and histology, we reviewed the database of PUBMED for the period 1985 - 2010. **Main Result:** Treatment strategy depends on the location and length of the strictured segment. Usually the diseased part of the ureter is excised and an end-to-end anastomosis is performed. **Conclusion:** Though rare, ureteral stenosis should be included in the differential diagnosis of congenital hydronephrosis.

492 - PA
Title: Case of a Rare Lesion Masquerading as Pelvi-ureteric Junction Obstruction
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Institutions: Himalayan Hospital, Swami Ram Himalayan University, Dehradun (Uttarakhand) - 248140, INDIA.(1)
Category: Urology
Keywords: Cystic nephroma,Pelvi-ureteric junction obstruction,Renal
Aim of the Study: A 15-month old female child presented with a large left flank mass, noticed by her parents some four months back. Investigations revealed it to be hydronephrosis (HN) which needed surgery. Standard Anderson-Hynes pyeloplasty was planned but there was a surprise waiting for the surgeon. **Methods:** The mass was gradually increasing in size. There was no contributory history including fever, vomiting, loose motions, or failure to thrive. Examination revealed a non-tender, soft and smooth renal lump. CT scan had already been done somewhere else which showed global HN. USG showed severe HN with a complex multiseptated renal cyst. Diuretic DTPA renal scan showed impaired parenchymal function with significant upper outflow tract obstruction, with only 39% split function. Surgery revealed a largely intra-renal pelvis which contained a solid but soft bean-shaped mass with a pedicle. Mass was obstructing the outflow. There was an associated mutilocular cyst as well close to the pelvis. Mass and the cyst were excised and pyeloplasty done. **Main Result:** Patient did well and is fine after two years of follow-up. Biopsy revealed a benign multilocular cyst. The mass turned out to be a cystic nephoma (CN). **Conclusion:** Cystic renal tumors are rare renal masses in children and have a spectrum, ranging from CN to cystic Wilms' tumor (CWT), with cystic partially differentiated nephroblastoma (CPDN) in between. These cannot be differentiated on imaging studies. Surprisingly, in the present case, imaging studies had not mentioned about the mass. What was interesting in this case that it presented as pelvi-ureteric junction obstruction, and thus came to the notice.

PA3-8 | MODERATORS: DAVID SIGALET, MUHAMMAD AMJAD CHAUDHRY

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Title: Post-traumatic pelvi-ureteric junction obstruction - an uncommon entity.
Authors: MRINAL ARORA, Diplomate of National Board trainee(1), ALPANA PRASAD, MS MCH(2)
Institutions: SIR GANGARAM HOSPITAL(1), SIR GANGARAM HOSPITAL(2)
Category: Urology
Keywords: PELVI-URETERIC JUNCTION OBSTRUCTION,RENAL TRAUMA,DELAYED PRESENTATION
Aim of the Study: To report two cases of delayed pelvi-ureteric junction obstruction following conservatively managed blunt renal trauma **Methods:** A 3 year old boy presented with blunt trauma to right kidney (grade-4) sustained during road traffic accident. He was managed conservatively in view of hemodynamic stability and improving hematuria. In the follow-up ultrasound right renal haematoma was reported to be resolving. He presented 9 months post-injury with ultrasound diagnosis of asymptomatic right sided large hydronephrosis. Percutaneous nephrostomy (PCN) was done followed by nephrostogram which confirmed pelvi-ureteric junction obstruction. Another 8 year old boy had left sided grade-3 blunt renal trauma after a fall from height. He too recovered with conservative management but 3 months later presented with tender mass in left lumbar region, which on further investigations was confirmed to be left sided hydronephrosis resulting from pelvi-ureteric junction obstruction. **Main Result:** In our first case the entire right kidney was replaced by a bag of urine and no functioning parenchyma was seen on further workup and hence nephrectomy was done. In the second case after initial PCN, cystoscopic double-J stent placement was done across left pelvi-ureteric junction, causing improved drainage and hydronephrosis was noted to be improving at follow-up after 6 months. **Conclusion:** Following initial conservative management of blunt renal trauma, all children should be observed for delayed complications. Although uncommon, yet post-traumatic pelvi-ureteric junction obstruction in children is possible and has unpredictable outcome

494 - PA
Title: Dartos Release, Advancement and Glansplasty (DRAG): a modified technique to correct distal hypospadias
Authors: Chandrasekharam VVS, MBBS, MCh(1)
Institutions: (1)
Category: Urology
Keywords: hypospadias,distal,advancement
Aim of the Study: To present the technique and results of a modified urethral advancement technique for repairing distal hypospadias **Methods:** Over a 4.5-year period, 98 cases of distal hypospadias (mean age 28 months) were repaired using our modified technique.The penile skin was degloved by circumcoronal incision; ventrally the incision was carried 5mm proximal to the hypospadiac meatus, leaving a 5mm strip of ventral skin attached to the meatus. A stay suture was placed on this skin strip; traction on this suture was used to pull the meatus upwards and distally; the dartos tissues in the midline that tethered the urethra were released as far proximally as the penoscrotal junction. Distally, the dissection was carried out between the urethra and the skin strip held in the stay suture, until the ventral lip of urethra slid distally till the glans tip. At this point, the distal urethral plate was excised, the ventral glans incised deeply and glans wings were mobilized laterally. The original meatus was advanced to the tip of the glans and neomeatus was created with 6/0 polyglycolic acid sutures. The glans wings were approximated over the urethra; glanular mucosal wings were approximated ventrally; the skin was closed in circumcision fashion. A urethral catheter and penile dressing were left for 3-5 days. **Main Result:** There were 8 glanular, 73 coronal and 17 subcoronal hypospadias. Twenty-one cases (21%) had mild chordee that was corrected by degloving. At a median follow-up of 18 months (3-48), 91/98 (93%) showed a good result. There was no recurrent chordee or urethrocutaneous fistula. Five children (5%) had meatal retraction to the level of mid-glans, while two children (2%) had meatal stenosis requiring meatal calibrations. Thirty-six toilet-trained children demonstrated normal follow-up uroflowmetry results. **Conclusion:** The modified technique of urethral advancement can be useful for repair of distal hypospadias with minimal complications and good results

