The 6th World Congress of the World Federation of Associations of Pediatric Surgery

BOOK OF ABSTRACTS

Moving Collaboration, Education and Training Beyond Borders

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[OA 1.1] Title: COMPARISON OF DIFFERENT METHODS OF COMPRESSION OF SCARS IN CHILDREN

Authors: Minaev S. V., Grigorova A.N., Ivchenko A.A.., Kirgizov. I.V., Gerasimenko I.N., Zelenskaya M.
Institution: Stavropol State Medical University, Stavropol, Russia

From the inception of surgery to the present, compression therapy for scar treatment continues to be used and now, Contractubex Intensive Patch (CIP) is being used. It has a bilayer structure that releases active ingredients (Cepaline and Allantoin) and provides pressure on the postoperative scar. Moderate physiological pressure on the scar tissue leads to the development of a normal (normotrophic) scar. However, there are very few scientific papers that have evaluated the effect of the CIP in pediatric surgery. **Aim of the Study:** The aim of the current study was to evaluate the effectiveness of compression therapy with a Contractubex Intensive Patch for skin scarring in children after surgery. **Methods**: In a prospective open-label randomized trial, 109 patients aged 5.1 ± 2.3 years after surgery of cutaneous formations (nevi, dermoid cysts, angiodysplasias, vascular malformations, and hemangiomas) were considered; seventy-three (66.9%) were boys, while 36 (33.1%) were girls. Patients were divided into 2 groups: in the main group (54 children), the application of the CIP (Merz, Germany) was performed; meanwhile the control group (55 patients) was observed dynamically. The scar deformation was assessed according to the Vancouver scale (Table) for 10, 30 and 90 postoperative days. For randomization and statistical data analysis, Statistica 10.0 (StatSoft, USA) was used. **Main results:** In this study, the comorbidities present in children (perinatal encephalopathy, chronic bronchitis, and pyelonephritis) had no effect on the formation of hypertrophic scars. There were no differences in the propensity to develop hypertrophic scars with respect to age and sex. On the 10th postoperative day, all scars for all studied parameters had a zero rating. On the 30th day, there was a less pronounced change in the side of the scar in the main group than in the control group. On the 90th postoperative day, a significant effect of the treatment with CIP on the postoperative scar in the main group was detected. On the 90th postoperative day, Contractubex Intensiva Patch had a pronounced effect with respect to pigmentation than that seen with dynamic observation of the wound (0.07 ± 0.03 and 0.3 ± 0.09 points, $p < 0.05$). The treatment had a pronounced effect on the vascularity of the scar. On the 30th day, vascularity in the main and control groups was 0.09 ± 0.05 and 0.45 ± 0.1 points, respectively ($p < 0.05$); on the 90th day, 0.14 ± 0.07 and 0.6 ± 0.09 points, respectively ($p < 0.01$). The pliability of the scar on the 30th postoperative day in both groups declined. Thereafter, the scar in the main group had normal or pliable elasticity, while pliability and elasticity was noted in the control group (0.19 ± 0.06 and 0.50 ± 0.07 points, respectively ($p < 0.05$)). By the 90th day, there was significant ($p < 0.05$) scar formation with satisfactory pliability in the main group (0.32 ± 0.1 points). The main group demonstrated good results in relation to the height of the scar on the 30th and 90th postoperative days (0.11 ± 0.04 and 0.27 ± 0.06 points, respectively) in contrast to that seen in the control group (0.42 ± 0.10 and 0.93 ± 0.15 points, respectively; $p < 0.05$). Overall, 94.4% of patients had good compliance while 2 (3.7%) had satisfactory and 1 (1.9%) had unsatisfactory compliance. In our study (Fig.5), the formation of hypertrophic scars in the main group was significantly less frequent than in the control group (1 and 8 patients, respectively, $\chi 2 = 4.241$, $p = 0.042$). **Conclusions:** Altogether, the use of Contractubex Intensive Patch in the short and long-term postoperative periods provided a good cosmetic and functional result in terms of scar formation

[OA 1.2] Title: HERNIOTOMY IN CHILDREN UNDER LOCAL ANESTHESIA: A 9 –YEAR EXPERIENCE AT THE PHILIPPINE CHILDREN'S MEDICAL CENTER AND DURING SURGICAL OUTREACH.

Authors: B ESPINEDA MD, J. SANCHEZ MD

INTRODUCTION: Herniotomy or inguinal hernia repair is one of the most common surgical procedures done at the Philippine Children's Medical Center as an outpatient or ambulatory surgery. Most of the cases however were performed under general anesthesia (GA). We would like to report our experience that in selected patients, herniotomy were done under local anesthesia (LA) using the direct infiltration technique and the outcome is comparable to those cases operated under general /spinal anesthesia. **Materials and methods:** A total of 428 cases (320 male, 108 female) of inguinal hernia repair were done under local anesthesia using a mixture of lidocaine and bupivacaine. Ages range from 5-16 years old (mean 10y.0). Eighty eight (88) cases were performed at Philippine Children's Medical Center and three hundred forty (340) herniotomies were done during surgical

outreach or missions in the rural areas from 2011 to the present. A Direct Infiltration Technique was used rather than the Field Nerve Block method. All patients were seen and evaluated by a Pediatrician and Pedia Anesthesiologist prior to surgery. Patients were put on NPO 6-8 hours before surgery time, in order that sedation or general anesthesia can still be given in case patients cannot tolerate the procedure. On the selection of cases, the advantage of the use of LA versus GA, the possible complications and the conduct of operation were explained fully to the parents and patients themselves. Then those who agreed to the procedure under local anesthesia were asked to sign an informed consent. Exclusion criteria are those with irreducible incarcerated hernias; those with associated undescended testis, those with mental retardations and co-morbid conditions and those very apprehensive and uncooperative patients. Data recorded includes demographics, intraoperative complications if any, reasons for conversion from LA to GA and postoperative follow up evaluation. Comparison of the cost of surgery done in a government and private hospital is also presented. **Results**: Almost all patients tolerated the procedure and were sent home immediately after surgery, except for 6 cases (all male) with conversion from local to general anesthesia because of adhesions of omentum to the hernial sac and 9 patients (7 female, 2 male) were given IV sedation because of extreme apprehension, discomfort and intolerance to pain. No intraoperative complications were seen. Procedure lasted from 1-2 hours only and patients were sent home with oral analgesics. Minor complications on follow up were treated and recorded ; 6 patients had scrotal swelling , 4 had surgical site infection , 1 wound hematoma and 1 with wound dehiscence. **Conclusion**: In selected patients, herniotomy under local anesthesia is relatively safe, simple, no post anesthesia side effects and very cost effective. All patients can be sent home immediately after the procedure.

[OA 1.3] Title: VALUE OF CONTRALATERAL TESTICULAR VOLUME IN PREDICTING THE STATUS OF THE INTRA-ABDOMINAL TESTIS

Authors: Mostafa Kotb, Ahmed Eshiba, Sameh Shehata

The degree of contralateral compensatory hypertrophy of contralateral testis in terms of the testicular length or volume has been reported to predict the viability of the affected testis in children with a non-palpable testis. The **aim** of this study was to assess the accuracy of contralateral testicular volume for predicting the presence or absence of impalpable undescended testis (UDT) in children. Patients and **Methods**: This study was carried out on 55 patients with unilateral impalpable UDT who presented to the Pediatric Surgery Department, Alexandria University Hospitals, from January to December 2018. They were subjected to routine laboratory investigations, ultrasonography measurement of the dimensions of the contralateral testis. The testicular volume was calculated by using the formula [(length x width x height x (π/6)]. The testis is considered hypertrophied if its volume is more than the reference values reported by Goede et al. Next, all patients underwent diagnostic laparoscopy for the impalpable intra-abdominal testis (IAT) to detect the absence or presence of the intra-abdominal testis. Both ultrasonography and laparoscopic findings were reported. **Results:** Twenty four patients found to have hypertrophied testicular volume, nineteen of which (80%) was found to be absent by diagnostic laparoscopy. On the other hand, only 10 testes were absent out of the 31 normal volume testes (32%). The ages ranged from 1 to 4 years, with a mean of 2.2 ± 1.23 years. Testicular volume ranged from 0.602 to 0.837 cm3, with a mean of 0.699 ± 0.095 cm3. **Conclusion:** Hypertrophied testis can predict the absence of other contralateral impalpable testis in 80% of cases, while it drops to 32% when the opposite testis is within reference range.

[OA 1.4] Title: REPAIR OF INGUINAL HERNIA IN CHILDREN

Author: Khashim Sultanov

Aim of the study: This study aimed to evaluate the usefulness of laparoscopic repair of inguinal-scrotal al hernia in children in comparison with open hernia repair. **Methods**: One hundred eighty seven indirect inguinal-scrotal hernia sacs were closed in 163 children from 2017 to 2018. Among them, 41 (22%) performed laparoscopic hernioraphia (LH) and 146 (78%) underwent open hernioraphia (OH). The neck was closed with a purse string suture by using 4-0 absorbable suture. **Main results**: In the OH group, 9.6% primarily underwent bilateral inguinal hernia repair. In the LH group, 23% performed primary bilateral inguinal hernia repair. The mean operating time of unilateral ring closure was 25 minutes (range, unilateral 21 to 35) and showed no statistical differences between

LH and OH. However, the mean operation times of bilateral inguinal hernia repair were shorter in LH (39.8±10.4 vs. 51.1±14.4min, p<0.001). The contralateral processus vaginalis was patent in 20% of children. In 24% of children, the final procedure was modified based on the findings of a dilated internal ring. A laparoscopic ilio-pubic tract repair was done in these cases. Scrotal swelling occurred in one child. Hydrocoele occurred in one patient. Recurrence rate was 3.1%. **Conclusion**: Laparoscopic inguinal-scrotal hernia repair in children can be offered, as it is safe, reproducible, and technically easy for experienced laparoscopic surgeons. Iliopubic tract repair may be added in cases with dilated internal ring. Recurrence following laparoscopic ring closure can be managed with laparoscopic ilio-pubic tract repair.

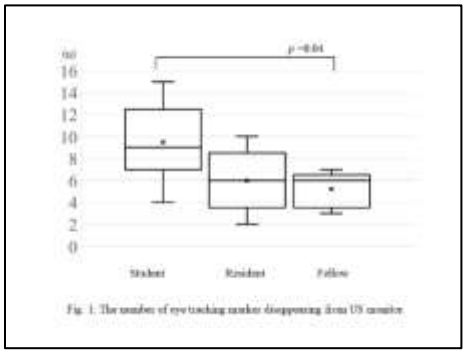
[OA 1.5] Title: THE EVALUATION OF EYE MOTION USING EYE TRACKING SYSTEM IN THE SIMULATION TRAINING OF THE REAL-TIME ULTRASOUND GUIDED VENIPUNCTURE

Authors: Kaji Tatsuru , Nagai Taichiro , Yano Keisuke , Onishi Shun , Harumatsu Toshio , Yamada Koji , Muto Mitsuru , Matsukubo Makoto , Ieiri Satoshi

Institution: 1. Clinical Training Center, Kagoshima University Hospital

2. Department of Pediatric Surgery, Research Field in Medicine and Health Sciences, Medical and Dental Sciences Area, Research and Education Assembly, Kagoshima University

Aim of the Study: Real-time ultrasound (RTUS) guided central venipuncture has been standard procedure. This procedure, especially short axis approach, is very complicated. Some studies presented that insufficient training would cause the several severe complications. We focused on the eye motion during the procedure of RTUS guided central venipuncture. **Methods:** Ten medical students (MS group), 5 residents (R group) and 5 fellows (F group) were registered. Subjects performed the short axis RTUS guided venipuncture using training modified vessel system (KYOTO KAGAKU, REAL VESSELS). The eye motion was captured as tracking marker by eye tracking system (Tobii Eye Tacker 4C). Evaluation endpoints were the task completion time, the time and number of the eye tracking marker disappearing from US monitor and success rate of venipuncture. **Results:** There was no significant difference in the task completion time and the time of the eye tracking marker disappearing from US monitor among three groups. The number of eye tracking marker disappearing from US monitor in S group was significantly increased compared with that in the F group (S group: 9.5±3.4、R group: 6.0±2.9、F group: 5.2±1.6； p = 0.04, Fig.1). The success rate of venipuncture in R group had a better tendency compared with that in F group. **Conclusions:** The eye motion was associated with the success rate of the RTUS guided venipuncture. As the residents have trained repeatedly in the emergency room, success rate would become better than fellows. Repeated training with considering the eye motion would be pivotal in the RTUS guided venipuncture.



[OA 1.6] Title: MODERN MANAGEMENT OF ULTRASHORT BOWEL SYNDROME IN CHILDREN

Authors: Dionisiy Petrov

Aim: to present a modern algorithm for the management of children with ultrashort bowel syndrome.
Methods: 54 patients with SBS aged 1 months to 14 years were treated in the Department of Pediatric Surgery in Russian Children's Clinical Hospital. Fifteen of them have the length of the remnant small bowel ≤ 30 cm with preserved colon and two patients without colon. Pediatric home parenteral nutrition (HPN) program is used before and after autologous intestinal reconstructive procedures. 33 patients underwent serial transverse enteroplasty (step) with our own modification. Four patients with ultrashort SBS undergone step with simultaneous isoperistaltic colon transposition into the reconstructed small bowel, in three patients the «high» step was performed with the incisions starting from the duodenum bulb, three patients received repeated step procedure. Two ultrashort SBS patients on long-term HPN started receiving teduglutide therapy (TED) showing positive effect.**Results:** Eleven children remain off PN 32 months after surgery; fourteen children after intestinal

reconstructions continue to receive reduced PN 2-4 nights a week - all with reassuring growth and nutritional status. The most significant results (50% - 75% PN reduction) were among those ultrashort SBS patients who underwent STEP in combination with a colon transposition along with TED therapy. All fatal outcomes (9,3%) were associated with central line-related infection.**Conclusion:** multicomponent non-transplant treatment strategy for pediatric ultra-SBS involving HPN program, autologous intestinal reconstructions and TED therapy allow to achieve significant reduction of PN and opens prospective for enteral autonomy**.**

Fetal - **Neonatal** Surgery Day 1: OA2
Moderator: Mansour Ali

[OA 2.1] Title: AUTOMATED IDENTIFICATION OF NECROTIZING ENTEROCOLITIS IN NEONATES USING MULTIMODAL BASED DEEP LEARNING

Author: Jiale Chen

Aim: To develop a deep learning system to automatically identify cases with necrotizing enterocolitis (NEC) at early stages and compare the effect of multimodal based deep learning. **Methods**: Forty-nine image features, extracted from plain abdominal radiographs by WILDCAT algorithm, radiology reports and ten clinical parameters (heart rate, systolic blood pressure, diastolic blood pressure, breath, body temperature, C-reactive protein, hemoglobin, and counts of white blood cell, neutrophil and platelet) were collected. Three deep learning-based models were established and compared in their effects on identifying NEC at early stages. **Results:** A total of 1288 neonates (569 NEC, 44%) and 2992 related records were reviewed. Records were randomly divided into a training set (n=2094, 70%) and validation set (n=898, 30%). The model combined with radiology reports and clinical parameters shown sensitivity, specificity and accuracy in identifying NEC was 81.97%, 67.62%, 76.12%, respectively and an area under ROC curve (AUC) of 0.75. The model based on plain abdominal radiographs alone shown sensitivity, specificity, accuracy and AUC of 79.94%, 74.67%, 77.92% and 0.85, respectively. However, combining with plain abdominal radiographs and clinical parameters, the superior sensitivity, specificity and accuracy of 98.59%, 95.90%, 97.49%, respectively, and a favorable diagnostic efficacy with an AUC value of 0.97 (P< 0.01) were identified than other two models. **Conclusions:** Multimodal based deep learning, especially combining features extracted intelligently from plain abdominal radiographs with clinical parameters, was a promising approach to identify NEC in early stage. However, large-volume, multi-centric, prospective and well-designed researches are still needed to comfort its feasibility in clinical usage.

[OA 2.2] Title: **THE MULTI-DISCIPLINARY MANAGEMENT OF RECURRENT TRACHEOESOPHAGEAL FISTULA AFTER ESOPHAGEAL ATRESIA: 112 CASES EXPERIENCE FROM A TERTIARY CENTER**

Authors: Jun Wanga ,Minzhong Zhang a, Wenjie Wu a, Jia Shi a, Wei Xie b, Juming Yu c, Qi Huang d, Jing Li e, Weihui Yan F

Institution: Shanghai Jiao Tong University School of Medicine, China

Aim of the Study: Recurrent tracheoesophageal fistula (rTEF) is a complex complication after the repair of esophageal atresia and remains a challenge because of difficulties in perioperative management and the substantial rates of mortality and morbidity after reoperation. We discuss here a multidisciplinary approach (MDT) adopted over the past seven years by reviewing a single institution's experience and assessing the outcome. **Methods**: The medical records of 112 patients with rTEF treated at a single institution from September 2012 to March 2019 were reviewed. The multidisciplinary program includes staff in surgery, ICU, gastroenterology, pulmonary medicine, ENT and radiology. All patients underwent chest CT scan before reoperation. Other investigations included modified esophagram, bronchoscopy, laryngobronchoscopy and esophagoscopy. All cases were subsequently discussed in an MDT meeting. **Main results**: Before reoperation, two nasogastric tubes were placed at the level of the fistula and into the stomach under esophagram for continuous aspiration, a jejunal feeding tube was placed for enteral nutrition in all patients. Tracheomalacia was identified in 5 patients by chest CT scan. A guide wire was placed through the fistula under bronchoscopy and modified esophagram in all patients

to help locate the fistula intraoperatively. 112 patients received a total of 123 reoperations including 122 open surgery and 1 thoracoscopic surgery and two nasogastric tube and a jejunal feeding tube were placed during surgery for early feeding after surgery. The incidence of postoperative anastomotic leak, anastomotic stricture, and repeat recurrences was 25.0%, 27.7%, and 6.3%, respectively. Granulation tissue leading to airway narrowing was identified in 5 patients by bronchoscopy and laryngobronchoscopy after reoperation and then resected endoscopically. The mortality rate was 2.7%. Mid-term follow-up (median of 23.6 months) revealed that 23(20.5%) had pathological gastroesophageal reflux. Five of them underwent fundoplication and recovered uneventfully. None of the survivors experienced severe respiratory complications. **Conclusions**: MDT approach is important in perioperative management of rTEF and leads to a satisfactory outcome.

[OA 2.3] Title: **DECENTRALIZED SURGERY OF ABDOMINAL WALL DEFECTS IN GERMANY**
Author: Andrea Schmedding
Aim of study: Neonatal surgery is decentralized in Germany. In 2015 there were 89 departments of Paediatric surgery that treated 93% of the abdominal wall defects with an average case load of less than 5 per unit. The aim of the study was to determine if the German results are equal to international results despite the decentralized care. **Methods**: Data of the major health insurance company which cover about 40% of the German patients were analyzed. All patients between 2009 and 2013 with the diagnosis of gastroschisis or omphalocele at first submission to the hospital were included. Mortality was analyzed during first year of life. **Main results**: We could identify 316 patients with gastroschisis (G) and 197 with omphalocele (O). Related associated anomalies were atresia of small bowel (35-G, 6-O) or colon (22-G, 4-O), cardiac anomalies (32-G, 63-O), anomalies of urinary tract (17-G, 19-O), anomalies of spine or thorax (0-G, 3-O), diaphragmatic hernia (0-G, 4-O), lung hypoplasia (1-G, 9-O), Trisomia 18 or 21 (0-G, 15-O). All but two non-survivors died during the first 30 days. Survivors had a median length of stay of 39 days (G) and 15 days (O). Closure of the abdominal wall without synthetic material and without temporary closure could be performed in 74% of the patients with gastroschsis and 73% with omphalocele. In 43 (G) versus 10 (O) patients appendectomy was performed. Short bowel syndrome was coded 16 times (G only).

	30 days	3 months	12 months
Gastroschisis mortality	5NS/311S (1.6%)	10NS/306S (3.2%)	12NS/304S (3.8%)
- Non-survivor with anomalies	1/5 (20%)	2/10 (20%)	4/12 (33%)
Omphalocele mortality	25NS/172S (12.7%)	32NS/165S (16.2%)	32NS/165S (16.2%)
- Non-survivor with anomalies	18/25 (72%)	25/32 (78%)	25/32 (78%)

(NS – Non-survivor, S – Survivor)**Conclusions**: Despite the decentralized care of abdominal wall defects in Germany mortality rates are equal-low compared to international data.

[OA 2.4] Title: **RISK FACTORS OF OBSTETRICAL FRACTURES OF THE FEMUR: A STUDY OF 24 CASES**
Author: Ndeye Fatou SECK
Aim of the study: To analyze the predisposing factors of obstetrical fractures of the femur and their impact in the occurrence of these lesions. **Methods**: The study includes children treated for an obstetrical fracture of the femur between April 1, 2010 and March 31, 2015. The obstetrical background data were studied using descriptive and bivariate analyses. Twenty-four femoral fractures were collected, accounting for 3% of the birth injuries over the span of the study. They represent 10% of all obstetrical fractures and ranked in third position behind brachial plexus injuries and fractures of the clavicle. **Results**: 62.5 % of obstetrical fractures of the femur occurred during C-section deliveries. All cases occurred in the breech fetal presentation. There was a predominance of low birth weight (71.5%). No case was associated with macrosomia. The analytical study found that C-section (p-value= 0,0007; Odds Ratio =0,15510) and low birth weight (p-value = 0,0000; Chi-square = 24,9055; df = 2) were associated with the occurrence of obstetrical fractures of the femur. **Conclusions**: Our study shows that obstetric

fractures of the femur present two risk factors that are distinct from the risk factors of other birth injuries: low birth weight and C-section. Furthermore, C-sections are a causal factor whereas they are considered as preventative factor for other lesions.

[OA 2.5] Title: A PRENATAL PREDICTION MODEL FOR SURVIVAL IN CONGENITAL DIAPHRAGMATIC HERNIA
Authors: Jun Wang, Weipeng Wang, Weihua Pan, Wei Xie, Ming Liu, Lei Wang, Yi Jiang
Institution: Xinhua Hospital affiliated to Shanghai Jiao Tong University School of Medicine, China.
Aim of the Study: This study aims to determine prenatal risk factors for survival in patients with prenatally diagnosed congenital diaphragmatic hernia (CDH) and develop a prognostic model to predict outcomes of CDH patients. **Methods**: The medical records of 158 neonates with prenatally diagnosed CDH from March 2001 to December 2018 were retrospectively reviewed. Using binary baseline predictors generated from O/E LHR, presence of liver herniation and gestational age at diagnosis, a clinical prediction model was developed on a randomly selected subset of the data by using a backward selection algorithm. The performance of the model was analyzed including calibration and discrimination. **Main results**: O/E LHR(Observed to expected lung area-to-head ratio), presence of liver herniation and gestational age at diagnosis were included in the final model. The model predicted survival well with an area under the receiver operator curve of 0.884 (95%CI: 0.832-0.937). The sensitivity of the model was 66%, specificity was 98%, false negative rate was 34%, and false positive rate was 2%. The model calibration was good with a C statistic of 0.677 (Hosmer-Lemeshow test). **Conclusions**: The prenatal prediction model was a useful tool in predicting survival in patients with prenatally diagnosed CDH, which will help guide prenatal counseling and perinatal management.

[OA 2.6] Title: ANNULAR PANCREAS DUODENAL OBSTRUCTION ASSOCIATED WITH ECTOPIC PANCREAS IN PROXIMAL JEJUNUM IN NEWBORN: A CASE REPORT
Authors: Luciana Coutinho
Aim: Ectopic pancreas is defined as a pancreatic tissue that does not have any vascular or anatomical connection with the main pancreatic. The incidence varies from 1 to 13%. However, the embryology and the pathogenesis is not fully understood. The most common places are: the stomach (25-38%), duodenum (17-36%) and jejunum (15-21%). The association of ectopic pancreas with congenital duodenal obstruction is rare and rarely described in the literature. **Case description**: We describe a case of a newborn, a low birth weight, with reports of vomiting and diagnosed with duodenal obstruction due to a double bubble sign on abdominal radiography. During an exploratory laparotomy, it was found annular pancreas, causing duodenal obstruction, associated with an ectopic pancreas in the proximal jejunum, 15cm from the Treitz angle. An anastomosis of a diamond-shaped duodenal duodenum was performed and an enterectomy of approximately 3 cm was also performed with termino-terminal anastomosis. Transanastomotic tube was left. We restarted oral feeding after seven days.The baby received hospital discharge after twenty-four days of internship. **Conclusions:** This case represents a rare association between ectopic pancreas and duodenal obstruction due to annular pancreas. Both can be found in newborns in the first days of life, and the embryology isn`t clearly described.

Fetal Neonatal Poster Day 1 Group 1
Moderator: Kevin Lally

[SP 1] Title: **A PUTATIVE ROLE FOR HYPOXIA IN NEC AND FIP ASSESSED BY HIF-1ALPHA EXPRESSION (SHORT: HIF-1ALPHA IN NECROTIZING ENTEROCOLITIS)**
Author: Alexandre Serra
Introduction: The pathophysiology of Necrotizing enterocolitis (NEC) is still largely unknown. Hypoxia associated to oxidative stress may play an important role and it can be assessed through HIF-1alpha, one of the most important transcription factors in regulating O2 delivery to hypoxic cells. **Methods**: Immunohistochemical staining for HIF-1alpha as a hypoxia marker was performed on intestinal samples from patients with acute NEC (n = 24),

convalescing NEC (n = 11), SIP (n = 6) and control group (n = 17). Specimens were microscopically examined and non-parametric statistical tests were perfomed. **Results**: Our data showed that the expression of HIF-1alpha is higher in the control group than in NEC patients ($p \leq 0,01$), although HIF-1alpha expression in intestinal mucosa of NEC patients is decreased during convalescance as compared to acute illness ($p \leq 0,03$). The HIF-1alpha expression in NEC patients was rank-correlated with iNOS expression in all intestinal layers and with CMV infection in the epithelium. Our study further suggests that the presence of HIF-1alpha is a protective factor for NEC with an odds ratio of 0,08 (95% CI [0,01; 0,76]) for developing NEC in preterm infants ($p \leq 0,03$). **Conclusion**: HIF-1alpha is less expressed in acute NEC patients, indicating that these patients may respond poorly to hypoxia in this particular developmental period. In addition, the positive correlation to iNOS and CMV suggests that hypoxia is indeed associated to oxidative stress and CMV infection. HIF1-alpha increased expression should have a protective effect on the presence of NEC, because of its ability to improve oxygen supply, yet NEC children do not seem able to upregulate HIF1-alpha appropriately during the acute onset of the disease. Future prospective studies with fresh NEC tissues samples are being conducted in our group to further elucidate the role of hypoxia and ROS in NEC.

[SP 2] Title: THE INTRODUCTION OF 3D/4D BASED SPATIO – TEMPORAL IMAGE CORRELATION (STIC) DURING ROUTINE FETAL ANOMALY SCAN IMPROVES DETECTION AND HELP TO PREPARE FOR POSTNATAL CARE INCLUDING SURGICAL REPAIR.

Author: Badreldeen Ahmed

Objective: To evaluate the role of STIC in completing fetal cardiac evaluation, during routine anomaly scan **Methods**: This is a longitudinal observational study at a single center. All the scans were performed by a single experienced feto - maternal specialist. 8750 patients had Routine anomaly scan including fetal heart examination according to ISUOG practice guidelines. Scan time was kept to the time frame allotted to routine anomaly scan. STIC technique both conventional and Electronic probes were used only when the examiner could not complete all the list recommend by ISUOG (ISUOG practice guidelines) which include demonstration of Situs and general aspect, atrial chambers, ventricular chambers and atrioventricular junction and valves. For the conventional STIC we employed a multiplanar approach, tomographic ultrasound imaging (TUI) and rendering approach. For electronic STIC, in addition to rapid acquisition of the volume we have used Biplane and sonoVCAD. **Results**: During the study time, 8750 patients were seen for routine anomaly scan. During study time, 52 patients were diagnosed with congenital cardiac defects. The total number of fetal malformations diagnosed during the time of the study was 350 which mean cardiac anomalies constituted (4%) of all fetal malformation in this study. In 1312 patient (15%) of the total number of patients the examiner could not obtain the full images required as per ISUOG protocol. Accordingly both conventional and electronic STIC was used in this group, depending on the condition. In all these patients the obstetrician was able to complete the examination. STIC was also applied to patients where a cardiac anomaly was suspected. More information with regards to these abnormal cases was found in 10% of the cases **Conclusion**: In this study we have shown that using STIC technique we can obtain a volume of adequate quality which will allow us to complete the cardiac examination and reduce the number of cases referred to fetal cardiologists and hence decrease patient anxiety. STIC did not influence our detection rate of cardiac anomaly, however, when the diagnosis is made STIC added more information which helped us with our initial counseling.

[SP 3] Title: **INTESTINAL STRICTURES DEVELOPED IN SURVIVORS OF NECROTIZING ENTEROCOLITIS**

Author: Rustam Yuldashev

Aim. To study thei ncedense and clinical features of post-NEC intestinal strictures among survivors of necrotizing enterocolitis. **Material and methods**: A total of 99 patients diagnosed NEC were retrospectively included in this study. Clinical data were related to the occurrence of intestinal post-NEC strictures. Post-NEC strictures were defined as clinically relevant strictures with a radiological and/or endoscopic, surgical and pathological confirmation. **Results**: Among survivors of acute phase of NEC 9 (13%) developesd post-NEC strictures. Intestinal strictures more often developed among medically treated NEC term infants. Median age at presentation clinical symptoms was 18,87±5,63 months. Post-NEC strictures often developed on the left half of the colon (67%) and predominantly (44.5%) in the descending colon. Eight children surgically managed on planned manner and in one

case managed urgent because of ileus. No mortality occurred in infants with post-NEC strictures. **Conclusion**: The incedense of post-NEC intestinal strictures among NEC survivors is 13%, mainly among medically treated NEC term infants. Strictures often (44.5%) located on descending colon. For the early diagnosis of intestinal strictures, there is necessity to perform a contrast enema study and/or surgery, all after the acute phase of NEC.

[SP 4] Title: **MANAGEMENT AND OUTCOMES OF CONGENITAL ANOMALIES AT DHAKA SHISHU (CHILDREN) HOSPITAL: A PROSPECTIVE OBSERVATIONAL COHORT STUDY**

Authors: U Huq, S Hasan, G R Mahmud, A Rahman, A Mamun, S Sultana, T Ferdousi

Background: Country like Bangladesh, where congenital anomalies are more frequent because of inadequate health care services, provides a wider perspective to understand how surgical anomalies contributes towards neonatal mortality and morbidity. This study was aimed to provide a compact data set which is likely to be a rich addition to this field where even in this 21st century data regarding congenital anomalies are quite insufficient. **Method**: This study was conducted in Dhaka Shishu (children) Hospital from October 2018 to April 2019, with the cooperation of Global Pedsurg Research Collaboration. Patients presented primarily with seven congenital anomalies (esophageal atresia, congenital diaphragmatic hernia, intestinal atresia, gastroschisis, exomphalos, anorectal malformation and Hirschsprung disease) were considered for the study. Data were recorded using RedCap and analysis was done using SPSS version 22. **Result**: Total 211 patients (137 male, 72 female & 2 undifferentiated) were admitted with those seven conditions during the study period. 76(36.0%) neonates had associated cardiac anomalies. More than 85% of patients had antenatal USG scan but only 11(5.2%) patients had an antenatal diagnosis. Despite the lack of aseptic environment and the unavailability of ventilatory support and arrangement of TPN, the hospital managed to keep the survival rate around 64% on primary admission. Though one of the major causes of death was sepsis (26 cases), there were rarely evidence of surgical site infection (1%). Patients with delayed presentation, who arrived with already grave condition mostly within two days of admission, contributed a significant percentage (14.6%) in the mortality. **Conclusion**: The result of this study is expected to aid constructing future intervention plan prioritizing perinatal care and on enrichment of resources. For improving survival, it is crucial to ensure multisectoral coordination including involvement of government and nongovernment organization.

[SP 5] Title: **NEONATAL LAPAROTOMY UNDER LOCAL ANAESTHESIA; EXPERIENCE FROM A SECONDARY LEVEL HOSPITAL**

Authors: Mahfuzul Kabir

Aim of the study: Secondary level hospital in a LMIC does not have adequate skilled anaesthetic manpower and facilities dealing with children particularly neonates. Here we are describing our experience of doing neonatal laparotomy under local anaesthesia in a district hospital (Secondary level hospital). **Methods**: From Jan 2014 to Dec 2018, three hundred and ninety (390) neonates were admitted for major surgery. Among them 187(63.6%) most fragile neonates (premature baby, weight <2500 gram, having episodes of cyanosis) and expected operating time <1.5 hours were included in this study. All patients were operated with local infiltrative anesthesia (inj. lignocaine, inj. Bupivacaine) with or without per rectal analgesia (paracetamol). Data were collected prospectively with outcome. **Main Results**: Out of 390 neonates, 96 (24.6%) died pre-operatively and 294(75.4%) underwent laparotomy. Among them 107 (36.4 %) neonates operated under general anesthesia (group A), while 187 (63.6 %) laparotomies were done under local anaesthesia (group B). In group B, Anorectal malformations were 81 (sigmoid colostomy), intestinal atresia were 67(resection and anastomosis, ileostomy), Hirschsprungs disease were 21(transeverse colostomy), abdominal wall defects were 18 (closure). Median age at surgery was 5.0 days (3.0–14.7), birth wt. were 1.3 kg to 3.1 kg., 18 patients had several attack of cyanosis and 22 patients needed conversion to general anaesthesia. In-hospital postoperative mortality was 17 (9.1%). **Conclusions**: Local infiltrative anesthesia can be a viable alternative option for the most fragile neonates with major surgical diseases. **Key words**: General anaestesia, Local anaesthesia, neonatal laparotomy.

[SP 6] Title: **OUTCOME OF NEC AND FIP: SURGICAL TREATMENT OR WAIT AND SEE?**

Authors: Melanie Kapapa MDa, Janina Hahneb, Alexandre Serraa

Institution: University Medical Center Ulm, Germany

Aim of this study: Necrotizing enterocolitis (NEC) and focal intestinal perforation (FIP) affect almost exclusively premature new-borns. Incidence of NEC is 0.3% and rises up to 15% in birth weight <1500g and severity effects children's outcome. Accompanying diseases and surgical complications have major impact on clinical outcome. Aim of this study is to evaluate surgery rate, complications, clinical outcome and hospital stay after NEC and FIP. **Methods**: Seventy-six children treated for NEC or FIP during study period (2003-2013) were included in 3 groups: Group 1: NEC without perforation, group 2: FIP, and group 3: NEC and perforation. All data recorded during hospital stay till discharge including surgical procedures were collected. **Main results**: In group 1, 44% underwent surgery, in group 2 and 3, 100% were surgically treated. Complications like hematocrit decrease occur in 36.1%, and in 57.4% of these children blood transfusions were necessary: group 3 was affected in 62.2%, followed by group 2 and 1 in 50% each. Postsurgical bleeding or perforation occurred in group 1 and 3. Post-surgical short bowel syndrome (9,8%) and malnutrition (6,6%) were present in group 1 and 3. Cholestasis was present in 41% of all children; in 45.9% of group 3, in 41.7% of group 2 and in 25% of group 1. Complications like stoma prolapse was present in group 2 (58,3%) and in group 3 (33.3%). The hospital duration stay differs, in group 1 the average stay was 85,4 days, in group 2, 111,1 days and in group 3, 114,1 days. **Conclusion**: Children with NEC and perforation were treated surgical more frequently, experienced significantly higher levels of postsurgical complications and had extended hospital stay, followed by FIP and at least by NEC without perforation. Post-operative complications and length of stay correlates with the children's outcome. To optimize clinical outcome recognition of NEK is necessary before occurrence of gut perforation.

[SP 7] Title: **SPECTRUM OF NEONATAL SURGICAL CASES ADMITTED TO A TIERTIARY CENTER IN LOW TO MIDDLE INCOME COUNTRY**

Author: Aly Shalaby

Aim: To evaluate the burden of disease and mortality rates from a newly-designed database as a part of major quality improvement projects on the neonatal intensive care unit.**Methods**: Retrospective analysis of neonatal ICU database focused patient diagnoses and mortality. **Results**: From April 2016 to January 2019 1,100 patients were admitted. Forty three patients had incomplete entries leaving a total of 1057 patients. Mortality over the total study period was 340 cases (32%). Broken down by year mortality was highest in 2016/17 at 36%, decreased to 30% in 17/18 and is down to 28% in 18/19. The commonest diagnoses were TOF OA 162 (15%) ; ARM 126 (11%), bowel atresia 118 (11%), perforated viscus 90 (8%), gastroschisis 66 (6%) and exomphalos 59 (5%). Others included non-specific lower GI obstruction 65 (6%), neonatal inguinal hernia 60 (5.6%), CDH 27 (2.5%) and SCT 12 (1%) and NEC 9 (0.8%). Mortality was highest for conjoined twins 8 (100%), gastroschisis 45 (68%) and TOF OA 88 (54%). **Conclusion**: This is the first report from our country detailing the both the spectrum and burden of disease encountered in neonatal surgery. Despite a decrease in mortality rates, much effort is required for improving outcomes.

[SP 8] Title: NEONATAL SURGERY IN BANGABANDHU SHEIKH MUJIB MEDICAL UNIVERSITY (BSMMU): EXPERIENCE OF FIRST FOUR YEARS

Authors: Umme Habiba, Dilshad Munmun

Purpose: There are a wide variety of anomalies in this age group the management of which is further challenged by associated medical conditions. It requires a highly dedicated multidisciplinary approach and proper resources to get good outcomes through this study, we want to share our initial experience of neonatal surgery and identify different factors responsible for decreasing mortality and morbidity. **Methods and materials**: This is a retrospective study over the last four years from June 2015 to June 2019. 203 neonates were admitted with surgical conditions, which was 20% of total 1200 admissions in NICU during the study period. Data was collected from hospital record and analyzed retrospectively. **Result and discussion**: Out of 240, the highest number of surgical neonates admitted with gastrointestinal abnormality (35%), which was followed, by CNS anomalies (32%),

urinary anomalies (15%), abdominal wall defects (6%), congenital diaphragmatic hernia (4%), Tracheoesophageal fistula (1.5%) and conjoint twins (1%), cleft lip and palate (2%), multiple congenital anomalies (2%) and others (1.5%) Among them 42.8% underwent surgery. Out of 203 neonates, 147(72.4%) received either conservative (27.1%) or surgical treatment (45.3%), of which 53.8% discharged to home and 14.5% died during hospital course. 27.59% left against medical advice mainly due to financial reason. **Conclusion**: To establish highly specialized field like neonatal surgery in developing country like Bangladesh is going to need both time and resources. With proper resources, the morbidity and mortality rate as well as significant number of patient leaving against medical advice can be improved. **Key words**: neonatal surgery, BSMMU, anomalies

Thoracic Surgery Poster Day 1 Group 2
Moderator: D. Patkowski

[SP 9] Title: **THORACOSCOPIC THYMECTOMY IN CHILDREN BY MYASTHENIA GRAVIS**
Author: Saidkhassan Bataev
Introduction: Myasthenia gravis is an autoimmune disorder of peripheral nervous system, leading to fluctuating muscle weakness. In the pathogenically management of autoimmune myasthenia, thymectomy is recognized as effective surgical therapy. We treated this pediatric populationby a thoracoscopic thymectomy. **Patients and methods**: 32 patients were operated on from April 2004 to December 2018. Mean age was 13±3 (5-17 years); girls were 26 (81%), boys were 6 (19%).Disease severity was IIB-IVB by the MGFA classification. All patients were on anticholinesterase and prednisolone therapy. The operation was indicated by certified neurologists, specialized in myasthenia. On thoracoscopic thymectomy patients are placed on the back with raised right (left). The single lung ventilation is preferable. Four thoracoscopic ports are used, a 10-mm for the camera and three 5-mm operating ports. Perithymic fat and both lobes the thymus are removed out of the one pleural cavity through 2-2.5 cm incision on the endobag. **Results**: All patient were thoracoscopically thymectomy using left side (17 cases) or right side (15 cases) access. There were no conversions and intraoperative complications. The operation duration was 77±23 min. The postoperative hospital stay was 6.6±3.6 (3-9) days. Excellent long-term results (effect A) were achieved in 8 (25%) patients, good (effect B) - in 20 (62.5%) children, no changes (effect C) were registered in 2 and deterioration of myasthenia (effect D) in 2 (6.25%) patients in according with scale G.Keynes. **Conclusion**: The study proved that thoracoscopic thymectomy obtains the radicalism of open technique, proposing the easier postoperative period and being the method of choice for the surgical treatment of myasthenia gravis in children.

[SP 10] Title: **THORACOSCOPIC THYMECTOMY FROM RIGHT-SIDED ACCESS IN CHILDREN**
Author: Andrzej Grabowski
Introduction: Thymectomy in children is rarely indicated, being it solely for myasthenia gravis and tumors. The most common approach is by wide open sternotomy. However the thoracoscopy is growing in popularity. The aim of the study is to assess the feasibility of thoracoscopic thymectomy from the right-side approach in children. **Material and method**: In the years 2011-2018 18 thoracoscopic thymectomies were conducted. 12 were girls, 6 – boys. The range of age was 6 months to 18 years (mean 13.2 year). The indication for thymectomy were serious myasthenia gravis in 16 cases, congenital myasthenic syndrome in one and tumor in one case. All of the patients were treated by the right-side approach using four trocars. **Results**: In all patients right-side approach was sufficient for total thymectomy. There were no conversions. We found no major complication during and after the surgery. Drainage of pleural cavity was kept for 24-48 hours. The median hospital stay was 4.8 day. When discharged only NSAID were administered. All of the patients with myasthenia found clinical improvement of their disease after the surgery. The tumor was NHL, properly treated then after. **Conclusions**: Thoracoscopic thymectomy is feasible and safe approach for complete resection of thymus in children. Apart of the better cosmetics it also shortens the hospital stay and lessens the analgesics consumption.

[SP 11] Title: THE APPLICATION OF THORACOTOMY AND THORACOSCOPY FOKER'S TECHNIQUE IN LONG-GAP ESOPHAGEAL ATRESIA

Author: Wei Zhong

PURPOSE: To present modified thoracotomy and thoracoscopy esophageal external traction and elongation technique (Foker's technique, FT) in treating the long gap esophageal atresia (LGEA). **METHODS:** Three patients with LGEA were retrospectively reviewed for the surgical timing, technique and outcomes. One thoracotomy and two thoracoscopy FT were performed and all patients achieved native esophageal anastomosis. **RESULTS:** Three patients were included (36+6, 34+2 and 34 weeks gestation, birth weights 2.3 kg, 2.2 kg and 1.83 kg, respectively). All patients were diagnosed with type I esophageal atresia. Patient 1 was complicated with patent ductus arteriosus (PDA) and received PDA ligation on day 120. Patient 2 was associated with small omphalocele and received primary repair on day 2. Growing expectancy time was 160, 80 and 47 days respectively, patient 1 and patient 3 received 35-day and 22-day internal elongation under ultrasound guidance. Patient 3 had proximal esophageal perforation during internal elongation and healed after conservative treatments. The esophageal gaps were 3.5, 4.1 and 5.1 cm respectively. Patient 1 underwent thoracotomy FT on day 160. Patient 2 and 3 underwent thoracoscopy FT on day 80 and day 47 respectively. External traction sutures were placed on each esophageal pouch and exteriorized through the thoracic wall. The esophageal ends were approximated 1 to 2 mm daily by traction on the sutures. Anastomosis was performed when the two ends crossover. Definitive thoracotomy anastomosis was performed at day 21 in Patient 1, and thoracoscopic anastomosis was performed at 11 and 17 days in patient 2 and 3 respectively, after FT. patient 1 and 2 had anastomotic leakage which was treated conservatively and patient 1 had esophageal stenosis that required dilatation. **CONCLUSIONS:** Both thoracotomy and thoracoscopy FT achieved adequate esophageal lengthening and successful anastomosis of native esophageal in these 3 patients with LGEA, avoiding the need for eventual replacement.

[SP 12] Title: SURGICAL TREATMENT OF BRONCHIECTASIS IN CHILDHOOD

Author: Khashim Sultanov

Aim: The aim of this retrospective study is to present our surgical experiences, the morbidity and mortality rates and outcome of surgical treatment for bronchiectasis in children. **Methods:** We retrospectively reviewed the medical records of 79 consecutive children who underwent surgery for bronchiectasis in our clinic between 2004 and 2018. Were analyzed for age; sex; clinical features; radiological; type of surgery, morphologic study, operative morbidity, and mortality; and outcome. **Main results:** 79 patients underwent 83 pulmonary resections during the study period. There were 44 males and 35 females. The causes of bronchiectasis were nonspecific lung infection (n = 42), congenital hypoplasy of bronchi (n = 31), and foreign body aspiration (n = 6). The types of resections were segmenectomy (26.5%), lobectomy (35.4%), and lobectomy with segmentectomy (17.8%), bilobectomy (8.9%) and pneumonectomy (11.4%). Four patients with bilateral bronchiectasis subsequently required second operation another lung. Two patients of them had undergone right lower lobectomy, by one childhoods underwent right upper lobe, another left lower lobectomies. One patient with incomplete resection subsequently required second operation for ongoing bronchiectasis underwent complementary right pneumonectomy. Postoperative complications were encountered in 6 patients. Long-term outcome of treatment in terms of 6 months up to 14 years studied in 78. Postoperatively rated as follows: well, 49 patients; improved 23 patients; worsened 6 patients. Two patients died. **Conclusions:** A radiologic and morphologic evidence of reversal of airway abnormality has been shown in cases. The morbidity and mortality rates of bronchiectasis surgery are within acceptable ranges. Most of the children benefit from surgery, especially when total excision is accomplished. Segmentectomy and lobectomy are well tolerated in children without increase in morbidity and mortality. Therefore, resection of damaged part of the lung tissue may be preferred instead of removing much volume lung tissue.

[SP 13] Title: UNUSUAL PRESENTATION OF H TYPE TRACHEOESOPHAGEAL FISTULA IN A CHILD

Author: Jiledar Rawat

Aim of the study: To highlight the very unusual presentation of H type fistula as a left lung bronchiectasis. Surgical repair in these cases are not always possible by cervical routes, some unusual cases may require thoracotomy as

fistula were low laying. **Case description**: A 4-years-old female child presented with recurrent pneumonia since birth, nasal and oral regurgitation of feeds since infancy on lying supine. She required recurrent admission for pneumonia and left side bronchiectasis. Patient was referred to our hospital for non-resolution of symptoms. On examination of baby respiratory rate was 45/min, decreased chest movement was found on left side, and on auscultation of chest there was decreased breath sounds on left side. Chest X rays esophagus was grossly dilated, and air filled. Contrast esophagogram suggestive of H type tracheoesophageal fistula. Contrast Enhanced Computer Tomography suggest bronchiectasis changes on left lung. Rigid bronchoscopy was done under general anaesthesia to confirm the diagnosis. Tracheoesophageal fistula found at lower part of trachea, along with purulent fluid in left bronchus. Initially repair was tried by right lower cervical approach, but after cervical exploration it was appreciated that fistula was quiet low and fistula was repaired through right posterolateral thoracotomy. The child was improved in just post-operative periods and up to one year of follow up. Radiography of thorax demonstrate marked improvement of his pulmonary bronchiectasis and the esophageal diameter is markedly decreased back to almost normal size. **Conclusions**: Tracheo-bronchoscopy (especially rigid) is an important investigation due to the better visualization, in doubtful cases and to locate the exact location of fistula. H type TEF above T2 should be approached through cervical approach whereas lower fistula should be always approached by right posterolateral thoracotomy.

[SP 14] Title: CONGENITAL DIAPHRAGMATIC HERNIA: CLINICAL AND THERAPEUTIC ASPECTS

Author: KOUAME SOR AGBARA

Introduction: Congenital diaphragmatic hernia (CDH) is an embryopathy, characterized by the non-development of all or a part of a diaphragmatic dome. In westernized countries, the diagnosis is performed entirely in antenatal, which helps spot most severe or lethal forms. Research lead to develop an in utero treatment in some medical centers. As it a pathology with highly reserved prognosis, we are conducting this study to evaluate our results when taking care of late diagnosis case of CDH. **Patients and methods**: We conducted an 8-year retrospective and analytical research of 8 CDH cases with a gender ratio of 1.6. The parameters used were the age of apparition of symtomps on the patient, the antenatal diagnosis, clinical and paraclinical aspects, therapeutic and evolutionary. **Results**: The average age for the diagnosis was greater than 1 month in 5 cases. No antenatal diagnosis was made. Patients were brought into consultation due to breathing distress in 6 cases and due to chronic cough twice. Clinical issues were, in 6 cases, breathing distress like polypnoea, nose flap, intercostal pull, xiphoid depression, chest-abdominal swinging. The Chest-abdominal Xrays were performed in all cases and confirmed the diagnosis in the most cases. Computed tomography of the abdomen and pelvis area was performed in 4 cases and also confirmed the CDH diagnosis. All patients went into surgery using laparotomy method except for one case that died prior to surgery. Post-operative remission was favourable on both short and long term. **Conclusion**: CDH is an illness rarely encountered in our context, only 8 cases in 8 years. In these cases, the antenatal diagnosis had not been perform which did not allowed to detect the severe forms. Folowing our study, the vital prognosis of CDH was favorable in 7 cases since it was late apparition forms of the illness. **Key words**: congenital diapragmatic hernia, late form, surgical treatment.

[SP 15] Title: BRONCHOBILIARY FISTULA

Author: Mohamed Helali

Congenital bronchobiliary fistula is a very rare condition. The first case reported by Neuhauser, Elkin, and Landing in 1952(1). We report this rare anomaly on an eleven month old female who had multiple admissions. The diagnosis of CBBF can be delayed and requires a high degree of suspicious, because it can be mistaken for other causes of bilious emesis. This is the first case reported in Sudan. Bilious sputum should alert pediatric physicians to investigate in the line of bronchobiliary fistula. MRI MRCP, HIDA scan and bronchoscopy are essential to confirm the diagnosis. Management of such a case is challenging but rewarding.

Upper GI Poster Day 1 Group 3
Moderator: Z Bahtijarervic

[SP 16] Title: DISTRACTION ENTEROGENESIS OF MULTIPLE INTESTINAL SEGMENTS USING BIODEGRADABLE DEVICE AS A LESS INVASIVE ALTERNATIVE FOR SHORT BOWEL SYNDROME
Author: Dionisiy Petrov
Aim of the study: To demonstrate the feasibility of mechanical lengthening of multiple intestinal segments in-continuity using biodegradable spring device. **Methods**: Spring device was produced from polycaplolactone – a biodegradable polymer used for sutures and various medical devices. Compressed spring length was 25 mm, relaxed spring was 60 mm long. Six female pigs aging 2 months each undergone placement of three biodegradable compressed springs into the jejunum in-continuity. Intestinal plication using dissolvable sutures was performed for narrowing intestinal lumen around each compressed spring to secure them. Spring physical parameters were chosen according to the previously published data by several labs. Animals were observed for the mean period of three weeks. By the end of observation animals were euthanized, intestine was examined for lengthening. Regular staining and immunohistochemistry were used to analyze histological changes. **Results**: All pigs tolerated liquid diet followed by regular feeds with no sign of bowel obstruction and no weight loss. Two pigs died from early surgical complications. Most intestinal segments demonstrated up to 2,5-fold lengthening. Three springs migrated from the place of implantation. Long follow-up animals demonstrated natural passage of the springs with the stool.Morphological examination revealed significant increase of villi height, crypt depth and muscularis propria thickness as well as neoangiogenesis. **Conclusion**: Distraction enterogenesis is a promising alternative for the surgical management of short bowel syndrome. Using biodegradable spring device allows to lengthen multiple intestinal segments in-continuity. Further studies of distraction enterogenesis are needed for its implementation in the clinical practice.

[SP 17] Title: LAPAROSCOPIC MANAGEMENT OF HYPERTROPHIC PYLORIC STENOSIS SHALL WE CONTINUE?
Author: Yosra Ben Ahmed
Objective: To evaluate the laparoscopic approach in the treatment of hypertrophic stenosis in terms of postoperative follow-up compared to the classical approach. **Methods:** This is a retrospective study of a series of 14 patients operated in our department for hypertrophic pyloric stenosis during 2016. **Results:** Over a period of 1 year, 14 patients were operated for hypertrophic pyloric stenosis. We opted for a laparoscopic approach in 4 of them. The mean age was 45 days. The average duration of surgery was almost similar for the 2 groups: 75 minutes for the laparoscopic approach and 67 for the classical technique. The introduction of the diet was started on day 1 for both groups. Concerning the use of analgesics during postoperative follow up, paracetamol was used during 2 days for the patients operated by laparoscopy and 1 day for the other group. Morphine was not administered to any patient. There was no significant difference in the duration of hospitalization for both groups. All patients were discharged on day 2. **Conclusion:** Despite the size of our sample, our results lead us to wonder if the laparoscopic approach is currently an alternative in the treatment of hypertrophic pyloric stenosis of. Indeed, the classical technique has excellent results. A larger sample and better experience would allow us a better evaluation.

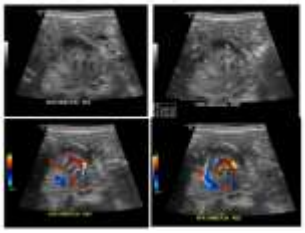
[SP 18] Title: REVERSED GASTRIC TUBE IN CHILDREN: A FIFTEEN YEAR EXPERIENCE
Author: Yosra Ben Ahmed
Aim of the study: The aim of this study is to present our experience with 28 children, managed by reversed gastric tube esophagoplasty and to evaluate short and long term complications. **Methods**: A retrospective study including 28 patients managed by reversed gastric tube esophagoplasty in the department of pediatric surgery B of Tunis during 15 years. **Main results**: Gastric reversed tube was performed in 28 children for esophageal replacement. Ten patients had esophageal atresia and 18 had caustic stenosis. The age at the operation ranged from 6 months to 14 years. The tube was passed through the esophageal bed in all cases. Anastomosis was cervical in 21 cases and thoracic in 7 cases. There was no early or late death. Eleven patients (39%) developed cervical leak with spontaneous closure except in one case that necessitated surgical intervention. Ten patients (35,7 %), 8 of them

had leak, presented anastomosis stenosis that needed endoscopic dilatation. None of these patients required surgical revision. The mean follow-up was of 75 months (ranging from 12 to 120 months). Five patients developed symptoms of reflux. Five patients continue to present late respiratory benign symptoms. Excellent and good functional outcome was achieved in 96% of the patients. All the patients, except one, had normal swallowing. Two patients had not undergone a weight catch-up phase. Mild tortuosity of the gastric tube had been encountered only once. **Conclusion**: Reversed gastric tubes have proved to be a useful and satisfactory substitute for the esophagus. It has remarkably low morbidity and mortality with satisfactory functional results. This technique is a safe and easy surgical alternative procedure for esophageal replacement in children.