495 - PA
Title: Anterior urethral valves or diverticuli as a cause of infravesical obstruction in children: is it more missed than uncommon?
Authors: Abdul Kumar, MBBS, MS, MCh(1)
Institutions: Government Medical College, Srinagar(1)
Category: Urology
Keywords: Anterior Urethral Valve,Anterior Urethral Diverticulum,Infravesical Obstruction
Aim of the Study: To present a single-surgeon experience with 18 cases over a period of seven and a half years. **Methods:** Eighteen children with mean age of 4 years (range 1 month to 7 years) were diagnosed as anterior urethral valves/diverticula between January 2009 and May 2016. Twelve presented with dribbling of urine, five with poor stream and one with urethrocutaneous fistula. Voiding cystourethrogram (VCUG) was done in 17 patients, although 8 were first diagnosed on a retrograde urethrogram (RGU). One was diagnosed intraoperatively with a calculus in the diverticulum. **Main Result:** Seven of 18 were wrongly diagnosed as posterior urethral valves at other places and fulgurated. Two were diagnosed as Neurogenic bladder with nephrectomy planned in one of them. Open repair was done in first 6 cases for non-availability of endoscopic facilities while Cystoscopic fulguration was done in last 8 cases. Four patients did not return after diagnosis for treatment at our center. All patients are voiding normally with improving back pressure changes, with a mean follow up of 3.5 years. One patient, who had already developed chronic renal disease is being managed by the nephrology department. **Conclusion:** With Infravesical obstruction, a high index of suspicion is essential to diagnose AUV at an early stage, particularly when PUV is absent. Most of the cases can be diagnosed with retrograde urethrogram. Cystoscopic fulguration is an efficient and minimally invasive method of intervention.

496 - PA
Title: The interscrotal approach to inguinoscrotal pathologies
Authors: SOUALILI ZINEDDINE, PhD(1), CHOUAIB SAYAH, PhD(2)
Institutions: University of Farhat Abbas, Setif, Algeria(1), University of Farhat Abbas, Setif, Algeria(2)
Category: Urology
Keywords: Testis,Cryptorchidism,Scrotum
Aim of the Study: To determine the efficiency of the interscrotal approach to inguinoscrotal pathologies **Methods:** We report the use of the interscrotal approach in 21 boys, from September 2012 to November 2013, operated using an interscrotal access through a vertical incision on the median raphe **Main Result:** The approach was used for bilateral inguinal hernia (48%), bilateral ectopic testis (19%), torsion of the spermatic cord (19%), testicular biopsy (10%) and webbing of the penis (5%). **Conclusion:** Inter-scrotal access is an option for inguinoscrotal pathologies, with the advantages of a single incision, much less dissection and disruption of tissue, and greater comfort for the ‘day-case’ child

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Title: CAN FIBRIN GLUE BE A USEFUL ADJUNCT TO SURGICAL MANAGEMENT OF RECURRENT FISTULA POST HYPOSPADIAS SURGERY?
Authors: AHMED BADAWE HASSAN, MSC(1)
Institutions: (1)
Category: Urology
Keywords: FIBRINE GLUE ,SEALANT AGENTS ,RECURRENT URETHROCUTANEOUS FISTULA
Aim of the Study: To evaluate the efficacy of fibrin glue as a sealant agent in repair of recurrent urethro-cutaneous fistula post hypospadias surgery. **Methods:** Over the period from Oct. 2014 to Dec. 2015, 20 patients in the pediatric age group with history of hypospadias surgery and at least two failed attempts of fistula repair operations leading to recurrent urethrocutaneous fistula. 17 patients underwent surgical repair using fibrin glue& the other 3 patients, two of them were candidates for repeated dilatation prior to surgery due to meatal stenosis and the other one needed diverticulectomy and urinary diversion. For those underwent repair using fibrin glue, during the operation, fibrin glue was applied over the suture lines and beneath the skin. A urethral catheter was kept in place for 5 – 7 days. Follow up ranged from 6 to 14 months (mean 10 months) . **Main Result:** Fourteen patients had an uneventful postoperative course. In one patient, partial wound dehiscence occurred and urethra remained intact, he recovered after 2 months with no further surgical intervention. Accidentally early cath. removal occurred in 2 cases with no subsequent problem. No fistula recurrence was reported during follow up period. **Conclusion:** A fibrin glue as a sealant agent could be a useful adjunct to surgical management of patients after multiple failed attempts of post hypospadias surgery urethro-cutanouse fistula repair. Moreover, trials concerning using single donor fibrin glue should be considered.