[SP 19] Title: BALLOON DILATATION OFEXTENSIVE POSTBURN STRICTURES OF ESOPHAGUS IN CHILDREN
Author: Nodir Arifdjanov
Aim: The goal is to show the possibility of using the balloon dilatation method for the treatment of patients with extended postburn strictures of the esophagus (PSE) and especially its diagnostic significance for identifying heterogeneity of cicatricial stricture and determining further treatment tactics. **Materials and methods**: We performed balloon dilatation in 15 children with an extended PSE, of which 8 were boys and 7 girls aged 1 to 8 years. All dilatation procedures were performed under X-ray control. The length of the cicatricial strictures in almost all patients was significant, and often captured more than two sections of the esophagus. Four of the fifteen patients had complete dysphagia upon treatment, five passed only fluid, only six of the fifteen patients could somehow eat. All patients were underweight. **Results**: Despite the extensive lengths of cicatricial strictures, we were able to dilate almost all strictures using a balloon. There were 4 patients with IV degree of dysphagia before dilatation, III — 5th, II — 4 and I — 2. Already after the first dilatation attempt, we were able to achieve the following results: I have no degree IV dysphagia one patient, III — not a single patient, II — degree of dysphagia - in 4 patients, I — in 11 patients. It should be noted that we do not stop at the achieved result and, if necessary, repeat the procedure of balloon dilatation two or more times, gradually reaching the maximum diameter of the esophagus for a given patient. We have not had a single case of esophageal perforation, so the balloon dilatation procedure is quite safe in the treatment of long PSE. **Conclusion**: Thus, balloon dilatation can be used to treat extensive PSE, as a fairly safe method with good results and gives a lot of additional information about the status of PSE, about the presence of areas of different densities. The expansion of indications for the use of balloon dilatation of the esophagus with its cicatricial stricture will provide new opportunities for the treatment of patients with PSE and, accordingly, will improve the quality of treatment. Features of the heterogeneity of esophageal strictures require a deeper instrumental and morphological study, which will give new approaches in the treatment of PSE.

[SP 20] Title: MIDGUT VOLVULUS- EASILY MISSED ENTITY ON US
Author: Sadia Sajid
Aim of the case: To highlight the diagnostic role of US in pediatric emergency cases. To illustrate the US and upper GI contrast study findings of mid gut volvulus in a pediatric patient. To emphasize the role of pediatric radiologist especially in critical emergency pediatric cases which require prompt diagnosis and surgical intervention. **Case Description**: One month old neonate presented in emergency with repeated vomiting. Since the baby was irritable the examination findings were not reliable. Emergency ultrasound performed by technologist was reported as normal by the on call non-pediatric radiologist. However, vomiting did not stop .Next day the pediatric surgeon requested upper GI contrast study after working hours. The study was done by the on call non –pediatric radiologist. The on call radiologist consulted the pediatric radiologist on call and the full case was reviewed by pediatric radiologist. US and upper GI study findings were typical for mid gut volvulus. The case was red flagged and the patient was immediately shifted to theater. Per operatively, there was 270 degrees mal rotation however; no necrosis of the bowel was present. Patient was discharged from hospital after complete recovery. **Conclusion:**

For neonates presenting with abdominal symptoms, US is the most important imaging modality to aid in diagnosis however, understanding specific children diseases and diagnoses and their imaging findings is crucial for optimal patient evaluation and management.



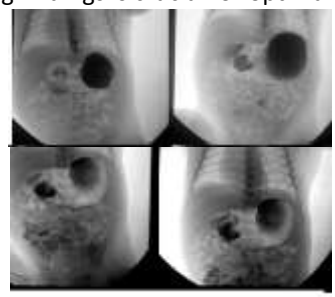
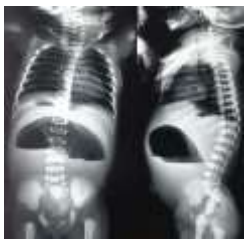


Fig 1: US Abdomen of Neonate A and B) Grey scale B mode images showing swirled appearance of mesentery and thick walled bowel loops. C and D) Color Doppler images showing swirling of mesentery and superior mesenteric vein around superior mesenteric artery. Fig 2: Upper GI Barium study of same patient, shows partial obstruction with mild dilaltion of the proximal deudenum and no crossing of the deudenum to the left side. The small bowel seen on the right side with Croscksrew appearance suggest malrotation with mid gut volviolus.

[SP 21] Title: SITUS INVERSUS ABDOMINUS ASSOCIATED WITH JEJUNAL ATRESIA

Author: SARRA AGGOUN

Aim of the study: Situs inversus abdominus, is the inversion of the abdominal organs with a normally located left-sided heart. It is quite an uncommon condition. Among the known congenital conditions associated with it, we find serious congenital cardiac defects and splenic anomalies .However; the association of intestinal atresia with situs inversus is rarely reported. We are presenting a case of situs inversus abdominus associated with type-I jejunal atresia in a newborn. **Case description**: A 2-day-old female baby was admitted with bilious vomiting and failure to pass meconium. The examination revealed upper abdominal fullness. The heart showed a normal, regular rhythm with no murmurs. A per rectal examination yielded mucous only. The infantogram showed a large median air fluid level with gastric shadow in the right, however cardiac shadow was normally placed [Figure]. The abdominal sonography confirmed situs inversus with the liver on the left side and the spleen on the right side, both kidneys were normal. It has also revealed a dilated twisted intestinal loop. An echocardiography showed situs solitus with hypoplastic left ventricle. A laparotomy was carried out. We found: Stomach on the right side while the liver was on the left. The caecum and appendix were in the left lumbar region. Type I complete jejunal atresia, the jejunal atretic loop was twisted and gangrenous.The proximal part of the jejunal loop was resected. A primary end-to-side jejunojejunostomy was performed with Appendectomy. The post-operative recovery was uneventful. The patient was referred to a higher cardiac center for the management of congenital cardiac anomalies.**Conclusion**: The “mirror anatomy” should be kept in mind while carrying out the surgery in such cases



An echocardiograph should be performed to recognize the anatomy of the heart before starting the surgical procedure. Figure

[SP 22] Title: EVALUATION OF ABDOMINAL SUBCUTANEOUS ADIPOSE THICKNESS AS A RISK FACTOR FOR SURGICAL SITE INFECTION IN PAEDIATRIC ABDOMINAL SURGICAL EMERGENCIES

Author: IBIYEYE TAIYE T, NASIR ABDULRASHEED A, ODI TEMITOPE O.

Institution: FEDERAL MEDICAL CENTRE LOKOJA, KOGI STATE, NIGERIA.

Background: Surgical site infection (SSI) remains a significant cause of increased morbidity and mortality in surgical patients including children. Surgical abdominal emergencies constitute a significant percentage of emergencies in children and is fraught with a high risk of SSI. Many studies have been carried out to identify the risk factors associated with SSI, the thickness of subcutaneous fat at the surgical site was found to be a significant risk factor for SSI. However these studies were done in adults. The impact of subcutaneous adipose tissue on SSI in black children is not known. **Aim**: To determine the significance of the thickness of abdominal subcutaneous adipose tissue as a risk factor for SSI in abdominal surgical emergencies in children. **Methods**: This was a prospective cross-sectional study involving children requiring emergency laparotomy at Federal Medical Center Lokoja, Kogi state,

Nigeria. Abdominal subcutaneous adipose thickness was measured pre-operatively via abdominal USS and intra-operatively using a digital vernier caliper. All patients were monitored for incisional SSI, wound swab for MCS was taken using the Levine's method in patients with SSI. Incisional SSI was defined using Center for Disease Control (CDC) and Prevention criteria. Data was analyzed using SPSS version 21.0. P value was set at 0.05. **Result**: Fifty-five patients were recruited for the study, the mean age at presentation was 6.4years, m: f ratio was 2.8:1. The mean duration of symptoms was 5.95 ±5.45 days. Mean BMI was 17.58 ± 3.49. Intestinal obstruction was the most common indication for surgery, accounting for 38.1% of all cases. Generalized peritonitis secondary to typhoid intestinal perforation was the second most common aetiology (27.3%). The SSI rate was 12.7%. The mean post-operative day for presentation of SSI was 4.67 ± 1.95 days. The duration of surgery in patients with SSI was longer than those without SSI, though the difference was not statistically significant (93.12 vs 97.46 min). The mean thickness of abdominal subcutaneous tissue measured pre-operatively and intra-operatively was 4.54 ± 1.12mm and 4.77 ± 1.22mm respectively. There was no significant difference in subcutaneous tissue thickness in patients with SSI and those without SSI (pre-op; 4.55 vs 4.49mm, intra-op; 4.89 vs 4.39mm, p value, 0.85 and 0.19 respectively). The duration of symptoms, the weight, BMI, ASA score, length of incision, duration of surgery, EBL and the class of wound were also not associated with an increased risk of SSI. There was positive correlation between BMI and intra-operatively measured abdominal subcutaneous tissue thickness. Of the patients that had SSI, 61.5% had a negative MCS, 46.2% cultured E. coli, while 7.7% cultured Staph. aureus. The mean duration of hospital stay was 8.8 ± 4.6 days, however, the mean duration of hospital stay was longer in patients with SSI (12.15± 4.62min vs 7.73 ± 4.06min). **Conclusion**: The study showed that abdominal subcutaneous adipose tissue thickness is not a risk factor for SSI in paediatric abdominal surgical emergencies.

[SP 23] Title: DIAPHRAGMATIC RECONSTRUCTION BY TISSUE ENGINEERING: ANIMAL STUDY. A NEW WINDOW TO CONGENITAL DIAPHRAGMATIC AGENESIS MANAGEMENT.

Author: Reza Shojaeian

Background: Outcome of congenital diaphragmatic hernia (CDH) is improved significantly in the light of advanced perinatal care and ECMO supports. This increased survival rate even among those with large diaphragmatic defects or complete agenesis causes more challenges in diaphragmatic reconstruction to reduce the recurrence rate and provide better functional results. Several articles observed high recurrence and inferior cosmetic and functional results in using prosthesis to reconstruct diaphragmatic defect. Tissue engineering opens a new window in reconstructive surgery recently. CDH could be diagnosed in fetal period and this may provide the opportunity of further diaphragmatic reconstruction by stem cells and tissue engineering. In this study we practice this method in animal model. **Method and materials**: We sacrificed a rabbit to harvest bone marrow stem cell and normal diaphragm tissue. Harvested diaphragm was cut to small parts (2 cm diameter) and underwent acellurization process. After providing acellular scaffolds, prepared and colonized stem cells were loaded on the scaffolds and maintain in sterile nourished environment. Stem cell coverage on the scaffold was observed microscopically and while the scaffold fully covered with stem cells they were prepared for transplantation. Tissue engineering phase took about 2 months and then we transplanted these loaded scaffolds to repair iatrogenic diaphragmatic defect in 4 rats.transplanted tissue was covered with omentom to augment circulation and diffusive nutrition of graft. Rats were kept in animal room for 2 months and sacrificed to evaluate the transplanted diaphragmatic segment. Transplanted part was taken and underwent histopathological study. **Results**: healing was occurred in all 4 rats. Angiogenesis and muscular transformation were observed in tissue engineered graft. Loaded stem cells were alive and partially transformed to local muscular tissue in microscopic studies. **Conclusion**: tissue engineering may provide an animate and even functional tissue to repair organic defects even as heterologous fashion.

[SP 24] Title: EMERGENT THYROIDECTOMY DUE TO COMPLICATIONS IN MCCUNE ALBRIGHT SYNDROME

Author: Henar Souto

Aim of study: To describe the management of a patient with McCune-Albright syndrome with multiple complications. This syndrome is characterized for the presence of a clinical triad: café au lait spots, polyostotic fibrous displasia and hyperfunctioning endocrinopaties. **Case description:** We report a one year old boy who was

being studied for psychomotor and growth retardation. Physical exploration showed inferior limbs dysmetria, pectus excavatum and café au lait spots in the inferior hemibody. During this period he developed hyperthyroidism and a secondary dilated cardiomyopathy for both of which he needed pharmacologic treatment. First line treatment for hyperthyroidism was methimazole, but caused a medullary aplasia with severe anemia, and was then replaced with propylthiouracil which caused a severe toxic hepatitis and had to be suspended. Due to the difficulties in the treatment for the hyperthyroidism, which were causing a deterioration of the associated cardiomyopathy an emergent thyroidectomy was indicated. The surgical procedure was performed without immediate complications, and a temporary hypocalcaemia was present for 3 weeks with spontaneous resolution. The patient also required blood transfusion due to the medullary aplasia for 6 weeks. After 2 years of surgery, the patient remains stable, with no need for transfusions and significant improvement of his cardiomyopathy.
In face of the presence of three clinical items, genetic study was run for McCune-Albright syndrome, which was found positive. **Conclusions:** McCune-Albright síndrome must be suspected when the typical clinical triad is present. Hyperfunctioning endocrinopathy is one of the main complications which may even require a surgical treatment. In this case thyroidectomy has been the only way to control the progression of the cardiomyopathy and to avoid further complications of medical treatment.

Basic Science and General Surgery Poster Day 1 Group 4
Moderator: Igor Sukhotnik

[SP 25] Title: EFFECT OF DIFFERENT BACTERIA CONTAMINATION ON ADHESIVE INTESTINAL OBSTRUCTION IN RATS
Author: G Demirtaş, D Güney, p celepli, S Hücümenoğlu, HT Tiryaki
Institution: Ankara Child Health and Diseases, Ankara Training and Research Hospital
Introduction:Postoperative peritoneal adhesions (PPA) are serious problems after abdominal surgery. Intraabdominal adhesions are the cause of pain, intestinal obstruction and infertility. PPAs occur as a result of peritoneal damage resulting from increased vascular permeability and release of fibrin rich exudate. Thus, normal peritoneal healing is limited. Mechanical, ischemic, infective, inflammatory and chemical factors play role in peritoneal injury. The fact that PPA does not develop at the same level in each patient indicates that individual factors also play role in this mechanism. One of the most important points in intraabdominal interventions is bowel flora and its effect on infection. It was thought that different microorganisms found in flora or frequently added as hospital flora might cause inflammatory processes and cause PPA formation. **Aim**: We aimed to investigate the effect of different bacterial strains (Klebsiella spp, E. coli spp, anaerobe) on the formation and degree of PPA in adhesion formation in rats.**Materials and Methods**: Rats were divided into 5 groups, consisting of twelve rats. Groups were classified as; E.coli, Klebsiella, Bacteriodes fragilis, Sham and Control groups. The rats were sacrificed on the fourteenth day and relaparotomy was performed. The results were evaluated macroscopically and microscopically according to the previously determined classifications. **Results**: When bacterial infected groups were compared with sham and control groups, both microscopic and macroscopically significant increase in PPA was observed. **Conclusion**:In the experimentally generated adhesion model, microorganisms have been found to play an active role in PPA formation. **Keywords**: postoperative peritoneal adhesions, bacteria, adhesion in rats.

[SP 26] Title: EFFECT OF PERITONEAL LAVAGE WITH NACL 0,9% SOLUTION ON RAT PERITONEAL TISSUE PLASMINOGEN ACTIVATOR AND PLASMINOGEN ACTIVATOR INHIBITOR-1 LEVEL AFTER LAPAROTOMI
Author: Dina Perdanasari
Aim of study: Laparotomy is the main risk factor for postoperative adhesion formation. Due to serious morbidity caused by postoperative adhesion, new research focused on its prevention are being done. Adhesion formation occurs when degradation of fibrin through fibrinolysis was disrupted. Dissolution of fibrin is mediated by plasmin which is a product of plasminogen conversion catalyzed by tissue plasminogen activator (tPA) and Plasminogen

Activator Inhibitor- 1(PAI-1) as its inhibitor. Fibrinolitic activity decreases after surgical trauma and routine peritoneal lavage aims to decrease postoperative adhesion, which still has not been investigated thoroughly. This experimental study focuses on the effect of normal saline solution on fibrinolytic parameters after surgical trauma on wistar rats. **Methods**: Male wistar rats (n=30) were randomized into control group, group 1 and group 2. Each group underwent laparotomy and peritoneal biopsy. Group 1 received NaCl 0,9% as a peritoneal lavage, while group 2 underwent peritoneal fluid evacuation. Baseline value of peritoneal tPA and PAI-1 were taken from control group. **Main results**: Mean value of peritoneal tPA and PAI-1 level on control group were 29,56 ± 18,17 ng/ml and 6,53 ± 1,66 ng/ml respectively. There are reduction of tPA levels and increase of PAI-1 levels in both lavage group and non lavage group. Differences of peritoneal tPA and PAI-1 between the groups were insignificant statistically. **Conclusions**: This study concluded that peritoneal lavage with NaCl 0,9% solution after laparotomy of wistar rats resulted in lower levels of tPA and higher levels of PAI-1 peritoneal tissue. **Ethical Approval**: The research Ethics Committee Universitas Padjadjaran Bandung has given ethical approval for this experiment on September 5th 2018. Number 1013/UN6.KEP/EC/2018.

[SP 27] Title: HIPPO STUDY: A RANDOMISED CONTROLLED TRIAL EVALUATING HOME VIDEO

Authors: Nair T, Choo C, Abdullah NS, Lee SM, Teo L., Chen Y, Nah SA and Chiang LW
Institution: KK Women's and Children's Hospital, Singapore

Aim: Hospital admissions and surgeries can trigger fear and anxiety in young children. If unaddressed, such anxiety can create future psychosocial challenges. The aim of our Home-Initiated-Programme-to-Prepare-for-Operation (HIPPO) was to provide resources to allay perioperative anxiety and improve patient satisfaction. **Methods:** We performed a randomized controlled trial approved by our institutional review board(CIRB 2017/2905). Children aged 4-10 years undergoing elective surgery were randomized into two groups. Group A received standard perioperative counseling while Group B received an additional animation video and activity sheets. Patients' responses at the holding room and during anaesthesia induction were measured by blinded observers and anaesthetists using the Children's Emotional Manifestation Scale(CEMS), Induction Compliance Checklist(ICC), and Visual Analogue Scale(VAS). The State-Trait Anxiety Inventory for Children(STAI-C) and State-Trait Anxiety Inventory(STAI) were used as self-reported anxiety scales for patients and parents respectively, and the feeling thermometer for younger patients with difficulty completing STAI-C. **Main Results:** Of the 130 patients randomised, 113 completed the study (Group A n=54, Group B n=59). No significant differences between groups were demonstrated for CEMS, STAI-C, STAI, ICC, VAS and feeling thermometer scores. However, a subgroup analysis on school-aged children(7-10 years) showed better STAI-C-STATE scores(Group B) approaching statistical significance, (p=0.052)(Table 1). Parents from group B also reported receiving significantly better explanations from their doctors(p=0.038). STAI-C-STATE and CEMS scores at the holding room reliably predicted patients' behaviors during induction(p<0.001). Unlike previous studies, we observed that parental STAI scores did not correlate with their children's STAI-C scores at P=0.717 and P=0.398 respectively. **Conclusions:** Our findings suggest that HIPPO may benefit school aged children. Self-reported anxiety appears more reliable than observer rated scales, possibly due to sociocultural norms. Better patient experience and workflow efficiency can be achieved if CEMS and STAI-C-STATE are used as indications for administration of perioperative anxiolytics.

	N	Group A, Control Median (Q1,Q3)	N	Group B, Video Median (Q1,Q3)	P-Value
STAI-C-STATE					
4 to 6	3	29.0 (27.0, nil)	8	40.0 (28.3, 46.8)	0.184
7 to 10	28	36.5 (32.5, 44.8)	23	33.0 (30.0, 38.0)	**0.052**
STAI-C-TRAIT					
4 to 6	3	28.0 (25.0, nil)	8	35.5 (30.0, 37.5)	0.133
7 to 10	28	36.0 (33.0, 40.8)	23	34.0 (30.0, 41,0)	0.263
CEMS Holding					

4 to 6	25	5.0 (5.0, 7.0)	34	5.0 (5.0,6.0)	0.729
7 to 10	29	5.5 (5.0, 6.5)	25	5.0 (5.0, 6.5)	0.762
CEMS Induction*					
4 to 6	24	6.8 (5.0, 10.9)	34	7.3 (5.0, 10.6)	0.557
7 to 10	28	6.8 (5.3, 10.0)	25	6.0 (5.0, 8.3)	0.217
ICC*					
4 to 6	24	0.0 (0.0 , 1.0)	34	0.5 (0.0, 2.0)	0.204
7 to 10	28	0.0 (0.0, 1.0)	25	0.0 (0.0, 1.0)	0.604
VAS*					
4 to 6	24	17.0 (6.3, 33.5)	34	23.0 (6.8, 59.0)	0.487
7 to 10	28	13.5 (6.3, 58.0)	25	22.0 (7.0, 41.0)	0.662

Table 1: Participants observed and self-reported anxiety according to age group

[SP 28] Title: PROPRANOLOL THERAPY IN INFANTILE HEMANGIOMA: CORRELATION OF AGE AND DURATION OF TREATMENT TO THE OUTCOMES

Authors: Ali F. Al-Mayoof, Ali E. Joda

Background: Infantile hemangioma (IH) is the commonest vascular tumor affecting children that appears in the first two weeks of life, and follows a proliferative phase that continues during the first year of life. After then it undergoes involution, which lasts for several months or years depending on the size, site, gender, and development of complications. **Objective**: A prospective study was conducted to evaluate the correlation of age and duration of propranolol therapy to the outcomes of IH. **Patients and Methods**: A prospective study included 28 patients with IH in which the propranolol therapy was initiated in a dose of 3mg/kg/day divided into two to three doses. The surface area of IH was calculated monthly using AutoCAD software. Treatment with propranolol was discontinued when there was no more decrease in the surface area for two consecutive visits.
Results: Eleven males and seventeen females completed the study. The age at initiation of therapy ranged from 2 to 16 months while at the end of therapy it was 9 to 23 months. The mean difference percent of surface area at 6 months was (51.1±16.3), while at the end of the treatment course was (75.0±16.8) which was statistically significant ($P < 0.0001$). In addition, a significant inverse correlation was found between the age at the beginning of treatment and the difference percent of surface area. A similar inverse correlation was observed between the age at the beginning of treatment and the duration of treatment. **Conclusion**: In addition to the safety and efficacy of propranolol therapy for IH, a higher response rate can be gained with early treatment and a prolonged course of therapy. In addition, propranolol therapy should be continued until there is no more response for two consecutive months regardless of the age of therapy initiation and the duration of treatment. **Key words**: Infantile Hemangioma, Propranolol therapy, Surface area, Difference percent Rebound growth.

[SP 29] Title: COMMON SALT: EFFECTIVE REMEDY FOR MANAGEMENT OF UMBILICAL GRANULOMA, AN OBSERVATIONAL STUDY.

Author: Vijai Datt Upadhyaya

Background: Normally the remained umbilical stump separates by 7-15 days postpartum and range from 3 days to 2 months. After the umbilical stump falls off the umbilical ring become epithelialized and is covered by skin and finally closed. In few infants umbilicus ring is not epithealialized completely and is covered with pink to light reddish piece of tissue with drainage at umbilicus and known as umbilical granuloma. The exact reason of that some infants develop an umbilical granuloma while others do not, have been under-recognized. Till now numbers of methods had been had been advised for treatment of umbilical granuloma which include medical as well as surgical interventions. This is an observational study on effect of common salt on umbilical granuloma. **Material and Method**: This is an observational study from January 2017 to December 2018. All infants of diagnosed

umbilical granuloma managed with application of salt were evaluated. A total of 76 cases were included in the study. Relevant demographic and clinical data of all included patient was be collected on structured proforma, which includes age, gender, hospital delivery or home delivery, normal delivery or cesarian section, in hospital reference or referred from outside, duration of application of common salt, numbers of days of application of common salt and final outcome after 2 weeks. Questionnaire like excessive cry during salt application, any change in color of peri-umbilical skin were asked to assess the complication of salt application. Since it was a simple observational study descriptive statistical analysis was done. **Result**: In all cases the granuloma was healed with in span of two weeks. Number of salt application ranged from 14 to 28 applications and median number of application was 18 for successful outcome. Total time for which salt was in contact of umbilicus ranged from 210 to 420 minutes and median duration was 270 minutes. Median days for success full outcome were 9 days and ranged from 7 days to 14 days. **Conclusion**: Common salt is an effective home remedy to treat umbilical granuloma.

[SP 30] Title: GIPS PROCEDURE IS AN EASY TECHNÄ°QUE APPLICABLE FOR ADOLESCENT PILONIDAL DISEASE
Authors: Zafer Turkyilmaz, Ramazan Karabulut, Hayrunnisa Oral, Teymursah Muradi, Merve Altın, Kaan Sonmez
Institution: Gazi University, Faculty of Medicine, Turkey
Aim of the study: Surgery for pilonidal disease(PD) is often followed by a significant unpleasant postoperative course, loss of school time and social relation reduction. The purpose of the study was to evaluate the outcome of Gips procedure on adolescents with PD. **Methods:** Nineteen adolescent patients with symptomatic PD were treated by Gips procedure in our clinic. Demographic, clinical and outcome data of patients were obtained by retrospectively. **Main Results:** Their mean age was 15.89 years and mean body mass index (BMI) was 25.12. The most frequent symptom at presentation was purulent discharge in 57.89% of patients. Nine patients had abscess drainage at presentation and one undergone wide surgery and 5 phenol injection previously. The mean operative time was 14.5 minute. The median hospital stay was 15.36 hours, while back to daily activities or school was 2,31 day. Two patients had recurrence and they also treated with the same procedure. Wound healing time was 3.15 weeks. The mean follow-up period was 5.3 months and considering the improvement in one of the recurrent patients, the success of this procedure can be considered as 94.7%. **Conclusion:** The Gips procedure is an easy to use a technique in adolescents with PD and has a high success rate while it does not restrict school and social life.

[SP 31] Title: OVERUTILIZATION OF CT SCANS IN THE DIAGNOSIS OF PEDIATRIC APPENDICITIS IN COMMUNITY HOSPITALS: THE ROLE OF THE PEDIATRIC SURGEON IN EDUCATION AND IMPLEMENTING PROTOCOLS
Author: Carmen Ramos-Irizarry
Objective: Pediatric patients often receive care at community hospitals for surgical emergencies such as appendicitis. The purpose of this study was to evaluate protocols and imaging techniques performed in community hospitals for children with acute appendicitis and their accuracy in diagnosing appendicitis. **Methods**: This was a retrospective outcome analysis of children ages 2-17 years old who were diagnosed with acute appendicitis at two community hospitals from April 1, 2017 to December 31, 2017. Children were diagnosed with ultrasound, CT scan or both. Demographic characteristics, imaging modalities, radiation doses, times to operating room, treatment, histopathology and complications were analyzed. Histopathology reports were correlated with US and CT scan reports. **Results**: During the study period, 45 patients underwent treatment for appendicitis. All patients underwent imaging studies. All the patients (11) referred from a nearby community hospital had CT scans, compared to 75.6 % of patients at the home community hospital. US of the appendix was performed in 57.8% of the cases and was diagnostic in 22.3% of the cases. CT scan was done in 76% of the patients and was accurate in diagnosing appendicitis in 88.2%. The mean effective radiation dose was 4.25mSv (range 0.83-15.71, SD 3.11). There were no differences between radiation doses after stratifying by gender and body mass index (p=0.379). The median time to operating room was 2 hours (range 1-11hrs, SD 1.44). **Conclusion**: The utility of US in the diagnosis of appendicitis in children at two community hospitals was modest due to high rates of non-diagnostic studies, leading to overutilization of CT scans. There was a large variability in the radiation exposure doses in children

undergoing CT scans. There is a need for the implementation of a surgical protocol, additional training of US technicians and application of the Image Gently Campaign in these institutions.

[SP 32] Title: DIFFICULT AIRWAY IN SURGICAL CHILDREN: APPROACH AND OUTCOME.
Author: Sarita Singh
Aim of the study: To highlight our approach to manage difficult airway in children undergoing anesthesia for surgical indications. **Methods**: In six years' duration (Jan 2013- Dec 2018) children from neonates to 12 years of age going under anesthesia for different surgical indications, of difficult airways were identified and studied. Ethical clearance was taken from institutional ethical committee. Preanesthesia airway assessment were done in all cases. In operation theater during induction of anesthesia we try to secure airway intubation by inhalational agents, if not succeeds then try with short acting muscle relaxant. In cases where direct laryngoscopy was not possible then we shifted to fiber optic bronchoscpic intubations, still not intubated then we secure the airway by surgical procedure (Tracheostomy). **Main results**: Total 52 cases of age groups (day one-12 years), of different surgical diagnosis were studied in six years' durations. Male to female ratio was 3:1. In all the cases the paranesthesia factors were identified for difficult airway. Out of 52 cases 10 cases were tracheal stenosis, 11 cases hydrocephalus, 8 cases large cystic hygroma of neck, 9 cases encephalocele, 2 cases of oral mass and 12 of temporomandibular joint (TMJ) ankyloses. In 47 cases endotracheal intubation were succeeds maximum up to 3 attempts. In four cases of TMJ ankyloses airway was secured with the fiber optic endoscope. Three cases of tracheal stenosis and four cases of TMJ ankyloses intubation was not possible by other means and were managed with tracheostomy. In five (9.8%) cases extubation was not done in post surgical period and kept on mechanical ventilator due to respiratory distress. Two (3.4%) cases were died due to sepsis. **Conclusion**: Cases of difficult airway should be identified during routine preanesthesia evaluations. Always the equipment should be prepared before procedure and in difficult situations be ready for surgical airway securing procedure.

[SP 33] Title: COMPARATIVE OUTCOMES IN INTESTINAL ATRESIA: JEJUNUM VERSUS ILEUM
Author: Takwa Mili
Aim of the study: Atresia of the jejunum and ileum is one of the major causes of neonatal intestinal obstruction. Traditionally, jejunal and ileal atresia have been grouped together as jejunoileal atresia. In this comparative study, we aimed to elucidate separately the early postoperative outcomes of jejunal and ileal atresia.**Methods:** A retrospective analysis of patients diagnosed with jejunal or ileal atresia, who were treated at the Department of Pediatric Surgery B, Tunisian Pediatric Hospital, during 10 years from 2009 to 2018, was carried out. **Results:** We included 40 patients: 30 with jejunal atresia and 10 with ileal atresia. The mean birth weight and gestational age of patients with jejunal atresia were significantly lower than those with ileal atresia (p=0.02 and p=0.008, respectively). The mean age at diagnosis was two days (0-27 days) and the average time to surgery was 48 hours with no significant difference between the two groups. Among the 30 patients with jejunal atresia, 16 had single atresia and 14 had multiple atresias. Of the 10 patients with ileal atresia, seven had single atresia and three had multiple atresias. Post-operative complications occurred more in the jejunal group with a higher reoperating rate for anastomotic dysfunction or adhesive intestinal obstruction.The mean total parenteral nutrition was 12 days in jejunal atresia versus 8.7 days in ileal atresia. In the jejunal atresia group, nine neonates died, giving a mortality rate of 30 % versus 20% in the ileal atresia group. **Conclusion:** Prolonged ileus and anastomotic dysfunction requiring long-term parenteral nutrition were the major causes of complications leading to death with a poorer outcome in jejunal atresia by comparison with ileal atresia. We suggest that atresia of the jejunum and ileum should be considered differently.

[SP 34] Title: BIOCHEMICAL PREDICTORS OF ENTEROCOLITIS IN CHILDREN WITH COLORECTAL ANOMALIES
Author: Ifeanyi Egbuchulem
Background: Hirschsprung's disease-associated enterocolitis remains the most life threatening complication in patients with the disease as it contributes much to morbidity and mortality (Moore, 2011).

In sub-Saharan Africa, there is paucity of long-term evaluations of these patients, as majority of the cases are lost to follow-up. The incidences vary in different studies due to different diagnostic criteria used. Singh et al. (2007) reported incidence of postoperative enterocolitis to be as high as 35%. A large proportion of patients with preoperative enterocolitis still have enterocolitis persisting even after surgery while others resolve thereafter. Several researches have studied Calprotectin, C–reactive protein (CRP) and Plasma viscosity as markers of inflammation, hence, the choice of their use in this study to try and establish their predictability in children with enterocolitis complicating Hirschsprung's disease and anorectal malformations in our environment.
Aim: To determine the biochemical predictors of enterocolitis in children with colorectal anomaly post colostomy. Method: This is an observational analytic study of 32 Patients with either Hirschsprungs disease or Anorectal malformation. The demographic data of the patients, clinical condition and the preoperative and postoperative readings of the biochemical analytes were recorded in an observational chart. Statistical analysis was carried out using SPSS version 23 and test for statistical association done using correlation analysis, Students t-test, ANOVA and regression analysis.**Results**: A higher proportion of patients had hirschsprung associated enteroclitis compared to those with Ano rectal malformation. Gender difference was not statistically significant even with the observed clinical difference. Plasma viscosity and blood viscosity correlate positively with each order. The sensitivity of calprotectinin predicting enterocolitis is about 90%. **Conclusions**: The prevalence of Hirschsprung associated enterocolitis is 60%. The positive predictive value is similar to other reports. **Keywords**: Predictors, Enterocolitis, Children

[SP 35] Title: WHAT IS BEHIND THE ACUTE OVARIAN PAIN? OUR EXPERIENCE
Author: CRISTINA GARCES VIS
Objectives: Evaluation of the treatment applied in patients with suspicious symptoms of ovarian torsion in our center and its subsequent evolution, for the proposal of a consensus therapeutic approach in these surgical emergency. **Methods**: Review of the clinical histories of 27 patients with symptoms of ovarian torsion, without previous diagnosis of ovarian pathology, treated in our center between January 2012 and December 2017. **Main results**: The median age at diagnosis was 13 years (r: 4-17). In 11/27 we performed a laparotomy (all of them before 2015, except for one performed in 2017) and in 16/27 we opted for a laparoscopic approach. We perfrormed an oophorectomy in 14/27 patients (10/19 between 2012-2014 and 4/8 between 2015-2017) and in 13/27 the ovary was preserved (4/12 between 2015-2017) after detorsion and/or extirpation of the ovarian tumor. Ovarian torsion was confirmed in 14/27 cases and ovarian mass in 17/27. The pathological anatomy confirmed 8 hemorrhagic cysts, 7 mature cystic teratomas, 2 serous cystadenomas, one granulosa cell tumor. No recurrent episodes of ovarian torsion were recorded. In the follow-up period (median of 10 months, r: 0-55), 1 case of ovarian atrophy was observed and in 12/13 cases in which the ovary was preserved, the viability of normal ovarian parenchyma was confirmed. **Conclusions**: Our results confirm the high prevalence of benign lesions that cause ovarian torsion in the pediatric population; as well as the high survival of the ovarian parenchyma after detorsion, which justifies surgical treatments with ovarian preservation in these patients.

[SP 36] Title: A NOVEL RET GENE MUTATION RELATED TO HIRSCHSPRUNG DISEASE AND REVIEW OF THE LITERATURE.
Author: CRISTINA GARCES VIS
Aim of study: To describe a new mutation of the RET gene related to Hirschsprung's disease (HD) and review the literature. **Methods:** A screening of the RET germline was carried out in two sisters with HD and their relatives. We performed a bibliographic research in Pubmed with the key words "Hirschsprung", "RET mutation" and "children". We selected those articles in English about RET gene mutations related to HD. **Main results:** We report the case of two patients, 3 and 1 years old, who debuted in neonatal period with clinical signs of intestinal obstruction. They were diagnosed with long-segment type HD and operated in our center. Regarding family history, paternal grandfather was diagnosed with HD, and underwent surgery during childhood. A mutation on RET gene, not previously described, in exon 4, codon 652_653del(p.Pro218Glyfs*135) was found in both probands, grandfather and father (who is an asymptomatic carrier). Cases of medullary thyroid carcinoma, pheochromocytoma,

hyperparathyroidism, cutaneous amyloidosis or other related diseases have not been recorded in the family history. Among the 32 articles analyzed, only one mutation in exon 4, codon 809, has been described in literature. Nevertheless, we did not find any reference about other comorbidities associated to mutations in exon 4. **Conclusions:** Multiple mutations of the RET gene causing HD have been described with variable penetrance and related diseases. Although there are no references in literature about pathologies associated with RET gene mutations in exon 4, we recommend long-term follow-up for these patients due to this very rare condition.

Case Report Poster Day 1 Group 5
Moderator: S. Shilpa

[SP 37] Title: A RARE CASE OF NECROTIZING FASCIITIS
Author: Jennifer Kavilaveettil
Introduction: Necrotizing fasciitis(NF) is a rare bacterial infection which affects the skin and subcutanous tissue. NF is usually reported in adults with preexisting medical conditions or those who are immunocompromised. It is rare in neonates. Very few cases of NF are reported in literature and most in otherwise healthy neonates. We describe the case of a nineteen day old male baby, apparently healthy at birth, with insidious onset swelling of left knee which rapidly progressed upwards to involve hip joint and lower part of abdomen with vesiculobullous lesion and scrotal swelling within one day. Rapid treatment was initiated however the baby quickly went into multi-organ dysfunction. Abscess drainage and extensive wound debridement was done. Antibiotics were given as per culture and sensitivity reports. Splenic flexure colostomy was done to avoid fecal soiling and to facilitate healing of the wound. Split skin grafting was done after wound granulated adequately. As the days progressed, no graft rejection was seen and the baby was discharged. **Conclusion**: Treating NF is a challenge for paediatric surgeons and newborn cases make it all the more difficult with increased risk of mortality. Immediate recognition, diagnosis, wound debridement, initiation of appropriate antibiotics and adequate supportive care helped this baby withstand this fatal condition.

[SP 38] Title: BURIED/TRAPPED PENIS IN A 14 YEARS OLD CIRCUMSÄ°ZED OBES ADOLESCENT
Authors: Kaan Sonmez,Ramazan Karabulut, Zafer Turkyilmaz
Institution: Gazi University, Turkey
Aim of study: A concealed penis (CP) is an inconspicuous phallus that can be categorized into three subgroups, according to Maizels' classification: buried penis (BP), webbed penis (WP), and trapped penis (TP). A BP is a normal-size penis totally buried in prepubic tissue because of a lack of skin attachment to the shaft. It can be identified by the absence of the circumferential groove at the base of the penis. A WP is characterized by a ventral fold of skin that joins the distal shaft and scrotum, obscuring the penoscrotal angle. A TP is usually the result of thoughtless circumcision of a concealed penis; less frequently, it can be the result of surgery for other pathologic features. We report a obes adolescent buried/trapped penis with parafimotic circumsied scar tissue. **Case Description**: Our patient was 14 years old and 116 kg with 172 cm height. He opereted for circumcision in 9 years old and his penis was normal lenght but buried type. After the operation his penis changed as trapped penis because of obesity and parafimotic scar tisuue. His erection was problematic due to pain and circumcision line scar tissue.We operated the patient under genaral anesthesia. Firstly parafimotic circumcision line was cut and released secondly 5 cm penoscrotal skin was cut to parallel to the penis and this two skins were sutured. Penis is normal lenght and erection without buried penis now. **Conclusion**: Children with obesity and buried penis should not be rushed for circumcision. Prepitual tissue is important for buried penis and circumcision can be delayed until adolescence in this children for good penil cosmetic.

[SP 39] Title: LATE PRESENTATION OF POSTERIOR CONGENITAL DIAPHRAGMATIC HERNIA IN AN OVERWEIGHT 16-YEAR OLD PATIENT AFTER ENGAGING IN FITNESS ACTIVITY - LAPAROSCOPIC MESH REPAIR

Author: Izabela Kis

The purpose of this case report is to present a laparoscopic repair with non-absorbable sutures combined with prosthetic patch, which was a surgeons decision based on a local defect impression. Also we wanted to bring attention on possibility of earlier manifestation of CDH in obese patients combined with physical activity. A 16-year old boy, adipose, complaining with chest pain and vomiting that started few hours ago was examined in an emergency pediatric ambulance. One year ago he was diagnosed with hypertension and during that initial work-up a chest X-ray was done and showed no pathologies. Now, CT showed left intrathoracic herniation of abdominal viscera including the stomach, intestines, spleen and tail of pancreas. Diaphragmatic rupture was suspected by the radiologist. In differential diagnosis, a traumatic rupture was slightly suspected due to no prior symptoms and a lack of detailed history of types of fitness exercises and incidental trauma, and by the radiologist report.
Defect was located left and posteriorly and approximately 6cm in diameter. All structures were successfully repositioned and the defect was sutured with non-absorbable Ethibond sutures and strengthened with Symbotex composite mesh. With our patient, defect was of medium size but additional prosthetic patch was obtained due to lack of tissue and its friability in the posterocentral segments of the defect. We believe that our patients obesity and engagement in sports activity could have caused an elevated intraabdominal pressure which led to gradual protrusion of abdominal organs through a congenital defect to the point of acute symptoms. Otherwise CDH could have stayed unrecognised, or could manifest itself in later years of life.

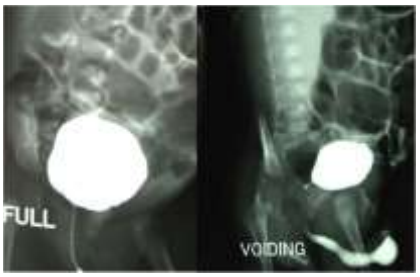
[SP 40] Title: CONGENITAL ANTERIOR URETHRAL DIVERTICULUM

Author: Ahmed Eshiba, Khaled Ashour, Mostafa Zein
Institution: Alexandria University Hospitals, Alexandria, Egypt

Introduction: Congenital anterior urethral diverticulum is a very rare cause of lower urinary tract obstruction. It may be considered as a result of congenital anterior urethral valve [1]. The diverticula usually occur where there is a defect in the corpus spongiosum, leaving a thin-walled urethra. It commonly occurs at the penoscrotal junction while one third may occur at the penile urethra. **Case presentation:** A 2 months old male baby presented with drippling of urine and a swelling on the ventral aspect of the penile urethra. The swelling is soft,cystic, fluctuant, compressible, and collapses completely on manual pressure, with urine coming out per meatus. Also, the parents reported variation in size, as well as it can completely disappear. Urine analysis, blood urea, and serum creatinine were normal. Ultrasonography (USG) showed mild degree of hydroureteronephrosis and a thickened trabeculated urinary bladder. A micturating cystourethrogram (MCUG) was performed, and it showed the presence of a sizable diverticulum at the penile urethra with mild trabeculated urinary bladder without any vesicoureteral reflux (Fig. 1). Decision was taken for surgical excision of the diverticulum. Cystourethroscopy was performed firstly to confirm the diverticulum and to exclude any other associated anomalies. It showed mild trabeculated urinary bladder, normal looking ureteric openings and confirmed the presence of anterior urethral diverticulum (Fig. 2). Following the endoscopy, open diverticulectomy was performed to excise the diverticulum and directly repair the anterior urethra on a urethral 8 f left for one week (Fig. 3). **Discussion:** Congenital urethral diverticulum usually occurs at the penoscrotal junction while it may occur at the anterior penile urethra in one third of cases [3]. It may present at any age from infancy till adulthood. The main complaints usually are poor urine stream, drippling of urine, urinary tract infection and urethral ballooning during micturition [4]. On clinical examination, dilated cystic swelling was palpable almost distal penile [4]. On compression, this swelling is disappeared, and urine is drippling out of the meatus. Diagnosis is usually made by the cystourethrogram. It gives also more information about the bladder, VUR and degree of hydroureteronephrosis. Ultrasonography of the urinary tract also gives important information about the kidneys, ureter, and bladder**.** Cystourethroscopy is diagnostic as well as therapeutic. A diverticulum typically appears as an outpouching from the ventral wall of the urethra. Treatment of anterior urethral diverticulum depends on the size of the diverticulum and the degree of obstruction. Transurethral resection (TUR) with a pediatric resectoscope is the treatment of choice for small, well-supported diverticula [6]. However, in the large diverticula, as in our case, open diverticulectomy and primary repair is recommended

[7]. In some conditions where there are back pressure changes of the upper urinary tract we may need to proximal diversion either urethrotomy or vesicostomy to preserve the damaged upper urinary tract

Informed consent: Consent to publish the case report was not obtained.



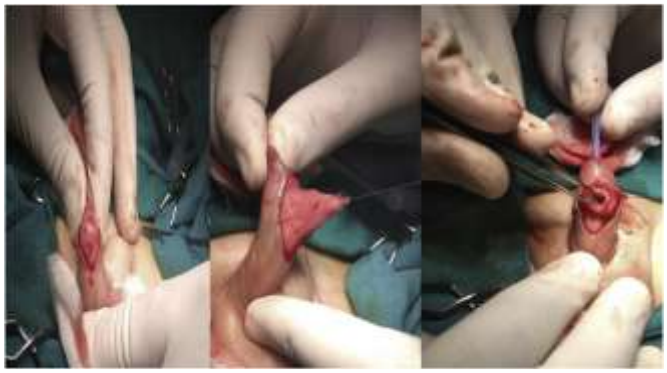


Fig. 1. MCUG showing dilated anterior penile urethra (diverticulum), mild trabeculated bladder, no VUR.

Fig. 2. Cystourethroscopy showing anterior dilated translucent urethral swelling

Fig. 3. (a,b,c): Operative procedure. a &b: complete dissection of the diverticulum. c-open the diverticulum, trimming the edges and plication of the urethral edges.

[SP 41] Title: MECKELâ€™S EXTRAORDINARY COMPLICATION

Author: OSMAN UZUNLU

Aim of the study: We emphasize uncommon complication for Meckel diverticulum: Intestinal obstruction due to intramural hematoma **Case:** A 3-year-old girl admitted to our clinic with non-bilious vomiting, decreased appetite, colicky abdominal pain and abdominal distention. On physical examination, she looked pale and lethargic and she had tachycardia. Abdominal examination revealed abdominal distention, decreased bowel sounds and tenderness in the periumbilical area. Laboratory findings were normal. Plain abdominal X-ray showed air-fluid levels and dilated loops of small bowel. Abdominal ultrasonography and computed tomography scan showed distended loops of small bowel and a 5x3 cm heterogeneous solid mass in the pelvic region. Neither US nor CT scan showed intussusception findings. She underwent an urgent operation after treated with early antibiotics and intravenous fluid resuscitation. During the operation, a complete intestinal obstruction caused by a 10 -cm intestinal segment with huge intramural hematoma was observed approximately 50 cm away from the ileocecal valve. We noticed that this intramural hematoma resulted from the haemorrhage of the adjacent Meckel diverticulum (figure). The affected intestinal segment with Meckel's diverticulum was excised by segmental resection and end-to-end anastomosis was performed. Histopathological examination showed that Meckel's diverticulum contained ectopic gastric mucosa and intramural large hematoma secondary to bleeding from Meckel's diverticulum. **Conclusion:** Meckel diverticulum can cause many complications, but we observed extraordinary complication. We kept in mind these intramural haemorrhage pattern can cause intestinal obstruction. One case up to date has been reported Meckel diverticulum that bled into the intestinal wall layers.

[SP 42] Title: MANAGEMENT OF AN IMPACTED URETHRAL STONE

Author: Ines Ben Chouch

Purpose: to report the management of an impacted stone in the anterior urethra. **Methods:** It's about a 4 years old boy, who has a clinical history of type one Tyrosinemia, who presented an acute urinary retention due to an impacted penile stone witch was removed from the orifice of the supra-pubic catheter after a week of bladder decompression. **Results:** The infant presented an acute urinary retention. At Clinical examination, he had a

distended bladder and palpable penile stone. Radiological findings concluded to a radio-opaque impacted stone in the anterior urethra. The boy underwent primary a supra-pubic catheterization in order to relieve pain and bladder decompression. One week after, he was operated to extract the calculi. At endoscopic exploration, we found that the stone was localized in the penile urethra. We performed a dilation of the supra-pubic orifice and then extract the stone, which was pushed back to the bladder, by this orifice under endoscopic control. The stone had oval shape and measured 6 mm of diameter. Finally we closed the supra-pubic orifice and the urine was drained using a trans-urethral catheter which were removed 2 days after. No post-operative complications was observed. The median follow up is one month. **Conclusion:** Urethral stones must be kept in differential diagnosis in a child who presents with acute urinary retention. It can be treated without recourse to urethrolithotomy by extraction the calculi from a dilated orifice of supra-pubic catheter after pushing back of the anterior urethral stone to the bladder.

[SP 43] Title: MARKING PULMONARY NODULES WITH A COMPUTED AXIAL TOMOGRAPHY-GUIDED SPIRAL HARPOON PRIOR TO VIDEOTHORACOSCOPIC RESECTION.

Author: VERONICA ALONSO

Case description: We present a patient with a stage I left Wilms tumor, who was operated and treated according to the 2001 SIOP protocol at the age of 5. A year later, a tumor recurrence with liver metastasis, was treated with a left hepatectomy, following the 2016 Umbrella protocol. At 7 years of age and weighting 20 kg, bilateral intraparenchymatous pulmonary nodules were demonstrated in a TC during an airway infection. A fibrobronchoscopy and bronchoalveolar lavage were performed. A nodule in left lower lobe was marked with a CT-guided spiral harpoon (120 mm long and 18 G), measuring the distance from the skin to the lesion before its introduction. The patient was taken to the operating room under general anesthesia. A thoracoscopy with 2 ports was performed (5 mm in the 5th ICS- posterior axillary line and **12** mm in the 8th ICS- midscapular line, pressure 4 mmHg, flow 1.5 lpm). The resection was possible with an endo-stapler. The absence of air leak was proved and a drainage (20 Fr) was left in place. Marking the pulmonary nodule with a spiral harpoon allowed its anchoring and subsequent extirpation without any complications. The histological study did not show tumor cells; dismissing a new recurrence. The bronchoalveolar lavage PCR was positive for rinovirus. **Conclusions:** Marking intraparenchymatous subcentimeter nodules with a CT-guided hook allows a safe videothoracoscopic resection. This spiral structure prevents its mobilization once deposited in the nodule, avoiding parenchymatous tears during the transfer to the operating room enabling traction and exposure maneuvers.

[SP 44] Title: PERCUTANEOUS HERNIORRAPHY REPAIR OF AN ANTERIOR DIAPHRAGMATIC HERNIA USING AN EPIDURAL NEEDLE: THE ABSENCE OF A SUTURE PASSER SHARPENS OUR MIND

Author: VERONICA ALONSO

Case descriptionA 3-year-old male went to the emergency department due to cough, mucous discharge and fever. The postero- anterior chest X-ray showed retrosternal intestinal gas. The patient was referred to our pediatric surgery consultation with a suspected diagnosis of a Larrey's DAH. The study was completed with a lateral chest X-ray. A laparoscopic herniorrhaphy was scheduled.Three trocars were used: 10 mm in the umbilicus for the camera, 5 mm in right and left upper quadrants. The hernial sac was resected. Four incisions, in the left substernal region were made (2 mm long respectively, and 1 cm apart). A loop-shaped 2/0 polypropylene suture was introduced through a 22G epidural anesthesia needle. The needle was inserted into the peritoneal space, crossing the anterior and posterior edge of the diaphragmatic hernia under laparoscopic vision. The end of the suture was released within the intra-abdominal cavity using an atraumatic grasper. Another suture was inserted through the same subcutaneous incision, with the same maneuver. The free end of the previous suture was introduced into the new loop. The epidural needle was removed bringing out the first suture and knotting the two ends extracorporeally. The knot remained in the subcutaneous tissue. Three more sutures were placed, closing the defect with a total of 4 percutaneous mattress stitches.**Conclusions**Anterior diaphragmatic hernia (ADH) represents 2-5% of all congenital diaphragmatic hernias. We recommend taking into account the percutaneous repair of ADH using this technique,

as it facilitated a robust repair through a laparoscopic approach.When a suture passing is not available, the use of an epidural needle is fast, easy and reliable.

[SP 45] Title: MULTILAYER REPAIR OF PALATAL FISTULA WITH AN INTERPOSITIONAL COLLAGEN MATRIX
Author: VERONICA ALONSO
Case description: Patient 1: girl with a cleft palate operated when she was one year old using a modified Furlow technique. A reintervention was performed when she was 3 years old due to a palatal fistula in the junction of soft and hard palate (type III of Pittsburgh). A multilayer repair with a local rotational flap was done. The surgery was accomplished with the interposition of a collagen matrix between the nasal and oral layers. The sutures and gaps were reinforced with a fibrine sealant. Patient 2: male with Prader-Willi syndrome and cleft palate was operated when he was 2 years old using a Furlow technique. A reintervention was performed when he was 5 years old due to a palatal fistula in the primary and secondary palate junction (type V of Pittsburgh). The technique used was the one described for the previous case. In both cases, antibiotics and analgesics were prescribed and the orotracheal intubation was maintained for 24 hours. The evolution was favorable and the patients were discharged at postoperative day 3. Nutrition was in a liquid or mashed form and served cold for one month. After 2.5 years of follow-up, no recurrences have been reported. **Conclusions**: Palatal fistula after cleft palate repair appears in 7.7% - 35% of patients. The closure can be done with local, regional or distant flaps; and/ or synthetic materials. A scarcity of articles explains in detail a simple and practical method in pediatric patients. The three- layer repair is uncomplicated, safe, effective and avoids refistulizations. Interpositional grafts of a resorbable collagen membrane provide a "scaffold" for tissue growth, revascularization and epithelialization of the mucosa.

[SP 46] Title: GIANT HYDATID CYST MIMIC A RENAL CYST IN A CHILD: A CASE REPORT.
Author: Mohammed Aboud
Aim of the study: Hydatid disease HD is endemic in several Mediterranean countries. Preoperative diagnosis of renal hydatid disease is difficult even in an endemic zone. **Case description:** A 6-year-old boy without any remarkable medical history was referred to our unit with chief complaint of left upper quadrant mass and vague pain presented for a few months. Except for a palpable and a ballotable mass, the rest of the physical examination was normal. Complete blood count, renal and liver function tests, urine analysis, and electrolytes were within normal range except for mild eosinophilia. The indirect hem agglutination test was negative. The abdomen ultrasound revealed a huge simple cyst measuring 110 × 85 mm that nearly occupied the left kidney entirely. No evidence of solid components or calcification was found in the cyst, according to Gharbi classification it was type 1. The contrast-enhanced CT scan verified the ultrasound findings. The chest x-ray was normal. Regarding the isolated renal involvements implicitly and the size of the cyst our primary diagnosis was a huge simple renal cyst without any suspicion of HD despite the endemicity of the hydatid disease in our country. For more evaluation, we performed percutaneous aspiration of the cyst under ultrasound guidance. The cyst contained clear fluid. Microscopic examination revealed a hypocellular smear in a proteinaceous background with no scolices or hooklets in the aspirated fluid. There was no evidence of such cystic lesion in any other viscera. Through left lumber incision, left nephrectomy was done, because cyst was involving almost whole of the kidney including hilum, sparing only a small portion of upper pole. Histopathological examination confirmed HD cyst. The patient was kept on albendazole tablet for 6 months postoperatively. **Conclusions:** Renal hydatid disease is rare even in endemic regions, and isolated renal involvement is even rarer.

[SP 47] Title: A RARE COMPLICATION FOLLOWING AN OESOPHAGEAL REPLACEMENT
Author: Mostafa Abdelatty
Aim of the study: To demonstrate that complex upper GI surgery in children may have rare, unexpected life threatening complications that could be treated successfully if identified early. **Case description**: An 11 year old male with Goldenhar Syndrome underwent emergency surgery for a Type C Oesophageal atresia/ trachea-oesophageal fistula on day two of life. The fistula was ligated and a gastrostomy fashioned. On day five of life a delayed primary oesophageal anastomosis was performed. He was lost to follow-up for 10 years and represented

with severe lower oesophageal stricture not amenable to dilatation despite multiple attempts. The patient underwent a colonic interposition, pyloroplasty and refashioning of the gastrostomy. An external left internal jugular vein central line was inserted on the day of surgery. He made a good clinical recovery postoperatively initially but on day 11, he became tachycardic, feverish and tachypnoeic. An upper GI contrast excluded an anastomotic leak, subsequently he was treated empirically for line sepsis with meropenem. An echocardiogram performed on day 12 postoperatively, in response to a globular heart on CXR, revealed a large pericardial effusion. He begun to show features of cardiac tamponade, and underwent an emergency pericardiocentesis on day 12; 400ml of white fluid, later confirmed to be TPN, was drained. A linogram demonstrated the central line tip was in the wall of the left brachiocephalic vein, subsequently the central line was removed safely in the interventional suite. Thereafter the patient made a remarkable recovery, progressed to full gastrostomy and oral feeds and was discharged on day 27 post op. **Conclusions**: In the aftermath of an oesophageal replacement operation, the multiple anastomoses are not always the source of clinical deterioration and one must keep an open mind and maintain a systematic approach in order to avoid missing a potentially fatal complication.

[SP 48] Title: PEDIATRIC COLONIC VOLVULUS: CASE REPORT

Author: MARIA ELEN MOLINA VAZ

Pediatric colonic volvulus is rare and underreported. We present a case report of total colonic volvulus in a two year old boy with no medical history except what they describe as mild constipation. A two year old child comes to our emergency service with sudden abdominal pain and progressive distention asociated with hipotensión and tachicardia . An emergency ecography was made showing dilated edematous bowel loops that seem to be colonic with no other findings.Total colonic volvulus arround a big sigmoid fecaloma and no fixation of colon was confirmed by laparotomy. Operative treatment consisted of total colonic resection because of the massive necrosis from the ileocecal valve to the healthy sigmoid loop and ileostomy creation. Child was unstable for three days and discharged from the intensive care unit the 7th postoperative day. Rectal suction biopsies were done 1 month later with normal ganglionic cells and ileostomy was closed two months later. Chronic underestimated and undertreated constipation can lead to severe consecuences. We can,t know if the non fixation of the whole colon is the cause or the consecuence of the constipation.

[SP 49] Title: BABY BELLY DANCE A SINGLE SYMPTOM PRESENTING BY TWO FAR AWAY DISORDERS

Author: Saeid Aslanabadi

Aim of study: As a noticeable and unique symptom which we called " Baby belly dance" , almost presenting in same fashion by two important and very different disorders we wanted to share this finding and propound the importance of differential diagnosis proceeded by single symptom. **Case description**: The authors present a case of a 6 years old girl. Since the age of 4 months the patient had experienced a spontaneous wavy undulating movement of her anterior abdominal wall resembling a severe peristalsis which we named it " Baby belly dance ". (stream1) Magnetic resonance images revealed an intramedullary tumor with ill-defined borders, diagnosis of intramedullary ganglioglioma was made in and the lesion was partially resected. The patient made a good recovery .Also another 5 years old girl had experienced the same symptom which we named it "Baby belly dance " from several months ago . (stream 2) In the history patient suffered from severe maltreated constipation after survey we made diagnosis of Hirschsprung's disease and patient went under colostomy and further abdominoprineal pull through procedure, This patient also made a good recovery and in both of them the symptom resolved. **Conclusions**: Clinical examination and noticing every single sign and symptom added by exact history taking most of the time reveals important diagnosis's sometimes presenting similar symptoms. In this presentation we introduced a noticeable and amazing symptom we called "Baby belly dance".

Oncology Poster Day 1 Group 6
Moderator: Andrea Hayes Jordan

[SP 50] Title: SOLID TUMORS IN PEDIATRIC SURGERY
Authors: Najeh Alomari, Mohamad Dajah
Institution: Queen Rania Hospital
Objectives: Pediatric solid tumors are not uncommon in the daily practice of pediatric surgery and pediatric oncology. We review our personal experience of one team over 20 years in pediatric surgery, the indications for surgery, type of tumor & surgery, resectability, complications, outcome and mortality. **Methods**: Over the past 20 years, 202 solid tumors were diagnosed and treated in pediatric surgery & pediatric oncology. Few cases were operated upon with the help of pediatric neurosurgery. **Results**: Tumors that encountered in different locations were Neuroblastoma (n=40), Nephroblastoma (n=48),4 patients had bilateral disease. Teratoma (n=50) ,Gangilioneuroma (n=15), Sarcoma (n=12), gastrointestinal tumors (n= 16), ovarian ,uterine ,bladder and testicular tumors (n=21). Laparoscopic excision was accomplished in 14 cases. The tumor was inoperable in 18 cases ,while incomplete excision was in 22 cases. Metastatic tumor encountered in 42 cases. 33 patients died after surgery from the disease, 2 patients died prior surgery and 4 patients died in the immediate post operative period. **Conclusion**: Solid tumors in pediatric surgery & pediatric oncology are common in our hospital . Treatment should be always accomplished in multidisciplinary team with careful preoperative review and evaluation. In spite of the new advances in the tumor management and improved survival rate in nephroblastoma and other mature tumors, still the outcome is poor in advanced, metastatic tumors. Anaplastic tumors, sarcomas and neuroblastomas caries bad prognosis.

[SP 51] Title: MALIGNANT SACROCOCCYGEAL TERATOMA A RARE BUT DEADLY CAUSE OF FAECAL OBSTRUCTION IN CHILDREN: MANAGEMENT OUTCOMES IN KANO NIGERIA.
Authors: LOFTY-JOHN ANYANWU, AMINU MOHAMMAD, LAWAL ABDULLAHI,ALIYU FARINYARO, ALIYU MS
Institution: AMINU KANO TEACHING HOSPITAL KANO, NIGERIA.
Background and aims: The introduction of modern chemotherapy has significantly improved the survival of children with malignant germ cell tumours in developed countries. Our study aims to report our preliminary experience with the cisplatin, etoposide and bleomycin (PEB) regimen in the treatment of children with malignant sacrococcygeal teratoma (SCT). **Methods**: This is a retrospective review of the records of six patients managed for malignant sacrococcygeal teratoma in our unit between January 2014 and July 2017. Demographic and clinical data were obtained from their records for analysis. **Results**: There ages ranged between 1 year and 4 years (mean 2.17; SD 0.98). The female to male ratio was 2:1 (4 girls and 2 boys). Difficulty in voiding urine and faecal incontinence were the common presenting features in all the patients. One patient had an Altman type II tumour, two had Altman type III and three had Altman type IV SCT. All patients had faecal and urinary diversions before commencement of chemotherapy. Febrile neutropenia, anorexia, anaemia requiring repeated blood transfusion were common adverse effects in all the patients, which required interruption of treatment. There were three deaths (50%) attributed to treatment toxicity. **Conclusion**: In order to balance toxicity with efficacy, a modification of PEB dosing may be required in compromised children presenting with advanced malignant SCT.
Keywords: Sacrococcygeal teratoma, Germ cell tumour, Cisplatin, Etoposide, Bleomycin.

[SP 52] Title: CENTRAL LIVER RESECTIONS IN INFANTS INCLUDING NEONATES
Author: Timur Sharoev
Aim of the study: To present our experience of central liver resection for hepatic tumors in infants including neonates that is extremely challenging surgery undertaken to achieve a disease-free patient outcome while is still associated with a risk of serious complications. **Material and methods:** From 2011 to 2019, 8 patients aged between 21 days and 6 years, with hepatic lesions, both malignant and benign, underwent central liver resections. Whenever applicable pre and/or postoperative chemotherapy was conducted according to the SIOPEL-4 protocol. The procedures were carried out via the bilateral subcostal incision. Hydrojet Dissection Jet and Plasma Jet devices

were used for the parenchymal transsection and haemostasis. The patient data was prospectively collected and subsequently subjected to retrospective analysis. **Results**: Diagnostically, hepatoblastomas were in 5 cases, malignant hemangiopericytoma – in 1 and rapidly expanding benign haemangiomas not amendable to conservative treatment - in 2. SVIII, SIVab segmentectomies were performed in 7 cases and left extended hemihepatectomy including the entire SIV – in 1. All procedures were effectively completed with no intraoperative complications encountered. The use of Hydrojet Dissection Jet and Plasma Jet allowed transection of the hepatic parenchyma at the clear-cut plane while carefully isolating both adjacent blood vessels and biliary ducts. There was no perioperative mortality or morbidity. The histology confirmed clear margins in all resected specimens. At surveillance from 1 to 7 years all patients survived and showed no evidence of local recurrence or distant metastasis. **Conclusion:** Central liver resections in infants including neonates are very efficacious in achieving the best possible outcome for the patients. The use of Hydrojet Dissection Jet and Plasma Jet systems appears to be particularly beneficial for radical tumor excision while evading potentially serious complications.

[SP 53] Title: LYMPH NODE BIOPSIES IN PEDIATRIC SURGERY PRACTICE

Authors: S Ural, G Karagüzel, C Boneval, M Melikoğlu
Institution: Akdeniz University School of Medicine Department of Pediatric Surgery, Antalya

Aim of The Study: Lymph node biopsies carry an important role in the differential diagnosis of benign and malignant diseases presenting with lymphadenopathy (LAP). Herein, we aimed to discuss our lymph node biopsy experience in the last 30 years. **Methods**: Patients who underwent lymph node biopsies in our third-level health care center from 1989 to 2018 have been evaluated retrospectively. Patient ages, sexes, localization/number/sizes of LAPs, surgical techniques, histopathologic diagnoses and concomitant diseases were reviewed. **Main Results**: 225 lymph node biopsies were performed on 217 patients. Between 1989-1998, 1999-2008 and 2009-2018; 28 (12.5%) patients, 68 (30.2%) patients and 129 (57.3%) patients underwent lymph node biopsies, respectively. The mean age of patients was 8,1±4.8 years (2months-17years). 133 (61.3%) patients were male, 84 (38.7%) were female. 103 (46.4%) lymph nodes biopsied were cervical, 54 (24.3%) were axillary, 26 (11.7%) were submandibular, 26 (11.7%) were supraclavicular, 6 (2.7%) were inguinal, 7 (3.2%) were miscellaneous. 116 (51.6%) biopsies were performed on the left side, 109 (48.4%) were on the right side. As surgical technique, 182 (77.8%) were excisional, 40 (17.8%) were incisional, 12 (5.2%) were simultaneously drained. 157 (69.8%) of the lymph nodes excised were singular while 68 (30.2%) were multiple in number. Hisopathologic diagnoses of 123 procedures could be obtained, 61 (49.6%) of these were malignant while 54 (44%) were benign, eight (6.4%) were indeterminate. 21 (9.3%) patients had a concomitant disease. **Conclusion**: In the practice of pediatric surgery the need for lymph node biopsies are gradually increasing. The biopsies focused on head and neck LAPs, involving single lymph node and performed by excisional technique were markedly more frequent. Although the differential diagnosis of benign and malignant diseases can mostly be made by histopathological examination of the lymph nodes, in a limited number of cases it can be non-diagnostic.

[SP 54] Title: LONG-TERM SURGICAL VIEW EVALUATION OF CHILDREN WITH HEPATOBLASTOMA IN OUR CENTER

Author: Leily Mohajerzadeh

Background: Hepatoblastoma is a rare malignant neoplasm of the liver, with a prevalence of 0.5-1.5 per 1 million children. The prognosis of hepatoblastoma is relatively favorable compared to other solid cancers in children. Surgery with chemotherapy can significantly increase recovery. The aim of this study was to evaluate the long-term survival of children with hepatoblastoma, with surgical resection at the Mofid Hospital from 2006 to 2016. **Methods**: This is a retrospective study on 30 children with hepatoblastoma, who had undergone surgery. For patients, a questionnaire was prepared and all patients' information was extracted by file record method. All diagnostic and therapeutic measures were recorded in the questionnaire. Then the information was analyzed and categorized to obtain final results. **Results**: The results showed that 70% of the cases were male and the highest incidence of HB was in the children under the age of 12 months (41.38%). 66.7% of children diagnosed with Stage II, 7 children were diagnosed with Stage III (23.3%) and 1 child with Stage IV (3. 3%). about surgical complication, 40% had biloma and 20% had bleeding and 40% of them were without any complication. In the follow-up, 20 non-

complicated children were treated, two had pulmonary metastases, 1 required liver transplantation, and 3 patients died. A number of risk factors for tumor recurrence have been investigated in previous studies, including non-anatomical resection, AFP level at diagnosis, AFP reduction after NAC, presence of extra hepatic lesions, tumor tissue characteristics, progression grade Tumor, vascular attack, tumor size, and tumor necrosis rate. According to surgical techniques, anatomical resection for liver tumors such as HB and hepatocellular carcinoma has been shown to have a more positive effect on patient survival than non-anatomical withdrawal. **Conclusion**: According to the results in treatment of HB cases, the use of timely and accurate surgical treatment with chemotherapy shows a good prognosis in the survival of children with hepatoblastoma tumors. Therefore, extensive studies with a broader population can be used to determine the exact factors to effective treatment strategy. **Key words**: Hepatoblastoma, Surgical resection, Long-term survival

[SP 55] Title: COMPLICATIONS OF TOTALLY IMPLANTABLE VENOUS ACCESS DEVICE IN PEDIATRIC ONCOLOGY PATIENTS BEFORE AND AFTER IMPLEMENTATION OF ULTRASOUND GUIDANCE IN VENOUS PUNCTURE

Authors: Ana Maria Welp Cadenas, Camila Roginski Guetter, Vitória Bevervanso, Gustavo Ronchi Rezende Jacinto, Barbara Luiza Charneski, Gabriela Josefa Moraes, Larissa Raso Hammes, Leilane de Oliveira, Miguel Angelo Stremel Andrade, Miguel Angelo Agulham, Camila Girardi Fachin.

Institution: Federal University of Parana Medical School, Brazil

Introduction and aim: Placement of totally implantable venous access devices (TIVAD) is a common procedure among pediatric hematology-oncology patients and can be more difficult in children due to anatomical specificities. This study analyzes complication rates and other factors related to TIVAD implantation before and after implementation of ultrasound (US) guided venous puncture. **Methods**: This is a single-center retrospective cohort study of oncologic pediatric patients who underwent TIVAD placement between 2009 and 2016. Univariate analysis was performed to evaluate intraoperative, early and late complications, in 3 groups: vein dissection, vein puncture with or without US guidance; and also, to identify patient and operative conditions predictive of complications. **Main results**: 199 procedures in 172 patients were included. Mean age was 6.3 years, 51.3% were male. TIVAD placement was more frequent in right internal jugular vein (45%) and left external jugular vein (33%). 117 (58.8%) procedures were vein dissections, 45 (22.6%) venous punctures without US and 37 (18.6%) venous punctures with US. 20,5% of venous dissections were due to failure in venous puncture (all without US guidance) and 71,8% by surgeon's choice. Complications occurred in 45 (22.6%) procedures and there was no difference in complication rate between the 3 groups. On univariate analysis, on the venous puncture group, total number of venous punctures were associated with intraoperative complications (p=0.0000) and guidance by US wasn't associated with less intraoperative complication rates (p=0.524). Before ultrasound implementation, 67% of procedures were venous dissection, and after ultrasound this number dropped by half (35%). **Conclusions**: Although, guidance by US wasn't associated with less intraoperative complication rates, there was a change in the profile of TIVAD placement after ultrasound implementation: more children were submitted to venous puncture than vein dissection, which is a better way to spare the children's venous sites for possible future catheters.

[SP 56] Title: THE IMPORTANCE OF MONITORING THE RADIATION DOSE TO ONCOLOGY PEDIATRIC PATIENTS DURING COMPUTED TOMOGRAPHY (CT) PROCEDURES

Author: Hissa Mohammed

Institution: Hamad Medical Corporation

Background: Use of CT scans has greatly improved diagnostic capabilities in healthcare. However, they also pose health risk related to dosages of ionization radiation. As stated by (Miglioretti et al, 2013, 2), ionization radiation associated with use of CT is about 100 to 500 times higher than the typical radiography and has been associated with increased risk for cancer. Children in particular, are more radio-sensitive as the radiation source is closer to the skin and their bone layers which are thinner (Morgan, Kesari & Davis, 2014, 198). They also have a longer life ahead of them, during which radiation-induced cancer has time to develop. Ogbole (2010, 122) adds that children under ten are highly sensitive to radiation than adults. With this in mind, this study seeks to examine the importance of monitoring the radiation dose given to oncology pediatric patients during CT procedures.

Methodology: The study employs a literature-based systematic review design that involves going through previous studies that discuss the significance of monitoring radiation doses among pediatric patients. Selection criteria includes studies within a ten-year range, that is from 2009 to 2019, that only discuss radiation monitoring among pediatric patients. These criteria were used to ensure relevance of the study literature. The literature-based study was preferred as it allows for production of an objective baseline against which future research can be assessed and interventions modified (Mallet et al, 2012, 448). **Results:** This study revealed that pediatric oncology patients are more vulnerable to radiation exposure as compared with adults. They are more likely to develop radiation related carcinomas, therefore the need to monitor their exposure to CT radiation. The literature reveals increased risk for brain tumors and leukemia in children to whom CT scans are administered. Therefore, the most important reason for monitoring CT radiation in children is reducing risk for radiation related cancer. **Implications of the study:** By understanding the importance of monitoring radiation dosages in pediatric oncology patients, medical professionals are able to apply this knowledge when administering CT to children and reducing risk for cancer. Pediatric health care providers and physicians can now understand the risks that are associated with radiation dosages in children, which enhances their ability to provide quality care. In addition, this study serves as a reference material for future research on radiation dosage monitoring in children. **Conclusion:** It is evident that pediatric oncology patients are at higher risk of CT-related cancers due to the high radiation exposure. It is therefore the duty of the healthcare providers to share the responsibility to minimize radiation exposure to children. Understanding the importance of radiation monitoring not only increases their knowledge but also enhances quality care provision by reducing exposure to unnecessary CT radiation. There is need for further research to come up with specific guidelines on administration and regulation of radiation dosages for pediatric oncology patients.

[SP 57] Title: SINGLE-SITE RETROPERITONEOSCOPY IN PEDIATRIC METASTATIC LYMPHADENOPATHY

Authors: Y. El-Gohary, S. Mansfield, L. Talbot, A. Murphy, A. Davidoff, A. Abdelhafeez
Institution: St Jude Children Research Hospital, USA.

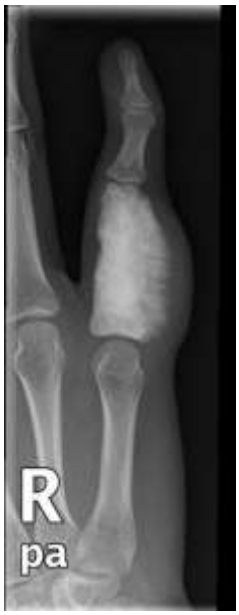
Background/Objectives: Retroperitoneoscopic surgery (RS) is increasingly used for diagnosis, staging, and treatment of solid tumors, but rarely in pediatric surgical oncology for retroperitoneal lymph node dissection (RPLND). Herein, we use single-site RS for RPLND in children and compare perioperative outcomes with those for the transperitoneal laparoscopic approach (TPLA). **Design/Methods**: An institution retrospective chart review was performed for patients undergoing single-site RS and TPLA (January 2018–June 2019). We compared patient demographics, diagnoses, operative times, complications, postoperative analgesia, and length of hospital stay between groups. **Results**: Eight patients (median age 16.5 years) undergoing single-site RS for RPLND and five patients (median age 17 years) undergoing TPLA RPLND were compared. Groups were comparable in age, median operative duration (232 vs 234 min, p=0.62), and complications (1 vs 1, p=0.72). Median postoperative hospital stay and total morphine equivalent doses used postoperatively were significantly lower in the RS group (0.5 vs 2 days [p=0.03] and 0.1 vs 0.4 mg/kg [p=0.01], respectively). Eight patients underwent ipsilateral modified template RPLND for paratesticular RMS (six single-site RS and two TPLA) and lymph node metastases occurred in 50% of patients. **Conclusions**: Single-site RS is safe and feasible in carefully selected pediatric surgical oncology patients. RS provides an excellent view of the retroperitoneum, requires less postoperative analgesia, and is associated with faster recovery.

[SP 58] Title: PHALANGEAL OSTEOSARCOMA MISTAKEN FOR CHONDROMA

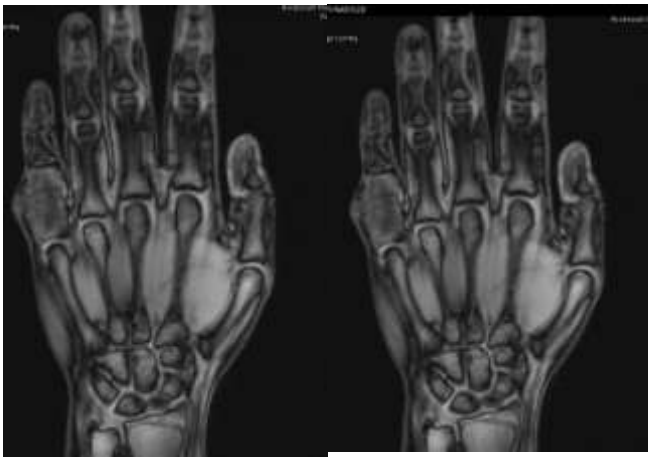
Authors: Teeba Abbood, Adham A, Ahmed Muneer,

We report a 15-year old female patient who presented with a 2 years history of a swelling in the distal phalanx of her right little finger. Although the history, clinical features and X-ray , MRI were suggestive of a malignant tumor (osteogenic sarcoma) or an inflammatory lesion, the histo-pathological examination of the swelling was reported as a Periosteal chondroma. Osteosarcoma of the hand is very rare. This article highlights the possibility of a seemingly benign lesion seen in a routine clinic could well turn out to be malignant even if it is uncommon site, and the need to maintain a high index of suspicion at all times. **Keywords**: Phalangeal osteosarcoma, osteosarcoma of

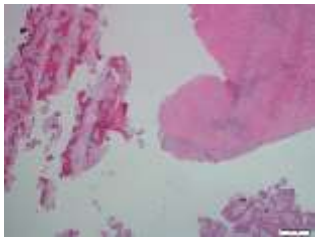
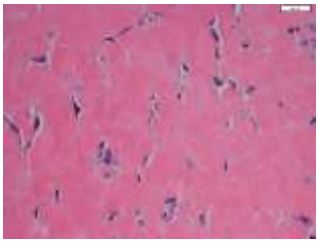
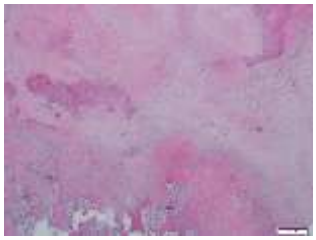
the phalanx. **Introduction:** Osteosarcoma: Bone sarcomas account for approximately 6 percent of all childhood cancers, and osteosarcomas account for approximately 3 percent of childhood cancers overall (1)
However, osteosarcoma is the most common primary malignant bone tumor affecting children and young adults. Osteosarcomas comprise 56 percent of all bone cancers in individuals under the age of 20 (2).
In children, the peak incidence is between 13 and 16 years of age, a time that appears to coincide with the adolescent growth spurt. For unclear reasons, osteosarcomas are more common in boys than in girls, and in blacks and other races compared with Caucasians (3,2,4) The most common sites of osteosarcoma in children are the metaphyses of long bones, especially the distal femur (2), proximal tibia, and proximal humerus (5,6).
Case Report: In 2016 a 15-year old Filipino female patient presented with a two years history of a right little finger swelling associated with increasing pain. She had no fever, loss of weight or loss of appetite.
She had a small firm swelling measuring (3x3) cm on the dorsal aspect of the distal phalanx of the right little finger , It was not tender to touch, with no local signs of inflammation. Range of movement of the distal interphalangeal joint was intact there was Mallet deformity secondary swan neck. She had no epitrochlear or axillary lymphadenopathy. On 10/04/2016 Radiographs revealed : Marked irregularity and ill-definition of the cortices of the proximal phalanx of the little finger with swelling of the overlying soft tissue shadow. However inflammatory process or malignant process (osteogenic sarcoma) were not ruled out.



On 21 /06/ 2017: MRI with the intravenous gadolinium-based contrast (Doterem): was reported T1 hypointense , T2 hyperintense , expansile lesion arising from the dorsal aspect of proximal phalanx of the little finger it showed some nodular extension along the medial aspect into the adjacent subcutaneous tissues. The dorsal and ventral interfaces of the lesion were well maintained. It was limited to the proximal phalanx, did not show extension to the inter-phalangeal and metatarsophalangeal joint. Ventral part of the bone marrow and bone shows sclerosis. There was minimal diffusion restriction in DW sequences and intensely vascular, showed early arterial enhancement. Delayed images demonstrate gross predominantly peripheral enhancement of the lesion. with mild subcutaneous edema. Ventral and dorsal tendons were within normal limits. The rest of the bony structures and the muscles of the hand appear normal.

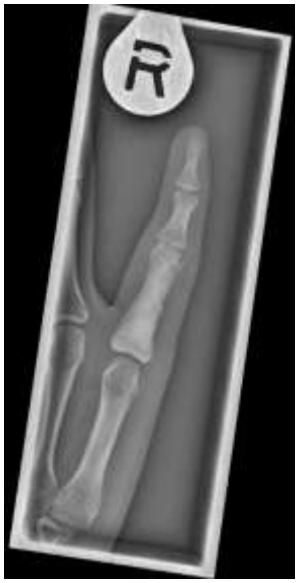


On 02/8/2017 : Histopathological examination: The sections show nodules covered by thin layer of dense fibrous tissue from periosteum and underlying moderately cellular hyaline cartilage with neoplastic chondrocytes residing in lacunar spaces. In place, reactive new bone formation is prominent. There were no features to suggest malignancy. with Diagnosis: of Periosteal chondroma with exuberant bone reaction. Our diagnosis of chondroma was based solely on the histopathology findings as her history and physical findings were not specific.

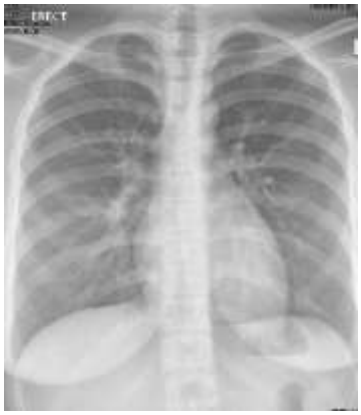




On 20 07 2017 under general anesthesia incisional biopsy of the bone tumor by osteotomeexcision of the edges of the tumor was performed at first

then a second intervention; On 21/12/2017 Bone tumor excised and sent for histopathology as Still pathology was query the slides was sent for a second opinion. However, to our surprise, the biopsy reported osteoblastic osteosarcoma (low to intermediate grade) , report details: the section showed : it is comprised of large trabeculae of neoplastic bone surrounded by spindle cells with mild to moderate nuclear enlargement. Features that bring a benign fibro-osseous lesions such as fibrous dysplasia and low grade osteosarcoma into differential diagnosis. Importantly the tumor also contains matrix production in the form of irregular nodular masses of bone, some with cartilaginous differential rimmed by condensation of hyperchromatic tumor cells, features which is diagnostic of osteosarcoma. These findings somewhat resembles parosteal osteosarcoma although there are some areas demonstrating confluent sheets of malignant osteoid in a pattern also seen in intermediate grade osteosarcoma such as periosteal osteosarcoma. Overall histological features are those of a low to intermediate grade osteosarcoma, and further classification rest with radiologic correlation.



On 29/10/2017 Last radiograph done: A full physical examination did not reveal any possible primary tumors. Other initial lab workup was unremarkable chest x ray



Discussion: Osteoblastic osteosarcoma (OOS) is a common subtype of conventional osteosarcoma [7] . Conventional osteosarcoma accounts for 90% of osteosarcomas, of which the OOS variant comprises 50% [7]. Although some authors consider that this subtype has no prognostic significance, others believe that it has a better clinical outcome than other conventional osteosarcomas and the non-conventional osteosarcomas, including the small cell, chondroblastic and post-radiation variants [8–12] .The differential diagnosis includes reactive bone-forming lesions such as myositis ossificans (MO), benign osteogenic tumors, including osteoid osteoma and osteoblastoma, an osteoid component of a malignant sarcoma, and other osteosarcoma variants [13].Patient initial diagnosis and management was mainly depending on the initial histopathology report as the nature of the tissues components similarities between both diagnoses. Since Periosteal chondroma (juxta cortical chondromas) are rare, benign, cartilage-forming tumors that arise from the surface of the cortex, deep in the periosteum, and erode into the cortex, with occurrence in children and adults , The most commonly the proximal humerus; the other long bones and small bones of the hands and feet also may be involved [14,15,16,17]. It might be accompanied by pain at the site of the lesion and a palpable non tender hard mass that is fixed to bone. Not to forget the differential diagnosis of periosteal chondroma includes [18] Non ossifying fibroma ,Soft-tissue tumors secondarily eroding into the cortical bone, Chondrosarcoma, Osteosarcoma. As a part of our initial diagnosis the optimum Treatment of Periosteal chondroma usually extended curettage or en block excision to minimize the risk of local recurrence [14,15]. **Conflict of interests statement:** The authors declare that they have no competing interests. **Consent:** informed consent was obtained from the patient father by phone for publication of this case report and the accompanying images and coupes. **Conclusion:** We missed the diagnosis of osteosarcoma as our initial diagnosis of chondroma was based on the features of the patient's physical examination findings and the histopathology report. A constant awareness for unusual lesions in unusual locations is important so that proper and prompt treatment can be provided for our patients.

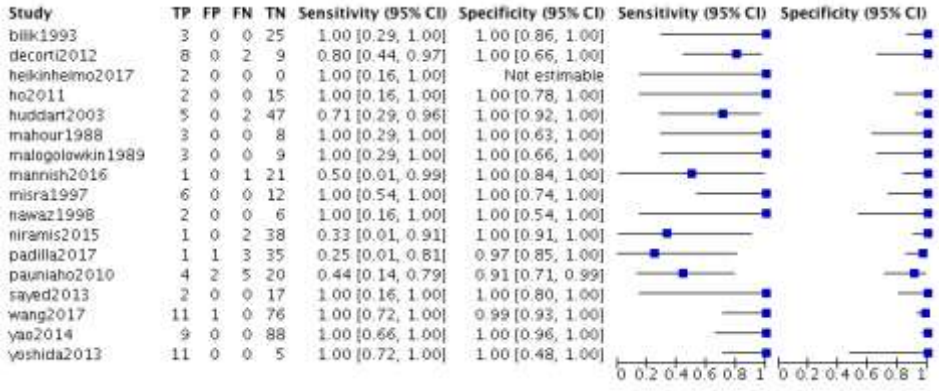
[SP 59] Title: THE ACCURACY OF SERUM ALPHA FETOPROTEIN RELATIVE TO HISTOPATHOLOGY AS MARKER OF MALIGNANT RECURRENCE IN PATIENTS WHO UNDERWENT RESECTION OF SACROCOCCYGEAL TUMOR: A SYSTEMATIC REVIEW OF DIAGNOSTIC TEST

Authors: Amabelle Moreno

Objective. Sacrococcygeal tumors are the most common extragonadal tumor in children, mostly affecting neonates and infants. They are often resected in the neonatal or early infancy period. Recurrences after initial

resection are associated with higher risk of malignancy. Alpha fetoprotein (AFP) is a tumor marker found to be elevated in yolk sac tumors. Sudden increase in AFP may indicate recurrent or metastatic disease. Elevation in AFP in sacococcygeal teratomas may be present if it is immature or if there are foci of yolk sac in the mass. The objective of the study was to determine the diagnostic accuracy of serum AFP elevation relative to histopathology as a marker of malignant recurrence in patients who underwent resection of sacrococcygeal tumors. **Methods**. The study employed electronic databases including PubMed, Google Scholar, and Cochrane. Studies cited in pertinent articles were also reviewed. There was no limit set to the time of the studies to be included in the search. The index test was serum alpha fetoprotein which was compared to histopathology in patients with malignant recurrence after the initial resection. The quality of eligible studies was analyzed independently by two reviewers using JBI Critical Appraisal Checklist for Diagnostic Test Accuracy Studies. Standardized data extraction tables were used independently and cross-checked. A third author reviewed the accuracy of the extracted data. The data was analyzed with Review Manager (RevMan) 5.3. **Results**. Seventeen studies were included in the review. Serum AFP had a sensitivity of 25-100% and specificity of 91-100%. **Conclusion**. Serum alpha fetoprotein concentration is a good screening test for malignant recurrence in patients who underwent resection of sacrococcygeal teratoma. An elevated result during monitoring would warrant further investigation of the presence of recurrence even before the patient is clinically symptomatic.

Figure 1. Sensitivity and specificity of serum AFP



[SP 60] Title: PEDIATRIC COLON ADENOCARCINOMA: A CASE REPORT

Author: Ana Marinho

Aim of the study: Colorectal cancer is an extremely rare form of cancer in children and adolescents, representing less than 1.5% of the total number of malignant solid tumors in children. We report a case of a pediatric colon adenocarcinoma. **Case description**: A 15-year-old boy, with the diagnosis of mitochondrial cytopathy: partial complex IV deficiency (Q10 medicated), non-alcoholic fatty liver disease, frontal cavernous angioma and tibial osteochondroma, complained of recurrent abdominal pain, changes in bowel habits and intermittent blood loss in stools, over a period of 1 year. In this time, he was diagnosed with acute gastroenteritis and had one hospitalization due to incoercible vomiting, in context of a flu (Influenza AH3 positive). For maintenance of symptoms he recurred to a pediatric gastroenterologist and made a colonoscopy. The colonoscopy revealed a large mass with 4 cm, in transverse colon, near the hepatic angle. Multiple biopsies were taken and a colic tattoo was made to mark the lesion. Pathological examination revealed an adenocarcinoma of the colon. Computed Tomography of the abdomen confirmed the diagnosis. There was a family history of rectal cancer (grandfather), without pathogenic variants in MSH2 and MLH1 study. The child was submitted to a laparoscopic radical right hemicolectomy that was uneventful. The child withstood the procedure well and was discharged 4 days later. **Conclusions**: The signs and symptoms of colonic carcinoma in childhood are really no different from those in adults. In any child with unexplained abdominal pain or bleeding per rectum, colon cancer should be suspected and investigated. Non-expectation of this condition leads clinicians in directions other than towards a diagnosis of malignancy.

Case Report Posters Day 1 Group 7
Moderator: A. ZANOTTI- PARAGUAY

[SP 61] Title: OBSTRUCTION INTESTINAL DUE TO CHYLOUS MESENTERIC CHYST
Author: Wahyu Din, Suwardi
IntroductionMesenteric cysts are identified in 1 of 250 000 hospital admissions. Mesenteric cysts can occur anywhere in the mesentery of the gastrointestinal tract and also may extend from the base of the mesentery into the retroperitoneum: 60% of mesenteric cysts occur in the small-bowel mesentery, 24% in the large-bowel mesentery and 14.5% in the retroperitoneum. Chylous mesenteric cysts have an estimated incidence of 7.3% of all abdominal cysts. Although often asymptomatic, 10% of patients with such cysts present as an acute abdomen. The mainstay of therapy is the complete surgical removal of the cyst.**Methode**:Reported a case of A 2 year-old Child with intestinal obstruction duo to Chylous Mesenteric Cyst. Patient generally presented with abdominal pain, abdominal distension, inability to have a bowel movement or pass gas and greenness vomitting in one day before admission. At the physical examination, there are abdominal distension, tenderness, auscultation reveals hiper peristaltic.. Plain abdomen finding the loops of the small bowel are dilated and distribution of bowel gas does't till the distal bowel segment showed obstruction in high level tract.US finding a unicystic and multilocular cystic mass compressing neighbouring ileum. This patient performed complete surgical removal of the cyst and the affected intestinal segment.Intestinal resection 10 cm along and do anastomose ileo-ileal. The postoperative recovery was normal and the patient returned home on the ninth postoperative day.**Conclusion**Intestinal obstruction due to Chylous mesenteric cyst have a good prognosis. The mainstay of therapy is the complete surgical removal of the cyst.**Key word** : Intestinal Obstruction; Chylous Mesenteric Cyst; Complete surgical removal

[SP 62] Title: INTERCOSTAL ECHOGUIDED BLOCK IN A PEDIATRIC PATIENT WITH NOONAN SYNDROME AND CHRONIC REFRACTORY PAIN
Author: Henar Souto
Aim of study: Noonan syndrome is a condition that affects many areas of the body. Mutations in the PTPNN11 gene cause about half of the cases. This condition may cause chronic pain conditioned by different musculoskeletal malformations. **Case report:** A 10-year old female patient with Noonan syndrome and an accessory intrathoracic rib with non articulated origin in the posterior third rib of the costal body, suffered from pain in the left rib cage, the pain increased with expiratory efforts and was maintained with left lateral decubitus. An intercostal left block T3, T4 and T5 was performed under general anesthesia in which 5 mg of levobupivacaine per level and triamcinolone were administrated after refractory treatment (nonsteroidal anti-inflammatory and tramadol). Pain relief was observed in the following checkups monthly. Follow-up period: 18 months**. Conclusions**: Selected patients with chronic and refractory pain in the rib cage may benefit from intercostal block.

[SP 63] Title: HEPATIC AMOEBIASIS WITH PLEUROPULMONARY INVOLVEMENT : A RARE ASSOCIATED CONDITION
Author: Doudou GUEYE
Aim of the study: to report on a rare association of hepatic and pleuro-pulmonary amoebiasis confirmed by amoebic serology. **Observation**: It was about a two-year-old and half child, admitted for the management of right basithoracic and hypochondrium pain, associated with a productive cough with muco-purulent sputum. This clinical feature had been evolving for 2 weeks. We noted a past medical history of dysentery syndrom that occured 3 weeks ago. The clinical examination revealed a fever at 39,6°C. Abdominal palpation showed a painful right hypochondrium. Pleuro-pulmonary examination found a basal right fluid pleural effusion featuring stony dull sound, low vocal resonance and breath sounds. Biological findings showed hyperleucocytosis, a positive CRP with unremarkable liver disorder. Parasitic stool examination was negative. Standard thoracic X-Ray revealed a rounded homogenous opacity of the lower lobe. The ultrasound pointed out a collection of 170cc straddling segments VII and VIII and a right pleurisy. A surgical drainage of the collections was performed and an antibiotherapy based on metronidazole was conducted.The thoraco-abdomino-pelvic CT showed a pulmonary abcess and hepatic abcess of

segments VII and VIII. Bacteriological analysis of pus didn't isolated a germ. Amoebic serology by passive haemagglutination was positive. At 6 months follow up, evolution was favorable. **Conclusion:** Hepatic amoebiasis with pleuro-pulmonary amoebiasis involvement is uncommon. In case of a negative bacteriological analysis of pus, amoebic serology is an alternative.

[SP 64] Title: BRONCHOCAVITARY COMMUNICATION IN LUNG HYDRATID: CHALLENGES IN THE MANAGEMENT AND OUTCOME

Author: Nitin Sharma

Aims: To analyze the presence of bronchocavitary communications and their outcomes in operated cases of hydratid lung. **Material and methods:** The data of the patients operated for lung hydratid between June 2017-May 2019 was obtained. All the cases were operated by postero-lateral thoracotomy approach. The number of bronchocavitary communications was recorded on table after excision of the cyst and they were suture repaired using Polypropylene. The duration required for repair and the average fall in the SPO2 was recorded. Those where data was incomplete or who did not come in the followup were excluded. The outcome parameters considered were number of bronchocavitary communications, duration of hospital stay, duration of intercostal tube, duration of air leak in the ICD, Requirement of ventilator support. **Result:** A total of 36 cases were operated during the study duration. There were 11 females and 25 males. Mean age at presentation and surgery was 6 years (Range 2-14 years). There were 25 right sided, 8 left sided and 3 bilateral cysts. The average duration of hospital stay was 14 days (Range:12-34 days). Mean duration of surgery was 2.15 hours (Range:1.45-3.15 hours). Bonchopleural fistulas were present in 34 cases. The average number of communications was 3 (Range: 0-8). The average duration required for suture closure was 30 seconds (Range 20-180seconds). The average fall in the SPO2 was 40% (Range 20-74%). None of the case was operated with a double lumen endobronchial tube. Ventilator support in the postoperative period was required in 4 cases. Average duration of intercostals tube drainage was 7 days (Range:6-14 days). Brisk column movement and persistent air leak in the ICD was seen in 2 cases. **Conclusion:** Hydratid cyst lung is generally associated with bronchocavitary communication, these cases needs judicious management for better outcome.

[SP 65] Title: ESOPHAGOPLASTIES IN CHILDREN DURING CAUSTIC STENOSIS OF THE ESOPHAGUS: INDICATIONS, SURGICAL TECHNIQUES, RESULTS IN THE PEDIATRIC SURGERY DEPARTMENT OF THE UNIVERSITY HOSPITAL CHARLES DE GAULLE

Authors: Ouedraogo S. F., Wandaogo A., Ouedraogo I., Tapsoba W.T., Béré B., Bandre E.

Esophagoplasties are intended to replace a greater or lesser part of the esophagus by a portion of the colon. The objective of our work was to evaluate 17 cases of œsophageal replacement performed in the department.

All patients had a history of caustic stenosis of the esophagus. The failure or inability to perform dilatations was the reasons for the operative indication. The average age of our patients was 5.70 years and the nature of the caustic ingested was mainly caustic soda and potash.The average time for surgery was 5.5 months and 14 patients had prior gastrostomy. The main transplants used were the transverse colon (n = 14), the right ileocolon (n = 2) and the right colon (n = 1). Esophagectomy was performed in 3 patients and the transplant route was predominantly retro sternal (n = 14).

The main complications were cervical fistulas (n = 6) and respiratory distress (2). In immediate postoperative we noted 3 deaths. One last patient died 6 months after a flange occlusion. After an average global retreat of 3 years, only one patient has a narrowing of the oeso-colic junction. The others did not present any other evolutionary complication. The results of our esophagoplasties are encouraging but require an improvement of the surgical and anesthetic plateau.

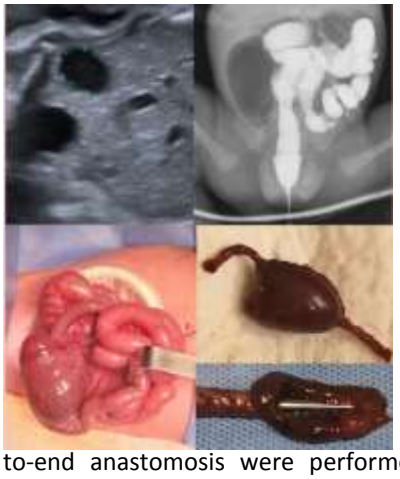
[SP 66] Title: SEGMENTAL DILATATION OF THE DISTAL ILEUM ASSOCIATED WITH ANORECTAL MALFORMATION

Author: Luciana Lerendegui

Aim of the study: Segmental dilatation of the small bowel is an infrequent malformation that can mimic other entities. It can present with intestinal obstruction in the neonatal period but many cases will remain undetected

until they develop late symptoms. Prenatal ultrasound may be helpful to achieve an early diagnosis. Congenital malformations such as cardiopathy, other intestinal anomalies and abdominal wall defects, are frequently associated. We report a case of segmental ileal dilatation associated with anorectal malformation.

Figure 1: Comparison between imaging (prenatal ultrasound and postnatal contrast enema) and intraoperative findings.



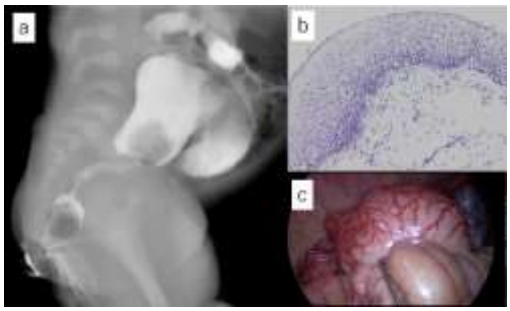
Case description: Newborn premature twin male with prenatal ultrasound (29 weeks of gestation) that showed a peristaltic anechoic 22 mm image in the right abdomen. The mother had a previous history of thrombophilia. At birth, a low-type anorectal malformation was diagnosed. Postnatal ultrasound showed no abnormalities. However, a persistent dilated radiolucent image in the right flank was visible in the X-Ray, with no signs of obstruction. Digestive symptoms were difficult to assess due to the combined presence of the anorectal malformation. The contrast enema showed a normal caliber colon displaced towards the left due to the radiolucent image.Through diagnostic laparoscopy, a segmental dilatation of the distal ileum with an abrupt transition to the adjacent bowel, was properly identified. Resection and end-to-end anastomosis were performed through transumbilical approach. Anorectoplasty was also completed. Pathology report showed a normal bowel wall structure but with submucosal edema and hemorrhage. Postoperative recovery was uneventful. After a 5-month follow up period, no adverse events have been identified. **Conclusions**: Congenital segmental dilatation of the bowel can be missed because of its nonspecific clinical features and radiological signs. Additionally, the presence of concomitant malformations can be misleading. In this aspect, prenatal ultrasound can point in the right direction. Management is often achievable during the neonatal period by a minimally invasive approach, preventing future complications due to obstruction, malabsorption or intestinal bleeding.

[SP 67] Title: LAPAROSCOPIC SUPER-LOW ANTERIOR RESECTION FOR CONGENITAL RECTAL STENOSIS USING SWENSONâ€™S TECHNIQUE

Authors: Taichiro Nagai, Keisuke Yano, Toshio Harumatsu, Shun Onishi, Koji Yamada, Makoto Matsukubo, Mitsuru Muto, Tatsuru Kaji, Satoshi Ieiri.

Institution: Kagoshima University Hospital

Aim of study: We herein report a case of laparoscopic treatment for congenital rectal steatosis.



Case description: A six-month-old girl presented with vomiting and abdominal distention and was transferred to our hospital. She had a normal anal appearance. Contrast enema revealed caliber change, and the narrow segment of the rectum was 2.5 cm long (Fig. 1a). A rectal mucosal biopsy showed a normal submucosal plexus and no acetylcholine esterase-positive fibers. She was diagnosed with congenital rectal stenosis. Symptoms became clinically evident after starting baby food. Dilatation was ineffective. We performed laparoscopic super-low anterior resection for a stenotic lesion. With the patient in a lithotomy position, the umbilicus was opened longitudinally, and a 5-mm trocar and 5-mm 30° laparoscope were inserted. Three additional 5-mm trocars were inserted. During the operation, a full-thickness rectal biopsy was performed again, showing no abnormal findings. The sigmoid colon and rectum were dilated above the perineal reflection, and the narrow segment was confirmed to be distal to the perineal reflection (Fig. 1b). The stenotic rectum was carefully dissected using bipolar scissors to avoid injuring the pelvic nerve. The stenotic rectum and dilated sigmoid colon were resected just above the anal canal using Swenson's technique. The normal sigmoid colon was pulled through, and anastomosis was performed outside the anus. The postoperative course was uneventful. The resected specimen revealed the presence of

ganglion cells with no inflammation (Fig. 1c). **Conclusions**： Laparoscopic super-low anterior resection for rare congenital rectal stenosis was feasible using Swenson's technique.

[SP 68] Title: A NEWBORN WITH UMBILICAL CORD CYST AFTER BIRTH

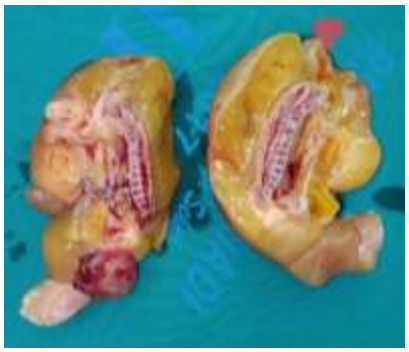
Author: Shohei Yoshimura

Background and purpose: Umbilical cord mass is a relatively rare presentation and we pediatric surgeons hardly see this symptom. The differential diagnosis of umbilical cord mass include omphalocele, omphalomesenteric duct remnant, umbilical polyp, umbilical hernia, umbilical pseudocyst and so on. However, its exact preoperative diagnosis is quiet difficult. In this presentation, we share a rare umbilical cord cyst case with urachal remnant. **Case presentation**: A 2-day-old male baby was found to have a 2 cm diameter growing mass in the umbilical cord by midwife. The patient's perinatal course was uncomplicated and he was delivered by Caesarean section at 40 weeks gestation without umbilical cord abnormality. Umbilical stump exploration was performed in the next day. The skin was incised along the umbilical ring and identified two umbilical arteries, a single umbilical vein and urachus remnant which communicated with a cyst in the umbilical cord. Omphalomesenteric duct remnant was not seen. We resected umbilical cord including cyst and urachus remnant. We pathologically confirmed urachal remnant and concluded that patent of urachus resulted in umbilical cord cyst after birth. His postoperative course was unremarkable and he discharged to home 10 days after the operation. **Conclusion:** We experienced a rare umbilical cord cyst case, which resulted from urachal remnant. When we see umbilical cord mass after delivery, we should perform umbilical stump exploration to make exact diagnosis.

[SP 69] Title: FETUS IN FETU: PARASITIC TWIN IN 19 DAYS OLD BOY

Author: Aitara Sihombing

Aim of the study: Fetus in fetu (FIF) is a very rare and peculiar congenital anomaly by conjoined of malformed



monozygotic diamnionic parasitic twin into the body of otherwise normal twin partner which frequently elaborate to distinguish from teratoma. This study aim to give an overview to differentiated towards potential of teratoma malignant. **Case Presentation:** A 19 days old baby boy presented a large abdominal mass since his birth. Antenatal ultrasonography during the third trimester of gestation expressed the presence of multi located cystic retroperitoneal lesion with calcification. Computed tomography (CT) imaging confirmed the existence of retroperitoneal fetus in fetu. A surgical exploratory laparotomy was performed, then the mass resected by using in-toto method. The parasitic fetus is anencephalic with a well-developed trunk and lower limbs, has six toes on right side likewise hair bearing. Autopsy represent that the fetus arranged by thoracic cage, vertebral column and bowel-like tissue. Histopathological examination show a composition of mature benign tissues. **Conclusions:** The infrequent condition of fetus in fetu typically presents as an abdominal lump which can be diagnoses pre operatively. The conceived fetus has vertebral column after passing through a primitive streak stage and organogenesis landmark, without neoplastic growth or malignancy potency. In contrary, teratoma consists of pluripotent cells, without organogenesis and vertebral segmentation because teratoma not lead a primitive streak stage. Clinically, the presence of an axial skeleton and vertebral column is sign that distinguishes teratoma from fetus in fetu. Surgical refer an excellent outcome and the necessity to differentiated fetus in fetu from teratoma.

[SP 70] Title: PRIMARY PSARP IN THE MANAGEMENT OF HIGH ARM: CHALLENGES AND OUTCOME

Author: Nitin Sharma

Aims: To analyze the outcome in cases managed by Primary PSARP for High ARM

Material and Methods: All the cases presenting with high ARM from june 2014 to May 2019 were included. Those with no associated anomaly, comorbidity, and no spine abnormality were considered for primary PSARP. A Standard PSARP was done using 2.5 magnification in prone jack knife position. Urethral fistula if present was

repaired using 5-0 vicryl. Rectal pack was kept around a flatus tube for four days in the postoperative period to prevent local spillage. All the patients were followed up on 15 day, 1 month and then every 3 monthly till a minimum of 2 years. Those with incomplete follow up and cases of pouch colon were excluded. Outcome was analyzed as immediate outcome in terms of duration of surgery, duration of post operative stay; wound related issues like infection, dehiscence and local excoriation. Long term outcome was analyzed in terms of continence using krickenbeck's criteria. **Result**: Forty seven of 69 cases formed the study group. The average age at surgery was 34 hours(Range:24-120 hours). The average duration of surgery was 2.15 hours(Range:1.30-3.15 hour). The average duration of hospital stay was 7 days(Range:5-14 days). Rectourethral fistula was present in 41. Local wound infection was present in 6. Two required diversion for wound dehiscence. Four required abdominoperineal approach for very high pouch. Perineal excoriation was present in 17 while severe excoriation was seen in 4. Occasional Soiling (grade 1) was present in four. Constipation manageable with dietary modification (grade1) was present in 6 and requiring laxatives (grade2) was present in 2. One had urinary incontinence. **Conclusion**: Primary PSARP can be offered in the management of High ARM. This has equally good results as compared to the standard multistage approach. Whenever feasible it should be considered.