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Title: Surgical Reconstruction Of Bladder Exstrophy Epispadias Complex In Children – Our Experience Over 14 Years
Authors: Mohammed Shadrul Alam, MS, FCPS(1)
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Category: Urology
Keywords: Bladder exstrophy,,Epispadias,,Surgical reconstruction
Aim of the Study: The surgical reconstruction of the child born with bladder exstrophy complex represents one of the most difficult surgical challenges for the pediatric urologist. The purpose of this study was to evaluate the outcome of patients with surgical management of the bladder exstrophy epispadias complex. **Methods:** Between January 2001 and December 2014, surgical repair of 24 patients (1 day – 18 years of age) with bladder exstrophy were carried out in the department of pediatric surgery of Sylhet, Mymensingh & Rangpur medical college hospital. Demographic data, surgical reconstructions and their ultimate outcomes were analyzed. **Main Result:** Out of the total 24 cases, there were 18 males and 6 females. The mean age of the primary repair was 9 months. The primary bladder closure was done before 72 hours in 4 (16.67%) patients without osteotomy. Twenty (83.33%) patients in whom bladder was closed after three days of life, underwent bilateral iliac osteotomy at the time of surgical reconstruction. One patient died of anesthetic hazards during operation. Common complications 10 (41.67%) encountered after repair of bladder exstrophy included urinary infection 2(8.33%), wound dehiscence 2(8.33%), vesicle fistula 4(16.67%), bladder calculi 1(4.17%) and inguinal hernia 1(4.17%) in postoperative period. Of the 5 (20.83%) children so far completed all stages of operation, one patient remain incontinent and three has continent with dry interval gradually increased from 1 to 2 hours with age.
Conclusion: Despite the tremendous challenge of caring for bladder exstrophy patients, a staged reconstruction with attention to details and meticulous techniques can provide these children with a functional urinary tract and a normal social life. The long-term outcome of this surgical sequence will necessitate to be assessed.

499 - PA
Title: ROLE OF BUCCAL MUCOSAL GRAFT IN PEDIATRIC URETHROPLASTY FOR HYPOSPADIAS
Authors: PREMA MENON, MS(1), JEGADEESH SUNDARAM, MS(2), KATRAGADDA LAKSHMI NARASIMHA RAO, MS(3)
Institutions: POSTGRADUATE INSTITUTE OF MEDICAL EDUCATION AND RESEARCH, CHANDIGARH, INDIA(1), PGIMER, CHANDIGARH, INDIA(2), PGIMER, CHANDIGARH(3)
Category: Urology
Keywords: BUCCAL MUCOSAL GRAFT,URETHROPLASTY,HYPOSPADIAS
Aim of the Study: To assess the effectiveness and complications of buccal mucosal graft usage in pediatric urethroplasty for hypospadias **Methods:** All patients in whom an inlay or onlay buccal graft was used from 2013 -2015 were analyzed retrospectively. Indications included poor urethral plate, chordee and glans fibrosis with deficiency of local tissue. The graft of required length and width was taken from the inner mucosa of the lower lip. After urethroplasty a catheter was left in situ for 2-3 weeks. Only patients with at least one year follow up were included. **Main Result:** 18 patients aged 2-12 years (mean 6 years) underwent inlay (8), onlay (9) or both (1) grafting during urethroplasty. There was history of previous urethroplasty 0-3 times (mean 1.07). The urethral plate was poorly formed in all the patients. Small or fibrosed glans (6), stenosed meatus (8), urethrocutaneous fistula (7) and chordee (5) were associated.Postoperatively, 4 patients developed urethrocutaneous fistula. There was difficulty in calibrating the neo

urethra in 2 patients who had undergone inlay graft. This lasted for 2 months. One patient developed a small oral mucus retention cyst. Cosmetic appearance was excellent in all the patients with meatus reaching the tip of the glans. **Conclusion:** Buccal mucosal graft is rarely used in pediatric urethroplasties. However, it helps in creating a wide urethral tube with mucosal lining especially in children with a narrow urethral plate and fibrosed glans who have undergone previous surgery. It allows the meatus to be brought to the tip of the glans and gives excellent cosmesis. The inlay graft when placed in an area of chordee helps in single stage repair. Children tolerate the procedure well.

500 - PA
Title: Minimally invasive treatment of neurogenic bladder in children – a single institution experience
Authors: Zoran Bahtijarevic, MD(1), Andrea Cvitkovic Roic, PhD(2), Fran Stampalija, MD(3), Mislav Bastic, MD(4), Nikica Lesjak, MD(5)
Institutions: Children's Hospital Zagreb(1), Center for Pediatric Medicine Helena(2), Children's Hospital Zagreb(3), Children's Hospital Zagreb(4), Children's Hospital Zagreb(5)
Category: Urology
Keywords: neurogenic bladder,Botox injection,minimally invasive surgery
Aim of the Study: We present the results of minimally invasive treatment of neurogenic bladder with intradetrusor Botox injections in 9 patients over a 3 year period. **Methods:** We treated all 9 patients by injecting Botox into the bladder wall via cystoscopy. Urodynamic study was always performed prior to the procedure and the result was objectified by urodynamics afterwards. High pressures >40 mmHg, low compliance and low maximum cystometric capacity were taken into consideration, when conservative measures failed. We injected Botox in 30 injection points in the bladder, avoiding the trigonum. The dose of Botox was 10U/kg, up to the maximum dose of 300 U. **Main Result:** We treated 9 patients. Underlying pathology is myelomeningocele in 6 patients, while other patients have other forms of spinal dysraphism. Three patients had improved urodynamics after one treatment and have so far no indication for repeated treatment, while 5 patients have good urodynamic results after 2 injections. One patient, 14 years of age, has had the need for multiple injections (5 so far). Intervals between injections has prolonged from 9 months between the first two injections to 41 months between the last two injections. In patients who required more than one injection, the average period between treatments was 22 months (ranging from 6 to 51 months). We had only one post procedural macrohematuria, which spontaneously resolved, and no systemic or long term side effects. **Conclusion:** Botox treatment is a safe and effective minimally invasive treatment for selected patients for the treatment of neurogenic bladder. In some patients it may postpone the need for surgical treatment, or even relieve the need for it completely. Long term follow-up and further studies are required, however.