[SP 71] Title: ANORECTAL MALFORMATION IN 8 "YRS "OLD CHILD CASE REPORT

Author: MOHAMMED IDRIS

Anorectal malformations are common congenital malformations with an average incidence of 1 in 5000 and are surgically correctable with a good prognosis. The Diagnosis is made by perineal examination during routine neonatal examination, but the it may be missed especially if the delivery was not in a hospital .we present a case of delayed presentation of anorectal malformation in order to recognized some of the pediatric surgery problems in low income countries . 8- years old male child, delivered at home by a midwife . The child had constipation from neonatal period and was passing thin caliber small amount of stool he also developed abdominal distension marked and persistent , on examination he was dehydrated, abdomen was distended and perineal examination revealed absent anal opening and anocutaneous fistula with bucket handle deformity was found. Anoplasty was done and the child recovered well. This case illustrate the importance of the neonatal examination and the importance of the training for the midwife in order to diagnose the anorectal malformation early.

[SP 72] Title: SELF-INSERTION OF URETHRAL FOREIGN BODY BY A 12 YEARS OLD BOY- CASE REPORT

Author: Qais Muraveji

Foreign bodies have wide varieties by object and mechanism of insertion in genitourinary tract. It needs careful investigation and evaluation for diagnosing the type of object and choosing best treatment method for self-inserted foreign bodies through the urethra. The presentation in children differs from a penile stricture up to metallic objects for auto stimulations in adolescents. It is believed that psychiatric disorder and mental defects are causes of this event. In this case, we report a self-inserted foreign body into urethra and its management in a 12 years old boy, presented to ER with urine retention and foreign object into his penis. Then the foreign object successfully retrieved by direct removal under general anesthesia and followed up for two months.

Key words: Pediatric Self-insertion, Foreign Body, Genitourinary Tract, Urine Retention

General Surgery Posters Day 1 Group 8
Moderator: Esmael Taqi

[SP 73] Title: INFANTILE BREAST MYXOFIBROMA

Author: Ines Ben chouch

Aim of the study: The pathologies of the mammary gland in children brings to get her several clinical entities. The pathology is benign in the vast majority of cases, but the management must be rigorous. The breast myxofibroma is a rare pathology in infants. The aim is to report a case of an infantile case of this entity. **Case presentation**:It's about an11-years-old boy. He was hospitalized to be explored for a unilateral breast mass which appeared 2 years

before and had progressed in volume .Clinical examination showed an asymmetry of the two breast buds, retro-areolar mass with firm density, mobile, elastic, painful and measuring 2cm of diameter. The mass was hypo-echoic at ultra-sounds exploration and the MRI suspected the diagnosis of breast myxofibroma.
The child underwent a complete macroscopic resection of the mass and the pathological examination confirmed the diagnosis of myxofibroma. No post-operative complications were observed with a follow up time of 2 years. No recurrence of the mass was noted. **Conclusion**: Infantile breast masses are generally benign and don't need aggressive treatments in most cases. Breast myxofibroma is one of benign of breast pathology, but pathological examination of the masses is usually obligatory in order to rule out a malignant origin.

[SP 74] Title: PRESENTATION OF INTERESTING CASES RARELY SEEN BY SLIDES SHOW PICTURES ONLY FOR FALLOWING DISEASE

Author: Nawfal Dawood

Presentation of Interesting cases rarely seen by slides show pictures only for fallowing disease

1. Big heamangioma involving lower lip in 10 months old female
2. Both testes were seen on one side in a child 1.5 yesrs presented with left undecended testes and hernia
3. Alveoler rhabdomyosarcoma in the neck of 10 weeks femal
4. Inflamatery myoplastic tumor in 6 month male
5. Parastic twin

[SP 75] Title: THORACIC EMPYEMA AS COMPLICATION OF AN ACUTE APPENDICITIS IN CHILDREN

Authors: Dorsaf Makhlouf, Rachida Lamiri ,Nahla Kechiche, Arije Zouaoui , Amine Ksia, Lassaad Sahnoun Mongi Mekki Mohssen Belguith, Abdellatif Nouri
Institution: University Hospital Fattouma Bourguiba Monastir, Tunisia

Aim: Although thoracic empyema and acute appendicitis are commonly diagnosed in children, these disorders are rarely presented together. The aim of this study is to review the pathophysiological mechanisms that explain this unusual presentation of a common disease.**Case description**: A 3-year-old boy was admitted for abdominal pain, nausea and vomiting. He had no relevant medical or surgical history. Physical examination noted tenderness in the right lower quadrant. The white blood cell count was 19.000 cells/mm3. Ultrasonography showed a right subphrenic abscess with a fecalith in the enlarged appendix, in the right lower quadrant of the abdomen. The patient was operated. Exploratory laparotomy was performed. It revealed a subhepatic perforation of the appendix. Appendectomy and drainage of the abscess were performed. The bacteriologic cultures of the abscess grew E. coli specie and effective antibiotics were administered according to the antibiogram. At postoperative fourth day, the abdominal drain was pulled out. At the same day, his body temperature increased to 39°C. The wound was clear and the abdomen was mild tender. Furthermore, CT scan revealed no abnormal findings in the abdomen but massive pleural effusion was detected in the left hemitorax. Thoracentesis removed purulent fluid with 80% polymorphonuclear. Bacteriologic culture of the pleural fluid grew the same with the appendicular abcess ones, E. coli. The management option was to stabilize the patient with intravenous antibiotics. The treatment duration was 21 days and the evolution was good. **Conclusion**: A thoracic empyema caused by an abdominal infection is a rare entity, especially as a consequence of acute appendicitis. Several hypotheses have been proposed. So, when an abdominal infection is established, it may eventually compromise the thoracic cavity by contiguous spread or due to bacterial translocation.

[SP 76] Title: PERCUTANEOUS TREATMENT OF SUPERFICIAL CYSTIC LYMPHANGIOMA

Authors: Nahla Kechiche, Dorsaf Makhlouf, Rachida Lamiri, Arije Zouaoui , Badii Hmida, Amine Ksia, Lassaad Sahnoun, Mongi Mekki , Mohssen Belguith , Mondhor Golli , Abdellatif Nouri
Institution: University Hospital Fattouma Bourguiba Monastir , Tunisia

Aim: To show the role of interventional radiology in the treatment of superficial cystic lymphangiomas. **Methods**: We report a series of 15 children aged from 7 months to 5 years, consulting for cervical, axillary or pectoral

swelling discovered by their parents. All children were scanned by ultrasound and sectional imaging (CT and / or MRI).All these patients were treated with sclerotherapy with Aetoxisclerol 0.5% in 10 cases and with absolute alcohol in 2 cases. **Main results**: Ultrasound has shown in all cases one or more cystic anechoic formations, more or less compartmentalized, insinuating into the free spaces. Sectional imaging allowed us to detail relationships with adjacent structures, especially vascular ones.
The technique consists of a puncture, a suction with washing and a final sclerotherapy by the foam (Aetoxisclerol 0.5% mixed with saline and PDC) or by absolute alcohol. The procedure is done in a vascular room equipped with fluoroscopy and under general anesthesia. Most patients had between two and three sessions. No serious accidents after the procedure were noted, A case of right submandibulitis was noted in 1 case. **Conclusion**: Interventional radiology is gaining more place in the therapeutic arsenal of superficial cystic lymphangioma. Sclerotherapy provides similar results with surgery, with less complications and respect for the child's aesthetic.

[SP 77] Title: UNUSUAL LOCATIONS OF HYDATID CYST IN CHILDREN

Authors: Dorsaf Makhlouf, Nahla Kechiche, Rachida Lamiri, Arije Zouaoui, Amine Ksia, Lassaad Sahnoun, Mongi Mekki, Mohssen Belguith, Abdellatif Nouri
Institution: University Hospital Fattouma Bourguiba , Monastir, tunisia

Aim of the study: Extrahepatic and extrapulmonary hydatid cysts are rare in children and only a few sporadic cases have been reported. The aim of this study is to present our experience in unusual locations hydatidosis in children. **Methods**: A retrospective study of 25 cases of aberrant location of hydatid cyst, which were admitted to our department from January 2007 to December 2018. Preoperative signs and symptoms were related to the size and localization of the cysts. Serological test, abdominal ultrasonography and computed tomography (CT) confirmed the diagnosis.**Main results**: Twenty-five patients with 7 different locations of the hydatid cyst were admitted to our department. The mean age of the patients was 9.76 years, with a range between 3.5 and 16 years. Half the patients (50%) had concomitant hepatic localization. Hydatid cysts were located intra-abdominally in 21 cases (spleen in 4 cases, peritoneum in 12 cases and kidney in 5 cases). The other locations were spermatic cord in one case, heart in one case, thyroid gland in one case and psoas in one case. All children underwent surgery except two who were treated with Albendazole (the hydatid cyst of the spermatic cord and of the heart). There was no mortality found in these patients.**Conclusion**: Hydatid cyst can be present in any anatomical location. Presentation at times is misleading. The surgical treatment is the golden standard. However, medical treatment with albendazole is indicated in cases of multiple hydatid disease and in technically complex cases.

[SP 78] Title: OUR EXPERIENCE OF FOREIGN BODY ASPIRATION IN CHILDREN , A YEAR AND A BIT

Authors: C. Donnelly, CPNP, N. Lim-Sulit, DNP, CPNP

Introduction: Rigid bronchoscopy was traditionally performed in the management of foreign-body aspiration (FBA). More recently, since development of a less invasive method, flexible bronchoscopy has been proposed in some centers for the management of FBA. For the past 16 months, we have applied a decisional algorithm, privileging flexible bronchoscopy for diagnosis and, in some cases, for extraction of foreign body. **Objectives**:To analyze our current management of FBA, to examine the bronchoscopic findings and complications, and to propose a novel algorithm for management of FBA that will help decrease the number of negative bronchoscopies **Methods**: Retrospective medical chart review of all patients with clinical suspicion of FBA who underwent bronchoscopy (flexible and/or rigid) from January, 2018 through May, 2019.**Results**: FB was found in 23 (33%) of the 70 patients included in the study (45 boys, 25 girls; median age: 21.5 months). Diagnosis of FBA was made on first intention in 22/23 (96%) and extraction was performed in 7/23 (30%) by flexible bronchoscopy. Rigid bronchoscopy was necessary for the extraction of the 16/23 (70%) remaining FBs. The rigid procedure was performed as first intention in only two (3%) patients, and one of the two was negative. Among the clinical signs of FBA, none were > 90% specific except for apnea (100%), but which was poorly sensitive (22%). Seven clinical and radiologic signs were found to be significantly different between FB+ and FB- groups: sudden choking, cyanosis, apnea, decreased breath sounds, atelectasis, mediastinal shift, and air trapping. Conversely, when none of these symptoms or signs and no clear history of sudden choking were present (in 15/70 patients), no FB was found. No

life-threatening complications or death were observed. **Conclusion**: Our current management of FBA allows us to avoid almost all negative rigid bronchoscopies. We identified some symptoms, clinical and radiologic signs whose absence was highly predictive of negative bronchoscopy.

[SP 79] Title: IMPROVING THE POST-OPERATIVE HANDOVER COMMUNICATION BETWEEN ANESTHESIA, OR AND PACU NURSES: A QUALITY PROJECT TO INCREASE COMPLIANCE OF ANESTHESIA AND CLINICAL NURSES TO A STANDARDIZED HANDOVER PROCES

Author: KHADEJA eribi

Introduction: ISBAR is a common communication tool used among health care providers. It has an important role in providing safest, best quality care for patients, and in the effective functioning of a health care system. Ineffective post-op handover communication and failures to utilize ISBAR tool noticed by health care team as there was no standard post-operative handover process, and often only minimal post-operative information was shared. OR, PACU nurses, and anesthesia developed a standardized post-operative handover process that reflects the essential critical elements in patient care. We aimed to increase nurse and anesthesia compliance to hand-over process by 90% in 7 weeks' time period, and to measure nurses' satisfaction before and after. **Methods**: We developed a standard ISBAR tool with the using model of PDSA. PDSA1: created a Standard Information Template with essential information and an explanation of how to effectively escalate concerns using ISBAR. PDSA#2: ISBAR training and education sessions implemented PDSA3: ISBAR guide tool presented in WOW machine and Cerner-Interactive View page was created with available easy access. PDSA5: survey used to evaluate nurse satisfaction before and after. **Results**: ISBAR process was less followed and communication Error noticed with no clear standard ISBAR process. However a significant improvement to the compliance of the newly standardized implemented ISBAR hand-over process noticed. the aim was to reach 90% compliance from Clinical nurses and anesthtesia, nurses compliance increased from 78% to 97%, while anesthesia compliance increased from 73% to 90% , this improved hand-over communication post-operatively and nurse's satisfaction increased from 65% to 94 %.**Conclusion**: Deploying a Standardized ISBAR tool and reinforcement of compliance improved post hand-over communication and increase nurse's satisfaction.

[SP 80] Title: PILONIDAL SINUS AND ADOLESCENCE: IS THERE AN IDEAL SURGICAL APPROACH?

Author: Alexander Siles Hinojosa

Aim of the study: The aim of our study is to compare the surgical technique of block excision with healing by secondary intention (BEHSI) and excision with primary closure according to the karydakis-flap technique (KT) in adolescent population with sacrococcygeal pilonidal disease. **Methods:** An observational, retrospective and multicenter study was carried out with adolescent patients (11-18 years old), between 2011-2017, divided in 2 groups: KT (pediatric surgeons) and BEHSI (general surgeons). **Main Results:** A total of 61 patients (KT:26 and BEHSI:35),mean age (KT:13.4years and BEHSI:26.7years). The mean time (days) of total recovery was significantly shorter in the KT group (37.77 KT vs 107.76 BEHSI, $p<0.001$). Regarding postoperative complications, no statistically significant differences were found into the overall complication rate (53.8% KT vs 40%BEHSI), neither in the incidence of hematoma (3.8 %KT vs 0%BEHSI), or surgical wound infection (43.1%KT vs 56.9%BEHSI). However, statistically significant differences were observed in postoperative bleeding (0% KT vs 25.7% BEHSI, $p=0.005$), appearance of seroma (23.1% KT vs 0% BEHSI, $p=0.003$) and surgical wound dehiscence (42.3% KT vs 8.6% BEHSI, $p=0.002$). The recurrence rate was lower in the Karydakis group (4% KT vs. 28.6% BEHSI, $p=0.015$). **Conclusions:** Both surgical managements are acceptable and safe, but in our study the Karydakis-flap technique has been shown superior for the surgical treatment of sacrococcygeal pilonidal disease in the adolescent population in terms of postoperative bleeding, recurrence rate and total recovery time. Therefore, the surgical technique of Karydakis may be an excellent alternative for the treatment of pilonidal disease.

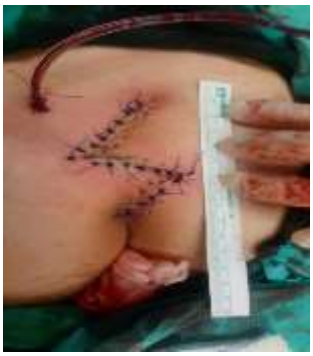
[SP 81] Title: A RETROSPECTIVE STUDY OF CASES OF PILONIDAL SINUS WITH EXCISION OF TRACT AND Z-PLASTY AS TREATMENT IN CHILDREN

Authors: Yusuf Atakan Baltrak

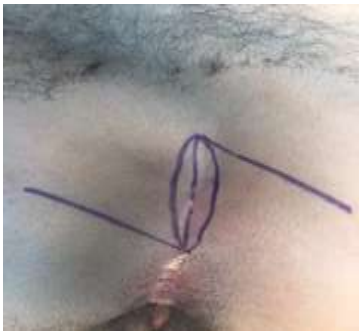
Institution: Kocaeli Derince Education and Research Hospital Department of Pediatric Surgery-Kocaeli TURKEY

Abstract Pilonidal sinus is a common chronic disease of the sacrococcygeal region. The treatment varies according to the clinical presentation of the disease. Although many surgical methods have been suggested, an ideal method is still lacking because of high recurrence rates. The aim of this work is to assess the role of Z-plasty in promoting primary healing in pilonidal disease and to evaluate morbidity and recurrence. This study included 24 patients (15 males and 9 females) who underwent excision of sinus and Z-plasty closure for sacrococcygeal pilonidal sinus. The follow-up period ranged from 6 to 12 months. There were 15 males and 9 females with a median age of 16 years. The mean hospital stay was 2 days. The mean time to return to work after discharge from the hospital was 14 days. There were no recurrences, and all patients were satisfied with the cosmesis. Two patients (5 %) had numbness over the flap. Necrosis of flaps did not occur in any patient. Only three patients were noticed to have wound infection (7.5 %). Five patients (12.5 %) developed wound seroma. Although requiring some technical expertise, excision of sinus and Z-plasty offer superior results with respect to recurrence in the hospital stay and cosmesis of patients with pilonidal sinus.**Keywords**: Pilonidal sinus . Sacrococcygeal region . Z-plasty . Seroma

IntroductionPilonidal sinus disease is a common problem, but its management is frequently unsatisfactory [1].

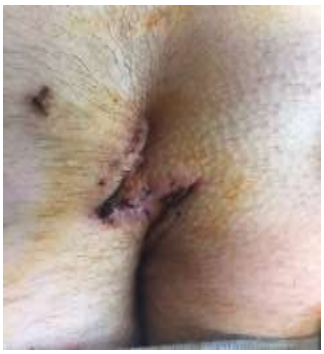


According to Monro and McDermott [2, 3], the factors responsible for the development of pilonidal sinus would appear to be the deep natal cleft together with, in most patients, the presence of numerous hair surrounding it, with their points noticeably directed towards its depth. Multiple case reports described pilonidal cyst formation in jeep drivers in World War II. So many servicemen were affected with pilonidal disease that it was renamed “jeep disease.” These findings led to the belief that pilonidal cysts can be acquired by excessive repetitive trauma to the sacrococcygeal region [4] .Though pilonidal sinus disease has been surgically treated for more than 100 years, its management remains controversial, and many reports [5, 6] have advocated various different approaches. Because no method satisfies all requirements for the ideal treatment, in this study, the results of the Z-plasty procedure were evaluated for the elimination of the disease.**Material and Methods** This was a 3-year study at out institution from June 2016 to April 2019. The population comprised 24 patients with pilonidal sinus disease (15 men and 9 women, median age 16 years (range 14–17 years)). Patients were admitted a day before the surgery, and laboratory tests were obtained. They took a bath the night before the surgery, and the operative field was shaved carefully. On the morning of the operation, patients were transferred to the operating room and given spinal anesthesia. The anesthetized patient was placed in prone position on two rolls (one under the chest and another under the pelvis).



The head of the patient was placed on a roll with 45° lateral angulation. The operative field was draped and prepared with Betadine (Fig. 1). The tracts were excised with a narrow elliptic segment of skin. The incision was next deepened to remove the whole of the natal raphe and to reach the aponeurosis over the erectorspinae at the back of the sacrum. If therewas any residual deep area of granulation tissue, after removing the sinus tract, it was excised. The length of the primary wound was 2–6 cm. The limbs of the Z were cut to form a 60° angle with the long axis of the wound. The length of each limb was equal to the length of the primary wound. The flaps were then transposed without tension (Fig. 2). The transposed flaps were next approximated and sutured with 2/0 vicryl for subcutaneous and 3/0 nylon for skin closure. A simple form of suction drainage through a stab wound was used. The wound was then covered with dressing gauze. **Results**: There were 15 males and 9 females with a median age of 16 years (range 14–17 years). The mean hospital stay was 2 days (range 1–5 days).The mean time to return to work after discharge from the hospital was 14 days (range 10–24 days). Postoperative morbidity involved superficial wound infection in two patients (8.3 %), which was managed by removal of skin sutures,

regular saline dressing, and healing by secondary intention. This resulted in scab formation with resolution of the infectious process. Two patients (8.3 %) had numbness over the flap. Necrosis of flaps did not occur in any patient. There were no recurrences, and all patients were satisfied with the cosmesis (Fig.3). **Discussion:** Pilonidal disease is a painful condition usually occurring in the intergluteal region. It is a problem filled with controversial issues, including who actually first described the disease, its etiology, and its optimal treatment [7]. The condition was probably first described by Mayo in 1833 [8]. Hodges in 1880 first used the term "pilonidal", from the Latin pilus, which means hair, and nidus, which means nest [9]. Z-plasty increases the transverse length by recruiting the lateral tissue and thus obliterates the natal cleft which is the main cause of pilonidal sinus formation [7]. Z-plasty has three major uses. It increases the length of the skin in a desired direction, changes the direction of a scar so it lies in the same direction as the skin lines, and rotates the axis of the tissue included in the Z-plasty flaps [10].Mansoory and Dickson [10] used this techniqueon 120 patients. Complications included three abscesses and twohematomas. There were only two recurrences (1.6 %) at a follow-up of 1 to 9 years. Following surgery, discharge was on the first postoperative day, and patients returned to work2 weeks later. Toubanakis [11] used this procedure on 110 patients. He found no recurrences at follow-up of 1 to 10 years. Bose et al. [12] found 20 % necrosis and 10 % wound infection, and one patient was with hematoma after Z-plasty. Hodgson et al. [13] compared Z-plasty with incision and drainage or excision with marsupialization for pilonidal sinuses. They showed that traditional surgical approaches have resulted in high recurrence rates. They found that no further surgical treatment was required in the Z-plasty group. Behdad et al. [14] reported that the incidence of seroma, infection, and relapse after Z-plasty was 12, 3.3, and 3.6 %, respectively. Compared to previous case series, ours showed an improved result in terms of recurrence, cosmesis, and overall duration of stay. Z-plasty is thus an effective treatment for pilonidal sinus disease offering quicker recovery and better esthetic result.



[SP 82] Title: NEONATAL INTESTINAL OBSTRUCTION SECONDARY TO CONGENITAL DEFECT: AN OMITTED DIAGNOSIS

Authors: Nahla Kechiche, Dorsaf Makhlouf, Rachida Lamiri, Arije Zouaoui , Amine Ksia1, Lassaad Sahnoun, Mongi Mekki , Mohssen Belguith , Abdellatif Nouri

Institution: University Hospital Fattouma Bourguiba Monastir , Tunisia

Aim of the study: Herniation through a congenital mesenteric defect is a rare cause of intestinal obstruction in the neonatal period. Delayed diagnosis may expose the new-born at risk of loss of significant length of bowel. We report a case of a neonate presenting with small bowel obstruction resulting from strangulated mesenteric hernia. **Case description**:A 8-day-old baby girl was referred to our institution for progressively increasing abdominal distension and bilious vomiting. She was born by caesarean section for to fetal distress secondary to knotted and intertwined umbilical cords. She passed meconium on the second day of her life. On examination, baby had stable vital signs and distended abdomen with no palpable masses. There were no clinical signs of sepsis. On digital rectal examination, rectum was empty. Her C-reactive protein was elevated and her white blood count was normal. X-ray abdomen was suggestive of proximal small bowel obstruction. It showed few dilated bowel gas shadows. Ultrasound scanning of the mesenteric vessels has been suggested intestinal volvulus. Following resuscitation, an emergency laparotomy was carried out considering acute small bowel obstruction secondary to volvulus of bowel. Exploratory laparotomy revealed pan-necrosis of the entire small bowel and cecum. There was a wide defect in the mesentery of the jejunal region, near the jejuno-ileal junction, through which the entire bowel was herniated. After discussion with the family, the decision was made to close the mesentery defect without bowel resection and transition to comfort care. He expired soon thereafter, 13 hours after the initial presentation. **Conclusion**:Internal hernia must considered in neonatal bowel obstruction's the differential diagnosis in order to avoid catastrophic bowel loss. Only early diagnosis and treatment remains the key to improving survival.

[SP 83] Title: PRENATAL DIAGNOSIS OF HIGH FORM OF ANORECTAL MALFORMATIONS

Author: Nahla Kechiche

Introduction: Anorectal malformation of all forms concern about 1/5000 births. High form is difficult to diagnose prenatally but it may be detected by ultrasound and confirmed by MRI. **Case report:** A 34-year-old woman, primigravida, was referred at 30 weeks of gestation for suspected multiple malformation syndrome with right renal abnormality, esophageal atresia and doubt as to the presence of an anorectal malformation. The fetus male was eutrophic, with no abnormal external genitalia. There was no family history of congenital malformations or consanguinity. Ultrasound examination at 22 weeks of gestation has noted colon dilatation with enterolithiasis and right kidney cyst. MRI confirmed at 30 weeks of gestation dilated bowel loops and detected a recto-bladder neck fistula; confirming high anorectal malformation. The baby was born at 37 weeks' gestation and high-type anorectal malformation was confirmed. Nevertheless, esophageal atresia with trachea-esophageal fistula was also noticed. After birth, the baby was operated. To repair esophageal atresia, the fistula was closed and we opted for gastrostomy because the upper and lower pouches are too far apart to bring together. Then, a colostomy was performed. Unfortunately, the neonate developed signs of congestive heart failure and died on the 5th postoperative day. **Conclusion:** High-anorectal malformations can cause a major handicap. Accurate prenatal diagnosis is essential in order to inform parents and optimize postnatal care. Fetal MRI is an excellent supplementary examination permitting to confirm higher forms by identifying the level of fistula and confirming the presence of bowel dilatation and enterolithiasis. It will also conduct a review of associated lesions.

[SP 84] Title: CASE REPORT OF CONGENITAL BRONCHO BILIARY FISTULA

Author: Esam Alsanjak, Mohamed Helali

Congenital bronchobiliary fistula is a very rare condition. The first case reported by Neuhauser, Elkin, and Landing in 1952(1). We report this rare anomaly on an eleven month old female who had multiple admissions. The diagnosis of CBBF can be delayed and requires a high degree of suspicious, because it can be mistaken for other causes of bilious emesis. This is the first case reported in Sudan. **Case Report**: We report on an eleven month old female who presented to the pediatric surgery department in Omer Sawii hospital on the 21 of august 2017. The patient is outcome of term uneventful pregnancy without risk factors (no maternal febrile Illness, no PROM, no abnormal vaginal discharges and no drugs ingestion apart from multivitamins). Mother was on regular antenatal care. She delivered by normal vaginal delivery at hospital, cried immediately and started breast feeding, passed urine and meconium at first 24 hours.At day 5 of life she had cough with large amount deep yellowish sputum, not offensive, cough was irrigative and frequent throughout the day but mostly after feeding. Associated with shortness of breath and vomiting when it was severe. She was feeding well, no cyanosis or apnea no diarrhea or abdominal pain or abdominal distension no jaundice, no convulsion and no history of contact with coughing person. The girl was admitted at maternity NICU for 29 days diagnosed as pneumonia, received cefotaxim and vancomycine without any improvement. Pertussis was also considered and azithromycin was added with no improvement. Blood culture showed E. Coli that was sensitive to meropenem. She slightly improved but cough never resolved. She was discharged home. 4 days later she developed the same symptoms again and was re-admitted again.Clinically she looked ill not pale, cyanosed or jaundiced. She was well thriving and without any dysmorphic features , but is distressed with respiratory rate of 64 breath/minute , pulse rate 120 beat/ minute, temperature was 38.3 c , capillary refill time less than 2 seconds . Oxygen saturation was 94% and her weight 3.5 kg centile, length 52cm.

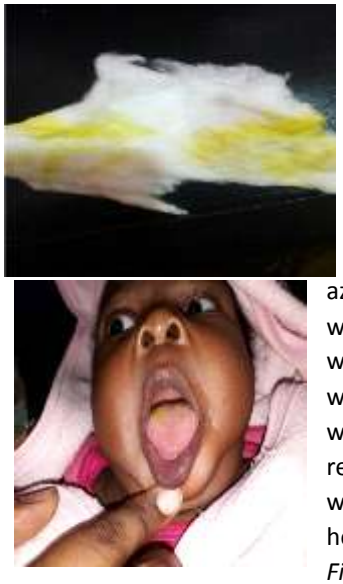
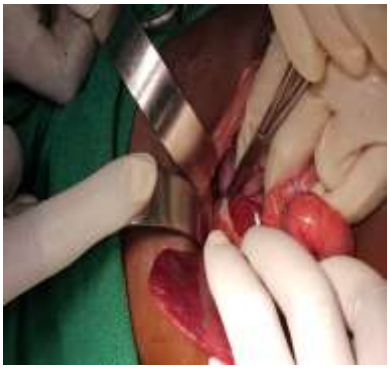


Figure 1: (A) photograph of the patient yellowish sputum. (B) Photograph showing yellowish discoloration of the patient tongue.



The tongue and sputum were yellow stained. There was no clubbing or chest deformity and both sides of the chest moving equally, but there was intercostal and subcostal retractions. There is fair air entry bilaterally with crepitation all over the chest but no wheeze. Investigation showed normal complete blood count. Random blood glucose was normal. Normal renal function test and electrolytes and C reactive protein was 28.ECHO showed structurally and functionally normal heart and sputum . Culture showed pseudomonas and klebsiella which were sensitive to ciprofloxacin and amikacine. Abdominal U/S showed normal liver parenchyma no focal lesion, normal spleen .both kidneys were normal and there was no ascites. MRCP showed beaded bright linear structure approximately 2-5 mm in diameter extending from the region of the left hepatic lobe to the underside of the right main bronchus raise the suspicious of a bronchobiliary fistula. HIDA scan also was done but it showed nothing . CT Chest showing prominent lung vasculature suggestive of cardiac cause, otherwise normal lung paranchyma without cavities, nodules or masses. Also there were no bronchiectatic changes, calcification or effusion. Diagnosis of congenital bronchobiliary fistula was made upon clinical history and examination and MRCP only. Laparotomy was done and intraoperative cholangiogram was needed to determine the track of the fistula which appeared to be extending from the left hepatic lobe to right main bronchus (right chest). The fistula was divided from left lobe of the liver and repaired. Postoperative course passed uneventful and she had a remarkable improvement of her symptoms and discharged home. One month later chest x ray was normal, and there was no evidence of jaundice; and no episodes of coughing. Figure 3; photographs showing parts of the operation (the incision, division and ligation of the fistula).**Disscusion**: Congenital bronchobiliary fistula is a very rare condition. The first case reported by Neuhauser, Elkin, and Landing in 1952(1). The fistula had been demonstrated by bronchography, but unfortunately the patient died before surgery could be performed. Enjoji(2) in 1963 reported a similar fistula in a 7-month-old infant who died. StigoF(3) in 1966 published the first successfully treated case in a 14-month-old girl. Weitzman(4) reported a successfully treated casein a 2 year, 9 month-old infant and quoted a personal communication from Haight and Graves that they had successfully treated a case in 1958.The diagnosis of CBBF can be delayed and requires a high degree of suspicious, because it can be mistaken for other causes of bilious emesis. This is the first case reported in Sudan so the diagnosis delayed for about 8 months. Bronchoscopy with contrast studies and HIDA scan have beenthe mainstay of diagnosis of CBBF (3, 4), but in this case HIDA scan was negative and the diagnosis made only by MRCP MRI.Most of the previous authors found the fistula entered the right main stem bronchus, and all reported cases have shown communication of the fistula to the bile duct system in the left lobe of the liver(5), and we found the same scenario in our case. A search of the medical literature failed to reveal any report on such presentation in our country and whole Africa continent and hence it is worth reporting this patient presentation to share the experience. **Conclusion** Congenital bronchobiliary fistula is an unusual condition. Misdiagnosis or delayed diagnosis are very common and it require a high degree of suspicious to diagnose. Bilious sputum should alert pediatric physicians to investigate in the line of bronchobiliary fistula . MRI MRCP, HIDA scan and bronchoscopy are essential to confirm the diagnosis. Management of such a case is challenging but rewarding.

General Surgery / Lower GI Poster Day 1 Group 9
Moderator: Tahmina Banu

[SP 85] Title: MANAGEMENT AND OUTCOME OF VESTIBULAR FISTULA IN SUDAN
Author: Tarig Kabashy
Background: Anorectal malformations are birth defects in which the anus is absent or malformed. Its incidence occurs in 1 in 5000 births and affects boys and girls equally. Vestibular fistula is ectopic anus opens in the vestibular. **Objective**: To know management and outcome of vestibular anus in Sudan **Methods:** It was Descriptive prospective, multicenter, hospital based study, which was conducted in 5 center of pediatrics surgery in Sudan, in period march 2018 to march 2019. The study sample was included (66 cases). Data was collected using a questionnaire. Data was analyzed by using SPSS. **Results:** Among the 66 patients, age that noticed vestibular anus were; since birth 48 (72.7%), 2-4 months 9 (13.6%), first month 8 (12.1%) and 5-12 months 1 (1.5%).
age of presentation were 2-4 months 20 (30.3%), first month 17 (25.8), since birth 17 (25.8) and 5-12 months 12 (18.2%). 59 (89.4%) was repair with colostomy and 7(10.6%) was repair without colostomy. Mostly type of repair was limited PSARP 32(48.5%), ASARP 25 (37.9%) and anal transfer 9 (13.6%). Most complication were anal stenosis 25 (58.1%), minimal wound infection 8 (18.6), perineal body disruption 5 (11.6%), rectovaginal fistula 3 (6.9%) combined perineal body disruption with anal stenosis 1 (2.3%) (n=43). 46 (69.7%) of patients had not perineal body contraction and 20 (30.3%) of patients had perineal body contraction **Conclusion:** This study concedes that Limited PSARP and ASARP withoutcolostomy carried a risk of wound dehiscence. Two stages correction of RVF is safer and more beneficial than one stage procedure, especially in our locality. Earlydetection of vestibular fistula improved the outcome of surgery and decrease complication.

[SP 86] Title: EFFECTS OF HYDROGEN-RICH SALINE SOLUTION ON INTESTINAL ANASTOMOSIS PERFORMED AFTER INTESTINAL ISCHEMIA REPERFUSION INJURY
Author: Sibel Eryilmaz, Zafer Turkyilmaz, Ramazan Karabulut, Merve Altin Gulburun, Aylar Poyraz, Ozlem Gulbahar, Burak Arslan,Kaan Sonmez
Institution: Pathology and Biochemistry, Ankara, Turkey
Aim of study: Regardless of the etiologic factor, a spectrum of bowel injury ranging from completely reversible alteration of bowel function to gangrene of the intestines may develop following intestinal ischemia reperfusion injury(IRI).In this study, we investigated the effects of hydrogen-rich saline solution (HRSS) on intestinal anastomosis performed after intestinal IRI. **Methods**: 30 Wistar-albino female rats were randomly divided into five groups. Only laparotomy was performed in Sham group. Intestinal 45 minutes IRI was performed by clamping the superior mesenteric artery in the other 4 groups. After intestinal IRI, anastomosis was performed by cutting the intestine from the proximal 15 cm of the ileocecal valve at the 1st and 24th hours. HRSS was given intraperitoneally in 5 ml / kg before reperfusion and other 4 days in the HRSS1 and HRSS24groups, no treatment was given in the IRI1 and IRI24 groups. After five days, all groups underwent re-laparotomy. Anastomotic bursting pressures were measured in all groups, except Sham group. TNF-α, IL-6, MPO and MDA levels were measured in the tissues taken from the anastomosis line. Tissue sections were evaluated histopathologically and apoptosis index was determined by TUNEL method. The results were analyzed by using statistical software SPSS for multiple comparisons, one-way analysis of variance (ANOVA) and Pearson's Chi-Square test. **Main results**: Although tissue antioxidant MPO, oxidant MDA, inflammatory IL-6 and TNF-α values were not statistically significant between groups, degree of tissue damage and apoptosis levels were lower and anastomotic bursting pressures values were higher in HRSS1 and HRSS 24 groups compared to IRI1 and IRI24 groups. **Conclusion**: HRSS is effective in reducing intestinal damage caused by ischemia / reperfusion injury: HRSS has a potential to reduce the detrimental effects of intestinal anastomosis performed after intestinal IRI.

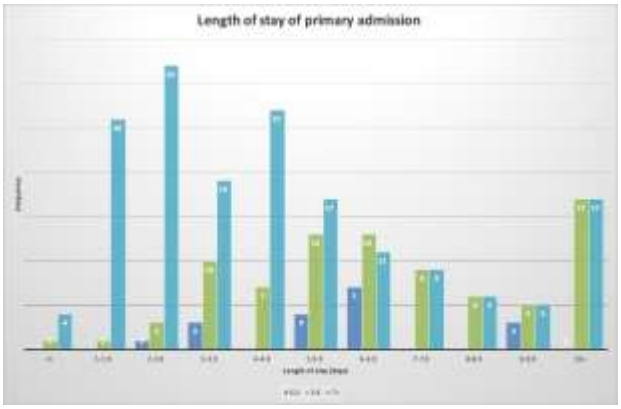
[SP 87] Title: THE EFFECT OF THE DURATION OF SYMPTOMS OF INTUSSUSCEPTION ON THE SUCCESS OF HYDROSTATIC REDUCTION
Author: Mostafa Zain, Ahmed Aboelela, Mostafa Rashad

Introduction: Intussusception is the most common abdominal emergency in pediatrics, especially in children younger than 2 years of age. It is widely believed that hydrostatic reduction of intussusception is less successful in children with prolonged symptoms prior to presentation.
Objective: The aim of this study was to evaluate the success of hydrostatic reduction in relation to the duration of the symptoms.**Patients and Methods:** A prospective study was conducted at Pediatric Surgery Department, Alexandria University Hospitals. All children presented to Shatby Children Hospital, with ultrasound proven intussusception from January 2017 to May 2018 were included. In all cases, hydrostatic reduction was performed except if there was clinical or radiological evidence of peritonitis or perforation. Patient details, including the presenting symptoms, duration of these symptoms, physical findings, and the findings on abdominal x ray and ultrasound were prospectively recorded.**Results:** Of 174 children presenting with intussusception, hydrostatic reduction was attempted in 148 and was successful in 117 (79%). There were 20 successful reductions with symptoms <12 hours (76%), 45 with symptoms for 12-24 hours (83%), and 35 with symptoms for 24-48 hours (76%). and 17 with symptoms > 48 hours (77%). **Conclusions:** The success of the hydrostatic reduction was not significantly affected by duration of symptoms.

[SP 88] Title: AGE AND MICROORGANISM AT PRESENTATION SHAPE LENGTH OF STAY AND HAVE A SIGNIFICANT IMPACT ON SEVERITY OF DISEASE IN PAEDIATRIC APPENDICITIS

Author: Ingo Jester

Aims: To identify whether age at presentation has an impact on severity of the disease process for paediatric appendicitis. This was prompted by an on-going effort to reduce post-operative collection and intervention rate for intra-abdominal infection.**Methods:**Data was retrospectively collected over a 1 year period (144 patients), and then prospectively for a 1 year period (118 patients)(2016-18). Patients were reviewed for length of stay (LOS), disease severity (normal appendix, simple or complex appendicitis), postoperative collection rate and intervention rate for postoperative collection. Outcomes were compared between 3 groups; 0-2, 2-6, 6-17 years. Analysis with chi^2 and Wilcoxon rank sum tests.**Main results:**Age was significantly related to disease severity (p=0.008) with the older group more likely to have a normal appendicectomy, and the younger group more likely to have complex disease.There was no significant difference between age groups for collection rate (p = 0.50), or for intervention (p=0.12), although results trended to less re-interventions in the youngest group.LOS had a bimodal distribution with peaks at early discharge and longer length of stay (7+days). The younger age groups were more likely to need a 4-6-day admission. (Fig1)Streptococcus Anginosus (SA) prevalence is significantly higher in the 0-6 year cohort (19/96) compared to 7+ cohort (13/153) (p=0.01). In the 7+ cohort with SA nearly 50% (8/18) required postoperative intervention**Conclusions:**Managing paediatric appendicitis remains challenging with post-operative collection rates close to 20%.LOS is more closely correlated to age than collection rates. It is possible to achieve early discharge in older patients, but for those with complex disease LOS reaches 7+ days. Those with SA are likely to require postoperative intervention. The young population groups present with more complex appendicitis but are less likely to require postoperative intervention. Age and postoperative microbiology shape counselling given to these patients and parents regarding postoperative outcome.



[SP 89] Title: PILONIDAL SINUS SURGERY IN CHILDREN: A NOVEL APPROACH

Author: Liam Phelan

Aim Pilonidal disease is increasingly seen in adolescent patients. Multiple procedures are described with varying efficacy and complication rates. There are little data in the literature on the management of pilonidal disease in

children. Our paediatric surgeons are adult colorectal specialists and therefore receive referrals from the local paediatric tertiary centre for the management of paediatric pilonidal disease. We report a retrospective analysis of all children who underwent elective surgery for pilonidal disease to assess outcomes **Method**
A retrospective review of all consecutive, elective patients under 16 years old who had surgical intervention for pilonidal disease from 2008-2018 was undertaken. Complications were identified through interrogation of discharge and clinic letters. **Results** 53% (28/53) of patients experienced a post-operative complication. Data on wound healing were unavailable in 15 patients due to a combination of factors including patients not attending appointments. In the remaining 38 procedures, 82% (31/38) had a wound that took 3 months or more to heal. 13% (7/53) had recurrent disease. 19% (10/53) of patients required at least one further operation.
Our results per procedure are:

Procedure	Number of patients	Complication rate
Excision and primary closure	7	86%
Excision of pilonidal sinus without closure	22	55%
Bascombs	2	50%
Karyndakis flap	3	33%
Perforator flap	1	0%
Rhomboid flap	15	47%

Conclusion: Pilonidal disease is an adult condition with increasing prevalence in our paediatric population. There is limited evidence to guide best practice, however our data demonstrates poor outcomes regardless of the operative intervention. Data collated on pilonidal surgery in adults shows similar high complication rates 11.5-73% (1-4). We propose the implementation of a pilonidal disease pathway to optimise post-operative care, including social washes, specialist nurse wound review, strict physiotherapy and bowel preparation.

[SP 90] Title: EPIDEMIOLOGY, CLINICAL PRESENTATION AND OUTCOME OF INTUSSUSCEPTION AMONG CHILDREN < 3 YEARS IN A MIDDLE-INCOME COUNTRY

Author: Milind CHITNIS

AimTo investigate the epidemiology, aetiology, clinical presentation, management and outcome of intussusception among children <3 years of age in an active, prospective surveillance programme conducted in eight hospitals across six cities in South Africa from October 2013 to December 2017.**Methods** Children hospitalised with intussusception were enrolled. Demographics, clinical presentation, investigations, treatment, duration of hospitalisation, outcome, and laboratory results performed as standard of care, were obtained by parent interview and record review. Stool samples were collected from a subset of intussusception cases and non-intussusception controls matched by age, site and admission date, and tested for infectious pathogens using a Taqman array card. Ethics clearance for the study was obtained from the local Research Ethics Committees. **Results** 474 patients were enrolled. The median age was 6.7 months (IQR 5.25–8.80); 91% of patients were <12 months old. 54% were males. Median duration of symptoms was 2.5 days (IQR 1–4). The most common symptoms were vomiting (90%), bloody stools (87%) and refusal to feed (64%). Diagnosis was confirmed by ultrasound in 68%. Ileo-colic intussusception was found in 93%. Pneumatic reduction was attempted in 67% (n=305), of which 37% were successful at first attempt. A second attempt of pneumatic reduction was performed in 77 (16%) patients, with a 29% success rate. 326 (69%) patients required surgery; of which 63% required resection of bowel. A lead point was identified in 14%. The median duration of hospitalisation was 5 days (IQR 3–7); the mortality rate was 1% (n=6). The odds of identifying adenovirus C in the stool was 2.6 times (95% CI: 1.5–4.4) higher among intussusception cases compared to non-intussusception controls. **Conclusions** Intussusception was most prevalent in children <12 months of age. Surgery was required in most patients; however, mortality was relatively low. Adenovirus infection was associated with intussusception; however, this requires further investigation.

[SP 91] Title: LAPAROSCOPIC ASSISTED ANORECTOPLASTY FOR ANORECTAL MALFORMATION IN CHILDREN: OUR EXPERIENCE.

Author: Mozammel Hoque, Allauddin Ahmed, Abdullh al Hasan, Sarwar Azam, Sumaiya Ahmed , Fahmida Sultana, Sanchita Roy, Firoz Md Rozesul, Priyanka Biswas, Naima Sharmin,Jafrul Hannan.
Institution: Chattagram Maa-o- Shishu Hospital Medical College, Chattogram, Bangladesh.

Introduction: Classically infants with high anorectal malformations have been treated in three stages with an initial colostomy, subsequent posterior sagittal anorectoplasty, followed by colostomy closure. Laparoscopic assisted anorectoplasty is becoming an increasingly common procedure to correct high anorectal malformations. This study was carried out to report our initial experience using laparoscopic assisted anorectoplasty.
Materials and Methods: From January 2014 to May 2019 ,a total of 28 male patients of high anorectal anomalies were randomly selected for laparoscopic assisted anorectoplasty. Age ranged from 5 months to 18 months. All patients had distal cologram before laparoscopic assisted anorectoplasty to locate the fistulas tract. The technique was 3 small (5mm) abdominal ports. The rectum was mobilized in a circumferential fashion with an electrocautary. Fistulas tract was dissected, freed and ligated. **Results**: The median operative time was 105 min (range 80-140min). Follow up period 15 days to 12months. Post operative wound infection developed in three patient , anal stenosis in one patient and rectal prolapse in one, fecal soiling and perianal skin excoriation developed in one patient.
Conclusion: Laparoscopic assisted anorectoplasty provides excellent visualization of the rectal fistula and surrounding structure. It is minimally invasive and leaves small abdominal and perineal wounds. Laparoscopic assisted anorectoplasty is an alternative and more effective technique for high anorectal malformations. Long term follow-up is essential for evaluation.

[SP 92] Title: SYMPTOMATIC AND NUTRITIONAL IMPROVEMENT FOLLOWING TUBE OR LAPAROSCOPICALLY INSERTED BUTTON COLOSTOMY IN CHILDREN WITH AFRICAN DEGENERATIVE LEIOMYOPATHY

Author: Milind CHITNIS

Background: African degenerative leiomyopathy (ADL) an incurable disorder, seen in southern and south-eastern Africa. The disease process is thought to start in the rectum and the distal colon and gradually progresses cranially. It can affect the smooth muscles all over the body. It is a distinctive visceral myopathy, of unknown aetiology and has classical clinical picture of chronic intestinal pseudo-obstruction. As the disease progresses, it results in massive megacolon due to degeneration of smooth muscle and replacement by fibrosis. Management is traditionally conservative, with surgery reserved for the management of complications. We have placed Malone antegrade continence enema (MACE) stomas in the grossly dilated colon to vent accumulated gas and administer antegrade bowel enemas. This is done mainly for relief of gaseous distension and constipation to provide symptomatic relief.**Aim**: To review our experience in the management of children with histologically confirmed ADL with the use of tube or laparoscopically assisted button colostomy over the past 24years.**Methods**: Retrospective review of the patients with ADL admitted to our hospitals from the 1st February 1995 till the 31st of January 2019 with special emphasis on the improvement of their symptoms and nutritional status and complications associated with the procedure.**Results**: Out of the 60 histologically confirmed patients with ADL, we did colostomy in 30 patients. Out of the 20 patients followed up, 16 patients reported symptomatic relief and showed improvement in the nutritional status. Four patients had stenosis of the stoma and two had excoriation of the skin around the stoma. Four patients died due to the incurable nature of the disease. **Conclusions**: Tube or button colostomy gives symptomatic relief and contributes to improvement of nutritional status in children with ADL. It has minimum morbidity. It is a useful adjunct in the management of the children with this incurable pathology.

[SP 93] Title: SURGICAL TREATMENT OF CLOACA´S

Author: Kirgizov I.V., Shishkin I.A., Minaev S.V., Aprosimova S.I., Dyakonova E. Grigorova A.N.

Aim. High forms of the persistent cloaca is one of rarest 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.**Materials and methods**. In 2006-2019 67 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.**Results**. In 37% we used distal colon for proctoplasty, and PSARP for urethra and vagina separation. In 55.6 % of patients abdominoperineal pullthrough, and vaginoplasty was made by the distal colon, in 7.4% 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.**The 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.

[SP 94] Title: ARM WITH RECTO-URINARY FISTULA: A NEW TECHNIQUE FOR PRIMARY REPAIR (PRUF)
Author: Ernesto Leva
Since 1981 treatment of ARM has been standardized with PSARP procedure for any type of ARM. Authors developed and suggest a new technique for treatment of ARM with urinary fistula: with this technique the ligation of the fistula and anatomical reconstruction and anoplasty is obtained with only 1 operation. **Method**: 158 patients from 2010 has been operated for ARM; of those in 9 Primary Repair of recto-Urunary Fistula (PRUF) has been utilized as technique. All patient were operated in day 1 of life and presented meconium in the urine. **Results**: in 9 pts PRUF was utilized in day 1 of life with abdominal approach, ligation of the fistula, primary anorectoplasty without colostomy. 4/9 presented bulbar fistula, 3/9 prostatic and 1 bladder fistula. In 1 patient a review of rectal prolapse was performed at age of 18 months. Average follow-up is of 4,2 years and all patients are on bowel management regiment with regular bowel movements and clean. None of the patients presented dehiscence after anoplasty or stricture after adequate period of anal dilatations.**Conclusion**: PRUF is an innovative technique for treatment of ARM with recto-urinary fistula. This technique is difficult and it is mandatory that is used in expert surgeons on colorectal surgery. The advantage of this approach is to reduce in 1 operation the procedure for repair, and since day 1 of life patient start to pass fecis in the perineum. This technique should be considered an evolution of PSARP, form which base the principle of a correct approach to this disease.

[SP 95] Title: ARTERIOVENOUS MALFORMATION OF THE SPERMATIC CORD MASQUERADING AS TESTICULAR TORSION
Author: Haitham Dagash
Aim of the study: An arteriovenous malformation (AVM) is an abnormal mass of connecting arteries and veins, which bypasses the capillary network, and are most commonly seen within the central nervous system. There are only a handful of reported cases of AVMs within the spermatic cord. **Case description:** An otherwise healthy 6-year-old boy presented with a 1 day history of sudden onset right testicular swelling and pain. On examination there was swelling of the right testicle and mild pain on palpation. It was possible to palpate above the right testicle. The abdomen was soft non-tender, and no groin lumps or cough impulse were found. Observations were normal as were bladder and bowels movements. A provisional diagnosis of testicular torsion was made and he underwent emergency exploration. A right paratesticular mass extending into the groin alongside a normal right testis, hydatid and epididymis was observed. A groin incision was made and a high ligation of the spermatic cord performed and the mass excised. The left testis was fixed. Tumour markers were taken post-operatively (AFP and B-HcG), which returned as normal. He made an uneventful recovery and was discharged home the following day. Histology of the mass revealed clusters of small vessels embedded in a myxoid stroma consistent with a diagnosis of an AVM of the spermatic cord. **Conclusion:** This case highlights the importance of considering AVMs of the spermatic cord as a differential diagnosis of testicular swelling.

[SP 96] Title: HIRSCHSPRUNGÂ€™S DISEASES IN AN AFGHAN ADULT GIRL- CASE REPORT

Author: Qais Muraveji

Hirschsprung's Diseases is a known cause of chronic constipation during childhood which can be diagnosed during infancy or later and requires surgical intervention for treatment. This disease is very rare in adults and needs careful investigations for confirmation and treatment. Here we report a case of 22 years old girl presented to ER complaining of suddenly started abdominal pain and vomiting. Her past history showed a chronic constipation since childhood with many conservative treatments done for symptom's relief. A diagnosis of acute bowel obstruction made and the patient hospitalized for further investigation and treatment. **Keywords**: Adult Hirschsprung Diseases, Chronic Constipation, Cologram, Rectal Biopsy

[SP 97] Title: USEFULNESS OF COMBINATION OF ULTRASOUND AND SCINTIGRAPHY IN PREOPERATIVE EVALUATION OF SECONDARY OR TERTIARY HYPERPARATHYROIDISM.

Author: Daniel Her Liberto

Aim of the Study: In patients with secondary hyperparathyroidism the surgical treatment is aimed to reduce complications associated with phosphocalcic metabolism. The aim of this study is to determine if the combination of ultrasound and scintigraphy enhances the capacity to detect hyperplastic parathyroid in a pediatric population for the preoperative planning.**Methods:** It is an observational and retrospective cohort study. Patients diagnosed with secondary or tertiary hyperparathyroidism who underwent total or subtotal parathyroidectomy surgery between 2011 y 2018 which could have collected information on the pathology and surgical part.
In our institution, the pre-surgical evaluation includes a specific laboratory and cervical ultrasound and parathyroid scintigraphy with sestamibi. **Main results** : N= 15 patients. Median age was 15 years (RIC: 12 - 18). 12 were diagnosed with secondary hyperparathyroidism, 3 with tertiary hyperparathyroidism. 53 parathyroid glands diagnosed with hiperplasia by one of the two methods were analysed. For each method (ultrasound and scintigraphy) and for the combination of them, sensitivity and under the curve area were obtained, the reference was the pathological report. (Table 1).The concordance in the diagnosis of ultrasound and scintigraphy was 66%. **Conclusions** :It is well known the intra-surgical difficulty that arises in terms of the location of the parathyroid glands and in cases of self-implantation, the choice of the gland, for these reasons pre-surgical evaluation with the appropriate methods to optimize the results is essential.Ultrasound detected more cases than the scintigraphy in the diagnosis of parathyroid hyperplasia. The combination of both methods allows detecting patients in whom a first study was negative.Based on our results, we can estimate that the diagnostic revenue from the use of both methods is superior to the scintigraphy, although in this study, when comparing the confidence intervals no statistically significant differences were found, which could be due to the sample size.