501 - PA
Title: PYELOURETERAL OBSTRUCTION CAUSED BY PARTIAL OBSTRUCTION OF THE URETEROVESICAL JUNCTION
Authors: Espiñeira Rico, MD(1), Henar Souto, MD(2), Rafael Arteaga, MD(3), Cristina Riñón, MD(4), Rocío Espinosa, MD(5), Jorge A Rodríguez de Alarcón, PhD(6)
Institutions: Hospital Universitario Niño Jesús(1), (2), (3), (4), (5), (6)
Category: Urology
Keywords: pyeloureteral junction obstruction,ureterovesical stenosis,pressure baloon dilatation
Aim of the Study: To describe our experience in diagnosis and treatment of pyeloureteral junction obstruction (PUJO) and set out the hypothesis of its origin at the ureterovesical junction. **Methods:** Hospital records were reviewed for all patients with PUJO over the period 2009-2015. The epidemiologic data, clinical symptoms, complementary tests and treatment modalities were recorded. **Main Result:** Our center treats all patients with obstructive uropathy with endourologic techniques in first term. A total of 93 patients with median age 20.4 months (range 5-76 months) were treated in this period, of whom 65/93 (69%) were male and 28/93 (30%) female. During cystoscopy, in 7 patients (7.5%) a small caliber of the ureteral ostium ipsilateral to the PUJO was observed, making it difficult to tutor the ureter. Retrograde pyelography showed an enlarged extrarenal pelvis causing kinking at the pyeloureteral junction, with no evidence of stenosis at this level. Pneumatic dilatation of the ureterovesical junction was done and catheter double J placed. One of the patients had previously undergone bilateral pyeloplasty in another center, and the ureterovesical junction obstruction was missed. Follow up renogram was done showing normal pattern in three patients. In the rest, obstructive pattern in the renogram was persistent due to the kinking of the pyeloureteral junction and surgical tailoring of the renal pelvis was done. **Conclusion:** A small ureterovesical junction is likely to develop a gradual enlargement of the renal pelvis and therefore causing kinking at the pyeloureteral junction. Endourologic treatment of PUJO as first line option enables to diagnose this cases that would otherwise stay unnoticed.

502 - PA
Title: An anatomical hypospadias repair with frenulum cum septum glandis reconstruction: Glanular-Frenular Collar (GFC) technique
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Category: Urology
Keywords: hypospadias,penis,urethroplasty
Aim of the Study: In normal human penis,glans wings merge in the midline ventrally,but are separated by the “septum glandis”,in conjunction with the frenulum.The frenulum is included in the formation of the distal (glanular and subcoronal) urethra,which has a special part known as “fossa navicularis”.This anatomy has inspired a hypospadias repair technique simulating the development of the distal urethra. **Methods:** One hundred and twenty one patients with varying degrees of hypospadias were operated with the described technique:a Y-V plasty was used to dissect the inner (distal) foreskin,in a fashion to allow for its ventral mobilization as a mucosal collar.After tubularisation of the proximal urethra,partial spongioplasty was performed extending up to the subcoronal level.The glans wings were approximated only at their outermost convexities with a couple of subepithelial sutures, leaving a slit for the meatus. The cleft-like area between the split wings of the glans penis was filled with the terminal ends of the spongiosum and the dartos of the mucosal collar,converging to form a septum and a neo-frenulum (Glanular-Frenular Collar;GFC).Midline skin closure of the ventral collar and the circumferential foreskin closure is completed as usual. **Main Result:** At a mean follow-up of 10 months,2 patients developed urethral fistula (2%),6 had meatal stenosis (5%),and 2 had glans dehiscence (2%) that resulted with meatal retraction.Overall patients had cosmetically satisfying appearance.Fortyone received secondary circumcision;while the parents of 80 patients (66%) were satisfied with the foreskin appearance obtained with this method. **Conclusion:** The split wings of the glans penis or so-called ventral cleft between the glans wings accommodating the frenulum is part of normal anatomy.Hence,in hypospadias surgery,the approximated glans wings should allow for ventral support of the glanular and subcoronal urethra by a reconstructed neo-frenulum.Neither glanular surface enhancement,nor extensive dissection of the glans wings and their full-length approximation are necessary,and may in fact be counter-productive.