Table 1

Diagnosis method	Sensitivity	IC 95 %	UCA	IC 95 %
Ultrasound	55	40 - 69	0.77	0.70 - 0.84
Scintigraphy	41	26 - 53	0.69	0.63 - 0.76
Ultrasound + Scintigraphy	65	50 - 77	0.82	0.76 - 0.89

[SP 98] Title: ACUTE COLONIC ISCHAEMIA DUE TO SCHISTOSOMIASIS

Author: Enas Ismail

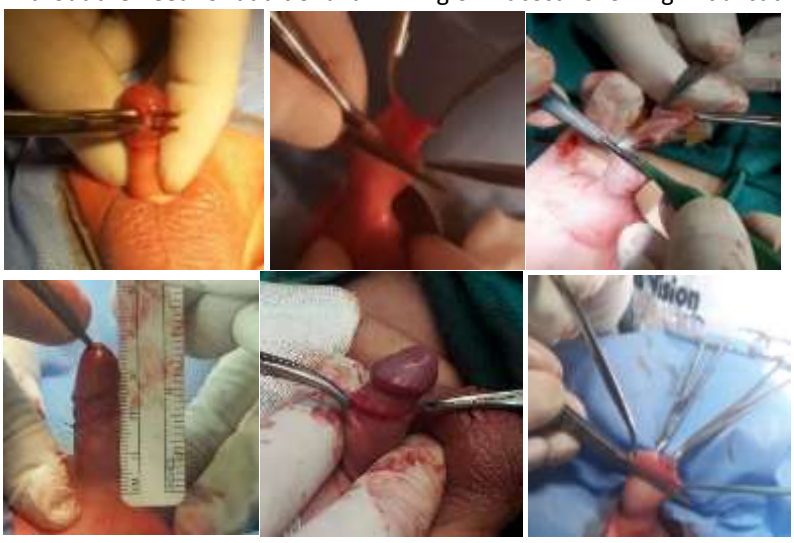
Aim of the study: To report a case of acute colonic ischaemia in 9 years old girl due to schistosomiasis.**Case description:**At 23 -july-2015 a 9 years old girl presented to emergency department at Khartoum North Teaching Hospital with: sever constant abdominal pain mainly at left lower quadrant, high grade fever associated with sweating and vomiting 3-4 time for three days PTA.13 days earlier pt. treated as dysentery as she presented with diarrhea, vomiting and abdominal pain.

Physical examination.Pt. was ill in pain febrile , pale and dehydrated ,Flexing her left hip,Abdomen not move with respiration ,rigid with sever tenderness all over,PR: empty. Resuscitation was done and decision of Laparotomy has been taken,Laparotomy done through midline incision, White patchy lesion affecting liver, small and large intestine,Enlarged mesenteric LNs ,Gangrenous descending and proximal sigmoid,Thrombotic vessels was observed in the small mesenteric veins draining the affected segment,Left himecolectomy done with end to end anastomosis,patient discharged home 7 days later.,Histological examination showed ischemic blood vessels ,numerous granuloma around viable schistosoma ova in intestinal wall and mesenteric lymph nodes

[SP 99] Title: BIPOLAR CIRCUMCISION - A NEW METHOD FOR AN OLD PROCEDURE

Author: Naser Al Mefleh, Matthew O Jones, Mahmoud Kaddah, Muhammad Eyad Ba'Ath

Introduction: Although circumcision is one of the most widely practiced procedures, numerous techniques exist with no consensus which is best. We here describe a new technique using regular bipolar forceps without resorting to blind crushing or cutting of the foreskin.**Methods**: The technique used is briefly described and shown in the figure attached. Initially the foreskin is fully separated from the glans. The fraenulum is taken down with bipolar (1). The mucosa is then held with two clamps; ventrally just below the lower end of the divided fraenulum; and dorsally just above the para-phimotic ring (2). The clamps are pulled up and a soft non crushing McIndoe forceps is then placed on the edge of the corona and the skin is pulled back up above the glans and held tightly (3). Two additional clamps are placed on the skin to maintain traction and the foreskin is then divided with the bipolar forceps using a piecemeal movement and under direct vision (4). No additional trimming of mucosa was done. The skin and mucosa are then re-approximated with 4 fine absorbable sutures. All consecutive boys who underwent circumcision using this technique were enrolled and the data collected prospectively recording: age, any complications, length of glans, penis, and mucosal cuff following circumcision. The data was presented as mean +/- SD or median as appropriate. **Results**: 66 patients so far recruited. Median age 3 months (quartiles 2-10.25). No complications were encountered. The average length of mucosal cuff was 0.81 +/- 0.28 cm and the proportion to total penile length was 20.9 +/- 4.8 % and to glans length 71.5 +/- 24.5 %.**Conclusion**: Using the technique described; bipolar circumcision is safe. It could achieve acceptable cosmetic results in terms of mucosal cuff length without the need for additional trimming of mucosa following initial cut.



[SP 100] Title: GALL BLADDER PERFORATION : A RARE COMPLICATION OF TYPHOID FEVER

Author: Galih Widiyanto

Aim: Perforation of gallbladder due to typhoid fever is extremely rare condition. Pre operative diagnosis is rarely made and mortality is high. The aim of this study to describe a patient with gall bladder perforation due to typhoid fever following emergency laparotomy and cholecystectomy with a good outcome.**Case description:**A 8 year old boy presented with history of diffuse abdominal pain since four days and not passing flatus and motion since 2 days. He was having continues fever since 2 weeks. On general examination patient was looking very toxic. Abdominal examination revealed abdominal distension, muscle guarding, generalized abdominal tenderness. The Typhidot (IgM) test was highly positive for Salmonella typhi. An abdominal radiograph revealed multiple air fluid levels and there is no free gas under the diaphragm. Abdominal ultrasonography demonstrated free fluid with fine internal echoes, suggestive of perforation. Provisional diagnosis of enteric perforation of small bowel was made. Patient was explored by laparatomy. Peritoneal cavity was containing of bilous fluid and bowel loops were appeared to be normal. On further exploration gallbladder appeared to be grossly inflamed and there was a perforation around 1 cm in size at the fundus. Cholecystectomy was done and pelvical drain was placed. There was an uneventful recovery and patient discharged on 8th post operative day.**Conclusion:**Secondary gallbladder perforation due to typhoid fever requires a high degree of clinical suspicion. In typhoid endemic region, it should be considered as a differential diagnosis in patient presenting with a signs and symptoms of typhoid fever and signs of acute abdomen. Early diagnosis and immediate surgical intervention are very important in reducing the morbidity and mortality. Cholecystectomy is the choice with a good outcome.

[SP 101] Title: EARLY FEEDING VS 5-DAY FASTING AFTER ELECTIVE DISTAL BOWEL STOMA CLOSURE SURGERY IN CHILDREN: A PROSPECTIVE COHORT STUDY

Author: Taimur Qureshi, Shabbir Hussain

Institution: Liaquat National Hospital and Medical College

Aim of study:To determine the safety and efficacy of early enteral feeding after elective distal bowel stoma closure surgery in children. **Material and method**:Prospective randomized cohort study conducted in the department of Paediatric Surgery, Liaquat National Hospital, Karachi, over a period of 1 year after approval by ethical committee. All children aged between birth to 13 years of age who have undergone elective distal bowel anastomosis at Liaquat National Hospital were included, while all children who have undergone emergency distal bowel anastomosis, children who were at high risk for surgery or had significant comorbid diseases at the time of surgery, newborns, children who underwent upper gastrointestinal tract anastomosis (esophagus, gastric, duodenal or jejunal), bilious digestive anastomosis, immunosuppressed patients, gastrostomy or any pre anastomotic derivation, multiple anastomoses, chronic intestinal obstruction and patients who did not complete the minimum POP follow up of one month were excluded. All included children will be divided into 2 groups based on odd and even numbers. (Non probably consecutive sampling). Those who are odd numbers were included in the 5 day Fasting group while those with even number were added into the fasting group. The 5 day Fast group (Group 1) were kept nothing per oral for 5 days post operatively and kept on parenteral nutrition, with start of enteral feed on 5th day. , while those with early feeding Group (Group 2) were kept nothing per oral for 24 hours and feed was started on 1st postoperative day. Nasogastric tube was placed in both groups. In both groups, Nasogastric tube was closed and aspirated after 6 hours once dextrose water was started and will was removed once feed had been started In case of abdominal distension (more than 3 cm then peroperative girth) or persistent vomiting (more than 3 in 24 hours) or more then 2ml/kg/hour aspirate for 8 hours, feed was stopped and restarted after 24 hours if abdominal girth reaches or vomiting stops. Child was discharged if he takes feed normally for 24 hours **Main results**: Majority of the child after elective distal bowel anastomosis had established feed by 2nd day of surgery and were sent home early post operatively. **Conclusio**n: It is safe to start feed early after elective distal bowel anastomosis as it allows early discharge from the hospital with resultant reduced cost of care and hence reduced financial burden on the family.

[SP 102] Title: RELATIONSHIP BETWEEN TIME OF DIAGNOSIS OF HPS AND SURGERY RESULTS

Author: SALEEM YOUSSEF

Objective: Studying the relationship between time of diagnosis of Hypertrophic Pyloric Stenosis and Surgery Results.**Material and method of search:**The study included 40 cases of IHPS in Aleppo University Hospital and the cases are distributed as follows: 21 retrospective cases and 19 prospective cases.
The cases were studied as regard to: clinical data, time of diagnosis, the diagnostic methods, management, and outcome.**Results:**Diagnosis delay is associated with worsening of metabolic alkalosis and disturbance. The patient needed longer period to recover to normal acid-base balance.The time of diagnosis affects the preoperational period, with 76.93% of cases taking more than 48 hours for preparation before surgery if they are diagnosed in more than two weeks. Whereas only 11.11% of cases diagnosed in less than two weeks required more than 48 hours for preparation.The time of diagnosis plays a moderate role in the eradication of symptoms, duration of hospitalization after surgery, the time needed to reach ad libitum feeding, and good tolerance; The hospitalization that exceeded 48 hours after surgery, was seen in about 46% of cases that
were more than 2 weeks late to diagnosis, and the time needed to reach the full feeding exceeded 24 hours in about 30% of those patients. While 92% of cases who were diagnosed in less than two weeks reached full feeding with 24 hours after surgery and only 3.7% of them needed more than 48 hours of hospitalization.The time of diagnosis has no effect on surgical complications.

[SP 103] Title: ABSENT GALL BLADDER IN A NEONATE AND ITS SUTHICAL IMPLICATIONS

Author: Ifeanyi Egbuchulem

Introduction: Congenital agenesis of the gall bladder is a rare anomaly with incidence of less than 0.1% (0.04 - 0.1%). Greater than 50% of these patients present with symptoms with a strong female preprondrance.
Gall bladder atresia and biliary atresia co existing is a rare finding in a neonate. **Aim**: Is to report a rare finding of absent gall bladder and common bile duct in a three month old girl presenting at a Tertiary Hospital and review relevant literature. **Case Presentation**: we report a three month old female presenting with progressive deepening jaundice of six weeks duration, convulsion of five days duration and fever of four days duration. There is associated passage of dark coloured urine and passage of pale bulky stool. Antenatal and delivery history were uneventful. Serum total bilirubin 9.5mg/dl with conjugated bilirubin of 6.9mg/dl; Gamayl glutamate, Aspartate transaminase and Alkaline phospatase were all elevated. She is glucose six phosphate deficient, INR greater than 3.0.
Had two imaging done by two different Senior Sonologist from two different centers. First, did not visualize the common bile duct and gall bladder with no intra hepatic biliary dilatation. The repeat scan did not also visualize the gall bladder, however there is increased echogenicity along the anterior wall of the portal vein giving a positive triangular cord sign consistent with biliary atresia. A diagnosis of Obstructive jaundice with Biliary and Gall bladder Atresia complicated with hepatic encephalopathy, Child Pugh C was made.**Conclusions**: Agenesis of the gall bladder is a rare disorder with over 50% being symptomatic. The absence of normal anatomical structures poses a risk of iatrogenic biliary injury when procedures such as Kasai portoenterostomy for biliary atresia is indicated.
Keywords: Absent Gall bladder, Neonate

[SP 104] Title: PREDICTORS OF ANXIETY

Author: Ifeanyi Egbuchulem

Introduction: Congenital agenesis of the gall bladder is a rare anomaly with incidence of less than 0.1% (0.04 - 0.1%). Greater than 50% of these patients present with symptoms with a strong female preprondrance.Gall bladder atresia and biliary atresia co existing is a rare finding in a neonate. **Aim:** Is to report a rare finding of absent gall bladder and common bile duct in a three month old girl presenting at a Tertiary Hospital and review relevant literature. **Case Presentation:** we report a three month old female presenting with progressive deepening jaundice of six weeks duration, convulsion of five days duration and fever of four days duration. There is associated passage of dark coloured urine and passage of pale bulky stool. Antenatal and delivery history were uneventful.Serum total bilirubin 9.5mg/dl with conjugated bilirubin of 6.9mg/dl; Gamayl glutamate, Aspartate transaminase and Alkaline phospatase were all elevated. She is glucose six phosphate deficient, INR greater than 3.0.Had two imaging done by two

different Senior Sonologist from two different centers. First, did not visualize the common bile duct and gall bladder with no intra hepatic biliary dilatation. The repeat scan did not also visualize the gall bladder, however there is increased echogenicity along the anterior wall of the portal vein giving a positive triangular cord sign consistent with biliary atresia. A diagnosis of Obstructive jaundice with Biliary and Gall bladder Atresia complicated with hepatic encephalopathy, Child Pugh C was made.**Conclusions:** Agenesis of the gall bladder is a rare disorder with over 50% being symptomatic. The absence of normal anatomical structures poses a risk of iatrogenic biliary injury when procedures such as Kasai portoenterostomy for biliary atresia is indicated. **Keywords**: Absent Gall bladder, Neonate

[SP 105] Title: CORROSIVE INDUCED ANTROPYLORIC STRICTURES: A MANAGEMENT CHALLENGE

Author: Muhammad Saleem, Nabila Talat, Asif Iqbal Sandhu, Imran Hashim, Uzma Ather, Naveed Haider, Azka Saleem, Umer Saleem

Background: Easy availability of corrosive agents in our part of world results in high morbidity and mortality in children. Interestingly only few reports are available in English literature highlighting the management and surgical outcome of corrosive induced antropyloric strictures. Aim of this study was to determine the presenting features, management and outcome of patients treated at our institute with corrosive induced antropyloric strictures.
Methods: This retrospective descriptive study was conducted at Paediatric Surgery Department of Children Hospital & Institute of Child Health, Lahore. Medical records of patients admitted for corrosive-induced gastric out let obstruction from January 2013 to December 2018 were included. The demographic, Peroperative assessment, investigations, surgical procedure and follow up details were noted in a proforma. Results were analyzed by descriptive statistics using SPSS version 20. The quantitave variables were presented mean ± SD. Qualitative variables were presented as frequency and percentages.**Results**: A total of 62 patients were included in this study. The mean age at presentation was 4.9 ±3.3 years. Of these 42 (67.7%) were male and 20(32.3%) were female. The mean weight at time of surgery was 12.6 ± 5.0 kilograms. Bathroom cleaner was ingested by 42 patients (77.4%) while 12 (19.4%) had bleech and 2 (3.2%) battery acid ingestion. All the parents were reported that victims took corrosive agent unintentionally. Vomiting was seen 100% cases while abdominal pain, dysphasia and weight loss was seen in 38.7 %, 8.1% and 80.6% respectively. Feeding jejunostomy tube was placed in 35(56.5%) patients as initial procedure. Endoscopy was performed in 61 patients. Upper GI contrast study showed complete obstruction in 52(83.9%) and partial obstruction 10 (16.1%) patients. Mean hemoglobin level was 11.1±1.5 while rest of the laboratory investigations were within normal limits. We used Heinke-mikulicz pyloroplasty in 59 (95.2%) patients, Billroth II in 1(1.6%) and gastrojejunostomy in 2 (3.2) cases. Postoperatively 40 children remained well during early period while leak and respiratory issue were seen in 11.9% and 13.6% patients respectively. The mean hospital stay was 27.9±11.5 days. Four patients needed revision of pyloric stenosis surgery. Two patients died after surgery & rest were discharged. Mean fallow up was 15.2±70 months. Of 60 discharged children 37(62.7%) had no issue while 4 (6.8%) had leakage from previous jejunostomy site leak. Other 19 patients were lost in fallow up.
Conclusion:On the bases of study we concluded the corrosive induce antropyloric injuries are associated with morbidity and mortality. Avoidable circumstances can be reduced by cautiousness in family as well as in every aspect of our community. For this there is a great need for adult education and for legislation to ensure correct labeling, safe packaging in child proof containers. Surgical intervention, gives excellent result we found Heinke-mikulicz pyloroplasty is very safe operation with minimum morbidity and mortality and excellent long-term outcome.

[SP 106] Title: AMYANDS HERNIA WITH ACUTE APPENDICITIS.

Author: Josué Eduardo Betancourth-Alvarenga

Aim: Inguinal hernias and acute appendicitis are very common in children. Finding the appendix as the contents of an inguinal hernial sac, known as Amyand´s hernia (AH), is an unusual phenomenon seen in <1% of all inguinal hernia cases. We aim to present a video case report of a laparoscopic approach for an AH with a complicated appendicitis.
Case report: A 7-year-old boy with a 4 day right inguinal mass associated with general abdominal tenderness, nausea and vomits. An incarcerated hernia was diagnosed, and a successful manual reduction was performed with satisfactory pain relief. 6-hours after the procedure, the patient had fever and an unclear recurrence of the inguinal mass with right lower quadrant abdominal pain with no other symptoms. Blood-work revealed leukocytosis with

neutrophilia and elevated C-reactive protein and ultrasound exhibited an unclear incarcerated small bowel loop-like-structure. An exploratory laparoscopy was performed finding an acute gangrenous perforated appendicitis incarcerated through the deep inguinal ring surrounded by a phlegmon and periapendiceal pus. Complete reduction of the hernial contents was achieved and an appendectomy was performed. Due to the local infection and inflammation and unclear inguinal anatomy the internal ring was left untouched with no postoperative complications. Although there were no further symptoms nor recurrence of the hernia, a differed open herniotomy was performed 2-months later finding a complete obliteration of the hernial sac.**Conclusion:** AH with acute appendicitis is a rare occurrence, and it should be considered as a differential diagnosis of incarcerated inguinal hernia. A laparoscopic approach is a valuable option both diagnostic as therapeutic. If possible, both appendectomy and hernia-repair are advised in a single surgery, unless there is an intraoperative risk of damaging inguinal structures whereas a differed herniotomy can be performed safely.

[SP 107] Title: BILATERAL URETERAL FIBROSIS AS A RARE COMPLICATION OF ULCERATIVE COLITIS: A CASE REPORT.

Author: Muazez Cevik

Ureteral fibrosis is rare disease. It may be idiopathic or secondary to other causes. Idiopathic is an immune-mediated disease, which can be either isolated, associated with other autoimmune diseases. Here we describe an unusual case Bilateral ureteral fibrosis following ulcerative coli. A 10-year –old male with rectal bleeding and hematuria admitted during follow up acute abdomen and disseminated intravascular coagulation after underwent subtotal colectomy during follow up bilateral hydronephrosis occured bilateral nephrostomy catheter inserted. During follow up bilateral ureteral have not solved therefore bilateral otorenal transplantation planed.
Here we present a unique case of bilateral fibrosis associated with ulcerative colitis. Ultimately this case report serves as a good reminder tos tay diligent and keep in mind when treating a ulcerative colitis patient.

[SP 108] Title: THE LATE ESOPHAGEAL PERFORATION CAN BE TREATED WITH ESOPHAGEAL STENT AND PEG-J IN CHILDREN

Author: Muazez Cevik

Background: More than half of all esophageal perforations are iatrogenic. The initial managment of an esophageal perforation include prompt diagnosis and assessment for operative or nonoperative managment. In this study summarizes our experiences treating two perforation of the esophagus using a removable esophageal stent.
Case 1. A 6-year – old patient with a history of endoscopic foreign body removed 10 days ago before admitted. When she was getting worse condition she refered to us. We find esophageal perforation we esophageal stent and PEG-J placed. We removed esophageal stent 6 weeks later without any esophageal leakage.Case 2. A 10 -year old pateint was operated for achalasia postoperative a week later admitted clinic for acute abdomen. The patient underwent surgery acute abdomen and repaired for esophagogastric junction perforation.The condition of the patient was getting worse and patient underwent endoscopy for esophageal stent and PEG-J. The stent removed 2 months later without any lekage.**Conclusion**: Endoluminal esophageal stent and percutan endoscopic jejunal tup is an effective method for the treatment iatrogenic perforations of the esophagus. These approach may reduce hospital length of stay and avoid the potential morbidity and motality.

Basic Science and General Surgery Day 1: OA3
Moderator: Igor Sukhotnik

[OA 3.1] Title: THE ROLE OF THIOL-DISULFIDE AND ISCHEMIA-MODIFIED ALBUMIN IN THE DIFFERENTIAL DIAGNOSIS OF OVARIAN PATHOLOGIES IN CHILDREN

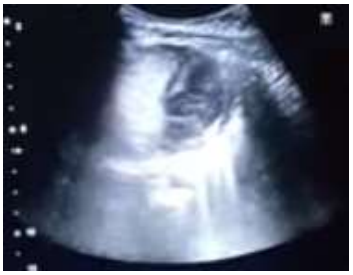
Author: CAN Ä°HSAN ÖZTORUN

Aim of the study: The aim of this study was to evaluate the association between ovarian pathologies and oxidative stress in children via the new method of thiol / disulphide homestasis. **Methods:** The study was conducted in our

clinic and included 24 cases of ovarian cysts followed by us and 23 cases of operated ovarian cyst or torsion and monitored by pediatric surgical intensive care unit. The control group consisted of 24 girls who admitted to the pediatric surgery outpatient clinic because of not-incarcerated inguinal hernia.Serum native thiol, total thiol, dynamic disulfide, albumin and ischemic modified albumin(IMA) levels of the patients and healthy volunteers were evaluated. **Results:** Native thiol(p = 0.41), total thiol(p = 0.57), dynamic disulfid (p = 0.98), albumin(p = 0.54) and IMA(p = 0.98) levels of the patients with ovarian cyst were found similar with the ovarian torsion group. However, there were statistically significant differences in native thiol(p <0.001), total thiol(p <0.001), albumin(p <0.001) and IMA(p <0.001) levels of ovarian torsion group compared to the controls whereas dynamic disulphide levels(p = 0.63) were not statistically different from that of controls. **Conclusions:** In children, the evaluation thiol / disulfide homeostasis might be helpful in the diagnosis of ovarian pathology. Nonetheless, it couldn't be helpful in the differential diagnosis of ovarian torsion which requires emergency surgery from the other ovarian pathologies. Measuring of IMA levels as well as thiol / disulfide homeostasis could increase the specificity of the test. Further studies with larger sampes are needed to clarify this issue. **Key words:** children, IMA, oxidative stress, ovarian pathologies, thiol-disulphide

[OA 3.2] Title: COMPARISON BETWEEN ULTRASONOGRAPHY AND X-RAY AS EVALUATION METHODS OF CENTRAL VENOUS CATHETER POSITIONING AND THEIR COMPLICATIONS IN PEDIATRICS

Author: Leilane de Oliveir



Aim of the Study: this study evaluates the diagnostic quality of the ultrasound to confirm the placement of the central venous catheter (CVC) from the comparison with the gold standard, the chest radiograph (CR).**Methods:** data were collected from children between 0 to 14 incomplete years old, who were submitted to CVC placement between March and May 2018. A 4-chamber cardiac window with rapid saline injection was performed, with ultrasound, to identify a hyperechoic image and confirm the positioning of the CVC. After that, CR was performed. The diagnostic quality of the ultrasound was evaluated from the accuracy, sensitivity, specificity, positive and negative predictive values.**Results:** a total of 21 patients were analyzed. The mean age was 3.95 ± 4.01 years. The preferred site of puncture was the right internal jugular vein (71.4%). The accuracy of the ultrasound to detect the CVC positioning was 81%. Sensitivity, specificity and positive and negative predictive values were 33%, 100%, 100% and 79%, respectively.**Conclusion**: ultrasound is a reliable method for the detection of CVC positioning. Even so, when performing the window of 4 cardiac chambers, there is a need to confirm the positioning with the CR.*Figure 1. Hyperechoic image within the right atrium and ventriculum**.*

[OA 3.3] Title: RANDOMIZED CLINICAL TRIAL OF IMMERSIVE VIRTUAL REALITY TOUR OF THE OPERATING THEATRE IN CHILDREN BEFORE ANESTHESIA

Author: Ji-Won Han, Dayoung Ko, Jeik Byun, Yongwoo Yune , Hyun-Young Kim, Sung-Eun Jung,

Aim of study:Surgery is unfamiliar experience and can induce the anxiety in children undergoing surgery. The experience of operation room(OR) through virtual reality(VR) tour is expected to reduce the anxiety of pediatric patients. The purpose of this study was to evaluate the usefulness of VR tour of OR to reduce the anxiety of the patient and caregiver.**Methods**:The VR image used in this study is a four-minute animation that shows the experience of Pororo, an animation character, entering OR from the entrance and undergoing anesthesia. Total 105 patients aged 4-10 years and planned to undergo surgery were included. They were divided into 3 groups by randomization. Group 1(n=35): undergoing surgery without VR tour, Group 2(n=35): watching VR tour at out-patients clinic a few days before surgery, Group 3(n=35): watching VR tour at the entrance of OR on operation day. Group 1 was control group and group 2 and 3 were intervention group. We evaluated the anxiety of patients using m-YPAS, anesthesia compliance using ICC, the anxiety of caregiver using BAI, and caregiver's satisfaction.**Results**: The age of patients were 5 year (4-11) and male was 48. The performed operations included inguinal hernia repair(n=42), benign skin mass excision(n=26), central catheter insertion(n=7), and frenulotomy(n=6). There was no significant difference of age, sex, and performed operation among groups. There was no significant difference

of score of m-YPAS(p=0.447), ICC(p=0.890), and BAI(p=0.370) among 3 groups. The score of caregiver's satisfaction in group 2 was significantly higher than group 1(p=0.43). There was no significant difference of score of m-YPAS(p=0.356), ICC(p=0.695), and BAI(p=0.219) between control and intervention group. The score of caregiver's satisfaction in intervention group was significantly higher than control group(p=0.40).**Conclusions**: The experience of OR through VR tour did not reduce patient's anxiety, anesthesia compliance, and caregiver's anxiety, however could increase caregiver's satisfaction.

[OA 3.4] Title: SALIVARY BIOMARKER FOR ACUTE APPENDICITIS IN CHILDREN: A PILOT STUDY
Author: Te-Lu Yap
Aims of study: Diagnostic assays based on salivary biomarkers are gaining popularity in paediatric diseases due to its non-invasive nature. Our pilot project sought to evaluate the utility of saliva Leucine-rich-alpha-2-glycoprotein(LRG), an inflammatory protein, in the diagnosis of paediatric acute appendicitis(AA).**Methods**: We prospectively recruited 40 patients, aged between 4-16 years, admitted with acute abdominal pain suspicious of AA. The patients' demography, clinical characteristics, laboratory investigations, imaging examination findings, operative and discharge diagnosis were recorded. We compared the diagnostic performance of Total white counts(TWC), neutrophil percentages(Neu%), C-reactive protein(CRP), urine and saliva LRG levels. Saliva samples of LRG were obtained using SalivaBio Children's Swab(Salimetrics LLC,USA) which were placed in the patients' mouth for 60-90 seconds after gurgling. LRG levels were subsequently quantified using commercially available LRG ELISA kit. IRB approval and informed consents were obtained.**Main results**: Of the 40 patients, 19 were confirmed to have AA based on histology. 21 patients were confirmed without AA after at least 24 hours of hospitalization and further confirmed on telephone interview 2 weeks later. The levels of salivary LRG were elevated in patients with AA, median 0.282 ng/ µg , as compared to those without, median 0.153 ng/µg, statistically significant at p=0.038. At a cut-off of LRG 0.28 ng/µg, we obtained a specificity of 78%, positive predictive value 75%, sensitivity of 52.4% and Negative predictive value of 61% for AA.**Conclusion**: To date, no saliva testing for the diagnosis of AA is yet available. Our proof-of-concept study is the first to demonstrate the diagnostic potential of salivary LRG for AA in children. The distinct advantage of saliva LRG assay is its pain-free, non-invasive, uncomplicated method of sampling whereby no specialized training or skill is required. Our findings may prompt the development of a novel means for risk-stratifying patients with suspected AA.

General Surgery Day 1: OA4
Moderator: Kevin Lally

[OA 4.1] Title: DETERMINING ACUTE COMPLICATED AND UNCOMPLICATED APPENDICITIS USING SERUM AND URINE BIOMARKERS: INTERLEUKIN-6 AND NEUTROPHIL GELATINASE-ASSOCIATD LIPOCAL: PRELIMINARY RESULTS
Author: Mohits Kakars, Renars Broks, Marisa M. Butnere, Aigars Reinis, Juta Kroica, Arnis Engelis, Amulya K. Saxena, Aigars Petersons ,Mathilde Delorme, Lasma Asare
Aim of study: Early diagnostics of acute appendicitis is essential to provide effective treatment for children, and therefore, there is demand for early, accurate predictive biomarkers. The aim of this study is to determine whether serum and urine biomarkers Neutrophil Gelatinase-Associated Lipocal (NGAL), and Interleukin-6 (IL-6) should be included in the early diagnostic algorithm. **Methods:** Children aged between 7 and 17 years old who were admitted to the pediatric emergency department were included in this prospective, cohort study. Serum and urine samples were assayed for IL-6 and NGAL on hospital admittance (Day 0). Final diagnosis was determined by histopathology and the three groups were established. Children diagnosed with acute complicated appendicitis (AcA), acute uncomplicated appendicitis (AnA), and a control group of children without abdominal infections. Additional samples were assayed on the second and fifth postoperative day for the AcA and AnA groups.**Main results:** 79 children were included in the study, with an average age of 12 (IQR 9-15) years. Median serum IL-6 and serum NGAL levels Day 0 were higher in appendicitis versus non-appendicitis. The average serum NGAL on Day 0

were 199.55 ng/mL for AcA, 135.20 ng/mL for AnA and 90.60 ng/mL for the control group (p = 0.020). The basal average serum IL-6 levels were 79.45 ng/mL for AcA, 23.14 for AnA and 10.93 ng/mL for the control group (p < 0.001). On the second postoperative day, serum NGAL levels were higher in AcA vs. AnA (p<0.001). Median urine IL-6 and NGAL levels did not differ among the groups. **Conclusion:** Serum NGAL and IL-6 are elevated in pediatric appendicitis cases compared to the control group upon disease presentation. The data shows promising results for the usage of these biomarkers in determining whether a patient has a high risk of appendicitis that requires surgical treatment.

[OA 4.2] Title: VENTRICLULO-PERITONEAL SHUNT COMPLICATIONS (PSEUDOCYST) AFTER ABDOMINAL SURGERIES.

Author: Wesam Khalafallah, Khalid Al-Kharazi, Ian Pople
Institution: Sidra Medicine

A case of a large (two litre) abdominal CSF pseudocyst occurring following multiple abdominal surgeries in a child with spina bifida and an indwelling ventriculo-peritoneal shunt is presented, together with a review of available literature of abdominal complications in similar children with CSF shunts undergoing elective or emergency abdominal surgery by pediatric surgeons. Guidelines for handling shunt catheters during bowel or bladder surgery are suggested and comparison of infection rates for different techniques and timing of feeding gastrostomy will be presented.

[OA 4.3] Title: OUTCOME OF PYLOROPLASTY IN A PATIENT WIT PYLORIC ATRESIA.

Author: Mubarak Hajalbashi

Pyloric atresia is a rare surgical condition that affect about 1 in 100.000 neonate. This is often associated with Epidermolysis bullosa and it usually shows a familial pattern with an autosomal recessive inheritance , however, we present a unique case of pyloric atresia without this congenital skin lesion . Pyloric atresia is classified into 3 anatomical variations which often warrant different surgical procedures. Type A obliterating diaphragm, type B fibers cord atresia and type C complete separation between stomach and duodenum . The mortality rate is 49.3% and the prognosis is depend on many factors as early diagnosis, the appropriate operative procedure, the extent of prematurity of the infant and association of other congenital anomalies or complications. The evidence show different surgical option (gastrodudenostomy , pyloroplasty and excision of diaphragm) according to the intraoperative finding . We didn't find any case of congenital pyloric atresia has been reported from Sudan before. This paper will describe a case of Sudanese newborn who presented at age of 7 day with yellowish non bilious vomiting and incidental empty left hemiscroutum .and diagnosed by imaging as pyloric atresia , successfully treated surgically by pyloroplasty .therefore this case will provide evidence on the outcome of this procedure.

[OA 4.4] Title: PYGOPAGUS CONJOINED TWIN EXPERIENCES IN SEPARATION. A CASE REPORT.

Author: Trần Thanh Trí, Trần Văn Dương, Đặng Đỗ Thanh Cần, Phạm Ngọc Thạch, Trần Đông A.

Aim of the study: to present our experience in a case of conjoined twin in Vietnam that we succesfully separated.
Case description: the twins were born at 37 weeks with the total weight of 3400g. They were stablized and tranfered to our hospital on 24/7/2016. These females were joined at the buttocks. The MRI shows the conjoined sacrum, lumbar spine and a common spinal cords (S3-S4). They both have anovestibular opening. The smaller baby had 6 right costal bones hypoplasia, right hip dislocation, right knee stiffness and right clubfoot. We put skin dilated bags at the joined area but failed in two attempts because of the infection. We decided to conduct a definite separating operation when they were 13 months with the total weight of 15kg. The skin turned out adequate with skin rotation flaps technique done by a plastic surgeon. The conjoined spinal cords and membranes we divided by neurosurgeons. Two colostomies were opened by gastrointestinal surgeons. The skin flaps became partially necrotic (4cm2) in both babies but that were managed well with onsite wound care. In one baby, there was spinal liquid leak that needed re-operation for dural membranes closure and external ventricular drainage for 2 weeks. The babies got discharged from the hospital 1 month after the surgery. The smaller baby continued the physiotherapy but it is not effective for the severe hip dislocation and knee stiffness.**Conclusions**: Conjoined twin is

a super rare malformation. Separating is technically demanding and could only be done by experienced surgeons from different specialties. We think surgeons should consider going for the definite surgery soon with skin flap rotation technique if possible to avoid complications from skin dilated bags and long hospitalization time.

[OA 4.5] Title: SEPARATION OF CRANIOPAGUS TWINS Â€“ THE MODERN SURGICAL TEAM AT THE CUTTING EDGE, UTILISING SCIENCE, SKILL, VIRTUAL REALITY, LEADERSHIP AND HUMILITY

Author: Noor U. O. Jeelani , David J. Dunaway , Silvia Schievano, Juling Ong , Gregory James 1 Richard D. Hayward and Great Ormond Street Hospital Multidisciplinary Craniopagus Team**Aim:** Craniopagus twins are rare entities with approximately 10 pairs surviving beyond the neonatal period per annum, globally. The outcome in most cases remains undocumented. The GOSH team has till date separated 3 sets of twins. We present here our cumulative experience of the 3 sets with a particular emphasis on the 'lessons learned' in the planning and execution of the separation.**Methods:** Three sets of craniopagus twins underwent separation at GOSH. All 3 sets were of the O'Connell Total Vertical configuration. The 2006 case (CPT 1) was a Type 1, the 2011 case (CPT 2) a Type 3 and the 2019 set (CPT 3) a Type 2 configuration. Staged separation was undertaken in all 3 cases spanning some 6 months for each case. Neurovascular separation was undertaken first and once completed, tissue expanders were inserted and the final separation undertaken. For planning the separation cross-sectional imaging, MR flow studies, Digital subtraction angiograms, 3D photogrammetry, finite element modelling, rapid prototyping, computer simulations and virtual reality holograms were utilized. **Results:** All 6 children survived the separation process.
From CPT 1 both girls are diagnosed on the ADHD spectrum and require extra support at school. One twin has a mild weakness on one side; she is ambulant and able to use her affected arm for gross motor skills.
From CPT 2 both girls are neurologically intact, with one twin diagnosed on the Autism spectrum.
From CPT 3, one twin suffered a venous infarct resulting in a weakness in her left arm and leg. Follow up is short to comment on final recovery and cognitive outcome. **Conclusion:** Staged separation has a lower morbidity and mortality profile for Craniopagus twins of the total vertical classification; the underlying philosophy is utilising the body's innate blood flow diversion and healing potential to sequentially facilitate the separation. In this fashion, one mammoth surgical undertaken is broken down into a number of more manageable steps.This does however require extreme teamworking with clear leadership and a unified belief in the common purpose. Good interdisciplinary communication is essential along with multiple simulations and dry runs utilising virtual reality and 3D models. The surgical team in the 21st century has all these tools available to redefine what is possible; ultimate surgical leadership is key.

[OA 4.6] Title: INTRA-OPERATIVE TOTAL BOWEL IRRIGATION IMPROVES THE OUTCOME OF GASTROSCHISIS PRIMARY REPAIR

Author: Ahmad Mohammadipour

Introduction: gastroschisis is a common anterior abdominal wall defect with an incidence of 0.4-11.7 % per 10000 newborns. surgical correction of this congenital abdominal wall defect includes reduction of herniated bowel into abdominal cavity and primary closure that may not be accomplished in some circumstances. rapid patient transfer and early intervention is a major factor in successful primary deduction attempt.in this case series we introduce a useful manure to improve intra and post-operative outcome of simple reduction and reduction of silo placement in treatment of gastroschisis.**Method and materials**: all neonate with gastroschisis in this study were divided into 2 groups randomly. The first group underwent conventional gastroschisis reduction by opening and widening of abdominal wall defect and silo placement mostly with further staged repair of abdominal wall. In the second group, neonates where transferred to operation room rapidly and after placement of NG tube under general anesthesia gastric content were evacuated , viscera were washed by warm saline and then soaked in warm normal saline for about 5 minutes. after a gentle enterolysis, 10 cc/kg warm saline was inserted to the stomach through the orogastric tube and the surgeon guide the injected water to the proximal jejunum. pushing the water back and forth through the small bowel will liquify the thick meconium all along the small bowel. Diluted meconium pushed back to the stomach to be evacuated by the gastric tube suction. This procedure repeats several times to wash all along the small bowel and finally and after extraction of meconial plugs the water started to coming out of anus

slightly. passage of thin meconium through the anus by gentle milking is the key point to start the bowel reduction and subsequent primary abdominal repair.**Results**: 15 neonates were allocated in each group. in this study, we observed a significantly better outcome in terms of faster GI rehabilitation, less need to silo placement and shorter NICU and hospital stay. operation time was slightly longer in TBW group while the difference was not significantly statically. during post-operative period 9 neonates became prone to abdominal compartment syndrome and underwent operation. (7 in conventional group and 2 in TBW) those in TBW group was managed by facial opening, redo bowel washing and skin closure.TBW was improved bowel motility and function during post-operative period after gastroschisis repair and also helps to rule out any concomitant bowel atresia. Mortality rate was also lower in TBW group although significantly as all the clinical finding among expired cases were in favor of sepsis. **Conclusion**: We observed beneficial effects of TBW in faster recovery of neonate with gastroschisis which may also decrease medication and hospitalization fees.

[OA 4.7]] Title: CLINICAL ANALYSIS OF ANASTOMOTIC STENOSIS AFTER THE TREATMENT OF TYPE III CONGENITAL ESOPHAGEAL ATRESIA WITH THORACOSCOPIC SURGERY

Author: Yan Bin

Purpose: This paper was aimed at looking into the influencing factors of anastomotic stenosis after the treatment of type III congenital esophageal atresia (CEA) with thoracoscopic surgery, summing up the experience of diagnosis as well as treatment, and eventually providing suggestions for the means of prevention and control of complications of such kind. **Data and Methods**: The clinical data of 33 children with type III CEA treated with thoracoscopic surgery in Guangzhou Women and Children's Medical Center from January 2013 to January 2017 was collected for a retrospective analysis. After creating an Excel database of clinical data, various clinical pathological parameters of the afflicted children were entered while the related data from follow-up visits to the children discharged from hospital were recorded. Based on the incidence of anastomotic stenosis (AS), the children were divided into the AS group (n=7) and the NAS (non-AS) group (n=26) for further comparison of their clinical parameters and follow-up data. A statistical analysis software, SPSS 19.0 for Windows, was employed for data analysis. The Stenosis Index (SI) of children with AS was measured before and after the esophagectasis treatment, and their growth and development were recorded through follow-up visits. **Results**: Among the 33 children, 7 were diagnosed as having AS (incidence: 21.2%). Comparisons of their sex, birth weight, gestational age, complication of malformation, postoperative feeding time, and postoperative ventilator use between the AS group and the NAS group indicated no significant difference ($P>0.05$). Among others, the differences between the groups in distance from the missing blind end, the incidence of anastomotic leakage, the incidence of the learning curve of thoracoscopic surgery, and the incidence of postoperative gastroesophageal reflux were found significant ($P<0.05$). With 4 factors as independent variables, a multi-factor logistics regression model of the AS and NAS variables was established. According to the results therefrom, anastomotic leakage was an AS-causing independent influencing factor. 7 children in the AS group showed dysphagia symptoms in 4.8± 1.3 months on average, and the measured mean esophageal stenosis index was 0.71 ± 0.02. All of them were diagnosed by gastroscopy and received balloon dilation for 2.1 ± 0.3 times on average; no perforation was found. After the treatment, all symptoms disappeared. During the 6~36 months of follow-up visits, the children grew and developed well. **Conclusions**:The postoperative AS after the thoracoscopic treatment of type III CEA was related to the distance of esophagus blind end, postoperative gastroesophageal reflux, surgical learning curve, and anastomotic leakage, of which the last one was an independent influencing factor that could cause AS. Balloon dilation was an effective treatment method for esophageal stenosis. Early diagnosis and active treatment of postoperative AS could enhance the quality of life of children suffering from the disease. **Keywords**: Congenital esophageal atresia; thoracoscopy; anastomotic stenosis; balloon dilation

[OA 4.8] Title: WHATâ€™S HAPPENING IN PAEDIATRIC GLOBAL SURGERY? â€“ A BIBLIOGRAPHIC ANALYSIS OF THE 30 MOST CITED ARTICLES

Author: Julia Steinle
Institution: University of Muenster, Germany

Aim of the study: Less than 3% of children in low- and middle-income countries (LMIC) have access to surgical care as stated by the Lancet Commission on Global Surgery. To improve surgical care for paediatric patients, publications from LMIC are essential for understanding the specific needs. The aim of this study is to analyse the most cited articles in global paediatric surgery. **Methods:** A Web of Science search was conducted looking for global paediatric surgery articles or paediatric surgery studies from LMIC. Title, authors, author's affiliation, country, publication year, journal, main subject, total citations and average citations per year were extracted from the 30 most-cited articles. **Main results:** The articles were published from 2000 to 2017. On average, the articles were cited 23.1 times (range: 10-76) and average citations per year were 3.6 (range: 0.9-10.5). The mean 5-year Impact Factor of the source journal is 2.4 (range: 0.58-7.066). The majority of first and last authors are from North America (first: 57%, last: 47%; N=30), 37% of fist authors and 30% of last authors are from LMIC. The major topics of discussion were paediatric surgical workforce, training and challenges in LMIC. **Conclusions:** There are only a limited number of publications on global paediatric surgery. The 30 most cited articles mainly originate from North America, only a minority of from LMIC. In order to study paediatric surgery in LMIC taking into account the situation on site, there is a need for studies originating from LMIC themselves. The findings of this study support the claim that more funding and mentoring should be focused on developing paediatric surgical research capacity in LMIC.

Thoracic Surgery Day 1: OA5
Moderator: Aydin Yagmurlu

[OA 5.1] Title: VIDEO ASSISTED THORACOSCOPIC SURGERY FOR CONGENITAL DIAPHRAGMATIC HERNIA WITH MODIFIED SUTURING

Author: LEECARLO LUMBAN GAOL

Purpose: Congenital diaphragmatic hernia (CDH) is one of the most challenging and complex pediatric abnormalities to manage, both medically and surgically. More than 90% of congenital diaphragmatic hernia (CDH) repairs are approach through via laparotomy, but the thoracoscopic approach to CDH repair may be performed safely with appropriate patient selection. **Method**: We herein report a case of CDH treated by Video Assisted Thoracoscopic Surgery with modified suturing. **Results**: A 2.7-kg full-term newborn refered to our hospital after 3 weeks with CDH underwent VATS for repair the defect. The patient was positioned lateral decubitus with the ipsilateral side up and in a slight reverse Trandelenburg position. The surgeon stand at the head and the monitors are placed at the feet. An initial 5 mm port is placed slightly anterior to the tip of the scapula and low pressure/low flow insufflation is initiated in order to avoid excess intrathoracic pressure and mediastinal shift. A 5 mm, 0 degree camera is inserted and the thoracic cavity evaluated. Two additional 3 mm stab incisions are fashioned anterior and posterior to the camera, usually one rib space lower, for comfortable triangulation to the defect. There were almost all intestine herniated into the thorax including the spleen in this type C – CDH. We used modified closure of the defect using 3.0 braided non-absorbable sutures, and tearing the medial portion of the diaphragm brought to the lateral portion, and other suture passer to strengthen the repair. The suture is then tied in the subcutaneous tissues approximating the edges of the lateral diaphragm to the rib. Post operative hospitalization was 10 days, and the baby has no complication during the following up.**Conclusion**: Video Assisted Thoracoscopic Surgery (VATS) repair for CDH with modified suturing can be a choice to minimalized the surgical wound and shortened the time of operation in appropriate patient selection.**Keywords**: video-assisted-thoracoscopic-surgery, CDH, minimally invasive technique, modified suturing

[OA 5.2] Title: APPLICATION OF INDOCYANINE GREEN IN THORACOSCOPIC EXCISION OF CONGENITAL PULMONARY AIRWAY MALFORMATION

Author: CT Lau

Aim of the Study: With the advancement in antenatal ultrasound technology, congenital pulmonary airway malformation (CPAM) is an increasingly recognized disease entity. Most surgeons now incline for early resection, but should it be a lobectomy or segmentectomy remained a debatable issue. Recently the use of indocyanine

green (ICG) under near-infrared thoracoscopy has come to light as a potential tool to solve the problem. In this study we reviewed our early experience in the use of ICG during thoracoscopic excision of CPAM.**Methods:**All patients with CPAM undergoing thoracoscopic wedge resection between August 2017 and August 2018 were included into the study. 0.2mg/kg of ICG was injected intravenously during the operation to demarcate the extent of resection. Wedge resection was performed along the margin marked by ICG. Patients were discharged from hospital after chest tube removal. Demographic data and post-operative outcomes were analyzed.**Results:**15 patients were identified with 6 males and 9 females. The mean age at operation was 16 months. 8 lesions were located on left side while 7 on right. Pure type CPAM was found in 8 patients while 7 were mixed type with intralobar sequestration component. The mean operative time was 73 minutes. The mean hospital stay was 2.85days. No post-operative complication including persistent air leak or wound infection was noted.**Conclusions** The use of ICG during thoracoscopic CPAM excision is safe. Its use may help to facilitate the procedure and reduce post-operative complications.

[OA 5.3] Title: SURGICAL TREATMENT OF Ð'RONCHIECTASIS IN CHILDREN

Author: Mansur Nasirov

Aim of the study:Evolution of outcomes of surgical methods of treatment of bronchiectasis in children. **Methods**:We analyzed our recent experience with treatment of this syndrome and report on outcomes and quality of life assessment of the largest series ever reported of patients treated by "filling of the affected bronchi". 19 operated children were of 5-12 years old with bronchiectasis (on the right-6, left-13). After preoperative cleaning of bronchi, monotype interventions were done: isolated separation and resection of lower-lobar bronchi, canulation and swelling of the lobe until appearance of vicariously changed areas of the lung tissue and filling them with biopolymer (synthetic polymer-sorbent with two free radicals to one of which antibiotic was fixed), ends of bronchi was sutured hermetically. **Main results**:The early postoperative period was without complications, in 2-3 days' children were active. Results of outcome studies in 17 children carried out in 5-7 years after intervention were successful. Functional studies showed a good compensation of the indices of external respiration and hemodynamics of small blood circulation in all children examined. Only in 2 girls with morphologically verified "bronchial hypoplasia" developed lobar atelectasis, with moderate shifting of the heart shadow.**Conclusion**: Introduction into clinical practice methods of "filling of the bronchi" in affected part of the lung with bronchiectasis reduces the incidence of late complications, as well as an effective alternative to conventional lung resection.

[OA 5.4] Title: TRACHEO BRONCHIAL REMNANTS AS A RARE CAUSE OF CONGENITAL ESOPHAGEAL STENOSIS

Author: Isam A. Abdelgaleel, Shaimaa O.M Alaraby , Sami Taha, Omer E. Khair, Eltahir Bagadi

Introduction / Background :Congenital esophageal stenosis (CES) is a rare anomaly, and appropriate management is not well established. The first report of congenital esophageal stenosis (CES) was attributed to Frey and Duschl, in 1936. The authors described the case of a 19-year-old girl, whose death was attributed to the diagnosis of achalasia and who was found to have cartilage in the cardia during necropsy. CES is a rare condition, associated with malformation of the esophageal structure, which may be concomitant with esophageal atresia. Tracheobronchial remnants (TBR) are the most frequent cause, but membranous diaphragm and fibromuscular (FMS) stenosis are other possible etiologies for this type of narrowing (1).**Case Presentation** :We present a 2 year old female who presented with regurgitation, dysphagia and, recurrent attacks of chest infection for about 6 months. She was diagnosed as achalasia and was treated accordingly Intra operatively, a hard area was encountered at the lower esophagus which was excised and sent for histopathology which showed the presence of cartilage and repiratory mucosa. Early post op course was uneventful, but she developed leak and sepsis. After stabilization she was taken again to the OR, resection and anastamosis was done. The postoperative course was uneventful. Follow up after four years, she was well gaining weight and free of symptoms.**Conclusion**:Congenital esophageal stenosis owing to tracheobronchial remnants (TBR) is a rare condition. Inappropriate treatment often is carried out before the correct diagnosis is established. In cases of congenital esophageal stenosis, tracheobronchial remnants in the distal esophagus should be considered a possible diagnosis. The cause is thought to be esophageal sequestration of a tracheobronchial anlage before embryologic separation. Primary resection of

the stenotic portion of the esophagus with re-anastomosis is recommended (2)**Recommendation**:TBR should be suspected in patients who present with a typical history of dysphagia after ingestion of solid food and have characteristic esophagographic and esophagoscopic findings. It has a strong tendency to occur with esophageal atresia. Esophagoscopic dilatation is ineffective and may render the patient at risk for esophageal perforation. Operation is the treatment of choice and carries little morbidity and mortality.

[OA 5.5] Title: THORACOSCOPIC RESECTION OF MEDIASTINAL MASSES IN INFANTS AND CHILDREN EXPERIENCE AT QUEEN RANIA HOSPITAL FOR CHILDREN

Author: Ahmad AlRaymoony, M.daajah.; W. Mefleh; A.Ibrahin.; G.Kasawneh.

Objective:To evaluate the feasibility and effectiveness of Video-Assisted Thoracoscpic Surgery (VATS) in diagnosing and treating mediastinal masses in infants and children including benign, malignant or inflammatory processes. **Methods**:A retrospective study has been designed at Queen Rania Hospital for Children in Amman, Jordan. Medical records of 45 patients aged between 5 months to 14 years who presented with mediastinal masses between February 2010 and June 2017 has been reviewed. 14 patients were presented with anterior Mediastinal mass and 31 patients presented with posterior Mediastinal mass, classified by radiological investigations. Demographics, preoperative radiographic evaluation, surgical techniques, complications, days of hospital stay and two years of postoperative follow up all have been evaluated in this study. Patients were positioned in a prone or supine position, the operation was performed under general endotracheal anesthesia, with single lumen tube. Three trocars were used with port diameters ranging from of 3 and 5 mm. Time of surgery went between 12 to 170 minutes.**Results**: While the final tissue diagnosis was reached in all patents via the VATS, complete surgical excision was performed in only 33 patients. All children were extubated immediately post operation and chest drain was inserted in all patients but removed after 24 hours have passed. Hospital stay was ranged from one to 5 days. The histopathological result showed different diagnosis like foregut duplications in eight patients, Ganglioneuromas in nine patents, Neuroblastomas in seven patients, lymphomas in eleven patients, 4 teratomas, 3 sarcomas, and 3 other lesions.**Conclusion**:Thoracoscopy is a safe and effective method to diagnosis and treat anterior and the posterior mediastinum masses in infants and children. Patients who had the surgery completed via VATS had the benefits of reducing postoperative pain, short hospitalization, short recovery times and good cosmetic result when compared to open thoracotomy patients.**Key words**: Thoracoscopy, Mediastinal mass, infants, children, minimally invasive surgery.

Oncology Day 2: OA6
Moderator: C. Hon Chu

[OA 6.1] Title: HIDDEN HAZARD IN APPENDIX IN CHILDREN: CARCINOID TUMORS

Author: Yusuf Atakan Baltrak

Introduction: Carcinoid tumors (CT) are the most common tumors of the appendix. The incidence of carcinoid tumor of the appendix is generally 1-2 in every 1000 appendectomy material. The diameter of appendix carcinoid tumors in children is less than 2 cm.**Material and Method:** The present study enrolled the patients who were diagnosed with carcinoid tumors of the appendix as a result of an examination of the appendix specimen after the patients underwent appendectomy in the pediatric surgery clinic of our hospital between November 2015 and November 2018. Patients' demographic characteristics, clinical findings, preoperative laboratory and imaging results, location, diameter and size of the tumor, mesoappendix invasion status, mitotic index and Ki-67 elevation, hospital stay duration, surgical types and complications, and results of laboratory and imaging tests were evaluated retrospectively. **Findings:** Eight of the six hundred twenty-one patients (1.2%) who underwent an appendectomy were diagnosed with carcinoid tumor of the appendix. The median age of the patients was 13 (range, 11-16 years).Of the 8 patients, five (62.5%) were female and three (37.5%) were male. All patients presented to our clinic with abdominal pain. No surgical complications were observed during the operation and in the early postoperative period. The mean hospital stay was 2.7 days (2-5 days). In all the patients, the tumor size

was less than 2 cm, the surgical margins were clean, the mitotic index was below 2%, the Ki 67 index was below 1%, and the tumor had not spread to the mesoappendix. Only in one of the patients, the carcinoid tumor was located in the appendix radix; in the other seven patients, the tumor was in the middle and end of the appendix. **Conclusion:** Carcinoid tumors of the appendix are clinically similar to acute appendicitis but may be found incidentally during other surgical procedures other than an appendectomy. Diagnosis is made after the pathological specimen diagnosed with CT is histopathologically evaluated. The size, diameter, and depth of the tumor, mesoappendix invasion, mitotic index, and Ki-67 elevation are used in the evaluation and treatment of the tumor.**Keywords**: Appendix, Carcinoid Tumor, Children

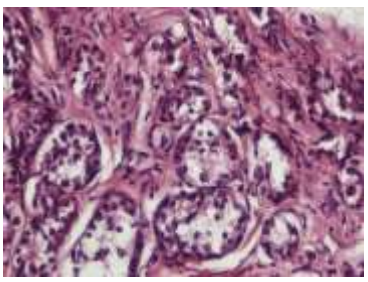
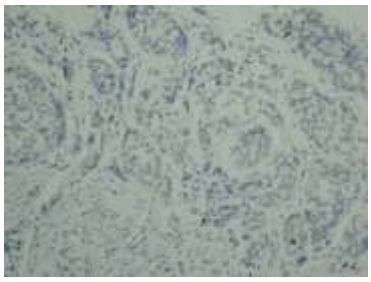
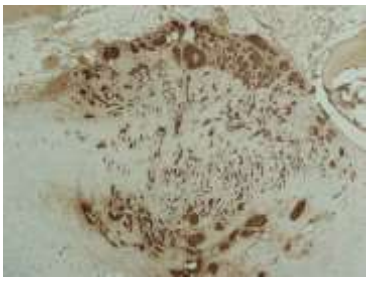




Figure 1: Appendice Carcinoid Tumor Histopathological appearance,Figure 2: Carcinoid Tumor Ki-67, Figure 3: Carcinoid Tumor Cromogranin Marker. Table: Findings of patients

Gender	Age	Tumors Measure(mm)	Tumors Location	Mitotic Rate	Ki 67- İndex	Cromogranin Marker
M	11	12 mm	Distal	>%2	>%1	+
F	11	11 mm	Distal	>%2	>%1	+
F	12	13 mm	Distal	>%2	>%1	+
M	13	14 mm	Middle	>%2	>%1	+
F	14	14 mm	Distal	>%2	>%1	+
F	14	12 mm	Middle	>%2	>%1	+
M	15	16 mm	Proksimal	>%2	>%1	+
F	16	14	Distal	>%2	>%1	+

[OA 6.2] Title: SURGICAL MANAGEMENT OF ABDOMINAL NON HODGKINÂ€™S LYMPHOMA

Author: Ahmed Mohamed, Maryam Haneef, Daniel Colliver, Brian Davies, Khalid Elmalik
Institution: East Midlands Children's and Young Persons' Integrated Cancer Service

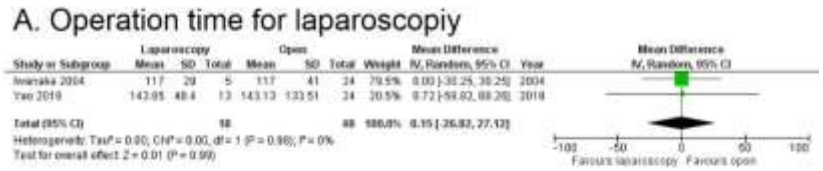
Introduction: Non-Hodgkin's Lymphoma (NHL) accounts for approximately 60% of paediatric lymphoma, 30% of which occurs in the abdomen. It is classified by a combination of morphological and immunophenotypic features. It can present as a focal lesion amenable to resection, diffuse retroperitoneal disease or direct infiltration of intra-abdominal viscera. Tissue diagnosis is made from sampling abdominal or extra-abdominal representative specimen.**Aim/ Objectives**: To review all children diagnosed with abdominal NHL in our institute and assess the surgical management and report any morbidity associated with the surgical intervention.**Results**: This was an 18-years' experience (2000 - 2018) during which 45 cases were diagnosed with abdominal NHL, 39 had complete records included for analysis. There were 27 males and 12 females diagnosed at a median age of 10.9 years (2-16 years). Abdominal pain was the main presenting symptom (n=23) followed by a palpable mass in (n=16). Twenty had extra-abdominal disease, 4 affecting the CNS.Minimal invasive surgery (MIS) was utilised to make the

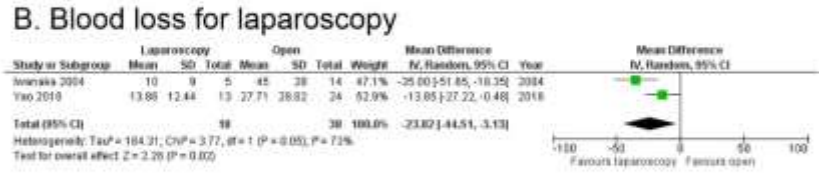
diagnosis in 28 patients: laparoscopic (n=9), percutaneous with and without image guidance (n=11) and endoscopic (n=2). Seventeen patients were diagnosed by an open procedure, of which 9 had an emergency laparotomy for bowel obstruction. Tissue diagnosis was made in 38 cases and supported by cytology in 5; one patient was diagnosed solely by cytology. Four cases (10%) were diagnosed from extra-abdominal disease. The lymphoma subtypes were: B cell (n=21), Burkitt (n=12), Anaplastic large cell (n=5) and T cell lymphoblastic lymphoma (n=1).Complications developed in 3 patients: pneumothorax (n=1), incisional hernia (n=1) and enteric fistula (n=1). There was a delay in diagnosis in 1 patient due to insufficient sample. Five patients relapsed and two died from disease progression. **Conclusion**: In our experience abdominal NHL was predominantly diagnosed from abdominal tissue however it can be diagnosed from carefully selected extra-abdominal sites using MIS provided the expertise is available. Non diagnostic samples may delay initiation of therapy. All interventions made were associated with low morbidity.

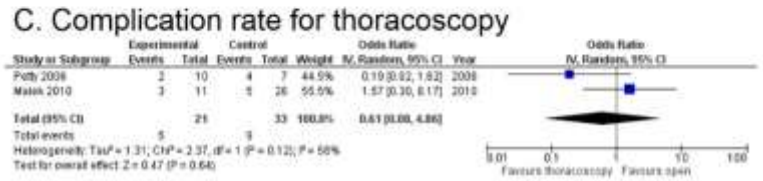
[OA 6.3] Title: ROLE OF LAPAROSCOPIC AND THORACOSCOPIC SURGERY IN CHILDREN WITH NEUROBLASTOMA: A SYSTEMATIC REVIEW AND META-ANALYSIS

Author: Hiromu Miyakea, Shogo Seoa, Agostino Pierroa

Aim of the Study: Neuroblastoma is the most common extracranial solid tumor in children. Surgical resection of tumor is one of the step of treatment. With the development of minimally invasive surgery, endoscopic surgery, including laparoscopy and thoracoscopy, is increasingly used for resection of neuroblastoma. However, safety and usefulness of these minimally invasive approach are still unclear. The aim of this review is to evaluate the current evidence on the outcome after laparoscopic and thoracoscopic surgery for the patients with neuroblastoma. **Methods**: A systematic search of MEDLINE and EMBASE was conducted to extract studies which compared minimally invasive (laparoscopic or thoracoscopic) tumor excision with open (laparotomy or thoracotomy) excision of neuroblastoma in children. Perioperative outcomes such as operation time, blood loss and complications were evaluated.**Main results**: Four retrospective cohort studies for laparoscopy and 2 retrospective cohort studies for thoracoscopy were extracted for qualitative systematic review. Of the 4 studies on laparoscopic surgery, 2 were included for qualitative meta-analysis. There was no significant difference between laparoscopic tumor excision and open surgery in the length of operation (Mean difference (MD): 0.15, 95% CI: -26.82-27.12, p=0.99. Figure A). Blood loss was significantly lower in laparoscopic excision compared to open excision (MD: -23.82, 95% CI: -44.51--3.13, p=0.02. Figure B). In thoracoscopic surgery, there was no significant difference in complication rate between thoracoscopic tumor excision and open excision (Odds ratio: 0.61, 95% CI: 0.08-4.86, p=0.64. Figure C).







Conclusions: Current results suggest laparoscopy and thoracoscopy can be performed safely and may have benefit in the selected cases. However, there are numerous bias in present evidence including indications for minimally invasive versus open surgery. Estimation of proper indication and larger scale prospective study will be needed to obtain high quality evidence

[OA 6.4] Title: SURGICAL MANAGEMENT AND OUTCOMES OF RENAL TUMORS AMONG CHILDREN WITH IVC/INTRACARDIAC EXTENSION

Author: Huma Halepota

Background/Objectives: Determine outcomes of renal tumor with inferior vena cava(IVC)and intracardiac(IC)extension in our institute. These subset of patients, presents a technical challenge to surgeon especially with constrained resources.**Design/Methods**: Retrospective cross sectional study.All patients from 1-16 years of age from January 1998 till June 2016 included.**Results**: During the study period 60 patients with renal tumors were managed. 18 (30%)patients presented with IVC and /or IC extension majority involving right kidney (13/18), most common age at presentation ranged between 1-5 years. Out of 18 children 55%were male and 45% were female. The level of Tumor extension into IVC was below the diaphragm in 10 (55.5%), above the diaphragm in 8 (44.44%) out of which 5 extending into IC (27.8%).Wilms tumor (83%) was the most common tumor type followed by renal cell carcinoma. Most patients 9(60%) with Wilm's tumor had IVC extension below diaphragm. 7 out of these 9 patients had no recurrence after 5 years of follow up. One had lung metastasis due to tumor spillage and one patient with stage 5 disease expired. Most (5/9) of the patients had received preoperative chemotherapy, 3 underwent direct thrombectomy. 5 patients had intra-atrial extension; all received preoperative chemotherapy 2 showed no recurrence after 5 years. 2 patients had Renal cell carcinoma and 1 had Rhabdoid tumor. **Conclusions**: In our study 30% incidence of IVC and or IC Tumor extension is much higher than the reported series.This high incidence can be explained that many of these patients were referred from other institutions.2 patients in our study had surgical complications: In our study no patient required cardiopulmonary bypass as preoperative chemotherapy reduced the thrombus to IVC., most patients received preoperative chemotherapy as well as preoperative radiotherapy in case of metastatic disease. 61% of these patients are disease free on five years of follow up

[OA 6.5] Title: A PROSPECTIVE ANALYSIS OF PERCUTANEOUS LONG-TERM CENTRAL VENOUS CATHETER INSERTIONS IN THE PAEDIATRIC POPULATION FOLLOWING A RETROSPECTIVE STUDY.

Author: C. Mushonga, N. Alexander, C. Rees, S. Syed

Aim: As insertion of long-term central venous catheters is a common procedure in paediatric surgery, it is thus of paramount importance to ascertain the best method of insertion to reduce complications and provide the best patient experience. Evidence has demonstrated percutaneous insertion of central venous access devices with or without ultrasound guidance to be the best method. However, this has not been shown to be standard practice in the paediatric population. Our objective was to analyse the complication rates of our practice prospectively following on from a previous retrospective study we conducted which demonstrated that percutaneous technique was best practice with regards to outcomes when compared with open insertions. **Methods:** Contemporaneous data on paediatric patients in whom central venous catheters were inserted between January 2017 and September 2019 was collected from surgeons' logbooks and electronic database of patient records. Information on patient demographics, inserted device specifics, as well as immediate and delayed outcomes of insertion was also obtained. Diagnostic data from peri-operative and intraoperative doppler ultrasounds of neck veins was also collected. Emphasis was placed on any immediate intraoperative complications, thrombosis, pneumothorax and line infections. **Results:** During the study period, 182 patients between 3 months to 20 years old underwent percutaneous central venous catheter insertion and 8 patients underwent open insertions. Of the 182, 104 were placed into the internal jugular vein, 37 subclavian vein, 3 femoral vein and 38 were peripherally inserted. Of the 8 open insertions, 2 were due to failed initial percutaneous insertions. There were no reported cases of a pneumothorax, thrombus or arterial injuries with line insertion. There was one reported case of unanticipated blood loss due to unexpected bleeding from a tributary to the internal jugular vein in the open insertion. **Conclusion:** Consistent with expected outcomes which were reflected in our preceding study there was a high success rate of percutaneously inserted lines with very low complication rates being reported in paediatric surgery.

[OA 6.6] Title: TITANIUM TRIONYX SYSTEM FOR CHEST WALL RECONSTRUCTION IN THORACIC EWING SARCOMA

Author: Oscar Gomez

Aim of the study. Chest wall reconstruction after an extensive resection in children with thoracic Ewing sarcoma represents a great challenge for pediatric surgeons. Our aim is to present our initial experience with titanium Trionyx system for chest wall stabilization.**Case description.** A 15-year-old girl was admitted to our hospital due to an 8x9 cm thoracic mass at the level of the left anterior axillary line, presenting rapid grow and focal pain. An 8.5x3x8 cm mass located in the left lateral chest wall was found on the chest CT scan, over the 5th and 7th ribs and under the serratus anterior muscle and with focal thickness of the pleura and periosteal reaction in the 6th rib. An incisional biopsy was performed through a quadrangular skin flap incision and an Ewing sarcoma was found with positive translocation for EWSR1 gen. Neoadjuvant chemotherapy was started following the protocol Euro Ewing 2012. Single stage surgical resection and chest wall reconstruction through previous surgical skin incision was performed after neoadjuvant chemotherapy. A 3x2 cm mass was found on the left lateral chest wall at the level of 5th and 6th ribs. Excision the lateral aspects of 5th, 6th and 7th ribs including the tumoral mass with a 3 cm of security margins was carried out. Focal atypical lung resection of the underlying lung was performed. Goretex patch was used for pleural closure. Two ribs Trionix system prothesis were employed for chest wall stabilization and a lattisimus dorsi muscle flap was developed for covering the titanium rib prothesis. Blake drainage was left and flap skin incision was closed by layers. Postoperative recovery was uneventful. **Conclusions.** Titanium Trionyx system is a new and helpful tool for chest wall stabilization in patients with large thoracic wall defects requiring complex reconstruction after surgical resection of thoracis tumors.

[OA 6.7] Title: SPONTANEOUS RUPTURED WILMS TUMOR

Author: Rehab Salim

Aim of study: to report a case of spontaneous ruptured wilm's tumor.**Case description**:4y old male presented with Lt Side abdominal mass for 2 months.The mass started with small size then increased rapidly over 2 months, ass with weight loss and fatigability, not pain or fever, No Gastrointestinal or urinary symptoms.He admitted to Pediatric medicine ward with uncontrolled blood pressure and anemia.I was called to assess the pt. for his new complain: Abdominal pain &vomiting &SOB.The pain was central, dull aching ass with bilious vomiting 5 times with no aggravating or relieving factors ,not radiating or referred to other site.No fever or increase in abdominal distension no constipation, NO history of abdominal trauma.O/E: looks ill emaciated, on cardiac bed ,with signs of respiratory distress, sunken eye, pale not jaundiced or cyanosed ,PR: 150/min RR: 48/ min T: 36.5 BP: 70/50.Chest: no air entry on Lt side with dull percussion note,Abdomen grossly distended with full flank, shiny skin, visible dilated vein, flat umbilicus, no surgical scar.Palpation: there was abdominal tenderness with ill defined mass extended all over the abdomen. Liver, spleen and Rt kidney difficult to palpated, Dull percussion note, -ve bowel sound and normal DRE.Radiological investigations: CXR: Lt Side pleural effusion.CT abdomen: lt huge solid heterogeneous renal mass consistent with wilm’s tumor. Diagnosis:? Ruptured lt side Wilm’s Tumor .Management:Resuscitation and Lt Side chest tube inserted (210 ml). After stabilization laparotomy was done through transverse supra umbilical incision.Finding: blood stained free peritoneal fluids and clots, ruptured lt side renal mass.Nephrectomy was done, wash of the peritoneal cavity &drain inserted.Histopathology: stage III Nephroblastoma Favourable histology. **Conclusion**: we consider this case as a rare presentation of wilm's tumor.

[OA 7.1] Title: SCORING SYSTEM FOR PREDICTED SURGICAL-SITE INFECTION IN NEONATES AND PEDIATRIC INTENSIVE CARE UNIT: A PRELIMINARY STUDY

Author: LEECARLO LUMBAN GAOL, Melian Anita, Edi Pasaribu, Yohanes Firmansyah
Institution: Tarakan General Hospital

Background: Surgical-site infections (SSI) account for a large portion of morbidity with the rate of 500,000 cases per year from 27 million surgeries. Some researchers found that factors contributing to surgical wound infections are the number of bacteria contaminants, the bacteria's virulence, the micro-environment around the surgical wound, and the immune system of the host. **Objective**: To determine risk factors for surgical-site infections in neonates and pediatric intensive care unit, so these factors could be used in a risk index for neonates and pediatrics in critical care unit.**Method**: A cohort retrospective study was initiated to investigate risk factors for SSI at Tarakan General Hospital from January 2018 to July 2019. The different factors then analyzed with chi-square test, whereas the multivariate binary logistic regression model was used to examine independent fisk factors for SSI.**Result**: A total of 179 patients met the inclusion criteria. There were 66 patients in NICU and 113 in PICU. Bivariate analysis showed that SSI was associated with type of ward, operating room temperature, septicemia perioperative, length of hospitalization, and the use of chlorhexidine bath-washing ($p<0.05$). Multivariate analysis identified three independent parameters correlating with the occurance of SSI: operating room temperature (odds ratio [OR] 12,510; 95% confidence interval [CI] 4,198 – 37,279; $P<0.001$); perioperative septicemia (OR 6,424; 95% CI 2,221 – 18,581; $P=0.001$); and the use of chlorhexidine bath-washing (OR 35,751; 95% CI 8,627 – 148,164; $P<0.001$). **Conclusion**: From these three independent paramaters, We recommended a prognostic scoring for SSI in post operative NICU's and PICU's patients that still need another diagnostic, validity and realibility test to improve patients outcome.**Keywords**: surgical-site infection, prognostic score, neonates intensive care unit, pediatrics intensive care unit, tarakan general hospital

[OA 7.2] Title: MODERN METHODS OF TREATMENT OF NEUROFIBROMATOSIS TYPE 1 IN CHILDREN AND ADULTS.

Author: Zarichansky V. A., Protiko A. G. , Yegiazaryan A. K. , Alsayed H. H.

Introduction: Neurofibromatosis type 1 is transmitted genetically by autosomal-dominant manner,accounting for 40% of all autosomal-dominant diseases. 50% of cases are inherited, but about 50% of people develop NF1 as a result of spontaneous mutation.NF1 develops in both sexes, in 1 out of 3500 newborns. The frequency of NF1 manifestation does not differ in different geographical regions among ethnic groups.The NF1 gene is one of the main genes-suppressors of tumor growth for half of body tissues, primarily neuroectodermal origin. it is a developmental syndrome caused by germline mutations in neurofibromin, a gene that is involved in the RAS pathway. The gene responsible for the development of NF-1 is located in the precentric region of proximal part of the long arm of the 17th chromosome at locus 17 q 11.2. Objective: To improve the methods for diagnosis and treatment of patients diagnosed with Neurofibromatosis type 1. **Materials and methods**: Under our supervision , there were 142 patients, aged from 9 months untill 75 years old NF-1 was confirmed in 117 patients(68% of cases) by molecular-genetic investigation .Remaining patients had differential diagnosis (NF-1 was excluded). Following diagnoses were verified and distinguished by NF-1 by medical and genetic examinations: Tuberous sclerosis-5(3,5%),Proteus syndrome-3(2%),Klippel-Trènaunay-Weber(KTW) syndrome-1(0,7%) Legius syndrome-1(0,7%), Facial Hemihypertrophy -5(3,5%), vascular malformations-7(4,9%) and NF2-3(2%).
Distribution of patients according to affected anatomical regions: Face-23 patients, Neck-30,Head and Neck-43, other body regions-21 patients. These patients underwent the given treatment: 1) surgical-70 patients ,2)Combined therapy(Sirolimus, Botulinum therapy) and surgical extraction(35 patients); Botulinum therapy(12 patients), it should be noted that this group of patients are under observation to date. **Results**: Treatment of patients was done after verification of diagnosis. Duration of supervision of patients is 10 years. Until now the gold standard for treatment is-Surgical removal of neurofibromas. Prescription of drugs therapy reduce neurofibromatous tissue, only 30% , but Botulinum therapy also has the same effect and it's analgesic. We will publish more expanded and detailed results after the end of the research.**Conclusion**: Neurofibromatosis type 1 is a severe inherited disease ,leading to a severe anatomical, physiological and aesthetic disorders. According to our supervision on the treatment of all

patients, treatment should be started immediately after the diagnosis is established, however it's advisable to undergo surgical treatment during the period of hormonal balance. At the moment, there is development of new drugs for the treatment of neurofibromatosis type 1.

[OA 7.3] Title: IS THERE A PLACE FOR ERAS PROTOCOL IN PEDIATRIC SURGERY \? INITIAL OWN EXPERIENCE
Author: Andrzej Grabowski
Aim of the Study: Enhanced Recovery After Surgery (ERAS) is a holistic perioperative care protocol created to improve treatment outcomes. Implementation of new rules radically changed the perioperative care of adult patients. The protocol refers to the preoperative, intraoperative and postoperative periods. The essence of all stages is reduction of metabolic stress caused by a surgery. Our aim was to compare outcomes before and after implementation of ERAS in children undergoing reverse stoma surgery. **Methods:** A pediatric-specific ERAS protocol dedicated for reverse stoma procedure was developed in 2018.A retrospective review was performed including 13 patients in the pre-ERAS period (2016 - 2017) and 14 patients in the post–ERAS period (2018 - 2019). 9procedures were applied initially, with 15 of 16 stages finally introduced at the end. Total parenteral nutrition (TPN) time, time of introducing watering, time to regular diet, time to stool and length of stay (LOS) were analyzed **Main results**The LOS decreased from 7.14 to 5 days in the post-ERAS period. Implemented protocol reduced time of introducing watering from 4.35 to 1 day and time to regular diet from 6.14 to 3.23 days. TPN decreased from 5.14 in the pre-ERAS period to 1.7 days in the post-ERAS period. With the progress of implementation of ERAS protocol TPN was gradually withdrawn – initially for 4 patients for 5.5 days in average, in the last 9 patients for 0 days. Withdrawal of TPN resulted in introduction of a full diet in the 2.22 postoperative day and to shortening the average LOS to 4.33 days. **Conclusions: I**mplementation of a pediatric-specific ERAS in children undergoing reverse stoma surgery is safe and may lead to improved patient satisfaction and treatment outcomes. Further experience is needed.

[OA 7.4] Title: USE OF DIMER D, AS A PREDICTOR OF POST-SURGICAL COMPLICATIONS AND HOSPITAL STAYS GREATER THAN 3 DAYS, IN CHILDREN OPERATED IN ACUTE APPENDICITIS. RETROSPECTIVE STUDY IN 717 PATIENTS FROM 0 TO 18 YEAR
Author: MARIA ELEN MOLINA VAZ
Objectives: Our objective is to analyze D-Dimer values in preoperative patients with acute appendicitis to determine its value as a diagnostic test for postoperative complications and hospital stays greater than 3 days.**Material and methods**: We perform a retrospective, longitudinal, descriptive and analytical study of 717 patients with appendicitis that were operated in our center. The inclusion criteria were: 1. Diagnosis of acute appendicitis (ICD 9) 2. 0-18 years 3. Operated in the period 2010-2015 4. Procedure performed with open or laparoscopic appendectomy 5. Urgent procedure .Exclusion criteria were: 1. Non-urgent appendectomy 2. Surgery deferred from plastron 3. Secondary peritonitis. We study demographic variables, hospital stay, postsurgical complications, analytical variables, leukocytes, total neutrophils, PCR, fibrinogen and D-Dimer.**Results**: ROC curves were done with fibrinogen, D-Dimer, PCR, leukocytes and total neutrophils. Stay greater than 3 days were predicted by D-Dimer(84.62% sensitivity and specificity of83.87%) with a cut point of 755 ng / ml. ROC curves done for prediction of post-surgical complications show that D-Dimer has a sensitivity of 75%, and specificity of 85.71%, for a cut-off point of 2580 ng / ml.**Conclusions**: The best analytical predictors of hospital stay longer than 3 days are Dimer D and PCR. The best analytical predictors of postsurgical complications are the D-Dimer and PCR.

[OA 7.5] Title: LAPAROSCOPIC INGUINAL HERNIOTOMY IS SAFE, OFFERS DIAGNOSTIC ACCURACY AND HAS MINIMAL COMPLICATIONS
Author: Mostafa Abdelatty
Aim of the Study: To demonstrate the benefits of laparoscopic inguinal herniotomies in infants. **Methods**
12 months prospective data collection on neonates, infants and children undergoing laparoscopic inguinal herniotomy at a single centre.Data collected included patient demographics, pre-operative and intra-operative findings, length of surgery, length of stay, rate of recurrence and other post-op complications.**Main results**:50 patients underwent laparoscopic inguinal herniotomies, median age 7 months (1-74 months), intra-operative findings differed from the clinical diagnosis in 16 (32%) cases (3 patients had no hernia, 9 cases were had bilateral inguinal hernias instead of unilateral, 4 cases had a unilateral hernia instead of bilateral hernias). There were no

recurrences in our series, median follow-up 3.5 months (3-6 months). Overall only 3 patients developed complications (6%), 2 patients developed omental port site hernias, and one developed adhesional large bowel obstruction. The median operative time was 35 (10-60) minutes, 70% of patients were discharged on the same day of surgery while 30% were discharged after one night in hospital.**Conclusions**: Laparoscopic inguinal herniotomy is safe and feasible, offers diagnostic accuracy, avoids unnecessary additional surgery and has minimal complications.

[OA 7.6] Title: SHORT TERM OUTCOME OF SUTURE RECTOPEXY IN CHILDREN WITH RECTAL PROLAPSE: LAPAROSCOPIC VERSUS POSTERIOR SAGITTAL APPROACH

Author: Ahmed Hosni Morsi

Aim of the study: Innumerable surgical options addressing persistent rectal prolapse are available. This study compared the short term outcome of laparoscopic suture rectopexy (LSR) to posterior sagittal rectopexy (PSR). **Methods**: Prospective randomized study was carried out on patients requiring rectal prolapse surgery. Patients were randomly allocated into LSR and PSR groups. Patients with neurological/musculoskeletal deficits, lower gastrointestinal tract anomalies and those with previous pelvic or perineal surgeries were excluded.**Main results**: Sixty six patients, who had suture rectopexy done, were followed up for a minimum of 6 months following surgery. There were 33 LSR and 33 PSR. The mean duration of symptoms was 19 months (range, 6 months-7.5 years). The mean age at operation was 5.9 years (range, 2.5-12 years), with a slight female predominance (54.5%). The mean operative time was 87.2 and 51.3 minutes for LSR and PSR respectively. The mean post-operative hospital stay was 41.18 and 31.87 hours for PSR and LSR respectively. LSR had better Manchester Scar Scale scores compared to PSR (mean, 6.45 and 10.09 respectively). LSR patients resumed unrestricted activities earlier than those of PSR (mean, 9.84 and 15.15 days respectively). Both groups showed comparable improvements in clinical bowel function and quality of life scores. Complications were a transient partial recurrence in one LSR patient (3.1%) and two wound infections in PSR group (6.2%). There was one conversion to laparotomy in LSR group (3.1%).**Conclusions**: Both techniques seemed equally effective in eliminating rectal prolapse. Without longer operative times and conversion to laparotomy, LSR would have been absolutely superior to PSR

[OA 7.7] Title: ROLE OF NURSE IN REDUCTION OF PREOPERATIVE STRESS AND ANXIETY IN PEDIATRIC SURGERY

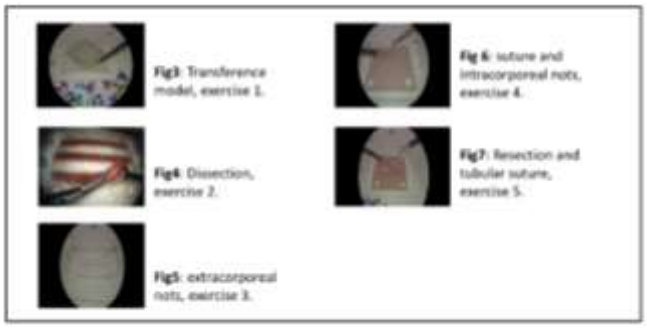
Author: Aferdita Ademi, Teuta Emini

Aim of the study: to present our experience with child stress in the surgical ward and the importance of the nurse in managing with this condition.**Material and methods**: one hundred and ten children hospitalized in Department of Urology at the Clinical Hospital of Tetova during a period between Jun 2018 – 2019 are included in this study. The presence of signs of psychological distress was assessed on the basis of direct discussions with children and changes in their behavior observed by parents of children. **Results**: From 110 children included in this study 85 of them was boys and 30 girls. The mean age of the children was 6.8 years. Most children were admitted in hospital on the day of surgery and discharged three days after surgery. A standardized interview is conducted with all the children's included in our study. The patients were asked to show what they consider as stressful event and what would calm them. The interview was realized by our nurses which have been trained in this procedure. Most of the children cited fear of pain and surgery as the main reason for their anxiety. Other reason of this stressful condition was the fear of anesthesia and different hospital settings. Warm and friendly conversation of nurses with children and the explanation of their concerns is shown to be very effective for attenuate the stress and anxiety in children during they stay at the hospital. **Conclusion**: stress and anxiety are present in every child hospitalized in surgical department. The role of healthcare providers especially of nurses is of particular importance to minimize these unpleasant feelings and to avoid negative postoperative consequences. **Key words**: pre-surgical stress; anxiety, surgery, children

[OA 7.8] Title: 3D PRINTED MULTIPLE SKILLS TRAINING SIMULATOR: DEVELOPMENT AND PRELIMINARY VALIDATION

Author: Maria Sole Valverde

Background: Simulators are emerging with the development of medical engineering technology. Using the MTBOX1, already presented, we extended our resources with a 3D Printed Simulation Tray that can be loaded with exchangeable models, used for essential laparoscopic skills training.**Aim of the study:** The aim is to describe the baseline experience and self-reported evaluation of the usefulness of this single simulator with exchangeable models as a resource for multiple skills training amongst surgeons with different expertise levels. **Methods:** The study enrolled 33 surgeons who were stratified in three groups according to their levels of experience and number of cases performed laparoscopically. G1: novice (<10), G2: intermediate (10-60), G3: expert (<60).
The MTBOX1 universal simulator box with a multifunctional tray to support the models, is manufactured with polypropylene and 3D printed parts, covered in thermoformed EVA foam simulating the abdominal wall of a small infant. (Fig.1) Five models were used to perform different exercises with measurable objectives to accomplish within a limited time frame. (Fig. 2)E1: transference (acrylic Mandala model)E2: dissection (self-supporting gel and silicone vessels model)E3: extracorporeal nots (acrylic bars model)E4: suture and intracorporeal nots (silicone pad model)E5: resection and tubular suture (silicone bowel model)2/0 Prolene, 5/0 PSD, 5/0 vicryl sutures and 5mm laparoscopic surgical instruments were provided.The validity of the model was assessed by a 17 item questionnaire. Q1-9 evaluated its capacity of testing and training and Q9-17 its relevance of actual laparoscopic surgery. The score of each exercise was obtained by dividing the time to finish the exercise by the number of objectives effectively accomplished.The correlation between surgical experience and the level of exposure to laparoscopy was evaluated, and the scores of the different groups were compared.**Main results** Participants gave a favorable opinion about the MTBOX1 and multifunction tray without inter-group differences. In G1–G3, the scores correlated with the level of previous exposure to laparoscopic procedures, more-experienced participants achieved better results than less-experienced participants. **Conclusion** The data demonstrate the validity of the MTBOX1 and multifunction tray model, suggesting that it can be a useful tool for training and evaluation of laparoscopic procedures.



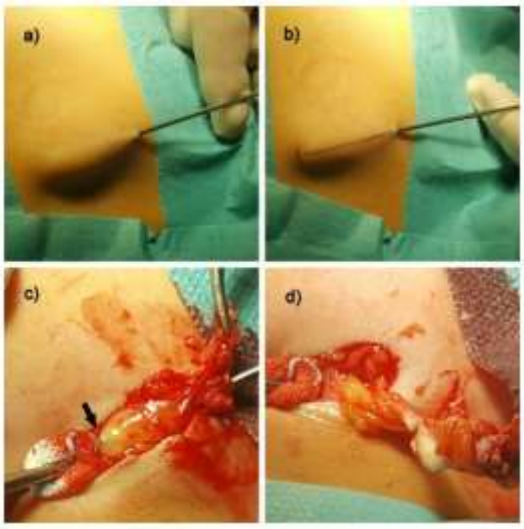
General Surgery Day 2: OA8
Moderator: Jacob Langer

[OA 8.1] Title: CONGENITAL DERMOID FISTULA OF THE ANTERIOR CHEST REGION

Author: Marko Bašković

Aim of the study:A congenital dermoid fistula of the anterior chest region (CDFACR) is a rare anomaly. It is mentioned in less than ten papers. Consist of a skin orifice at the anterior border of the sternocleidomastoid muscle with fistulas extending caudally in the subcutaneous tissue near the sternoclavicular joint.**Case description**: An eight year old girl came to our hospital because she had a skin change in the projection of the right sternoclavicular joint. According to the mother's statement, skin change has been present since birth. Occasionally

a leakage appeared. Ultrasonography had showed a subcutaneous tubular structure reaching to the

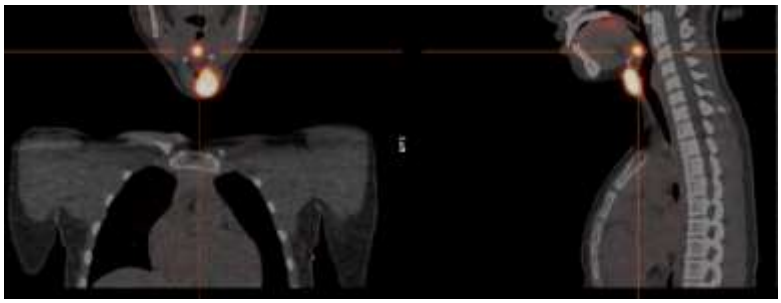


sternoclavicular joint. Operative treatment is initiated. The probe went through the small orifice to verify a 4.3 cm long fistula. That same marked (Fig. 1 a,b). Skin incision was made to verify the fistula channel. The channel was resected and sent to the pathohistological analysis (Fig. 1 c,d). Pathohistological analysis found that it was keratin-containing tubular structure lined with keratinizing stratified squamous epithelium with presence of adnexal structures. Following the pathohistological finding and review of the literature it was concluded that it was congenital dermoid fistula of the anterior chest region (CDFACR). Long-term follow up (2 years) showed no recurrence or late complications. **Conclusions**: The first descriptions of this anomaly date back to 1994 in the paper of Mutsanga et al. In a series of patients of Willaert et al., the leading symptoms were recurrent infections and abscesses that did not appear in our case. It is also interesting to note that in more than 90% of cases this type of fistula appeared on the left, while in our patient the fistula was on the right side. Apart from the dominant side of the appearance of the fistula, we also witness that the leading reason does not have to be an infection or abscess, but aesthetics and orifice leakage. *Figure 1. Resection of congenital dermoid fistula of the anterior chest region (CDFACR); a,b; cannulation and marking, c,d; progressive dissection and complete excision (black arrow - probe tip).*

[OA 8.2] Title: ABSENCE OF AN ORTHOTOPIC THYROID WITH A THYROGLOSSAL CYST AND LINGUAL THYROID IN A 13YO FEMALE

Author: Snigdha Mettu Reddy

Aim: We report a very rare case of a paediatric patient presenting with an anterior neck lump, subsequently identified to have no orthotopic thyroid gland, but a thyroglossal cyst as well as a lingual thyroid. **Case:** A 13yo female presented with an anterior midline neck swelling since birth; increasing in size over the past 18-24months, but otherwise fit and well. On examination she was noted to have a cystic swelling in the upper anterior midline of the neck, adjacent to the hyoid bone. The lesion was nontender with normal overlying skin and associated upwards movement on protrusion of the tongue. There was no visible lesion within the oral cavity. The clinical impression was that of a thyroglossal duct cyst**.**She underwent an USS neck showing a cystic anterior midline structure with no visualised thyroid. Given these findings a radioisotope scan was arranged prior to consideration of surgical excision. This, image1, showed the majority of her functional thyroid tissue was present within the lesion with a smaller proportion at the base of the tongue, confirming a lingual thyroid and ectopic thyroid within the thyroglossal cyst. Thyroid function studies showed normal levels of fT4 11.0pmol/L (7.0-16.0pmol/L) and raised TSH 10.7mU/L (0.3-5.0mU/L) consistent with early hypothyroidism. The recent enlargement of the mass was thought to be due to increased thyroxine requirement related to puberty.Our ongoing management will be to



commence thyroxine replacement to render her euthyroid and monitor the lesion; with potential decrease in prominence due to reduced stimulation of her ectopic thyroid tissue. **Conclusion:**This illustrates a case, reported only a handful of times within the literature, the importance of systematic clinical examination coupled with radiological imaging to evaluate anterior neck lesions.

[OA 8.3] Title: NECESSITY IS THE MOTHER OF INVENTION: MAKING OUR OWN PEDIATRIC SURGICAL INSTRUMENTS IN A LOW INCOME COUNTRY

Author: Ahmed Hosni Morsi

When you happen to work in a resource scarce area, try to think out of the box. You may step into a well-established theatre, or you have to create it from scratch. In certain localities, it's not always feasible to order little "fancy" equipment, justifying your craving for backdoor solutions. Making your custom instruments can simply start by reverse engineering, imitating branded instruments, until you come with your own modifications and inventions.The journey of instrument handcrafting in our hospital began with making a self-retaining anorectal retractor using a plexiglass frame, rubber bands and machined stainless steel fishing hooks, collectively costing less than USD 20 for the whole set of a retractor with 8 hooked elastic stays.

After imitation, comes innovation. We have built a pressure relief safety valve, meant to be used within the air circuit for pneumatic reduction of intussusception. This valve acts as a safety measure against pressure overshooting during intussusception reduction and its threshold pressure is easily adjustable as well.

We've also managed to cut and machine grooved directors, aka Mickey Mouse retractor, out of stainless steel sheets.Last but not least, we made a handmade endoscopic 5mm knot pusher using a copper pipe with a machined end. This knot pusher is currently used in simulation lab, obviating the need to buy a proper costly tool whilst helping junior doctors to get used to extracorporeal knotting.Our driving motives to look for alternatives were essentially cost and logistics. There are a multitude of easy to source materials and components that can be used to make or assemble proper surgical tools at low cost. He who wishes to do so should have the passion of handcrafting, ideally a surgeon.

[OA 8.4] Title: GALLBLADDER POLYPS: IGNIS FATUUS?

Author: Ghattaura H., Woodward B., Paramalingam S.

Aim of the study:We present 2 cases of children diagnosed with polypoid lesions of the gallbladder (GBP) on ultrasound scan (USS). We conducted a literature review in order to establish the natural history and correct treatment of GBP.**Case description**:We carried out a retrospective case-note review of all patients at our institution with an USS diagnosis of GBP between January 2015 and December 2018.

Case 1 underwent a laparoscopic cholecystectomy. Histology did not detect a polyp or calculous but identified features of chronic cholecystitis. Case 2 remains under active monitoring with surveillance USS and remains asymptomatic. We conducted a comprehensive literature search and reference review using appropriate search

	Age (yrs)	Symptoms	LFTs	USS Findings	Histology
Case 1	14	Yes	Normal	4mm polyp No stones	Chronic cholecystitis
Case 2	13	No	Normal	3mm polyp No stones	N/A

terms and strategies. We included all studies that reported GBP in the paediatric population. Non-English language articles were excluded. We identified 17 relevant articles of which 12 were isolated case reports. The largest contained 18 patients with GBP. In total, there were under 45 reported cases of GBP in patients under 16 years of age. All were retrospective studies and agreed on USS as the choice imaging modality for GBP. All papers unified on the need for laparoscopic cholecystectomy in symptomatic disease. In asymptomatic disease, a size threshold for treatment of >10mm has been proposed due to an increased risk of malignant transformation. A proportion of polyps <10mm spontaneously resolved or were not present on histological specimens. Symptoms appeared unrelated to the size of polyp. **Conclusions**: Further collaborative studies are needed to establish the natural history of the GBP. At our institution we continue to perform yearly USS monitoring for this condition and consider surgery in those who are either symptomatic or have GBP >10mm in size.

[OA 8.5] Title: NOVEL APPROACH TO TISSUE ENGINEERING HUMAN SMALL INTESTING-PRELIMINARY REPORT
Author: Marshall Schwartz
Intestinal failure in infants and children remains a major problem with significant morbidity, subsequent mortality, and high cost of care for those infants that survive NEC or certain congenital anomalies. Currently, survival is dependent on parenteral nutrition which also caries significant morbidity, mortality, and cost of care. There is no definitive treatment for intestinal failure in this age group. The ideal treatment would be to tissue engineer small intestine using the patient's own cells, but this has not yet been accomplished clinically.**Aim**: The aim of this study is to define an animal model to create a small intestine segment using human cells that is capable of absorption and peristalsis and that would be translationally feasible to infants with intestinal failure.**Methods**: To accomplish this aim requires a biodegradable scaffold, cell culture of human enteric smooth muscle cells and human neural progenitor cells to form the neuromuscular layer capable of peristalsis, an in vivo model to capable of supporting the scaffold wrapped in sheets of seeded human neuromuscular cells (i.e. a cellularized construct). The model also would require a method for this cellularized construct to obtain a blood supply and a mucosal lining. **Results**: We have been able to bridge these hurdles as follows. A tube-shaped scaffold made of two biodegradable polymers and collagen was developed using electrospinning technology designed to support the cell growth and with the cells oriented promote peristalsis that will maintain its structural integrity for approximately 12 weeks. This timeframe is necessary to allow maturation of the cellularized construct into a segment of tissue engineered small intestine. The method for creating a blood supply is though angiogenesis by wrapping the cellularized construct in omentum in an athymic rat which avoids recognition and rejection of the human cells. The vascularized construct is then inserted at both ends into a loop of the athymic rat's small intestine which will allow the rat's native intestinal mucosa to migrate from both ends to create a mucosal layer and thus, producing all functional layers of the small intestine. Our very preliminary results have shown that the techniques described in this model are feasible. We have defined the methodology to study nutrient absorption and peristalsis specific to the tissue engineered segment, but we have not carried out these studies. The details of these complex steps will be described in detail.**Conclusion**: Though complex, this approach to tissue engineering human small intestine appears feasible and capable of translationally adaptable to infants.

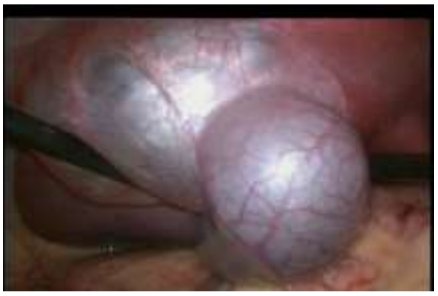
[OA 8.6] Title: INTRODUCTION OF ADVANCED PEDIATRIC THORACOSCOPY IN A DEVELOPING WORLD CONTEXT â€“ LESSONS LEARNED
Author: Sadi Abukhalaf, Ahmad Shaltaf, Haitham Aqra, Wael Amro, Mohamad Alkaim, Nathan M. Novotny
Aim of Study: Advanced thoracoscopy is slow to gain traction in the developing world. To our knowledge, no pediatric advanced thoracoscopy had been attempted previously in this developing country. Therefore, we report the first three pediatric cases with different underlying pathology who underwent an advanced thoracoscopic approach and the challenges associated with a limited resource setting.**Methods**: After IRB approval was obtained, we retrospectively reviewed the first advanced thoracoscopic procedures in children at Palestine Medical Complex. We reviewed patient demographics and outcomes. A post-procedure debrief was performed after each operation to identify opportunities for improvement. **Main Results**: Three patients underwent advanced thoracoscopic procedures in September and October of 2018. Two patients with type C tracheoesophageal fistula (TEF) were repaired thoracoscopically and the third was a 3 year-old boy with a right lower lobe congenital pulmonary airway malformation (CPAM) who underwent thoracoscopic lobectomy. There was a heavy reliance on disposable instrumentation provided through donation. The operative times were around 90 minutes for all three. The child with TEF had a small leak seen on a non-fluoroscopic x-ray that was thought to have sealed and returned with another leak 3 weeks after discharge. The second TEF unfortunately died in the NICU from an unrecognized left-sided pneumothorax on postoperative day three. The child with the CPAM was discharged without complication. **Conclusions**: In spite of having surgeons facile with advanced minimally invasive surgery, significant obstacles exist for caring for complex thoracic pathology in the developing world. Local lack of expertise in caring for critically ill babies and lacking facilities contribute to disappointing outcomes even when the advanced thoracoscopic approach is utilized in this setting. In spite of this, we believe that many obstacles have been overcome in the areas of lack of experience with anesthesia, lack of instrumentation, and local surgeon experience.

[OA 9.1]Title: LAPAROSCOPICALLY ASSISTED PULL-THROUGH SURGERY FOR DISTAL VAGINAL ATRESIA
Author: VERONICA ALONSO
Case description: A fourteen-year-old girl presented with primary amenorrea and abdominal pain. A mass was palpable in the hypogastric area. The genital and perineal examination revealed an absent vaginal orifice. The blood and urinary analyses were normal, including a negative pregnancy test and a 46 XX karyotype. The abdominal ultrasonography and MRI showed hematometrocolpos secondary to distal vaginal agenesis, with a distance of 5 cm to the perineum, without any other malformations.A two-stage surgery was performed consisting of a transurethral vaginal drainage, followed by a laparoscopically assisted vaginal pull-through. Vaginal dilations were initiated at postoperative week two. A suitable vaginal gauge and normal menstruation were achieved after four months. **Conclusions:** Distal vaginal atresia is an infrequent pathology that results from the lack of development of the distal 2/3 of the vagina from the urogenital sinus. The proximal 1/3 of the vagina and uterus, of Mullerian origin, develop normally. Most patients with distal vaginal atresia present primary amenorrhea, with normal external genitalia. We should consider this infrequent urogenital malformation, as a delayed treatment could result in endometriosis and an impaired reproductive capacity. Ideally, an early pull-thrugh vaginoplasty should be done. The approach; perineal, abdominal-perineal, or posterior sagittal; will depend on the distance to the perineum.We recommend a combined laparoscopic and perineal surgery for patients with vaginal agenesis and a normal uterus.

[OA 9.2] Title: LAPAROSCOPIC OR OPEN SURGERY; WHICH ONE IS PREFERRED FOR INGUINAL HERNIA REPAIR IN CHILDREN?
Author: Ali Fazeli
Introduction: Laparoscopy is one the most common techniques for inguinal hernia repair, which is safe and effective and has some advantages in contrast to open surgery. Recently, some modifications have been made in laparoscopic technique; one of them is to use only one port instead of three ports. In this study we compared single port laparoscopy to open surgery. **Method**: This study was a prospective controlled randomized trial conducted on 190 infants at Paediatric Surgery Department. Patients who suffered from congenital inguinal hernia were divided into two groups randomly. Group-1(N=73) undergone single-port laparoscopic surgery and Group-2(N=117) undergone open surgery. Complications during and after surgery were compared.**Results**: There was no significant difference between two groups regarding age and sex (P-value>0.05). No scrotal swelling and no iatrogenic UDT in both groups (P-value=1).Two patients in group-1 developed recurrent hernia during follow up but no one in group-2 (P-value=0.146). No intestinal injury, vas deferens injury and testicular atrophy were reported post-surgically(P-value=1). After surgery only two patients from group-2 had chronic pain and no one of group-1 (P-value=0.378). Higher rate of parents' satisfaction was reported in laparoscopic group as compared with the other (P-value<0.001).**Discussion**: Parents were significantly more satisfied of single-port laparoscopic surgery compared with open one. This importance increased while no difference between two groups was found regarding demographics and complications.

[OA 9.3] Title: LAPAROSCOPIC MANAGEMENT OF SIMPLE HEPATIC CYST
Author: Mostafa Zain, Basmal Abdulkareem Hashim, Ahmed Khairi
Simple hepatic cysts are rare (SHC) and usually detected incidentally during screening imaging examinations. There is no consensus regarding the management of SHC, resulting in confusion and difficulty in selecting appropriate therapy especially for children. We report a pediatric case of SHC treated by laparoscopic deroofing.**Key words**: Hepatic cyst, liver cyst, laparoscopy, deroofing.**Introduction**:Simple hepatic cysts are rarely diagnosed in adults and even less commonly in the pediatric population [1]. They are congenital in origin, non-lobulated and more commonly single, arising from aberrant bile ducts obstructed from the main biliary system [2]. Their wall is made up of a single layer of cuboidal or columnar cells which secrete a fluid similar to serum [3]. The sonographic

appearance of a simple cyst is a well-defined, echo-free lesion with acoustic enhancement and an imperceptible wall [4]. Radiological characteristics which would exclude the diagnosis of a simple cyst are internal septations, a thick wall, peripheral enhancement on contrast-enhanced examinations, and an increase in size over time [5]. The most common anatomic location is segment 5 of the right hepatic lobe. Unilocular cysts are much more common than multilocular cysts, with the multilocular type being extremely rare in children [6]. Simple hepatic cyst (SHC) is frequently detected incidentally during screening imaging examinations, and most are asymptomatic and need no therapy [7]. Surgical management is indicated when the cyst becomes symptomatic, complicated, or demonstrates rapid growth [8], [9]. However, the scarcity of case series and lack of consensus regarding the management of SHC has resulted in considerable confusion and difficulty in deciding on therapy in children [10]. We report here a pediatric case of SHC treated by laparoscopic deroofing.**Case report:**An 8-year-old girl presented with a nonspecific abdominal pain. Ultrasound demonstrated a cystic mass associated with the liver. CT scan confirmed an unilocular cystic lesion (12 cm · 11cm· 8 cm) containing clear fluid, showing no internal septation and located adjacent to the gall bladder in segments 5 and 6 of the right hepatic lobe. **Surgical procedure:** Surgery was performed under general anaesthesia. The patient was placed in the supine position. An umbilical incision was used to create pneumoperitoneum and insert a 5-mm trocar for the laparoscopic camera. Another two 5-mm working ports were introduced in the midclavicular line at the level of the umbilical port bilaterally. First, the cyst was dissected and separated from the gall bladder. Then, percutaneous aspiration of the fluid in the cyst was performed, removing 300 ml in total. The cyst wall was then resected as much as possible using EnSeal shears. After deroofing the cyst wall, epithelium within the residual cystic cavity wall was thoroughly ablated using diathermy and the resultant cavity was filled with omentum. A drain was placed.The operation was uneventful. The operation time was about 70 min, with minimal blood loss. The patient showed an uncomplicated postoperative course. Oral feedin was started on the first postoperative day and the drain was removed on the second postoperative day. Histopathological examination revealed a simple cyst lined by columnar epithelium without any hamartomatous component, and SHC was diagnosed. The patient has been doing well and remains free of symptoms from the residual cystic cavity, with no ascites detected as of 6 months postoperatively.



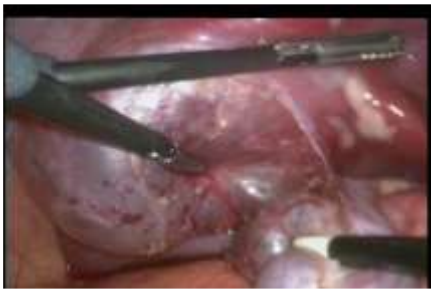


Figure 1: Laparoscopic exploration showing the cyst adherent to the gall bladder.
Figure 2: Separation of the cyst from the gall bladder.

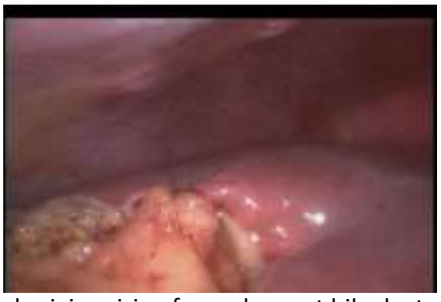


Figure 3: Deroofing of the cyst
Figure 4: Omental patch was fixed with 2 sutures toobliterate the residual cavity.

Discussion: SHC is believed to be of congenital origin arising from aberrant bile ducts, which are obstructed by the main biliary ducts [11]. Up to 24% of nonparasitic hepatic cysts can become symptomatic, and symptoms are usually nonspecific and consist of pain, abdominal masses, hepatomegaly, compression of nearby structures, and risk of rupture if the cyst becomes enlarged [12]. Treatments including aspiration, aspiration followed by injection of sclerosing agents, enucleation and hepatic resection, have been used for symptomatic SHC [13], [14].
Lin et al. [15] introduced the technique of deroofing the cyst and internal drainage into the free peritoneal cavity, which has since become the standard management and is now performed using minimally invasive approaches.

Recurrence, however, can be expected with inadequate collapse of the cavity or if the secretory wall is left in place [16], [17]. Gigot et al. [18] reported that 23% of patients experienced recurrence of symptoms, and 38% showed radiographic reappearance of the cyst. Wide fenestration or resection is therefore necessary to prevent adhesion of the cyst wall and refilling of the cyst.In the present case, we resected the cyst wall as much as possible using EnSeal shears without encountering any problem with hemostasis. After deroofing the cyst wall, epithelium within the residual cystic cavity wall was thoroughly ablated using diathermy and the resultant cavity was filled with omentum.