503 - PA
Title: Endoscopic treatment of vesicoureteral reflux with silicone elastomer (polydimethylsiloxane) as bulking agent
Authors: Clara Rico, MD(1), Henar Souto, MD(2), Jaime Rodríguez de alarcón, MD(3), Cristina Riñon, MD(4), Rocío Espinosa, MD(5), Manuel L Espinoza, MD(6), Rafael Arteaga, MD(7), Jorge Rodríguez de alarcón, MD(8)
Institutions: (1), (2), (3), (4), (5), (6), (7), (8)
Category: Urology
Keywords: Vesicoureteral reflux,Silicone elastomer,Endoscopic management
Aim of the Study: To assess the efficacy and complications of endoscopic treatment for vesicoureteral reflux (VUR) in children with subureteric injection of silicone agent (polydimethylsiloxane) **Methods:** Between 2007 and 2015 a total of 162 children (84 boys and 78 girls) and 237 refluxing renal units underwent endoscopic VUR treatment (75 bilateral, 87 unilateral; 5 with grade I, 55 with grade II, 78 with grade III, 86 with grade IV and 13 with grade V VUR). Surgical technique was the classical STING method. Efficacy of treatment was evaluated by ultrasound voiding cystography 2-3 months postprocedure. None or grade-I reflux were considered successful treatment. The median (± SD) age was 38.4 ± 38.1 months. The mean (± SD) follow-up was 52.4 ± 4.1 months. Mean injected volume per ureter was 0.6 ± 0.2 ml. Indications for treatment in low grade (I, II) VUR were repeated febrile urinary tract infections (fUTIs) in 43(78%) children; decreased kidney function or renal scarring in nuclear imaging in 23(41%) children; contralateral high grade reflux in 10 (18%) children **Main Result:** The overall success rate was 77.2% for the first endoscopic injection and 97% for the second injection. A third injection was done in 7 patients, but was only successful in three of them, and the rest went for ureteral reimplantation. In high grade reflux (IV/V) the success rate was 52% for the first injection and 84% for the second. Postoperative complications were dysuria in 20 (8.1%) patients, acute urine retention in 5 (2.1%), hematuria in 13 (5.4%) and postoperative UTIs in 4 (1.7%). No ureteral obstruction was observed after the injection. In two patients during follow-up period we found recurrence of low grade VUR 3-4 years after a successful injection **Conclusion:** Endoscopic injection of silicone elastomer (polydimethylsiloxane) is safe and effective in resolving VUR in children, with low recurrence rate.

504 - PA
Title: Case of penile Tourniquet syndrome and Near total amputation
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Institutions: Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA(1), Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA(2), Department of Pediatric Urology, child hospital Canastel Oran (31000) - ALGERIA(3)
Category: Urology
Keywords: penile amputations (tourniquet syndrum),circumcision,children
Aim of the Study: Hair tourniquet syndrome is the threw coined to describe the phenomenon usually caused by miscellaneous metallic object or nonmetallic (hair…) around suleus coronaries of penile. It was significantly encowrkerd in circumcised boys (0-6 years) and all injuries are minimal or severe Urethrocutaneous fistula or penile amputations if not diagnosed and treated appropriately Near total penile amputation caused by hair tourniquet is presumed to be

accidental or a original abuse. **Methods:** We report the delayed treatment of a boy with Down syndrome 21, aged 07 years, who presented with a partial amputation of his penis. The diagnosis of hair choke was laid 08 months after circumcision with almost total amputation of the glen. The treatment was done in two sequences. Starting with a suture of the glens to the body of the penis and urethral advancement 04 months after. **Main Result:** This delayed diagnosis and treatment was caused its y a difficult to see the hair in our boy who is circumcised and a mental retardation. **Conclusion:** The circumcision has been considered to be a major risk factor of strangulation. The hair or other agents seem to constrict more easily a circumcised penis thaw one with a normal prejudice. The diagnostic and treatment are after delayed, however repair is still possible. In a single time and uretroplasty suture when diagnosis is established quickly or wait.

505 - PA
Title: Side effects and complications of ureteral stenting after urinary lithiasis endoscopic treatment
Authors: Sebastian Nicolae Ionescu, MD, PhD, FEBPS(1), Simion Tirlea, MD, PhD(2), Mihai Mocanu, MD(3), Beatrice Bunea, MD(4), Elena Licsandru, MD(5), George Vlad Isac, MD(6), Monica Ivanov, MD(7), Veronica Marcu, MD(8)
Institutions: “Marie S. Curie” Emergency Children Hospital, Bucharest(1), “Marie S. Curie” Emergency Children Hospital, Bucharest(2), “Marie S. Curie” Emergency Children Hospital, Bucharest(3), “Marie S. Curie” Emergency Children Hospital, Bucharest(4), “Marie S. Curie” Emergency Children Hospital, Bucharest(5), “Marie S. Curie” Emergency Children Hospital, Bucharest(6), “Marie S. Curie” Emergency Children Hospital, Bucharest(7), “Marie S. Curie” Emergency Children Hospital, Bucharest(8)
Category: Urology
Keywords: urolithiasis stenting complications,pediatric urology,endoscopic treatment
Aim of the Study: The aim of the study is to evaluate the efficiency, outcomes and complications of “double J” stents in patients with urinary lithiasis. **Methods:** We review the files of 54 patients with urinary lithiasis, endoscopically treated, between January 2004 - March 2016. We performed ballistic lithotripsy in 15 patients, laser lithotripsy in 16 and endoscopic extraction of stones in 23. **Main Result:** Calculi localizations were: 36 ureteral, 13 bladder, 4 renal, 1 reno-ureteral. The success rate was 83.33%. Children age: 4-17 years. The size of the calculi: 0.5-3.5 cm. We used "double J" stent in 16 cases with reno-ureteral lithiasis. The stent was removed after 18-21 days, as an outpatient procedure. In all patients a bladder catheter was placed for 1- 2 days. Hospital stay: 3-4 days. Prophylactic antibiotherapy was administrated until stent removal. No significant incidents or accidents, during or after the procedure were noted. Complications of stent in 10 cases: 6 urinary tract infections, 3 stent migration- 1 bilateral, 2 misposition requiring replacement. No remaining calculi were remarqued by ultrasound 1 and 4 weeks postoperatively. Other complications can include increased urgency and frequency of urination, haematuria, leakage of urine, pain in the kidney, bladder, or groin, and pain in the kidneys during, and for a short time after urination. **Conclusion:** Endoscopic approach for urinary lithiasis should be the first option of treatment, when ESWL has no indication or is not available . “Double J” stent should be used only for cases in which laser lithotripsy could not split the stones into small enough fragments and in cases when the surrounding structures have been damaged. This technique is a safe, effective method of treatment of urinary tract lithiasis ,without X ray exposure, less costs. Stent placement has beneficial effects but not without complications.