[OA 9.4] Title: ADVANCED GASTRO-INTESTINAL LAPAROSCOPIC SURGERY IN CHILDREN

Author: Najeh Alomari

Objectives: To present our experience in laparoscopic surgery for gastro-intestinal, colonic conditions and anorectal malformations in children , acceptability, safety, efficacy, outcome parameters of operative time, analgesic requirement, postoperative stay and complications.**Methods**: During the last 10 years, 455 major laparoscopic & laparoscopic assisted procedures in children were performed at King Hussein Medical Center / Queen Rania Hospital & private sector. All patients were evaluated preoperatively by clinical assessment, paraclinical specific radiological tests and endoscopy with biopsy when indicated. Protocols were followed in all patients regarding use of antibiotics, analgesia, techniques and follow up. **Results**: Patients including 300 cases of laparoscopic Nissen fundoplication for GERD, thoracic stomach and esophageal cardiomyotomy for achalasia, 75 cases with anorectal malformation (ARM) and 80 cases of colonic conditions (HD & FAP,injuries) were managed by laparoscopy. The patients, 285 males and 170 females aged from 3 months to 15 years (mean age, 64 months), 50 males had rectourethral fistula, one female had rectovaginal fistula and 4 had cloacal anomaly. The associated anomalies including sacral malformation, genitourinary, cardiac anomalies and esophageal atresia were treated as well. 49 patients were treated with a colostomy in the newborn period followed by a delayed laparoscopic assisted anorectal pull through. The female with rectovaginal fistula had the surgery without colostomy. The indications for fundoplication were thoracic stomach and Barret esophagus due to (GERD), other indications were severe esophageal ulceration, stricture, recurrent bleeding, para-esophageal hernia and recurrent aspiration pneumonia. Five patients had previous repair of esophageal atresia and 6 patients had achalasia underwent laparoscopic cardiomyotomy and fundoplication. Mean operating time was 160 min (range 120-240 minutes) .The mean hospital stay for all patients was 3 days, range from 1 to 7 days. There were no intra-operative and post-operative complications. Two conversions to open surgery were required. Nine patients had laparoscopic gastrostomy insertion in addition to Nissen fundoplication. Blood transfusion was not required in any case and no mortality or recurrence so fare. In all ARM cases the laparoscopic assisted procedure was successful, dissection of the rectum and ligation of the rectourethral fistula, then rectal pull through to the new position after identification by muscle stimulation, the other colonic conditions were treated successfully by laparoscopy. Tow patients with cloaca had one stage laparoscopic assisted cloacal pull through as the first cases in the pediatric surgical literatures. All patients underwent a postoperative period of anal dilatation. Tow patients had laparoscopic repair of sigmoid injury due to trauma without colostomy, 4 patients had one stage laparoscopic total proctocolectomy for FAP, 2 patients had laparoscopic colonic biopsy and Maloney procedure for colonic irrigation,2 patients had laparoscopic and endoscopic assisted sigmoid polypectomy and 40 patients had laparoscopic assisted trans anal pullthrough for Hirschsprung's disease (HD).There were no major complications and no mortality. All patients were investigated and managed for their other associated anomalies.**Conclusion**: Laparoscopic fundoplication for GERD, thoracic stomach & achalasia in children is rapidly becoming the procedure of choice for surgical correction, the same applied for ARM and most colonic conditions because of the advantages of reduced discomfort and decreased hospitalization. It is a feasible and safe technique. Laparoscopic operation time in children reduced by experience. The length of hospital stay and convalescence is short and hence rapid return to normal activity is expected with less analgesia requirements. Follow-up examination verified perfect clinical, radiological and endoscopic findings. The cosmetic, endoscopic and functional results were excellent with very good patients and family satisfaction. Laparoscopy can be utilized safely for surgical management of HD, FAP, diagnosis and treatment of bowel injury.

[OA 9.5] Title: LAPAROSCOPIC NEAR TOTAL PANCREATECTOMY FOR PERSISTENT HYPERINSULINEMIC HYPOGLYCEMIA OF INFANCY (PHH)

Author: Najeh Alomari

Background & objectives : Persistent hyperinsulinemic hypoglycemia (PHH) of infancy is considered the most common cause of persistent neonatal hypoglycemia. A number of genetic abnormalities in early persistent hyperinsulinemic hypoglycemia (PHH) of infancy have been identified, but in the majority of patients no abnormality is found. The sporadic focal and diffuse forms as well the autosomal recessive form are particularly therapy-resistant and demand for early surgery. Preoperative discrimination between focal and diffuse disease in early persistent hyperinsulinemic hypoglycemia (PHH) of infancy is difficult. Medical treatment involves use of multiple agents and its failure is an indication of surgical intervention.Open pancreatectomy was the standard of care but recently laparoscopic pancreatectomy was advocated by few authors.We present and evaluate our experience with laparoscopic spleen saving near total pancreatectomy for (PHH) of infancy, safety, efficacy and complications **Methods** : A retrospective chart review was conducted for patients managed for persistent hyperinsulinemic hypoglycemia (PHH) of infancy with laparoscopic near total pancreatectomy for that period of 4 years. **Results**: Nine patients diagnosed with (PHH)were managed with laparoscopic spleen saving near total pancreatectomy. Median age at procedure was 7 months (range, 3-28 months). The extent of pancreatectomy was 90% (range, 85%-95%). There was no conversion to open surgery. Tow patients required reoperation 3 months after the procedure by open surgery. Three patients are euglycemic with no medications. One patient remained on octreotide postoperatively to be euglycemic, and one patient needed low dose of insulin to control his blood sugar. **Conclusion**: Our study suggests that laparoscopic spleen saving near total pancreatectomy for medically unresponsive(PHH) is feasible and safe, however long term follow-up and more cases is needed to ascertain effectiveness

[OA 9.6] Title: MINIMALLY INVASIVE SURGERY IN 100 CASES WITH CONGENITAL DIAPHRAGMATIC HERNIA

Author: Wei Zhong

Objective: To summarized and present our experience with minimally invasive surgical (MIS) repair for congenital diaphragmatic hernia (CDH) in neonates and infants.**Methods:** Patients with CDH admitted in our institute between June 2014 and June 2019 were retrospectively reviewed. Characteristics and outcomes were described.**Results:** A total of 100 patients (81 neonates and 19 infants) with CDH undergone MIS repair were included. There were 82 patients with left-sided CDH and 18 patients right-sided CDH. In neonatal CDH, mean gestational age, birth weight and age at operation were 38.6±1.6 weeks, 2998±397g and 4.2±4.4 days, respectively. In infantile CDH, age at operation varied from 1.3 to 33.4 months. Ninety-eight cases were repaired by thoracoscopic approach and two of them were converted to open surgery (2%). One case received laparoscopic repair and one underwent hybrid approach. There were 70 cases needed for path repair while 30 cases without patch-repair. During the follow-up period (2 to 60 months), all patients survived and four cases suffered from recurrence. Of these four recurrent cases, re-do procedures were conducted. Laparotomy repair was performed in one case, thoracotomy in one case and laparoscopic repair in two cases and no recurrence was identified. **Discussions and conclusions:** Experiences of MIS for CDH repair are summarized as following: (1) Stomach and intestine are reduced firstly and parenchymatous viscera (spleen, liver or kidney) subsequently. Spleen could be pushed back by traction of splenocolic ligament or cross-shaped pushing with two forceps. (2) Posterolateral diaphragmatic edge was closed by transthoracic mattress sutures with prolene stitches. (3) The size of patch should be larger than diaphragmatic defect for tension-free repair and patch is anchored to the ribcage when the exteriorlateral edge is less evident or completely deficient. In general, MIS repairfor CDH is an effective technique with satisfactory outcomes when working out with details.

[OA 9.7] Title: APPLICATION OF THE RETRIEVAL BAGS SERVICE IN LAPAROSCOPIC SURGERY OF HYDATID CYST OF THE LIVER

Author: Minaev S. V., Kirgizov I.V., Grigorova A.N., Bykov N.I., Gerasimenko I.N

Aim of the Study. Evaluation of the effectiveness of the vacuum - device (VD) in laparoscopic treatment of hydatid cysts of liver in children.**Methods**. The study included 14 children with liver of hydatid cysts during the period 2013 - 2018. The mean age was 8.7 ± 1.4 years. There were 9 boys, 5 girls. The multiport laparoscopic technique of echinococcectomy was performed in 14 children. Aged 3 to 18 years, hydatid cyst of the liver, type I-III by Gharbi / CE1-3, cyst size 3 - 5 cm. Location in IV-VI segment of the liver. VD (Device for Endoscopic Recovery of Infected Biological Material - Patent RU170304)**Main results**. Complications associated with the use of the VD were not noted. The time of laparoscopy with the use of the VD was 72 (59-103) minutes. The extraction time of the chitinous shell was 9.1 ± 2.0 minutes. Depending on the life cycle of the parasite, the duration of use of retrieval bags increased from Type I / CE1 to Type III / CE3 from 6.7 ± 1.5 to 11.1 ± 1.8min.The number of intraoperative the VD used only depended on the stage of the process. hydatid cyst of the liver was: Type I / CE 1 - 1 bag; Type II / CE 1-2; Type III / CE 3 - 2-3.The study of pain in children, with laparoscopy using VD, showed a decrease in pain syndrome.**Conclusions**. Laparoscopic echinococoectomy with the use of the VD is an effective and safe manipulation for the liver hydatid cysts in children. It is necessary to further study and compares the effectiveness of various devices for the extraction of removed tissues from the abdominal cavity in children.

[OA 9.8] Title: A RELIABLE MODEL TO PREDICT SURVIVAL IN CONGENITAL DIAPHRAGMATIC HERNIA
Author: Weipeng Wang, Weihua Pan, Jun Wang, Wei Xie, Ming Liu, Lei Wang, Yi Jiang
Institution: Xinhua Hospital affiliated to Shanghai Jiao Tong University School of Medicine, China
Aim of the Study: To determine the risk factors for survival in congenital diaphragmatic hernia (CDH) on the first day of life and develop a new and better model to predict survival rate of CDH. **Methods**: The medical records of 225 neonates with CDH from January 2001 to December 2018 were retrospectively reviewed in single institute. Using binary baseline predictors generated from birth weight, 1-minute Apgar score, side of hernia, presence of liver herniation, and PaCO2 in the admission arterial blood analysis, a clinical prediction rule was developed on a randomly selected subset of the data by using a backward selection algorithm. A new clinical prediction rule was created. The performance of the model was analyzed including calibration and discrimination.**Main results**: Multiple Logistic regression analysis found five significant independent predictors of survival, including birth weight, Apgar score at 1minute, side of hernia, presence of liver herniation, and PaCO2 in the admission arterial blood analysis. The new model was created by using the five predictors. The area under the receiver operating characteristic (ROC) curve (AUC) value for the model was 0.912, which was greater than that of a single biomarker in the prediction of survival rate of CDH. Besides, the new model had better discriminative ability compared to the CDH study group prediction model (AUC=0.781) and defect size staging system (AUC=0.712). The sensitivity of the model was 75%, specificity was 91%, false negative rate was 25%, and false positive rate was 9%. The model demonstrated good calibration as indicated by the Hosmer-Lemeshow goodness-of-fit test (P =0.410)**Conclusions**: The new model developed by the five risk factors for survival has demonstrated better performance in predicting survival of CDH, holding promise for future clinical application.

[OA 9.9] Title: BACTERIOLIGIC PROFILE OF OSTEOARTICULAR INFECTIONS IN A SURGERY TEACHING UNIT (162 cases)
Author: GABRIEL NGOM
Aim of the Study : identifying the causative germs of osteo-articular infections (OAI) on children.**Methods** : we report a retrospective and descriptive study ranged from January, the 1st, 2012 to December the 2nd, 2016. Different methods were performed for germ isolation such as : blood culture, metaphyseal puncture, articular fluid sample. Acute or chronic osteomyelitis, septic arthritis or osteoathritis could be found on children. We studied these following parameters : global distribution of isolated germs, germ distribution according to the age, germ distribution depending on the OAI pattern. **Main results** : staphylococcus aureus was found in 67,3% of the cases. It was noted to be the most common germ for all age groups except the neonatal period when Enterobacter cloacae was the only isolated germ. Staphylococcus aureus was also the most frequent germ regardless of the type of OAI.**Conclusion** : Staphylococcus aureus is the main identified germ during OAI in our surgery teaching unit.

[SP 109] Title: WOUND HEALING AND COSMETIC OUTCOMES IN NEONATAL CIRCUMCISION USING THREE DIFFERENT TECHNIQUES

Author: Ibiyeye Taiye T

Background: Circumcision of a male child is an integral part of some African cultures. It is the oldest surgical procedure performed worldwide. Its existence, indications, techniques and devices are shrouded in controversies. The techniques of neonatal circumcision are diverse and till date there is no conclusive evidence to suggest the best technique. An ideal technique of neonatal circumcision should be simple, safe and heal satisfactorily with good cosmetic appeal.**Objectives**: The objective of the study was to compare freehand, Plastibell and Gomco clamp techniques of circumcision in neonates in terms of wound healing, wound healing complications, cosmetic outcome and parental satisfaction with the outcome of the circumcision.**Methods**: This was a hospital based, prospective, randomized clinical study conducted at the Federal Medical Centre Lokoja, Kogi state, Nigeria, over a period of 6 months, after approval from the Ethics and Research Committee of the hospital. A total of 144 male neonates were recruited into the study. Using simple randomization technique, 48 neonates each were randomized into three study groups [Freehand (FH), Gomco (GM) and Plastibell (PB) groups]. Informed consent for the study and surgery was obtained from the parents. The neonates were circumcised according to the technique of circumcision corresponding to the group they were randomized into. All procedures were performed under local anaesthesia as day case. The patients were seen at the outpatient clinic post-operatively on the 3rd day, 7th day and 4th week. Wound healing was assessed on the 7th post-operative day. Satisfactory wound healing was defined in this study as the presence of a completely apposed wound edge with no exudate, scab or oedema. Cosmetic outcome of the three techniques and parental satisfaction with the outcome of the circumcision were assessed using a 4 and 5 points Likert scale respectively on the 4th post-operative week. Data obtained from the study were entered into the proforma designed for the study and were analyzed using SPSS version 21.0. P value was set at 0.05. **Results**: One hundred and forty-four neonates were recruited into the study at mean age of 15.26 ± 6.72days. The three groups were comparable in terms of age (p=0.207) and weight (p=0.098) at circumcision. The mean age for GM group was 14.08 ± 7.19 days, PB group; 15.17 ± 6.16 days and FH group; 16.52 ± 6.72 days. Indication for circumcision was socio-cultural in 101(70.1%) patients, religious in 31(21.5%) and religious + socio-cultural in 12(8.4%) patients. The mean duration for Plastibell circumcision was significantly shorter (5.81 ± 0.84mins), than for Gomco circumcision (15.71 ± 1.68mins) and freehand circumcision (16.81 ±5.52mins), p= <0.0001.There was satisfactory wound healing in 48(100%) patients in GM group, compared to 47(97.8%) in FH group and 45(93.8%) in PB group (p=0.324). Wound healing complications were recorded in 7 patients, 1(2.1%) in FH group with wound infection, 5(10.4%) in PB group with moderate pain despite use of analgesia and 1(2.1%) patient with skin bridge in FH group. None in the GM group had any of these complications.
The plastic surgeon rated cosmetic outcome as excellent in 47.9% of the patients in FH group, 43.8% of GM group and 12.5% of PB group. The parents however rated cosmetic outcome as excellent in 95.8% of FH group, 91.7% of GM and 85.4% of PB groups. A high level of satisfaction was expressed by 97.9% of parents in FH group, 91.7% in GM and 87.5% in PB groups. **Conclusion**: This study has shown that there is no significant difference in superficial wound healing amongst the three circumcision techniques. However healing was significantly complicated by undue pain in the Plastibell group. The cosmetic outcome of freehand circumcision was significantly better than that of Gomco and Plastibell circumcisions. On the basis of low late complication rate, better cosmetic outcome and higher level of parental satisfaction, freehand circumcision should be recommended to parents in hospitals where trained surgeons perform neonatal circumcision.

[SP 110] Title: THE LOCATION OF NECROTIZING ENTEROCOLITIS IN THE NEONATAL INTESTINE AND RELATIONSHIP TO BIRTH WEIGHT. MATHEMATICAL ANALYSIS OF THE EXTENT OF THE DISEASE

Author: Kubát M., Plánka L., Tůma J., Turek J.
Institution: University hospital Brno, Czech Republic

Introduction:
The aim of this study was to describe the extent of necrotizing enterocolitis (NEC) on mathematical model of intestine and to determine, whether locations and extent differs in infants with different birth weight. **Materials and Methods:** The authors reviewed records of 84 patients operated for NEC (stages Bell IIB and III) at single institution between 1/2002 – 12/2016. Patients were divided into 3 groups by birth weight (extremely low birth weight (ELBW), very low birth weight (VLBW), low and normal birth weight (LBW/NBW). The length of intestine was approximated in order to compare findings. The extent and location of necrotizing enterocolitis was evaluated.**Results**:During 15 years of study, 37 ELBW patients, 24 VLWB patients, 20 LBW/NBW patients were operated for NEC. Map of affection of intestine for individual groups was created. The most common site of affection was terminal ileum (68%) in ELBW, terminal ileum (45%) in VLBW and ileocaecal area and caecum (65%) in LBW/NBW group. Comparing the location, a significant difference between ELBW and VLBW groups was found (p=0,004). Comparing the extent of NEC, significantly higher extent of NEC was found between ELBW and LBW/NBW (p=.007) and between VLBW and LBW/NBW groups (p=.037).
Conclusions: The locations and extent of NEC differs in infants with different birth weight. Mathematical model is useful for planning and conduct of surgical procedures and for predicting postoperative outcomes. According this study, the prediction of postoperative complications has been reached, so the area of terminal ileum and ilocecal transition is the least favorable.

[SP 111] Title: CONGENITAL DIAPHRAGMATIC HERNIA : INSTITUTIONAL EXPERIENCE
Author: MOHAMMED ELIFRANJI
Background: Congenital diaphragmatic hernia (CDH) is an anomaly with high mortality rate and long term morbidity, representing a therapeutic challenge. Hamad Medical Corporation-HMC has been a referral centre for neonatal surgery in Qatar. The aim was to evaluate clinical management and outcome of newborns with CDH.
Methods: Retrospective study made up of newborns admitted to NICU with CDH was undertaken between January 2011 and December 2018.
Result: 38 cases of newborn admitted to NICU with CDH. Open repair was in 32(91.5%) , 3(8.6%) Thoracoscopy and 3 cases died before any surgical intervention. 10(90.9%) cases with liver herniation10(90.9%) had open repair vs one case by thoracoscopy.
Thoracoscopic repair was associated with higher median age in days (5(3-1643) vs 3.5(1-270) , P 0.001), mean weight at time of the repair by KG (7.37±6.78 vs 3.15±1.67 , P 0.011) and lesser hospital stay in days (9±6.25 vs 24.77±16.21, P 0.017) compared with open repair.6 cases (17.1%) required patch repair . There were 10 (26.3%) cases with delayed diagnosis. 6 cases required CT for confirmation of the diagnosis prior to surgery. Complication encountered: recurrence 2(5.3%), bleeding 1(2.6%)and intestinal obstruction 1(2.6%). The post-operative mortality was 3 cases (8.57%) **Conclusion**:Low mortality rate of CDH reflects the quality of pre and post-natal care. Thoracoscopy is safe and associated with lesser hospital stay. We found that babies with average term weight, mild to moderate PHTN and no major structural heart defect are good candidate for Thoracoscopic repair

Characteristics	Mean ± SD [median (min-max)] N (%)
Gender Male Female	 19 (50%) 19 (50%)
Site of hernia Left Right	 31 (81.6%) 7 (18.4%)
Pre-natal Ultrasound Normal Stomach in chest Liver in chest others	 21(55.3%) 12 (31.6%) 1(2.6%) 4(10.5%)

Pre-operative ECHO	
Severe PHTN	7(20%)
Mild to moderate	23(65.7%)
Normal	4(11.4%)
Structural heart decfect	1(2.9%)

[SP 112] Title: USE OF UMBILICAL CORD FLAP FOR CLOSURE OF GASTROSCHISIS.

Author: Mirza Kamrul Zahid

Background:Primary reduction of swollen oedematous viscera in gastroschisis is difficult, results abdominal compartment syndrome and associated with poor prognosis. Use of umbilical cord flap reduces intra-abdominal pressure and results better outcome. **Objective**: This a retrospective study which was done to evaluate the outcome of gastroschisis patient in whom umbilical cord flap covering was given. **Methods**: This study was approved by the Institutional Ethical review committee. Clinical records of the patients of gastroschisis were evaluated retrospectively during the period July 2014 to June 2017, whom the abdominal wall defect were covered with umbilical cord flap. Size of the defect was ranging 3cm-4.3cm was included in these study. Gestational age (weeks) mean±SD 34.4±1.7, Cord length (cm) 15.4±3.3. Out of 27 patient male was 16 female was 11. **Results**: Total 108 neonates were admitted with gastroschisis. Out of them, in 27 neonates umbilical cord flap were used. In 16 cases, abdominal defect was healed completely. 08 patients developed ventral hernia who required secondary repair at the age of 1 and half year of old. All 24 survived children were followed up for 6 months to 2 years 6 months. Mean follow up time was 1.7±1.3 years.**Conclusion**: Umbilical cord flap coverage could be a better technique in repair of gastroschisis with oedematous gut , where postoperative NICU facilities is limited.

[SP 113] Title: NEUTROPHIL-TO-LYMPHOCYTE COUNT RATIO FOR PREDICTING MORTALITY IN NEONATES WITH CONGENITAL DUODENAL OBSTRUCTION

Author: Julius Candra

Background and Objective: Congenital Duodenal Obstruction (CDO) is a common congenital anomaly occuring in approximately 1 in 5000 to 10000 live births. Surgical correction with laparotomy duodenoduodenostomy yields excellent long term results, with survival rates reaching 95%. Despite the recent advances, sepsis remains a major challenge in the treatment of neonates with intestinal atresias, including congenital duodenal obstructions. A number of biological materials have been studied as candidates for sepsis biomarkers. A recent study has found that in emergency settings, neutrophil-to-lymphocyte count ratio (NLCR) can predict bacteremia better that conventional infection markers. Elevated levolymphels of NLCR are seen in the early phases of sepsis, and in late phases, value of this biomarker can be helpful for prognosis. This study will explore the prognostic value of NLCR values in the mortality of neonates with CDO.**Methods**: Retrospective analysis of hospital records of 35 neonates with congenital duodenal obstruction from November 2015 and May 2019 were conducted. Preoperative NLCR values were calculated from the white blood cell (WBC) count from peripheral venous blood specimen. The NLCR values were evaluated in regards to post surgical mortality. A receiver-operating characteristic (ROC) curve was used to determine a cutoff for optimal NLCR value in predicting mortality.**Results**: The optimal cutoff value of NLCR for predicting mortality was 1.39, which resulted in 77% sensitivity and 68% specificity, with the area under the curve of 0.64 (95% CI: 0.449 – 0.838). Neonates with NLCR values larger than 1.39 had a mortality rate of 56.25% (9/16; OR 4.61, p = 0.04).**Conclusions**: Preoperative NLCR values of more than 1.39 in neonates underdoing surgical correction for CDO is associated with higher mortality rates. Sepsis management is crucial prior to surgery in order to decrease mortality rates.

[SP 114] Title: INCREASING MATERNAL BODY MASS INDEX IN THE GULF COUNTRIES AND ITS IMPACT ON NEONATAL OUTCOME

Author: Sufia Athar, Amna Tellisi

Institution: Al Wakra Hospital, HMC, Qatar

Aim of the study: To study the impact of pre-pregnancy body mass index on neonatal outcome**. Methods:** With increased prevalence of maternal obesity in gulf countries, a retrospective service evaluation was conducted at a secondary hospital at Qatar to assess the correlation of pre-pregnancy body mass index and neonatal outcome. 950 patients were randomly selected from the cohort of patients delivered at Al Wakra hospital at or more than 37 weeks gestation over a period of one year. Pre-pregnancy body mass index(BMI) was taken in account in classifying the cohort in three groups; Group A-BMI 18.5-24.9 kg/m2, Group-B- BMI 25-29.9 kg/m2 and Group C-BMI >30 kg/m2. Neonatal outcomes were studied. Chi square test was used for statistical evaluation. **Main Results:** In the study group 37.21 % patients were overweight and 28.36 % were obese. In group A, B and C, 4.64 %, 5.73 % and 20.33 % neonates had high birth weights (>4000 g) respectively. High birth weight infants in group B (OR- 1.2482, 95% CI- 0.3270 to 1.2756, p = 0.2080) and group C (OR-5.2302, 95% CI 2.8756 to 9.512, p= < 0.0001) were positively correlated with pre-pregnancy BMI. Total admissions in neonatal ICU were 12.07%, 13.75% and 15.04% in group A, B and C respectively. Respiratory morbidity was noted in 41%, 62% and 72.5% of the neonates admitted to NICU in group A, B and C respectively.Pre-pregnancy overweight and obesity increased the risk of high birth weight (OR- 1.2482 and 5.2302 respectively). The results were statistically significant in obese patients (p= < 0.0001).Neonatal ICU admissions and respiratory morbidity after birth showed increasing trend with increasing Maternal BMI. **Conclusions:** Patients with pre-pregnancy overweight and obesity have higher likelihood of high birth weight in neonates. Increasing maternal BMI is associated with poor neonatal outcomes. Reduction in pre-pregnancy BMI is the key to avoid future neonatal morbidities.

[SP 115] Title: PREVALENCE OF EXTERNAL CONGENITAL ANOMALIES IN NEONATES WITH AN OMPHALOCOELE IN KANO NIGERIA.

Author: ANYANWU LJC, MOHAMMAD AM, ABDULLAHI LB, FARINYARO AU, ALIYU MS

Background and aims: Omphalocoeles are congenital anterior abdominal wall defects covered by a membrane. Other anomalies are commonly associated with this defect. This study aims to determine the prevalence of external congenital anomalies seen in neonates with this defect in our unit.**Methods**: This is a retrospective review of the records of neonates with an omphalocoele managed in our unit between September 2011 and February 2017. We extracted clinical and demographic data from their records for analysis. **Results**: There were 40 patients in all, of which 24 (60%) were boys and 16 (40%) were girls. The male to female ratio was 1.5:1. Only one patient (2.5%) had a prenatal detection of the omphalocoele on ultrasonography. There were 12 (30%) patients with an associated external congenital anomaly in the series, with Beckwith Weidemann syndrome (5/40; 12.5%) being the most common. **Conclusion**: There was a high prevalence of associated external congenital anomalies in our study patients.**Keywords**: External, Congenital anomalies, Omphalocoele, Abdominal wall, Neonates

[SP 116] Title: APPLE PEEL LYING DOWN SEROMUSCULAR SEROMUSCULAR MESOPLASTY :A NEW AND USEFUL METHOD FOR PREVENTION OF POSTOPERATIVE VOLVULUS IN APPLE PEEL JEJUNAL ATRESIA

Author: Ahmad Mohammadipour

Background: Type III(b) Atresia (apple peel, Christmas tree or Maypole deformity) consist of a proximal jejunal atresia, absence of the superior mesenteric artery beyond the origin of middle colic branch, agenesis of the dorsal mesentery, significant loss of intestinal length and large mesenteric defect.

The unused distal small bowel always lies free in abdominal cavity and assumes a helical configuration around a single perfusing vessels. In this type of Atresia bowel blood supply, distal to Atresia, is provided from ileocolic or right colic or inferior mesenteric arteries in a retrograde fashion by an anastomotic arcade so the vascularity of the distal bowel is often impaired. UP to 50% of these cases may have simultaneous malrotation. Short bowel syndrome is present in nearly 75% of case while mortality is 54% in this population.Apple Peel deformity as severe variant of Jejunal Atresia supposed to become complicated mostly due to anastomotic leakage and sepsis or anastomotic failure with prolonged ileus and malnutrition, short bowel or TPN related side effects. Those who survive after the reconstructive gasterointestinal surgery in neonatal period are still in danger of further bowel volvulus and subsequent short gut syndrome due to very tiny narrow distal bowel mesentery.**Method and materials**: For prevention of post-operative volvulus in distal segment of intestine in our subjects, we have done a

new method of mesoplasty with seromuscular flap of proximal bowel as a mesenteric support for distal bowel with large mesenteric gap. In this technique, we divide a 5 cm segment of the more distal part of proximal dilated bowel before atretic segments this separated is opened longitudinally to provide a bed for distal hypermobile segments. while preserving the vascular pedicle, bowel mucosa is denudated with fine electrocautery preserving the seromuscular layer with its vascular pedicle.This seromuscular flap has been used as supporting bed for distal apple peel. The distal small bowel lied down on this mesenteric bed and fixed with fine 6-0 stiches.**Results**: All of our 5 patients had a benign postoperative course and made uneventful recovery and no postoperative obstruction or volvulus was seen during near to 5 year fallow up. We nominated this method as seromuscular mesoplasty. **Conclusion**: we suggest seromuscular mesoplasty as a supportive method to stabilize the distal redundant bowel in apple peel deformity to prevent subsequent volvulus.

Thoracic Surgery Poster Day 2 Group 2
Moderator: Mansour Ali

[SP 117] Title: LAPAROSCOPIC CARDIOMYOTOMY IN CHILDREN WITH ACHALASIA
Author: Saidkhassan Bataev
Background. Nowadays there are surgical treatment, balloon dilatation and injection of Botulinum toxin are used for treatment of achalasia in children. The optimalmanagement of oesophageal achalasia remains unclear in the paediatric population due to the rarity of the disease. This study reviews the single hospital experience of the laparoscopic Heller's cardiomyotomy procedure and attempts to define the most appropriate treatment. **Methods** Between 1991 to 2016 years, 45 patients with achalasia were treated in Filatov Children Hospital. Since 2011, all patients (33 cases) underwent the laparoscopic Heller's cardiomyotomy with Dor fundoplication. Mean age was 9.9 (4-15) years. During the laparoscopic procedure, we used five ports. We mobilize the anterior wall of the distal esophagus and gastric fundus. Cardiomyotomy was formed near 3 cm above and 1,5-2 cm below gastroesophageal junction. The mucosa was exposed for ½ of esophageal circumference. The Dor fundoplication was performed in all cases. **Results** The mean operative time was 45±12 minutes. Mean hospital stay was 6 days. Intraoperative complication - esophageal mucosa injury occurred during the myotomy in 2 cases (6.06%) which were cured during the laparoscopic procedure. There were no conversions to open procedure. Six (18.2%) required re-intervention: pneumatic dilatations (n=2), balloon dilatation (n=2) and redo-surgery (n=2). **Conclusion** In our series laparoscopic HC for achalasia was effective in 81, 8%. We consider the laparoscopic Heller's cardiomyotomy with Dor fundoplication the procedure of choice in the treatment of achalasia in children.

[SP 118] Title: THORACOSCOPIC THYMECTOMY IN MYASTHENIA GRAVIS. SINGLE-RIGHT-SIDE APPROACH
Author: Josué Eduardo Betancourth-Alvarenga
Aim: Myasthenia Gravis (MG) is a primary neuro-muscular disorder that can associate Thymoma in up to 15% requiring a complete surgical resection when possible. Thymectomy is also valued in the treatment of highly symptomatic MG. Our **aim** is to present a video case report of MG with Thymic mass that underwent a right-sided Thoracoscopic thymectomy.**Case Description:** 15-year-old male with symptomatic MG presenting generalized asthenia, bilateral facial weakness and difficulty to masticate. Initial treatment with immunoglobulin and high-dose corticoids had a partial response with recurrent symptoms. CT-scan revealed an anterior mediastinal mass highly suspicious of Thymoma, so surgery was advised. With a right 3-Trocar thoracoscopic approach a complete thymectomy was performed with a 155-minutes surgical time, no surgical nor respiratory postoperative complications and a chest drain that was taken out in the next 24-hours. Histopathology was negative for malignancies. 6-months after the surgery, the patient had a noticeable symptomatic relief with decreasing pharmacological needs.**Conclusions:** Thoracoscopic Thymectomy is a plausible safe procedure that can be performed in a single side approach in early stage thymic disease associated to MG.

[SP 119] Title: THORACOSCOIC REPAIR OF CONGENITAL DIAPHRAGMATIC HERNIA IN NEONATES AND CHILDREN: OUR EXPERIENCE.

Author: Mozammel Hoque, Allauddin Ahmed, Abdullh al Hasan, Sarwar Azam, , Fahmida Sultana, , Firoz Md Rozesul, Naima Sharmin, Jafrul Hannan.

Institution: Chattagram Maa-O- Shishu Hospital Medical College, Bangladesh.

Background: Congenital diaphragmatic hernia (CDH) remains one of the major challenges in neonatal surgery. The traditional surgical management of CDH consists of diaphragmatic repair by laparotomy. The use of minimally invasive techniques for CDH repair includes laparoscopic and thoracoscopic techniques has been well described with late presentation. We present our early experience of thoracoscopic repair of congenital diaphragmatic hernia in neonates and children in our center.**Methods**: Seven patients of congenital diaphragmatic hernia were randomly selected for thoracoscopic repair after obtaining the informed consent from January 2016 to May 2019. Age ranged from 7 days to 2 years. Male were 6 and female 1. Out of them left sided were five , right sided were two and diaphragmatic hernia with sac in 2 patients. We usually use 3 ports of 5mm in diameter and in one additional 3 mm port was used in one patient .The diaphragm was approximated with interrupted 2/0 delayed absorbable and non absorbable sutures.**Results**: The operating time varied 90 min to 130 mins. The insufflation pressures were 6-8 mm of Hg. Post operative ventilator support needed in five neonates. Extubation done after 3 days. Intercostal drain was kept in situ in all patients and removed after 4-5 days. Six patients survived and doing well, 1 neonate died due to sepsis. There was no recurrence till date.**Conclusion**: In our early experience, thoracoscopic repair of CDH is safe and feasible in children and neonates in selected cases. The close collaboration between pediatric surgeons, anaesthetists and neonatologists are mandatory for better outcome.

[SP 120] Title: LAPAROSCOPIC TREATMENT OF ANAPHYLAXIS AFTER INTRAVASCULAR RUPTURE OF HYDATID CYST FOLLOWING ABDOMINAL TRAUMA

Author: HAIF ASSIA

Aim of the study: Accidental traumatic intraperitoneal rupture resulting by anaphylactic shock is the well-known complication, unlike to the anaphylactic shock caused by the intravascular spread of cyst contents which is a rare and a review of the literature shows few case reports

Case description: A 13 year old boy, assaulted by kick in the abdomen by his young brother and admitted to the public hospital with less abdominal pain, Ultrasonography demonstrated a cyst in the liver without free peritoneal fluid. After a few hours, the general condition of the patient progressively worsened with temperature 40°C, vomiting, tachycardia, oliguria, hypotension, and dyspnea. The patient was oriented in our emergency then clinical examination showed generalized tenderness without any palpable mass and increasingly severe abdominal pain.Laboratory examination revealed severe leukocytosis. A second ultrasonography showed the drainage of the cyst contents into the right hepatic vein. Albendazole was immediately started and after 48 hours, stabilization of the patient, an abdominal laparoscopic examination, confirmed the absence of free intraabdominal fluid. On the seven liver segment, there was an intact wall cyst 5 to 6 cm. The approach consisted to the puncture which revealed hematic fluid that confirmed the rupture to the blood vessel, aspiration, injection and reaspiration. The cyst was totally evacuated, the residual cavity was explored carefully by optics for the presence of cysto-biliary communications. A partial cystectomy is done completed by drainage. Albendazole was continued for tow months.

Conclusion: The traumatic rupture of cyst in the blood vessels is very rare but should be kept in mind especially in endemic areas. We think that laparoscopic surgery can be recommended in this kind of clinical presentation of echinococcosis which is safe, feasible and effective.

[SP 121] Title: MORBIDITY RELATED TO PECTUS BAR REMOVAL

Author: Josué Eduardo Betancourth-Alvarenga

Aim: Surgical complication related to minimal invasive repair of pectus excavatum (MIRPE) has been vastly described in English literature with an esteemed 0.1% incidence of life-threatening complications occurring mostly during the learning curve. However, complications associated with the pectus bar removal has been poorly described. Our **aim** is to present our experience with bar removal surgery after MIRPE. **Methods:** Clinical review of patients that

underwent bar removal between 2012-2019 after MIRPE including patients that required early removal. The bar removal was performed in supine position with the patient at the right border of the operating table, both arms extended. Partial straitening of one side of the bar is performed. Thoracoscopic aid is always available if needed. Demographics, surgical characteristics, intra- and post-operative complications, and mortality were analyzed.**Results:** 52 patients (53 bars), 78.84% (n=41) males; with age ranging 7-21 years. Mean bar maintenance of 3 years (0.5-5.0 years). Early removal was necessary in 2 patients, both with bar displacement requiring thoracoscopic assistance with no complications. Surgical mean time was of 95 minutes (35-175 minutes) and median hospital stay of 1 day (1-3 days). Minor complications included seroma 11.5% (n=6), pneumothorax 5.75% (n=3) that resolved spontaneously, and wound infection/dehiscence 3.84% (n=2). Mayor complications included active bleeding of the ectopic soft tissue surrounding the bar in 3.84% (n=2) requiring thoracoscopic correction with no reconversion neither blood transfusion. No mortality was reported. **Conclusions:** Bar removal although considered safe and straightforward, possible life-threatening complications may occur. Its morbidity is probably underestimated because most complications are minor and require little or no surgical intervention. Thoracoscopic assistance can prove helpful for bar removal specially in cases where bar displacement or sternal erosion is suspected, or the removal procedure is not straightforward.

[SP 122] Title: ABDOMINAL TRAUMA MANAGEMENT IN A PEDIATRIC SURGICAL CENTER

Author: Sophia Siahaan

Aim of the Study: To characterize the types of abdominal trauma, mechanism of injuries, their management and outcomes.**Methods**: We extracted the data from medical records of 30 children who admitted to our hospital due to abdominal trauma from January 2018 to July 2019, including their demographic characteristics, mechanism of injuries, management (non-operative management [NOM] vs. surgery), length of stay (LoS), and mortality rate.

Main **Results**: They were 22 (73%) boys and 8 (27%) girls (27%), with the mean of age of 12.27 ± 4.96 years. The etiology of abdominal trauma were motorcycle driver accidents (14/30, 47%), motorcycle passenger accidents (8/30, 27%), bicycle accidents (2/30, 7%), pedestrian traffic accidents (2/30, 7%), fall (1/30, 3%), kicked accidentally (1/30, 3%), car passenger accident (1/30, 3%), and child abuse (1/30, 3%). Twenty-three (73.3%) patients were managed with NOM, three patients underwent an explorative laparotomy and splenectomy due to hemodynamic instability, and four patients an explorative laparotomy because of peritonitis. All NOM patients were uneventfully discharged from hospital. Two patients died following surgery due to significant loss of blood and septic shock. The hemoglobin level were significantly lower in children treated by surgery, and LoS were significantly lower in children treated by NOM ($p<0.05$).**Conclusion**: Most children with abdominal trauma are males and adolescent with the cause of traffic accident. NOM shows a good outcome for abdominal trauma in children.

[SP 123] Title: THORACOSCOPIC SYMPATHECTOMY ON RAYNAUDâ€™S DISEASE

Author: Josué Eduardo Betancourth-Alvarenga

AIM Raynaud's disease is a disorder characterized by episodic vascular spasms and digital ischemia triggered by cold temperatures or emotional stress, with recurrent attacks of pain, cyanosis, redness and numbness of upper extremities. We aim to present our experiences with thoracoscopic sympathectomy (TS) as treatment of Raynaud's disease.**Methods** Review of 5 patients that underwent TS for Raynaud's disease, focusing on demographics, postoperative complications, side effects, recurrence of symptoms, short and long-terms results. **Results** Five patients ranging 9-15 years with chronic symptoms including little or no response to chronic treatment underwent a bilateral thoracoscopic T2-T4 sympathectomy with no immediate complications and a mean 36-hours Hospital stay. All of the cases had initial satisfactory results with complete healing and resolution of their symptoms. After a year of the initial surgery, no recurrence has been reported. **Conclusions** Although thoracoscopic sympathectomy is a well-known and safe surgical procedure mainly used for the treatment of palmar and plantar hyperhidrosis, its use for treating Raynaud's disease is limited. Our initial experience has proven promising for those patients with chronic refractory symptoms of Raynaud's disease, although longer follow-up and a larger population will be necesary to assess its potential benefits.

[SP 124] Title: BILATERAL ThORACOSCOPIC SYMPATHECTOMY IN AN ADOLESCENT WITH PALMAR AND AXILAR HYPERHYDROSIS. REVIEW OF THE LITERATURE.

Author: CRISTINA GARCES VIS

Introduction:Primary hyperhidrosis is a functional disorder caused by hyperfunction of the sympathetic nervous system. It involves excessive and uncontrollable sweating, mainly affecting the armpits, hands, feet and face. It causes intense discomfort and a negative effect at the socio-emotional level.
In most cases, surgery is the only effective treatment option.**Objectives**:Presentation of a patient with bilateral palmar and axillary hyperhidrosis operated of bilateral thoracoscopic sympathectomy.
Review of the literature.**Material and methods**: We treated a 14-year-old male with bilateral palmar and axillary hyperhidrosis, using bilateral T3-T4-T5 sympathectomy, through thoracoscopic route, due to medical treatment failure. Two chest tubes were introduced during the procedure, which were removed after bilateral pulmonary reexpansion. We conducted a literature review of the complications and long-term efficacy of this surgery.
Main results: There was no intra-postoperative complications. The patient was discharged after 24 hours of admission. After 9 months of follow-up, he is asymptomatic, with resolution of the hyperhidrosis condition, and he is satisfied with the surgery. The literature describes different complications arising from the procedure: postoperative pain, recurrence, compensatory hyperhidrosis (HC), Horner syndrome, vascular or other organ damage and pneumothorax. The HC has a variable incidence according to the definitions applied to the term (3.5-100%). Success rates vary between 93-98%. **Conclusions:** Bilateral thoracoscopic sympathectomy is a safe and effective treatment for children and adolescents with primary focal hyperhidrosis of the palms and armpits, in which medical treatment fails, with a clear improvement in their quality of life.It is necessary to agree on a universal definition of compensatory hyperhidrosis to assess its postoperative incidence.Patients need long-term follow-up and a comprehensive approach, with psychological support, since the surgery is not without complications.

Case Report Posters Day 2 Group 3
Moderator: Devendra Gupta

[SP 125] Title: THE PATHOLOGICAL GASTROESOPHAGEAL REFLUX OF THE CHILD IN A PEDIATRIC SURGERY SERVICE OF SUB-SAHARAN AFRICA

Author: EKOBO PAULE-CHRI

Introduction: Gastroesophageal reflux is the involuntary return of gastric contents into the esophagus. Though a normal physiological phenomenon for an infant, it becomes pathological when associated with symptoms of inconfort and / or complications.Very little study has been done in subsaharan Africa on gastroesophageal reflux and its complications, especially in children. The objective of this work was to present through 3 cases studies, our diagnostic methods and our management.**Observation:** There were 3 patients respectively 15, 16 and 23 months old, for whom the reason for consultation or reference was chronic vomiting resistant to anti-emetics. Malnutrition and dehydration associated with body and weight slow-growth (n = 2) were alarming signs. An esophago-gastro-duodenal transit showed gastroesophageal reflux in all 3 cases. Esophago-gastro-duodenal fibroscopy was performed in 2 patients and showed erythematous gastropathy. One death is noted in a table of severe malnutrition and sepsis. A fundoplication with respect to Nissen's technique was realized in the other two patients, with a favorable evolution. **Conclusion:** Gastroesophageal reflux disease is extremely rare in subsaharan African children. Diagnosed late, it is accompanied by complications that can be lethal. Thinking of it in case of any infant vomiting would increase the number of early diagnosis and emphasize the prognosis of the children.
Key words: Gastroesophageal reflux - Vomiting - Child.

[SP 126] Title: NEONATAL GASTROINTESTINAL STROMAL TUMOR OF THE SIGMOID COLON: A CASE REPORT AND REVIEW OF LITERATURE

Author: Mostafa Kotb

Background: Gastrointestinal stromal tumors (GIST) are the most common mesenchymal neoplasms of the digestive tract. While the incidence in the pediatric age group is rare, its incidence in neonates is extremely rare. They are believed to originate from the interstitial cells of Cajal or their precursors.**Case Report:** A 10-day-old boy presented with intestinal obstruction. He was operated upon and a mass was found at the sigmoid colon, which was resected and divided colostomy was performed. The diagnosis of neonatal GIST was confirmed by histologic and immunohistochemical studies. We believe that this is the ninth case of neonatal GIST that arises from the intestine and the first to arise from the sigmoid colon.**Conclusion**: Colonic GIST can occur in the neonatal age group, can cause neonatal colonic obstruction, and can be confused clinically with Hirschsprung's disease or other causes of meconium ileus.

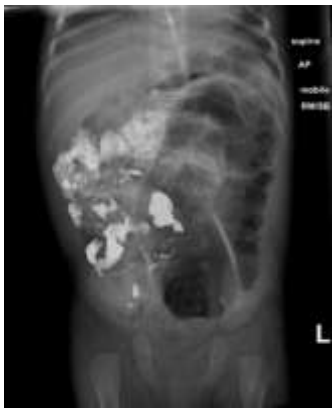
[SP 127] Title: PYLORIC WEB: RARE ENTITY OF GASTRIC OUTLET OBSTRUCTION AND CHALLENGING IN DIAGNOSIS
Author: MOHAMMED ELIFRANJI
Pyloric web is a rare cause of Gastric outlet obstruction. Most of the definite diagnosis can be achieved via routine evaluation which consists of patient history, physical examination, and plain abdominal x-ray. Perforated webs leading to partial intestinal obstruction is an exception, there can be a delay in diagnosis but radiologic, ultrasonographic, and endoscopic investigations could be helpful.The case is a 1-year-old girl who was presented with non-bilious vomiting since birth which became worse after 6 months of age. Physical examination was unremarkable apart from weight was on 3rd centile. Initial investigations including contrast study were consistent with GERD and motility problem. Therefore, patient was put on conservative management and her vomiting improved but her weight remained low. Therefore, Esophagogastroduodenoscopy (OGD) was obtained and showed pyloric web with pinhole opening. Several attempts to intubate the pylorus even with guide wire were failed. Operatively, the web was identified and incised followed by pyloroplasty. Patients symptoms resolved and she started to catch up the weight curve. In conclusion, pyloric web is a rare entity of gastric outlet obstruction and it can be presented with nonspecific symptoms that lead to delay in diagnosis. Thus, High index of suspicion in addition to upper GI endoscopy can achieve a definite diagnosis. Surgical intervention remains the best modality of treatment.

[SP 128] Title: CLOCACAL EXTSTROHY MANAGEMENT CASE REPORT
Author: Syarifah Debi Mulya
Aim Of The Study:Cloaca is the most severe and complex disorder in anorectal, vaginal, and urogenital malformations, as a congenital disorder in which the rectum, vagina and urinary tract unite and lead to the perineum through a channel called the common channel. This disorder is very rare. The condition occurs because of a disturbance in the development of the embryo in a very early phase.Reporting our experience of management in ekstrofia cloaca on a new born baby; starting from first assessment to surgical management**Case Description**:A newborn girl with the chief complaint of the intestine coming out of the stomach wall & not having anus. Examination of the abdominal region, there is defects of the anterior abdominal wall about Ø 8 cm. Intra-abdominal organs exposed, with membranes covered, the location is in the umbilical cord, with meconium and there is normal peristaltic. In the anal region, anal dimple, fistula, OUE, and scrotum was not formed. She was diagnosed with Cloaca Extrophia with ambigous genitalia. Babygram radiological examination, echocardiografi and check the karyotype chromosome was performed. We have successfully performed surgery on the patient. An ileostomy and PSARP have been performed at an early stage (7 mounth y.o), followed by vaginal reconstruction and vesica urinary reconstruction (19 mounth y.o).The last treatment was performed ileoileal reanastoose (24 mounth y.o). The patient was good, with healed scar operation and normal devecation.**Conclusion:**Cloaca ekstrofia in new infants is a congenital disorder whose incidence is very rare.Prognosis is usually good, depending on the treatment starting from the initial diagnosis. In this patient the ileostomy and PSARP procedure is performed at an early stage, followed by vaginal reconstruction and vesica urinary and ileoileal reanastoose in the final stages.**Keywords**:Cloaca Extrophia, Ileostomy, PSARP, Vaginal Reconstruction, Vesica Urinary Reconstruction

[SP 129] Title: MALROTATION AND CHALLENGES IN DIAGNOSIS

Author: MOHAMMED ELIFRANJI

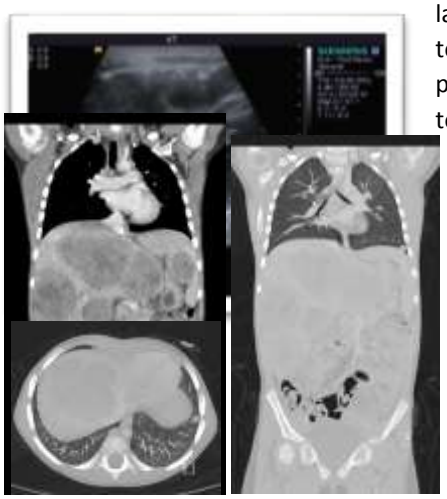
Introduction: Malrotation is a congenital disorder of abnormal intestinal rotation and fixation that predisposes infants to potentially life-threatening midgut volvulus. Although Upper gastrointestinal tract contrast study remains the golden standard in diagnosis such problems, sometimes, can lead to inaccurate diagnosis. **Case** Term neonate presented at 9 days of life with poor feeding and loose stool admitted to intensive care unit with features of severe dehydration. Resuscitation accomplished and baby became stable hemodynamically. However, clinical examination was unremarkable, baby continued to have feeding intolerance in term of occasional non bilious vomiting. Baby's abdominal X-ray showed dilated bowel loops which was consistent with ileus but an upper GI contrast study was obtained due to baby's symptoms of feeding intolerance. Interestingly, upper GI contrast showed DJ did not cross the midline and most of small bowel at right side and large bowel at left which is consistent with malrotation /nonrotation abnormalities, Fig.1. Therefore, baby underwent an exploration laparotomy which showed normal rotation of bowel. Baby's condition improved gradually and sent home after she tolerated full feed. **Discussion**: Severe Gastroenteritis cases associated with a period of ileus which can lead to dilatation in colon. The dilated colon pushed the flexible DJ junction to the right side which led to false interpretation of UGI study as Malrotation . **Conclusion**: UGI contrast study is still the preferred diagnostic method of Malrotation. due to flexibility of DJ junction in infancy false positive results can occur. Meticulous technique in addition to close cooperation and communication between radiology and surgery is required to improve its accuracy. *Fig.1 . UGI contrast study showed the DJ and small bowel at right side and dilated colon at left.*



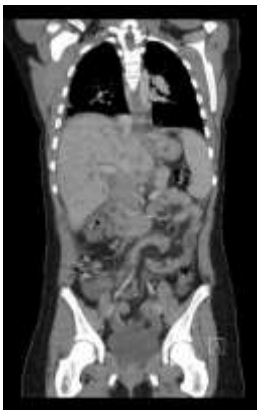
[SP 130] Title: METASTATIC COLORECTAL ADENOCARCINOMA IN TWO PEDIATRIC PATIENTS

Author: Dorothy Rocourt

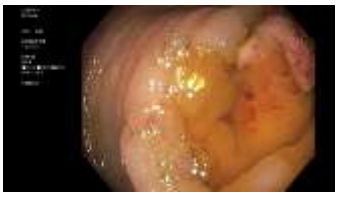
Case 1:A 4 year old female presented with a 3 month history of abdominal pain. She had multiple emergency room visits with abdominal x-rays that were interpreted as constipation and her primary care physician started her on acid suppression for possible reflux. She was electively admitted for a colonoscopy with intention of bowel prep. She had an Abdominal radiography (AXR) obtained for position of the nasogastric tube to initiate the bowel prep. AXR imaging was concerning for intussusception. An Abdominal Ultrasound (US) was obtained confirming a complex ileocolic intussusception. Air enema was concerning for a non-reducible intussusception with an underlying mass lesion acting as a lead point. She was emergently brought to the operating room for diagnostic laparoscopy. Intra-operative, the terminal ileum and cecum were noted to be normal and the intussusception involved the ascending colon. The intussusception was not reducible and the procedure was converted to laparotomy. She had a right hemicolectomy performed with stapled side to side anastomosis. She had an ileus post-operatively that resolved on post-operative day (POD) #6. She was started on clears, advanced quickly to regular diet and was discharged home on POD#7 with resolution of her abdominal pain. Pathology report was consistent with high grade poorly differentiated adenocarcinoma with metastatic disease in 2 of 31 lymph nodes. Immunohistochemistry showed intact nuclear positivity for MLH1, MSH2, MSH6 and PMS2. There was no loss of nuclear expression of MMR proteins with low probability of *Figure 1 US: Complex ileocolic intussusception* microsatellite instability-high (MSI-H). The family was lost to follow up and during the fourth postoperative week, she returned to the Emergency Room with complaints of recurrent abdominal pain. She went on to have a Computed Tomography of the abdomen and pelvis (CT A/P) which demonstrated metastatic disease to the liver and lung



with an exophytic lesion at the resection site.Multiple heterogeneous primarily hypodense lesions within the liver compatible with metastatic disease. There is a large mass extending into the right abdomen inseparable from the liver and likely exophytic hepatic. 2. 2 cm pulmonary nodules, one in left upper and left lower lobes, consistent with metastatic disease.The family declined further treatment and genetic testing. They also declined genetic testing and screening colonoscopy for their other children. She was placed in hospice care and expired 7 days later. *Figure 2 CT A/P: Multiple heterogeneous primarily hypodense lesions within the liver compatible with metastatic disease. There is a large mass extending into the right abdomen inseparable from the liver and likely exophytic hepatic.2. 2 cm pulmonary nodules, one in left upper and left lower lobes, consistent with metastatic disease.* The family declined further treatment and genetic testing. They also declined genetic testing and screening colonoscopy for their other children. She was placed in hospice care and expired 7 days later. **Case 2**:A



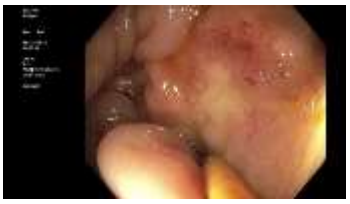
12 year old female presented with a 1 week history of abdominal pain and 1 day of fever. She has an US performed that demonstrated multiple liver lesions. CT Chest/Abdomen/Pelvis were done and were significant for multiple lesions throughout the liver, soft tissue versus enlarged lymph nodes within the peripancreatic/porta hepatis region and scattered enlarged mesenteric lymph nodes causing central biliary obstruction and bilateral pleural effusions. Her presentation was concerning for embryonal sarcoma versus metastatic carcinoma of uncertain origin. She underwent a core liver biopsy that was consistent with metastatic poorly-undifferentiated adenocarcinoma. PET scan was performed and she was notable for widespread multifocal metastatic disease to the liver and lymph nodes above and below the diaphragm. She was started on FOLFOXIRI-BEV with cycle 1 starting on post hospital day 6. Chemotherapy cycle was to consist of: FOLFOXIRI-BEV: Cycle 1, Day #1. Bevacizumab (5 mg/kg) Week 1 day 1, Week 3, day 1; Irinotecan (165 mg/m2) Day 1 Week 1, Day 1 week 3; Oxaliplatin (85 mg/m2) Day 1, week 1, Day 1 week 3; Leucovorin (400 mg/m2) Day 1 week 1, day 1 week 3; Fluorouracil (1200 mg/m2) Days 1-2 Week 1 and week 3 (Cycles are 4 weeks in length). Pediatric gastroenterology performed a colonoscopy that showed sessile polyps in the descending, mid transverse colon, cecum and terminal ileum. Biopsies were consistent with invasive poor differentiated adenocarcinoma. The malignant cells were CK20 positive and CK7 negative, CD68, S100 were negative. She developed portal vein thrombosis and acute liver failure between cycles 1 and 2 of chemotherapy. Follow up Magnetic Resonance Imaging (MRI) of the abdomen following cycle 1 of chemotherapy showed stable cancer burden. Host genetic testing performed using Invitae Colorectal Cancer Panel & preliminary-evidence genes



(28 genes) was notable for a pathogenic variant, c.1437_1439dekGGA(p.Glu480del), identified in MUTYH. She also had a variant c407A>G(p.Asp136Gly) identified in CDKN1B which is associated with autosomal dominant multiple endocrine neoplasia type 4. She went on to develop multi-system organ failure and the family elected to withdraw care. Upper and lower endoscopies on the siblings had normal findings on colonoscopy and H.Pylori is gastritis on upper endoscopy. Our recommended follow up is yearly colonoscopies starting at 12 years of age for first degree affected relatives. *Figure 3 CT A/P:Multiple lesions throughout the liver, soft tissue versus enlarged lymph nodes within the peripancreatic/porta hepatis region*. Intussusception is the telescoping of a part of the intestine into the section immediately adjacent to it. It tends to predominantly affect children between the ages of 3 months to 3 years. Intussusception typically involves the small bowel and less commonly the large bowel, with the ileo-cecal location being most frequent. It has an incidence of rate of 1 to cases per 1,000 children. There is a male predominance of 3:2. When present in older children a lead point is usually suspected. Lead points in children are commonly Meckel's diverticulum, polyp and tumors. Adenocarcinoma is the most common type of colorectal cancer. Most adenocarcinomas arise from a polyp which overtime may develop into a cancer. Adenocarcinomas are rare colorectal cancers in the pediatric population. According to the Center for Disease Control (CDC) the overall incidences of colorectal cancers have been decreasing. The decline in incidence is attributed to colon cancer screening protocols. The American cancer society recommends screening for colorectal cancers to begin at age 45 with either colonoscopy or stool based test. Most analysis from the Surveillance, Epidemiology, and End

Results (SEER) Colon Rectal Cancer (CRC) registry found that there was a decline in CRC in older patients with the most pronounced

Figure 4 Colonoscopy Transverse colon polypdecline in patients 75 years and older. However, they also found that there was a significant increase in the incidence of CRC in patients 20 to 34 years of age. Chemotherapy in the management of adenocarcinoma in children mirror the regimens used in adults. The recommended adult regimens for stage IV colon cancer include: FOLFOX: leucovorin, 5-FU, and oxaliplatin (Eloxatin), FOLFIRI: leucovorin, 5-FU, and irinotecan (Camptosar), CAPEOX or CAPOX : capecitabine (Xeloda) and oxaliplatin, FOLFOXIRI: leucovorin, 5-FU, oxaliplatin, and irinotecan, *Figure 5 Colonoscopy Terminal ileal polyp near ileocecal valve* One of the above combinations plus either a drug that targets VEGF, (bevacizumab [Avastin], ziv-aflibercept [Zaltrap], or ramucirumab [Cyramza]), or a drug that targets EGFR (cetuximab [Erbitux] or panitumumab [Vectibix]), 5-FU and leucovorin, with or without a targeted drug, Capecitabine, with or without a targeted drug, Irinotecan, with or without a targeted drug, Cetuximab alone, Panitumumab alone, Regorafenib (Stivarga) alone, Trifluridine and tipiracil (Lonsurf). Recommended adult colorectal cancer screening in high risk patients consist of visual screening with colonoscopy before 45 years of age, or get specific tests *Figure 6 Colonoscopy Hepatic flexure polyp* such as a stool base test and screening should be done more often. Population at high risk are those with a strong family history of colorectal cancer or certain types of polyps, personal history of certain types of polyps or colorectal cancer, personal history of ulcerative colitis or Crohn's disease, known family history of hereditary colorectal cancer syndromes, personal history of radiation to the abdomen or pelvis to treat a prior cancer.