506 - PA
Title: 2-stage repair of severe hypospadias using Byars technique: Comparison of dartos fascia versus tunica vaginalis as waterproofing cover for the neourethra
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Institutions: Rainbow Children's Hospitals, Hyderabad, India(1)
Category: Urology
Keywords: severe hypospadias,dartos fascia,tunica vaginalis
Aim of the Study: There are 2 main techniques for 2nd layer of waterproofing coverage of neourethra after urethroplasty; there is controversy regarding the best tissue for this purpose. The aim of this study is to compare dartos fascia versus tunica vaginalis for neourethral cover in 2-stage Byars repair of severe hypospadias. **Methods:** The surgical and follow-up records of all children that underwent Byars 2-stage repair for severe, primary hypospadias between January 2011 & December 2015 were analysed for patient data, technique, results and complications. The children were divided into 2 groups: During Byars stage 2 operation, Group 1 received dartos fascia as waterproofing tissue to cover the neourethra, while group 2 received tunica vaginalis cover. Both groups were compared for various parameters, including complications at latest follow-up. Statistical analysis was done using statistical software, $p<0.05$ was considered significant. **Main Result:** Over the 5-year period, 56 children with severe hypospadias underwent 2-stage repair using Byars technique. Thirty-five received dartos fascia cover (group 1), while 21 received tunica vaginalis cover (group 2). Both groups were comparable for age (mean age 38.3 and 41.6 months in groups 1 and 2 respectively), pre-operative testosterone treatment [23/35 (65%) children in group 1 and 13/21 (61%) children in group 2 received pre-operative testosterone injections] and the mean follow-up (26.1 and 23.7 months for groups 1 and 2 respectively). There was no significant difference in complications between both the groups [7/35 (20%) complications in group 1 versus 5/21 (23%) complications in group 2, p=not significant] **Conclusion:** Both dartos fascia and tunica vaginalis are equally suitable to cover neourethral suture line after 2-stage repair of severe hypospadias. Thus, where

available, dartos fascia may be the first choice for this purpose. Tunica vaginalis may be used in cases where adequate dartos fascia is not available.

507 - PA
Title: congenital megaurther
Authors: BENSLIMANE HAMMOU, MD(1)
Institutions: medical school of oran(1)
Category: Urology
Keywords: megaurther,obstruction,urethroplasty
Aim of the Study: CONGENITAL MEGAURTHER The megaureter congenital (MUC) is 3 malformation of the male urethra characterized by an expansion of the latter has agenesis + or - extent of erectile bodies in the penis without detectable obstacle. MU = scaphoid. MU Fusiform. It comes from a temporary blockage of the distal urethra in the fetus or defect mesenchymal affecting genito urinary tract. The treatment is surgical. The prognosis depends on the associated malformations **Methods:** This is the newborn B.S 28 days old admitted for urinary infection associated diarrhea (digestive table). Clinical examination: penis macro inspection (large yard). 7 cm in length. Apical meatus, Testis up, No hypoplasia of the abdominal wall. ECB and urine were found incipient renal failure with UTI. Ultrasound :bilateral ureterohydronephrosis, retrograde cystography allowed us to classify the malformation ureteral reflux vesicoureteral bilateral grade IV **Main Result:** The treatment is surgical, firstly palliative cystostomy. second time urethroplasty according to NESBIT technique. Discussion:. Prenatal diagnosis is available. frequent association with Prune Belly Syndrome. The penile deviation attracts attention, The radiological assessment is used to specify the type.The technique of Nesbit and Locke seems to be the best **Conclusion:** Congenital mega-urethra remains a very rare malformation that is often associated with other renal or other defects to look for. The surgical treatment depends on the anatomy of the latter type.

508 - PA
Title: MODIFIED KOYANAGI TECHNIQUE FOR THE SINGLE-STAGE REPAIR OF PROXIMAL HYPOSPADIAS
Authors: Aboubakr O Abdalaleem, MS(1), Gamal H El Tagy, MD(2), Sherif N Kaddah, MD(3), Tamer Yassin, MD(4), Ayman Hussein, MD(5), Haytham Esmat, MD(6), Hamed Selim, MD(7), Mahmoud MA Elfiky, MD(8)
Institutions: Cairo University(1), Cairo University(2), Cairo University(3), Cairo University(4), Cairo University(5), Cairo University(6), (7), Cairo University(8)
Category: Urology
Keywords: Hypospadias,Koyanagi,Repair
Aim of the Study: Hypospadias repair is one of the commonest operations done in pediatric surgery centers, with an incidence of 1 in 200 to 1 in 300. The proximal type accounts for 10–15% of cases. In this study we describe the results of the Koyanagi Nanamura procedure, which combines a meatal-based flap and a pedicle island flap in a single procedure. It allows for excision of ventral midline chordee without jeopardizing the flap. The technique was modified to improve the blood supply to the neourethral flaps. The modified technique was found to achieve nearly normal phallic cosmetic appearance with a low complication rate. **Methods:** This study was conducted at the general pediatric surgery unit on 20 cases with proximal hypospadias operated by modified Koyanagi technique. **Main Result:** Twenty cases were operated; with mean age was 2.83 ± 1.17 years. Sixteen cases (80%) were penoscrotal, 4 cases (20%) were perineal. Six cases (30%) had associated external genitalia anomaly. Twelve cases (60%) received topical androgen for a mean period of 1.79 ± 0.66 months. Mean operative time was 193.5 ± 41.84 minutes. The follow up period ranged from 2 to 12 months, with mean of 8.15 ± 3.53 months. The overall success was fulfilled in 11 cases (55%), as they needed no reoperation. Early complications were bleeding (5%), urine retention (5%), infection (5%) and stenosis (15%) which responded to urethral dilatation. Late complications included penoscrotal fistulae (20%), meatal recession (25%), urethral diverticulum (5%) and torsion of the glans (5%). **Conclusion:** A single staged repair can be safely and effectively performed even in patients with the most severe proximal hypospadias. Modified Koyanagi repair performed for severe hypospadias with chordee gives a good cosmetic and functional result.

509 - PA
Title: Pyuria associated hydromucocolpos in the neonates with the rare manifestations of distal vaginal obstruction : clinical , microbial and immunological profile in the management strategies
Authors: Mohammed Aboud, FICMS, FACS,MD(1), Manal Kadhim, PhD(2), Shaimaa Kadhim, IBMS (3)
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Category: Urology
Keywords: Immunological profile , ,pyuria ,,hydromucocolpos
Aim of the Study: Introduction : Distal vaginal atresia is rarely diagnosed in the neonate unless the obstruction causes a significant hydromucocolpos. Pyuria and pyometrocolpos may complicate hydromucocolpos , it may present with severe obstructive uropathy and septicemia . Objective : Evaluation the role of combinations of clinical , microbial and immunological parameters in enhancing and to discuss the management strategies , if these information will be useful in

determining the optimal intervention , follow up , outcome and to role out infection complication of these rare congenital anomalies . **Methods:** The sample of this study was conducted in the Pediatric surgery unit at The maternity and Children Teaching Hospital , Al-Qadisiya , Iraq , all at the age < 30 days . The clinical records and radiological findings together with laboratory findings were reviewed. Structural anatomy was determined by clinical examination, ultrasonography, and computerized tomography and re assessed for associated anomalies . The enzyme-linked immunosorbent assay technique was used to determine levels of urinary cytokines interleukins . **Main Result:** Fourteen patients with clinical signs of distal vaginal obstruction with obstructive uropathy. In prenatal sonography, congenital urinary tract malformations were seen in 9 patients. Clinical variability , 4 patients McKusick-Kaufman syndrome , 4 with cloacal variant, 3 imperforate hymen , 2 Bardet-Biedl syndrome and 1 with Rokitansky-Küster-Maier-Hauser syndrome . Significant elevations in symptom scores and IL-2, IL-6, and IL-8 were found in the urine of 10 patients . Eight of 14 patients showed the presence of significant pus cells in urine(>20 pus cells). **Conclusion:** Elevations in symptom scores and urinary cytokine levels were seen , suggesting an abnormal immune profile in such anomalies . Because of the high incidence of associated urinary tract abnormalities and urinary tract infection , a urological evaluation for screening are recommended.

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Title: Abdominoperineal repair for traumatic urethrovaginal fistula in children
Authors: Jai K Mahajan, MCh(1)
Institutions: Postgraduate Institute of Medical Education and Research(1)
Category: Urology
Keywords: urethral injury,Pelvic fracture,vaginal tear
Aim of the Study: Treatment of traumatic urethrovaginal fistula (UVF) in pediatric age is challenging due to difficult access and paucity of tissue for secure closure. **Methods:** We present a novel abdomino-perineal approach for managing these patients. **Main Result:** Two girls, aged 3 and 9 years, presented to our center with urinary incontinence. Both the girls had sustained blunt trauma in road traffic accidents with pelvic fractures and had undergone supra pubic cystostomies (SPC). Any attempt to clamp the catheter resulted in urinary incontinence. On examination, the urine was seen to be leaking from the vaginal orifice in both the children, however both urethral and vaginal orifices were seen separately. The urethra in either child could be calibrated with an infant feeding tube, which after 3-4 cms was seen to enter the vagina. In both the children urethrocystoscopy showed normal caliber urethra but bladder could not be entered. The methylene blue dye instilled through SPC was also seen to exist through the vaginal orifice. With the diagnosis of proximal urethrovaginal-vaginal fistula, a combined abdomino perineal approach with transvesical access was used for exploration. The dissection was started at uterovesical pouch superiorly and carried along the posterior wall of bladder and anterior wall of uterus and vagina. Simultaneous perineal dissection was done between posterior wall of urethra and anterior wall of vagina so as to completely separate the bladder and urethra from the vagina. The fistulous communication between the two was sutured separately. A vascularized flap of omentum was inserted between the two suture lines. The per-urethral catheter was removed after 4 weeks and cystoscopy revealed well-healed urethra and bladder neck. Both the patients are continent in the follow up. **Conclusion:** Abdomino-perineal approach provides adequate access for repair of urethra-vaginal fistula in young patients and interposition of omental tissue prevents recurrence.

511 - PA
Title: Is Tubularized Incised Plate Urethroplasty (Snodgrass) A Versatile Technique That Can Be Used In Cases Of Proximal Hypospadias?
Authors: AHMED M EL SADAT, MD(1), AHMED BADAWE HASSAN, MSC(2)
Institutions: (1), (2)
Category: Urology
Keywords: Proximal Hypospadias,Snodgrass,TIP
Aim of the Study: Tubularized incised plate (TIP) technique of urethroplasty adopted by Snodgrass had proven feasibility & success in repair of distal hypospadias. Its versatility in management of proximal hypospadias needs to be evaluated. **Methods:** From May 2011 to June 2014, 42 patients with proximal hypospadias in the pediatric age group were managed surgically. 32 patients underwent TIP urethroplasty & 10 were candidates for a two stage repair due to severe ventral curvature or deficient urethral plate, all of whom the urethral plate was sacrificed .For those undergoing TIP, 16 patients showed no chordee after artificial erection test, 8 cases presented chordee < 30o corrected by dorsal plication, 8 cases with chordee > 30owere corrected by elevation of urethral plate from corpora cavernosa and dorsal plication with maintaining of urethral plate. **Main Result:** The ten cases with sacrificed urethral late were excluded from analysis. Mean follow up for the TIP cases (n=32) was 12 months (2-38). Complication rate was 34.3% in the form of fistulae in 3cases (9.375%),2 meatal stenosis (6.25%),one glanular dehiscence (3.75%),one urethral diverticulum (3.75%),2 neourethral stricture (6.25%) & meatal recession in 2(6.25%). **Conclusion:** Snodgrass (TIP), a definitive technique for correction of distal hypospadias has evolved and proven feasible for proximal hypospadias as well. Dorsal plication and dissecting the urethral plate has aided in preservation of the urethral plate. In some cases it is inevitable to

transect the urethral plate either for being deficient or due to severe chordee and ventral curvature.

512 - PA
Title: Should we push the investigation into the micro penis in children? H.benslimane,bensahraoui,n.mellah;boughrara[2] ,aberkane[2]. 1-CHILDREN HOSPITAL ORAN [2]-GENETIC AND BIOLOGY MOLECULAR?UNIVERSITY HOSPITAL ORAN.
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Institutions: medical school of oran(1)
Category: Urology
Keywords: micropenis,chromosome y ,deletion
Aim of the Study: outcomes long term micropenis **Methods:** We report the case of a teenager who has consulted for a micropenis (27mm) Clinical examination revealed: obese-child. normoscolarisé without neurological abnormality; testicles in place of normal size. Bilan asked karyotype, AMH, testosterone, FSH, LH.inhibine b. **Main Result:** karyotype 46XY Presence of the region of chromosome sry there Deletion of one of the many areas being explored: the sys area 148. Ill put under testosterone delays for 6 months, the penis size from 17 mm to 70mm. **Conclusion:** very rare condition micropenis deletion of the sys 148 area responsible for 10% of azoospermia from which pushed the interest investigaion a micropenis

513 - PA
Title: Rendez-vouz cysto-vesicoscopy in the management of large urinary bladder stones in children: preliminary study
Authors: Khaled Sa Ashour, MD(1), Ahmed Mousa Esheiba, MSC(2)
Institutions: Paediatric Surgery Department, Faculty of Medicine, Alexandria University(1), Paediatric Surgery Department, Faculty of Medicine, Alexandria University(2)
Category: Urology
Keywords: Bladder stones,Cystoscopy,Vesicoscopy
Aim of the Study: the aim of the study is to evaluate the efficacy and practicality of the use of combined cystoscopy with vesicoscopy using laparoscopy port to remove, and or crush large bladder stones. **Methods:** Twelve children were included in this study, 7 girls and 5 boys, ranging from 5 and half years, to 9 years old (median 7 years and 3 months). Three cases had concomitant non-obstructing renal stones. None had previous surgery in the renal tract. For all children cystoscopy was done, followed by insertion of either size 5mm laparoscopy port (9 cases, 75%), or size 3 mm port (three case, 25%). Then a grasper was introduced to crush the stones first then remove it via the port completely, or washed out afterwards. Follow up period was 3 months to 14 months (mean 8.5 months). **Main Result:** : Complete cure of the bladder stone was achieved in 10 cases (83.3%). For two cases, (16.7%), 8 years old girl, and 6.5 years boy, both with concomitant renal stones, recurrence took place in 45 days, and 3 months respectively. Cosmetic results were excellent, no wound complications were reported. **Conclusion:** Rendez-vous cysto-vesicoscopy is rather a new technique to remove bladder stones safely with minimal invasiveness. Its cosmetic results are excellent, and carries no hazards of the energy-powered instruments.

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