[SP 131] itle: BOTULINUM TOXIN A AS AN ADJUNCT TO ABDOMINAL WALL RECONSTRUCTION FOR COMPLEX VENTRAL HERNIA

Author: Henar Souto

Aim of study:Complex ventral hernia repair remains challenging. Primary closure may lead to serious pathophysiological consequences due to chronic muscle tension and lateral retraction.

In order to facilitate, temporary paralysis of the abdominal wall muscles with pre-operative botulinum toxin type A (BTA) injections has been described in adult patients, but it has not been previously reported in children

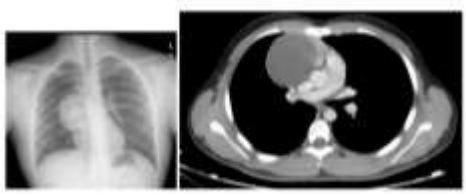
We present a successful case of BTA injection previous to repair a giant hernia with abdominal loss of domain, in an infant with a history of omphalocele.**Case description**:An African 12 year-old male, with a history of a spontaneously healed omphaloce, came to the emergency department with abdominal pain and emesis. He presented a painful irreducible giant ventral hernia. Abdominal radiographs and ultrasound showed features suspicious of gastric volvulus. Upper GI series demostrated a enlarged stomach and lack of transit to the duodenum. Nasogastric decompression improved the symptoms, although the hernia sac remained irreducible due to loss of domain.A subsequent CT scan confirmed a central abdominal wall defect of size 12 x 10 cm, and the hernia sac contained small bowel and practically the entire colon.Under ultrasound guidance, BTA was injected into the abdominal muscles (oblique, transverse and rectus). No related complications occured. Hernia repair was performed by a Rives-Stoppa technique, with placement of retro-rectal mesh. The postoperative course was uneventful. Due to the unraised intra-abdominal pressures, mechanical ventilation after surgery was no necessary. Full enteral feeding was achieved 72 hours later. The patient was discharge on the fourth postoperative day. There is no hernia recurrence to date.**Conclusion**s:Preoperative abdominal injection of BTA is a safe and effective procedure that allows primary fascial closure in complex ventral hernia repair in children.

[SP 132] Title: GIANT MEDISTINAL MASS. THE IMPORTANCE OF DIFERENCIAL DIAGNOSIS

Author: Henar Souto

Aim of study: To describe the management of a giant mediastinal mass in pediatric patient. **Case Description**

We report a 10 year old boy native to Pakistan presenting with 1 year history of progressive asthenia and dysphagia. Investigation revealed an enlarged mediastinum in chest x-ray due to a mediastinal mass and normal blood tumor markers. A tomography scan was performed showing a 12 cm mass in the anterior mediastinum with heterogeneous texture, being a theratoma the most probable radiological diagnosis. We performed surgery under general anesthesia through a right thoracotomy achieving complete resection of the mass without complications. Postoperative period was uneventful and the patient was discharged in five days. The hystopathologic analysis was positive for thymoma type B2 with no local invasion (Masaoka-Koga stadium I). No further oncologic treatment was needed. In the follow up period, the patient continued to show dysphagia and dysphonia. Further investigation demonstrated post-synaptic transmission defect in neurophysiological studies, revealing a myasthenia gravis syndrome. This atypical presentation of the myasthenia gravis without palpebral ptosis or exhaustion when walking (which are the most frequent symptoms), led to a late diagnosis. This fact could have negatively affected the outcomes of the surgical procedure adding to the risk of the mediastinal compression the interference with anesthesic medications. The patient was managed conservatively with progressive improvement, and no acetylcholinesterase inhibitors were needed. After two years of surgery the patient is asymptomatic, neurophysiological tests are normal, and there is no evidence of tumor recurrence. **Conclusions:** It is very important to establish a differential diagnosis in mediastinal masses in order to achieve an appropriate management and perform a safe surgical procedure. Although thymoma is a rare disease in children, it can be locally aggressive and associate diverse autoimmune diseases which may need specific treatment.



[SP 133] Title: TREATMENT OF A GIANT RENAL HYDATID CYST IN A GIRL

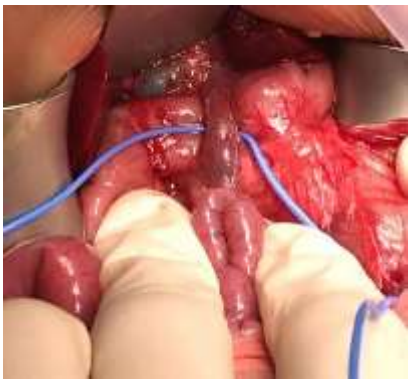
Author: Ines Ben chouchene

Aim of the study: Cystic echinococcosis, is a serious life-threatening health problem in our country. Urogenital sites rank third after lungs and liver, which are the main predilection sites. Renal hydatid cyst is the most common form of urogenital hydatidosis and its isolated presentation is a rare condition in children. Its diagnosis is sometimes difficult because of non-specific complaints and unavailability of any positive results in a routine laboratory analysis. Here, we present a case of giant renal hydatid cyst that was treated with surgical excision. **Case presentation**: A 4-year-old girl patient was admitted in our department for a flank pain and cystic mass in left kidney. Abdominal ultrasonography revealed a 10 *80 mm cystic mass at lower pole of right kidney... Indirect haemagglutination test (IHA) for Echinococcus was negative. We didn't give any medical therapy to the patient. Surgical excision of the cyst was performed. At the postoperative second month the ultrasonography of kidneys were normal. **Conclusion**: Renal cyst hydatid may present with various clinical findings ranging from asymptomatic clinical course to total loss in renal function. It will be beneficial to consider a renal hydatid cyst in patients with blurred flank pain, even if IHA is negative. For patients from endemic areas, hydatid cyst should always be included in the differential diagnosis

[SP 134] Title: PREDUODENAL PORTAL VEIN ASSOCIATED WITH INTESTINAL MALROTATION

Author: VERONICA ALONSO

Case description: A 3-day-old premature female weighing 1.9 Kg, was referred to our surgical team due to occasional acholic stools. The Doppler ultrasonography and gastrointestinal contrast study were consistent with intestinal malrotation. The duodenojejunalflexure and the small bowel were located on the left of midline, accompanied by an inversion of the superior messenteric vessels. The biliary system was normal. An exploratory laparoscopy was performed at the age of 1 month



After the Ladd's bands lysis, a preduodenal portal vein was found (figure 1). A conversion to open surgery was necessary to correct the malrotation with an end-to-end duodenojejunal anastomosis. The postoperative period was uneventful. **Conclusions:** Preduodenal portal vein is an infrequent cause of duodenal obstruction and is found in 4% of cases. This vascular anomaly is mainly associated with intestinal malrotation. Half of the patients are asymptomatic and this is an incidental finding during laparotomy. The Ladd's intervention decreases the risk of volvulation in cases of intestinal malrotation. The duodenoduodenostomy and duodenojejunostomy are the most described surgical treatments when a preduodenal portal vein is present.

[SP 135] Title: 3D MODELING FOR THORACOSCOPIC RELEASE OF LEFT MAIN BRONCHUS VASCULAR COMPRESSION, CASE PRESENTATION

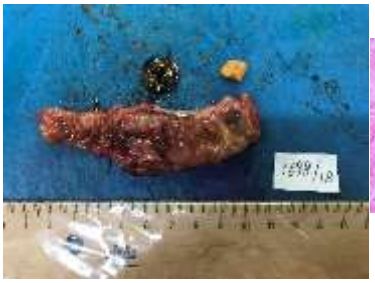
Author: Oleg Topilin

Aim To present a case of successful thoracoscopic release of the left main bronchus vascular compression with application of 3D modeling technology.**Case description** A 3 year old female was referred with recurrent respiratory infections, persistent coughing and shortness of breath on minimal physical exertion. The CT-Angio with 3D reconstruction demonstrated an aortic anomaly with right aortic arch crossing over to the left side and also left main bronchus stenosis. 3D modeling created by the means of a dedicated program showed that in presence of the aortic anomaly the ligamentum arteriosum compromised the left main bronchus. The 3D printed model was then used for planning and simulation of MIS surgery to release the bronchial compression in complex vascular anatomy. Consequently undertaken thoracoscopic ligation and division of the ligamentum arteriosum was successfully carried out with no intra-operative difficulties encountered. Postoperatively, the patient made prompt and uneventful recovery. His initially presented respiratory symptoms were relieved within a month following surgery.**Conclusions** 3Dmodeling facilitated the accurate diagnosis of complex aortic anomaly causing the left main bronchus compression and also assisted in planning and carrying out the proper corrective MIS surgery.

[SP 136] Title: A COIN TRAPPED IN MECKELâ€™S DIVERTICULUM

Author: Levent Cankorkmaz

Aim of the study Foreign body ingestion is a common problem among children. Most foreign bodies that have passed the esophagus will pass uneventfully through the intestinal tract. Foreign bodies that remain blocked in the narrower segments of the gastrointestinal tract require nonsurgical intervention. When there is a persistent foreign body in the intestine, it is difficult to make a diagnosis without exploration. We herein report the case of an abdominal pain child who presented with a coin trapped in Meckel's diverticulum.**Case description**A 2-year-old boy was brought to our hospital 3 months after ingestion of coin. Physical examination showed no abdominal tenderness. Laboratory was normal. The foreign body appeared to be a coin located in the middle lower quadrant in the abdominal X-ray. He was operated after about one week of pre-operative preparation. Exploratory laparotomy was performed, and Meckel's diverticulum was discovered. The coin was detected in Meckel's diverticulum and it wedge resection were performed (Figure). After the operation, the patient had an uneventful recovery and started enteral feeding within 5 days.**Conclusions:**Early treatment of ingested foreign bodies in the gastrointestinal system is important in terms of preventing possible complications. The determination of the exact location of the coin, decision for intervention, and management may be difficult in cases with prolonged lodgment. The diagnosis of Meckel's diverticulum should be considered when there is a prolonged lodgment of a foreign body in the lower quadrant.



[SP 137] Title: OUTCOMES OF SURGICAL TREATMENT OF ACHALASIA : ABOUT 4 CASES

Author: Ines Ben chouchene

Aim of the study: Achalasia is a primary oesophageal motor disorder characterized by insufficient lower oesophageal sphincter relaxation and loss of oesophageal peristalsis. Common clinical presentations include vomiting, dysphagia, regurgitation, recurrent pulmonary aspiration .Diagnosis is made by barium swallow study and oesophageal manometry, which is the gold standard test.Laparoscopic Heller Myotomy, with or without anti-reflux procedure is the standard treatment of choice for children. The aim of this study is to assess the outcomes of surgical treatment of Achalasia in infants in our department. **Methods:** It's a retrospective study about 4 patients who were operated for Achalasia by Heller Myotomy (HM).3 girls and one boy. The average age at time of surgery was 8 years old. The diagnosis of Achalasia was established on clinical, radiological, endoscopic and manometry findings. HM was a first-line treatment in 3 case and a second-line treatment, after failure of Pneumatic Dilation ,in one case .Three children underwent HM using laparoscopic procedure while HM by laparotomy procedure was performed in one patient. A Nissen Fundoplication was associated in 3cases, while a Dor anti-reflux valve was used in one case. **Main Results:** The average follow-up time of our patients was 3 years .No mortality was observed. Functional symptoms, such as dysphagia and regurgitations were improved in 3 cases .In one case who was operated by laparoscopic procedure We observed a recurrence of severe dysphagia with loss of weight after surgery. Radiological and endoscopic findings of this patient concluded to persistent signs of Achalasia treated by a Pneumatic Dilation with a good result .Only one patient, who was operated by laparotomy procedure, was post-operatively symptom free .No patient underwent subsequent intervention.**Conclusion:** Idiopathic esophageal achalasia is a rare pathology.HM may be considered the treatment of choice .The results of this procedure can be different from a patient to another.The results of this surgical technique using laparoscopic or laparotomy procedure may be compared in a larger retrospective study.

Case Report Posters Day 2 Group 4
Moderator: Mahmoud Elfiky

[SP 138] Title: CONSERVATIVE MANAGEMENT ON PEDIATRIC BLUNT ABDOMINAL TRAUMA GRADE IV-V SPLEEN AND LIVER INJURY

Author: Meily Anggreini

Aim: Blunt abdominal trauma is one of the most common causes of trauma in the pediatric population, and trauma is the leading of mortality in childhood. Every year, 20 million children suffer injuries and 25% of cases are abdominal trauma that is difficult to recognize. Certain mechanisms of injury are more common in the pediatric population. Infants and young children are likely to sustain injuries from motor vehicle collisions (MVC). In the last 2 months in dr. Moewardi Hospital recorded at least 3 cases of blunt abdominal trauma in children caused by MVC. Effective management of blunt trauma is needed to reduce mortality in pediatric population.

Case Description:A serial case (3 cases) of blunt abdominal trauma in children audit at dr.Moewardi Hospital Department of Pediatric Surgery in the last 2 months (July - August 2019) and review of the literature. 3 patients, boys 9 and 14 years old, and a girl 2 years old, who has blunt abdominal trauma by motorcycle accident were included. With stable hemodynamics, three patients were treated in pediatric high care unit, they had positive FAST, and Abdominal CT Scan was performed with results are 2 patient with spleen injury grade IV and grade V, and 1 patient with liver injury grade IV. They were treated by nonsurgical management, with fluid bolus and maintenance of normo salin, symptomatic drugs, transfusion with PRC to correct low haemoglobin level, and bed rest total for minimum five days, that give the results as we expected. **Conclusion:**Conservative management is safe and effective to treat blunt abdominal trauma in children with grade IV and V solid organ injury and stable hemodynamic. **Keyword:**Pediatric blunt abdominal trauma, Ruptur hepar grade IV, Ruptur lien grade V.

[SP 139] Title: INTESTINAL TUBERCULOSIS WITH ILEUS - A RARE CASE IN A DEVELOPED COUNTRY

Author: Andrea Schmedding

Aim of Study: Intestinal tuberculosis in Germany has an incidence of 0.13 per 100 000 inhabitants, in contrast to this the incidence of inflammatory bowel diseases in children and adolescents is 5-11 per 100 000. We present the diagnostic challenges of a 15-year-old girl with intestinal tuberculosis in a developed country. **Case description**: A 15 year old girl presented with weight loss of 14 kg over a period of 3 months (BMI 15.6), anemia, fever ad admission, abdominal pain and recurrent diarrhea. No night sweats. No family history of inflammatory bowel disease or tuberculosis. Initial diagnostic (day 1-8): Ultrasound: thickening of intestinal wall especially terminal ileum. Calprotectine elevated. CT thorax no signs of TBC. MRI of abdomen suspicious of inflammatory bowel disease. Gastrointestinal Endoscopy with normal appearance of esophagus, stomach, duodenum, terminal ileum, colon. Bronchoscopy normal. Further course (day 9-12): Skin test for tuberculosis positive, Quantiferone test negative. Microbiology of stool positive for Mycobacterium africanum. Start of antituberculostatic therapy (Isoniazid, Pyrazinamid, Ethambutol, Rifampicin). (Day 13-21) Despite of the antituberculostatic therapy the girl showed progressives signs of bowel obstruction leading to a mechanical ileus. Surgery was performed on day 22 showing miliary tuberculosis of the small bowel with total obstruction at level of terminal ileum caused by a conglomerate in the small pelvis. An end ileostomy was performed. Oral intake was given from postoperative day 4. Complication after surgery was wound dehiscence until subcutis. Follow-up for 2 months: Conglomerate in pelvis still viable at ultrasound. Patient feeling well. Weight gain of 3 kg. **Conclusion**: The diagnosis of intestinal tuberculosis can be challenging in the developed world as the disorder is a rare disease here. In our case we saw a rare diagnosis with rare bacteria as mycobacterium africanum in Germany is responsible for 1.5% of the cases only.

[SP 140]Title: FEMORAL VEIN THROMBOSIS SECONDARY TO STAPHYLOCOCCAL INFECTION IN A 2-YRS OLD CHILD

Author: Alshazly Isaac

Femoral vein thrombosis secondary to staphylococcal infection is rare in children .We are reporting a rare case of 2- year-old boy with Femoral vein thrombosis secondary to myositis ,fasciitis and cellulitis , who presented with massive swelling of the Rt. Thigh , fever and shock. Doppler ultrasound showed thrombosis of the Rt. femoral vein A low molecular heparin started, but the fever persist , MRI to RT L.L showed extensive Rt. upper thigh and lower abdomen myocitis , fasciitis and cellulites with small pocket of abscess in Rt. thigh .Prompt surgical treatment using fasciatomy was done and resulted in rapid improvement in symptoms. Recently he is doing well. It is important to consider DVT in any child who presents with sign and symptoms of musculoskeletal infection . Prompt antibiotic and anticoagulant treatments should be initiated to reduce the risk of complications.

[SP 141] Title: THE RAPUNZEL SYNDROME IN A CHILD: REPORT OF A CASE

Author: Levent Cankorkmaz

Aim of the study: Trichobezoars are gastric indigestible foreign bodies rarely found in children. They are mainly composed of swallowed hair. Rapunzel syndrome is a rare form of tricobezoar with a tail extending from the stomach into the small bowel. Clinical presentation can range from an asymptomatic abdominal mass to severe symptoms; gastric outlet obstruction, and perforation of the stomach. **Case description:** Here we present the case of a 4-year-old girl in who presented with a few months history of vomiting, epigastric pain of increasing severity. In her history was swallowed coin at 3-year old, removed with esophagoscope. In addition, her mother gave a history of trichophagia. Her vital parameters were normal, and there was no abdominal tenderness and rigidity. Palpation is the examination of the abdomen for any abdominal tenderness, or for abdominal masses. Upper endoscopic examination showed trichobezoar in the stomach with its tail extending into proximal duodenum (Rapunzel syndrome). An attempt was made to remove the trichobezoar, but due to its large size and hard nature, we failed to excise and remove it. We elected to perform a laparotomy. Endoscopic surgery failed significantly and hence laparotomy was performed, as a result, trichbezoar was removed successfully. Girl underwent a laparotomy was performed for the patient, and the trichobezoar (size 8x8 cm), filling the entire stomach, and duodenum was successfully removed. She made uneventful postoperative recovery. The patient was discharged on day 7 after surgery and referred for psychiatric counseling. She was referred for psychiatric consultation. Her intelligence level was normal, diagnoses were stimulant deficiency. **Conclusions:** Trichobezoar should be suspected in the presence of abdominal pain and vomiting in child with a history of trichofagia. Also in children as in our case, who swallowed

foreign object, should be done the psychiatric consultation that may lead to diagnose trichophagia in the early stages.

[SP 142] Title: TRICHOBEZOAR AT END OF GJ TUBE CAUSING SECONDARY INTUSSUSCEPTION

Author: Haitham Dagash

Aim of study: We report on a unique case of a 20 month old girl with a trichobezoar resulting in an obstructed and irremovable Gastro-Jejunal (GJ) tube with a secondary intussusception. **Case description:** This young girl is an ex-36 weeker with a background of dysmorphism, long gap oesophageal atresia (LGOA), and a complex cardiac history of double outlet right ventricle (Fallot type) with an atrio-ventricular septal defect and pulmonary valve stenosis.
She presented with bilious aspirates and leakage around the GJ tube causing skin excoriation. Abdominal x-rays revealed signs of intestinal obstruction. Attempts by the referring surgical team to remove the GJ tube were unsuccessful; the impression being that the tube had become embedded in the small bowel. The patient was therefore transferred to our centre where cardiac services are available. Initial attempts at laparoscopy were challenging with the discovery of a secondary intussusception. At laparotomy the jejuno-ileal intussusception was partially reduced. A jejunotomy was performed with the discovery of a trichobezoar at the end of the GJ tube. The trichobezoar was removed with the GJ tube. A 10cm long dusky segment of small bowel was resected with primary anastomosis. She made an uneventful recovery and was discharged on day 6 postoperatively.Upon further questioning the mother, she admitted that the patient took comfort from sucking her hair after feeds. **Conclusion**: Bezoars are a recognised cause of intestinal obstruction due to their indigestible features. To our knowledge, trichobezoar at the end of GJ tube causing an intussusception has not been previously reported.

[SP 143] Title: AXIAL TORSION OF MECKEL'S DIVERTICULUM: A PLEA FOR RESECTION AND ANASTOMOSIS

Author: Haitham Dagash

Aim of study: Meckel's diverticulum (MD) is the most common congenital anomaly of the gastrointestinal tract and occurs in 2% of the population. MD is usually asymptomatic but recognised complications are bleeding, intestinal obstruction and perforation. We present a rare complication, axial torsion which mimicked acute appendicitis, and subsequent rectal bleeding following incomplete excision. **Case description:** A 9 year-old-boy presented with a 1 day history of abdominal pain and vomiting. On examination, he was haemodynamically stable, euvolaemic with right lower quadrant tenderness. The haemoglobin was within normal limits at 127g/l. Acute appendicitis was suspected and he underwent a laparoscopic appendicectomy. At laparoscopy the appendix was macroscopically normal. A necrotic mass, encased in omentum, was identified, connected via a narrow stalk to the antimesenteric border of ileum about 60 cm from the ileo-caecal valve. The mass was excised with cauterisation of the base of the stalk. The patient was discharged the following day.He returned one week later with rectal bleeding. The repeat haemoglobin had dropped to 105g/l. At repeat laparoscopy the point of bleeding was identified where the stalk had been excised. A resection and anastomosis was carried out. He made an uneventful recovery.Histology of the mass revealed haemorrhagic necrosis and there was no ectopic mucosa in the resected ileal segment.**Conclusion:** Axial torsion is a rare complication of MD. This case illustrates the need for resection and anastomosis of MD. Diverticulectomy alone or tangential excision of the diverticulum have no role in the management of MD, as this case illustrates.

[SP 144] Title: CONGENITAL BILATERAL SPIGELIAN CRYPTORCHIDISM SYNDROME: A DEVELOPING NEW CLINICAL ENTITY

Author: Syed Waqas Ali

There is ongoing debate on nomenclature of Congenital Spigelian Hernia associated with undescended testis (UDT) in infants due to frequent reporting in last two decades despite rarity of the condition. Congenital Spigelian hernia with associated UDT is reported in less than 50 patients in English literature out of whom only 4 were bilateral to best of our knowledge. We present the fifth case to add to existing pool and report our surgical findings to help answer the questions surrounding the nature of association of this exceedingly rare hernia with

UDT. Picture of the patient taken after informed consent from parents. White and yellow arrows showing right and left Spigelian hernias and black arrow shows bilateral empty hemiscrotum.

[SP 145] Title: INITIAL EXPERIENCE IN SUTURELESS NON-OPERATIVE MANAGEMENT OF GASTROSCHISIS
Author: Alexander Siles Hinojosa
Aim of the study: Present our initial experience in the sutureless technique of gastroschisis. **Case description:** Newborn female of 36 weeks of gestational age with prenatal diagnosis of gastroschisis. Prenatally and after the calculation of the Svetliza Reducibility Index (SRI) the patient was selected as a candidate for postponed reduction and closure.In an incubator, under the effects of sedation and mechanical ventilation, exploration is performed, visualizing a defect of 3 cm in diameter, with stomach, small intestine and colon herniated and irreducible. The

"alexis" ringed plastic wound retractor is used as a silo. Complete reduction and extraction of the silo on the third day is achieved by closing it with a self-adhesive hydrocolloid dressing, which allows the edges of the defect to be approximated for healing and closure without requiring surgical suture. The procedure is performed with surveillance with NIRS (near infrared renal spectroscopy).Favorable evolution presenting minimal umbilical hernia, at 8 months of follow-up. **Conclusions:** After our initial experience, the sutureless technique for reduction and closure of gastroschisis, has proven advantages as well as in the current literature, such as the reduction in mechanical ventilation time, beginning of oral intake and the use of analgesia. However, it may increase the risk of umbilical hernia.

[SP 146] Title: GASTRIC VOLVULUS IN A CHILD WITH NOONAN SYNDROME: A CASE REPORT
Author: Luciana Coutinho
Gastric Volvo is a rare condition, especially in children.The stomach usually rotates more than 180 degrees around its axial axis and courses with upper gastrointestinal obstruction. It can be classified as organoaxial, mesenteroaxial or combined.It may also be called primary or secondary, acute or chronic.We report a case of a 2-year-old boy with Noonan syndrome, who started with the symptoms diarrhea, without mucus or blood. In the following days, the patient developed vomiting - more than 30 episodes per day, associated with severe abdominal pain and prostration. Two days later, he presented dehydration and hypoactivity. He was submitted to an abdominal CT due to suspicion of intestinal obstruction, which showed gastric dilatation, pleural effusion and ascites.After clinical treatment, the child has evolved with clinical improvement; restarting oral diet, however, presented again vomiting, abdominal distension and pain.After that, he was admitted in our hospital, with a suspicion of intestinal obstruction. He was submitted to a contrasted radiography and the image was strongly suggestive of gastric volvulus.Therefore, an exploratory laparotomy was submitted and we found enlarged stomach with organoaxial gastric volvulus, without signs of necrosis or ischemia, without perforation. We performed the gastropexy and a decompressive gastrostomyThe child evolved satisfactorily, the gastrostomy was maintained for 1 month and after this period, when the tube was removed, the gastrostoma closed.We have conducted a research in the literature and this is the first case relating gastric volvulus associated with Noonan syndrome.This syndrome is very common and the children may present severe cardiac malformations, typical facies, winged neck, pectus carinatum, short stature, pulmonary stenosis, hypertrophic cardiomyopathy, dermatological, ophthalmic and renal changes, lymphatic dysplasia, coagulation factors and cryptorchidism deficiency.

[SP 147] Title: A VERY UNUSUAL PRESENTATION OF CHOLEDOCHAL CYST IN AN INFANT AND LITERATURE REVIEW
Author: Syed Waqas Ali
Aim of the study: To report a highly atypical presentation and successful management of choledochal cyst in an infant. **Case description:** A 3 month old male presented in ER with fits, icterus and left oculomotor palsy. On evaluation by CT, he was found to have large left cerebral and subdural hematoma and an abdominal mass. Cerebral hematoma was managed conservatively. The abdominal mass was diagnosed as huge choledochal cyst for

which laparotomy and hepaticojejunostomy was done. His recovery was uneventful without any neurological sequel. **Conclusion:** This is the third case of choledochal cyst presenting as cerebral hemorrhage to the best of our knowledge. The literature shows two more cases of choledochal cyst with similar presentation both of whom required cranial drainage. This highlights the magnitude of bleeding tendency associated with biliary obstruction that needs to be taken in consideration while managing these patients.

[SP 148] Title: SUPERIOR MESENTERIC ARTERY SYNDROME, A DIAGNOSIS CHALLENGE AND A CASE REPORT
Author: Ubaidullah khan, Kitar.M , Khlifi M, Al Oteibi.R, Ksiaamine, Krichen.I, Maazoun K
Institution: Al Hada Armed forces hospital, Taif ,Saudi Arabia
Background : The superior mesenteric artery syndrome (SMAS), first described by Rokitanskini in 1861, is an uncommon cause of high intestinal obstruction. Unfortunately it is a condition that many clinicians are unfamiliar with. The superior mesenteric artery (SMA) normally forms an angle of approximately 450 with the abdominal aorta, with third part of duodenum passing through this angle. In SMAS, the Patients have a narrow aorto-mesenteric angle in the range of 6° to 11° (mean =8°) leading to high intestinal obstruction. Usual presentation of SMAS is the epigastric pain, bilious vomiting and weight loss. Which misdiagnosed as a functional disorder till reached final diagnosis so this case report will help clinicians identify rare and unusual pathology at the earliest to avoid misdiagnosis and management.**Presentation of case :**A 13 year 3 months old boy presented to our department with abdominal pain and persistent vomiting from last two weeks. During first week of illness he visited other hospitals for same complaint but given medical care and discharge home after initial investigation which was normal. Second week again visit to hospital and their given supportive care same time referred to our department. After all workup and excluded other possibility diagnosed as SMA, which give us idea how down the list is SMAS. During course of 2 weeks failed to respond to non operative management with nutritional supplementation remains the first line of therapy and huge amount of bile on daily basis. Duodenojejunostomy was done after failed medical treatment. The child gain significant weight and symptoms free in follow up.
Discussion: SMA syndrome is a rare vascular cause of proximal intestinal obstruction. This is caused by narrow angle between SMA and aorta compressing third part of duodenum. Acute weight loss is most commonly implicated in aetiology. Our case presented with weight lost, vomiting and pain abdomen. Through initial workup even endoscopy couldn't reach final diagnosis, after excluding many possibilities reach to label as SMAS. After non surgical treatment by decompression of stomach, TPN and supportive care bypass surgery done. Surgical option is last option and mostly non surgical option is treatment of choice but in few cases need to bypass where no improvement as in our case. The child does respond to bypass and quit significant improving in follow up.
Conclusion: Lesson learn from this case is, should be SMAS put down the list in differential diagnosis and when to decide enough is enough for non surgical management .**Keywords** Superior Mesenteric artery, Aorto-mesenteric angle, Duodenojejunal anastomosis.

General Surgery Posters Day 2 Group 5
Moderator: Anne Marie O'Donnell

[SP 149] Title: BENIGN CYSTIC MESOTHELIOMA IN A CHILD: A CASE REPORT AND LITERATURE REVIEW
Author: Al-Taher R., Batayneh Z., Al-Momani H. , Shatarah O. , Al-Khalili S.
Benign cystic mesothelioma (BCM) is an uncommon tumor with benign characteristics and a high local recurrence rate. It was first described in 1979, since then, a total number of 141 case reports have been published, and 9 of them were children. BCM occurs mainly intra-abdominally in females of childbearing age. Its diagnosis is usually difficult and is based on histological findings. Regarding the treatment; there is no evidence-based treatment strategy, although surgery has shown effective results. In this article, a 6-year-old girl with BCM originating from the retropertoium is presented, with a brief review of the literature.

[SP 150] Title: PEDIATRIC THYROGLOSSAL DUCT CYSTS: A 9-YEAR SINGLE CENTRE EXPERIENCE

Author: Gahitha Al Mahruqi, Dhruv Ghosh, Zainab Al Balushi, .F Arman Ali

Objective: A thyroglossal duct cyst (TDC) is a frequent congenital midline anomaly of the neck that usually manifests during the first decade of life. In this study we looked at the role of ultrasound vis a vis clinical examination in diagnosing TDC along with the presentation, management, and outcome of TDC in pediatric population at one of the tertiary hospitals in Oman between 2009 and 2018 .**Methods**:We reviewed all the cases with midline neck swellings that were seen at our hospital between 1st January 2009 and 31st December 2018. Data regarding demographics, presentation, investigations, management and complications were collected from the hospital records.**Results**:Ninety-seven patients presented with midline cystic lesions during this period and were suspected to be TDC. Seventy-six of these were TDC (histologically proven). A correct solely clinical diagnosis was made in 69% (n=67) patients. Ultrasound was done for 24% (n=23) cases and were reported to be TDC, however only 43% (n= 10) were histologically proven to be TGC.Sistrunk's operation with meticulous ligation of all suspected tracts was the procedure of choice and we have had no recurrences over this period. We have however had two complications**Conclusion** :A clinical diagnosis of a Thyroglossal duct cyst can be made reliably and consistently. Ultrasonography of the neck is a useful adjunct to be used and interpreted judiciously as it can be misleading.

[SP 151] Title: SURGICAL TREATMENT OF CHILDREN WITH MORBID OBESITY

Author: Khatsiev B. B., Minaev S. V., Grigorova A.N., Baycherov E.H.

Institution: Stavropol State Medical University, Stavropol, Russia

Aim of the Study. Our study aims to compare applicability and efficiency of the standardised enhanced recovery methods depending on patients' body mass index (BMI).**Methods**. From 2014 to 2018, 12 patients with morbid obesity were treated. Girls - 9 (75%), boys - 3 (25%). Age 13 ± 1.2 years. A type of restrictive bariatric surgery was performed on all children - laparoscopic longitudinal gastrectomy (SLEEVE), where longitudinal gastrectomy is performed. Conservative treatment: treatment in the clinic of nutrition, psychotherapy, meridia, psychological coding, diet.We used Clavien-Dindo classification of surgical complications to evaluate not only complication rates, but complication severity as well. According to this classification any deviation from the routine postoperative treatment (or standardised protocol in our case) is considered a surgical complication.**Main results.** The body mass index (BMI) is 43.1 ± 2.73 kg / m². Body weight - 114 ± 13.3 kg. Body length - 163 ± 2.3 cm. Associated disorders: arterial hypertension - 50%, irregular menstruation - 50%. Complications in the early and late postoperative period - not noted. The average reduction in BMI after 1 year was 14.4 kg / m².**Conclusions:** The question of the surgical treatment of children with morbid obesity should be resolved after conducting a comprehensive conservative treatment unit in conjunction with a pediatric endocrinologist and a bariatric surgeon. The operation of choice in the treatment of children with morbid obesity is SLEEV.

[SP 152] Title: DIGESTIVE TRACT VOLVULUS IN CHILD

Author: SALSABIL MOHAMED SABOUNJI

Aim of the Study : To report cases of digestive tract volvulus in children**Methods :** We conducted a descriptive and retrospective study based on 25 children who have been treated for a volvulus over a 9-year period. We have studied the epidemiological, diagnostic, therapeutical and evolutive aspects of these patients.**Main Results :** The mean age was 3.8 years [4 days-11years]. The sex-ratio was 1.7. All patients had previously been examined at least once at another medical facility and had an erroneous diagnosis in 92% of cases. The length of time to first referral ranged form 1 day to 10 years, with a mean of 16.7 months. We recorded 15 chronic forms and 10 acute forms. Vomiting was the first functional sign identified (n=19/25). Physical examination revealed an abdominal distension in 12 cases and abdominal pain in 6 cases. Imaging techniques have allowed preoperative diagnosis in 15 cases. A laparotomy was performed on all patients. The small bowel location was most common (17cases). Detorsion and gastropexy were performed in 7 cases of gastric volvulus. Ladd's procedure was performed in 17 cases of small bowel volvulus. In one case of sigmoid volvulus with necrosis, bowel resection and colostomy were done. After an average follow-up of 7.7 month, evolution was positive in 24 cases. One patient of all presented a post-operative peritonitis who recovered well.**Conclusions :** Chronic forms of digestive tract volvulus are the most prevalent. The common location is the small intestine. Despite of late diagnosis, evolution was always favorable.

[SP 153] Title: NEONATAL TESTICULAR TORSION: IS IT TIME FOR CONSENSUS ?

Author: Dorsaf Makhlouf

Aim the study:Perinatal testicular torsion is a rare condtion and its management remains controversial varying from expectant strategy to immediate emergency surgery. The aim of this study is to review the management of perinatal testicular torsion in our institution.**Methods**:We retrospectively studied the charts of 18 neonates operated in a 28-year period. **Main results**:Twelve newborns had an antenatal torsion. The main symptoms were pain and scrotal swelling in all cases. A controlateral hydrocele was found in 8 cases. One of our patients had a torsion in an ectopic testis. Doppler ultrasonography was permormed in 15 cases and showed no blood flow in 13 cases. The non-surgical treatment was chosen for one patient. An emergency surgery was perdormed in 3 cases and a semi-emergency surgery within 24 hours was performed for the remaining 14 cases. The torsion was extravaginal in 17 cases. The surgery consisted in an ipsilateral orchidectomy in 17 cases and controlateral orchidopexy in 12 cases. The patient who did not underwent orchidectomy was reoperated and had orchidectomy later within the age of 8 months for testiuar atrophy. The post-operative course was uneventful for the other patients with a minimum of 18 months of follow-up.**Conclusion**:The most frequent management of perinatal testicular torsion is a surgery within 24 hours for most cases with an orchidectomy if the testicule is destroyed and a controlateral orchidopexy in most cases. There seems to be no real advantage to early intervention because the torsion lead to necrosis in all cases so the intervention could be done anytime later. Given its extreme rarity, controlateral orchidopexy could be deferred until the risks on anesthesia and surgery are improved.

[SP 154] Title: SUCCESSFUL MANAGEMENT OF LEAKY LYMPHATICS - IDIOPATHIC CHYLOTHORAX AND CHYLOASCITIES Author: Yuri Kucherov

Aim of the study To present our current experience in managing idiopathic chylothorax and chylous ascites, which are relatively rare entities yet with no established therapeutic guidelines.**Material and methods** The patient data of a series of 6 infants including neonates treated in our tertiary hospital for idiopathic chylothorax or chylous ascites was prospectively recorded over the last two years and then retrospectively reviewed.**Results** There were 4 cases of chylothorax and 2 of chylous ascites. The patient age at presentation ranged from 2 weeks to 4 months. The first-line conservative therapy including drainage of the chylous fluid, total parenteral nutrition, Octreotide continuous intravenous infusion with a maximum dose of 12 mcg/kg/hour was successful in 2 cases of chylothorax and in 1 of chylous ascites. The considerable decrease of the drained chylous volumes was reached within 10-14 days in these cases. The decision for operative treatment was made at the earlier stage within 5-7days when a large loss of chylous fluid > 50 ml/kg/day continued regardless of the conservative measures. The surgical procedures involved thoracoscopic thoracic duct ligation for chylothorax in 2 cases and open via laparotomy ligation of lymphatics located between the IVC and Aorta followed by a topical Per Clot hemostat application in 1 case. All procedures performed were successful in resolution of the chylous fluid leakages. No peri-operative morbidity or mortality occurred. **Conclusions** Overall the conservative and operative management of the leaky lymphatics conditions was very efficacious in all patients**.** Early surgical intervention appears to be strategically proper to achieve the best patient outcome.

[SP 155] Title: SPATIAL MAPPING OF CASES OF TYPHOID INTESTINAL PERFORATION IN CHILDREN IN KANO NIGERIA, USING GIS TECHNIQUES.

Author: Lofty-John C. Anyanwu, Abdulkadir Sani, Salisu Mohammed, Julius A. Falola, Aminu M. Mohammad, Lawal B. Abdullahi, Stephen K. Obaro.

Background:Although poorly understood, intestinal perforation is a dreadful complication of typhoid fever- a disease transmitted by the faeco-oral route, and commonly reported in developing countries. This study aims to determine the spatial variation of cases of typhoid intestinal perforation in children presenting to our hospital. **Methods**:Data used in this study were from a retrospective chart review of children managed for typhoid intestinal perforation in our hospital between October 2015 and September 2018. Only cases from the hospital's state of domicile were included in the analysis. Secondary data used in the study included topographical maps and land use data. With the use of the ArcGIS software, geocoding techniques were employed to match reported cases with

addresses. Analysis of geospatial data was done using the QGIS software.**Results**:There were 69 cases of typhoid intestinal perforation in children aged 13 years and less included in the study. Cases were seen from every region of the metropolis, with clustering of cases in high density residential areas close to major fruit and vegetable markets. **Conclusion**:Clustering of cases around vegetable markets may suggest a common food contaminant in the region. We recommend periodic analysis of samples of fruits and vegetables from major markets in the metropolis, in order to detect possible outbreaks of typhoid fever.**Keywords**: Typhoid fever; Spatial variation; Geocoding techniques; Clustering; Land use; Vegetable markets.

[SP 156] Title: THE ANALGESIC EFFECT OF THE INTRAVENOUS ADMINISTRATION OF ACETOAMINOPHEN FOR PEDIATRIC ACUTE APPENDECITIS â€“ COMPARISON OF SCHEDULED ADMINISTRATION WITH ON-DEMAND ADMINISTRATION

Author: Taichiro Nagai, Toshio Harumatsu, Keisuke Yano, Shun Onishi, Koji Yamada, Makoto Matsukubo, Mitsuru Muto, Tatsuru Kaji, Satoshi Ieiri
Institution: Kagoshima University Hospital

Aim of the Study: Acetaminophen is used as a postoperative analgesic agent for patients of all ages. In our country, the intravenous administration of acetaminophen has become a standard postoperative analgesic method for pediatric surgery in over the past few years. We evaluate the analgesic efficacy and safety of scheduled administration versus on-demand administration of intravenous acetaminophen for acute appendicitis. **Methods**: Sixty-nine patients who underwent laparoscopic appendectomy in our institution between January 2017 and June 2019 were enrolled. The patients were divided into 2 groups, based on the postoperative pain control protocols. The scheduled administration group (SA group, n=18) was controlled by the scheduled administration of intravenous acetaminophen and additional on-demand use of pentazocine as rescue therapy. The on-demand administration group (ODA group, n=51) was controlled by the on-demand administration of acetaminophen as the first choice, and pentazocine as the second choice for pain control. The patients' characteristics, operative data and postoperative outcomes were reviewed. **Main results**: There was no significant difference regarding the characteristics of the patients in the 2 groups as shown in Table 1. In each group pentazocine was used for on-demand rescue therapy, and there was no significant difference in the number of pentazocine doses per day on postoperative days 1 and 2. In the SA group, the number of patients who suffered pain on postoperative day 1 was significantly lower than that in the ODA group (0.83±1.4 vs. 2.6±1.9, p<0.001); however, there was no significant difference regarding the number of patients who suffered pain on postoperative day 2 (0.56±0.98 vs. 1.3±1.7, p=0.1). Serum liver enzyme levels were temporarily elevated, but were less than twice the normal value on postoperative day 3. **Conclusions**: The scheduled administration of intravenous acetaminophen may have favorable effect without side effects as postoperative pain control after emergency surgery for acute appendicitis in pediatric patients.

Table1

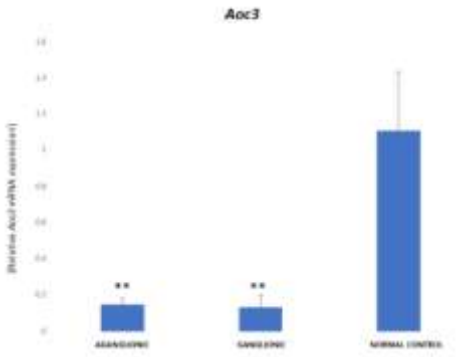
	SA group	ODA group	*p*-value
Patients' Characteristics			
Age (year)	8.5 ± 2.4	9.24 ± 2.8	0.32
Body Weight (kg)	29.62 ± 10.7	30.88 ± 12.3	0.7
WBC (×1000/μL)	14.9 ± 4.8	16.18 ± 5.7	0.4
CRP (mg/dl)	7.65 ± 8.3	5.2 ± 6.3	0.2
AST (U/L)	29.06 ± 22.1	23.37 ± 9.8	0.14
ALT (U/L)	14.39 ± 10.7	15.76 ± 25.2	0.82

Operative Time (min)	110.61 ± 43.1	94.41 ± 42.4	0.17
Number of pentazocine doses per day			
POD1	0.83 ± 1.4	0.86 ± 1.1	0.93
POD2	0.56 ± 0.98	0.39 ± 0.85	0.5
Number of patients suffering pain per day			
POD1	0.83 ± 1.4	2.6 ± 1.9	< 0.001
POD2	0.56 ± 0.98	1.3 ± 1.7	0.106
Serum liver enzymes on POD3			
AST (U/L)	29.35 ± 13.3	22.9 ± 12.6	0.078
ALT (U/L)	15.05 ± 7.8	15.2 ± 22.6	0.98

[SP 157] Title: DOWNREGULATION OF THE AOC3 GENE IN HIRSCHSPRUNGâ€™S DISEASE

Author: Anne Marie Odonnell

Aim of the Study: Amine oxidase copper-containing 3 (Aoc3) is expressed on the plasma membrane of all types of smooth muscle cells. The Aoc3 gene, encoding the Aoc3 protein, has been reported to be the most abundantly expressed cation channel in colonic smooth muscle cells in mice, thus suggesting a vital role in smooth muscle contraction and relaxation. To date, no data exists regarding Aoc3 expression in the human colon. We designed this study to investigate Aoc3 expression in the normal human colon and in Hirschsprung's disease (HSCR).
Methods: HSCR tissue specimens (n=6) were collected at the time of pull-through surgery, while control samples were obtained at the time of colostomy closure in patients with imperforate anus (n=6). qRT-PCR analysis was undertaken to quantify Aoc3 gene expression, and immunolabelling of the Aoc3 protein was visualized using confocal microscopy.**Main Results**: qRT-PCR analysis revealed significant downregulation of the Aoc3 gene in both aganglionic and ganglionic HSCR specimens compared to controls ($p<0.05$) (Figure). Confocal microscopy revealed Aoc3 protein expression within the smooth muscle layers, with a reduction in Aoc3 expression in both aganglionic and ganglionic HSCR colon compared to controls.**Conclusion**: Aoc3 gene expression is significantly downregulated in HSCR colon, suggesting a role for this gene in smooth muscle contraction and relaxation of the colon. Aoc3 downregulation within ganglionic specimens may partly explain the bowel motility issues which persist in some HSCR patients following a properly performed pull-through operation.

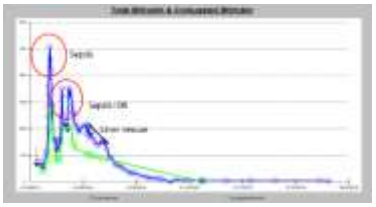


General Surgery Poster Day 2 Group 6
Moderator: Udo Rolle

[SP 158] Title: AGGRESSIVE LIVER RESCUE REGIME IN THE PRETERM BABY WITH SEVERE SHORT BOWEL SYNDROME

Author: Collette Donnelly

Aim of Study: The number of patients with Short Bowel Syndrome (SBS) secondary to necrotizing enterocolitis (NEC) is expected to increase as more extremely premature infants are resuscitated and survive the initial weeks after birth. Due to their immaturity, presence of central lines, PN and prolonged hospitalization these babies are at high risk of developing progressive liver damage.**Case Description:** Baby girl born 25+4 weeks gestation (twin 2), twin brother surviving and well. Birth weight 1.8kg. She was transferred to the surgical NICU having had multiple episodes of sepsis and then developed NEC. She had laparotomy and bowel resection with residual bowel length 33cms including IC, with Jejunostomy formation in another facility. Multiple central line sepsis, episodes of translocation of enteric bacteria, increasing transaminases and bilirubin and this baby was at high risk of developing progressive fibrosis of the liverJejunostomy closed 5 months after initial surgery. Enteral feeds started 6 days post closure with breast milk. Required a liver rescue regime on more than 1 occasion. Spent 1 year in the neonatal unit. Discharged on 5 nights home PN at 1 year old. Attended monthly SBS clinic with PN reduction plan. Home PN stopped after 5 months. First follow up one month after PN stopped there was weight loss but acceptable (wt/l z score -1.37, on the 9th centile). Monitored at 3 months after PN stopped (wt/l z score -0.58 on the 28th centile) growing nicelyBloods (transaminases, bilirubin) are normal. Compared with her twin brother she is developing similarly from a neuro-cognitive perspective. **Conclusions**Liver improvement should take precedence over optimal growth as optimal growth will recover once the liver function is normalized.



[SP 159] Title: FIBROGAMMIN P AS AN EFFICACIOUS TOOL FOR COMPLICATED FISTULA
Author: HIDEAKI SATO
Complicated fistula (CF) due to infection or inflammation remains a challenge for surgeons. The conservative therapy prolonged hospital stay and the effectiveness of surgical therapy remains unclear because of the risk of recurrence. Fibrogammin PoR, Lyophilised human blood coagulation factor XIII, has the insights to the treatment of CF because of the role as the fibroblast growth factor. This paper aims explore the effectiveness of this therapy against CF.**Material and methods**The chart review was performed against suffering CF managed with Fibrogammin PoR from 2013 to 2018 in our institute.
Results: Three patients identified. Case 1 was a 6-month-old boy suffered pulmonary oesophagus fistula due to the postoperative leakage of the oesophagus atresia. Five month conservative therapy showed no remarkable improvement. Five days administration of fibrogammin PoR resulted in closure of CF. Case 2 was a 1-year old boy with a tracheoesophageal fistula due to accidental ingestion of a button battery. One week conservative therapy did not show any remarkable improvement. 3 days administration of Fibrogammin PoR revealed closure of CF. Case 3 was a 9 year old girl with an intraperitoneal fistula due to a perforated appendicitis. The drainage therapy with antibiotics was provided for a month with no any remarkable improvement. Five days administration of Fibrogammin PoR achieved completely closure of CF. **Conclusion** Fibrogammin PoR is an efficacious tool for CF due to various conditions such as inflammation or infection for each age.

[SP 160] Title: ACUTE APPENDICITIS IN 9 MONTH OLD CHILD IS A CHALLENGING TASK: CASE REPORT
Author: Muhammad javed khan, Jehangir khan, Muhammaduziar,Gouharrehman.
Objective: Acute appendicitis in infants is very rare. Its early diagnosis is more difficult and challenging in infants. Late diagnosis and surgery in infants leads to greater complication.**Introduction**: Acute abdominal pain is a common cause for surgical consultation, however, a third of children presenting with acute abdominal pain diagnosed as appendicitis. The diagnosis of acute appendicitis is difficult task, with a considerable proportion of diagnostic errors based on the clinical and laboratory data, this is due to the fact that appendicitis may present under several forms (simple, complicated, mass, and abscess). The incidence below 2 years is 2% and in literature 141 cases reported (1901-2000).**Methodology**: Herein, we present a rare case of acute perforated appendicitis in 11 months male child. He presented to emergency (ER) with pain abdomen, vomiting, fever and irritability.

On examination he was febrile, dehydrated, distended abdomen with tenderness and irritable. After resuscitation and investigation, proceed for surgery. Operative findings were perforated acute appendicitis with peritoneal contamination. Appendectomy performed with peritoneal wash. **Results**: He was managed post-operatively with intravenous fluids, antibiotics, analgesia and wound care. He was discharged on 5th post-operative day.
On follow up he developed wound infection and incisional hernia. **Conclusion**: In infants acute appendicitis diagnosis is very challangng.Timely diagnosis and early surgery in this age group is very important otherwise leads to greater morbidity and mortality.**Keywords**: Acute appendicitis, operative finding

[SP 161] Title: EVALUATION OF CAPACITY OF OUR CENTER OF PAEDIATRIC SURGERY (AUGUST 2016 TO JULY 2017)

Author: Wala Rahma

Aim :The aim of this study is to provide base line data at our center that facilitate rational policy making, health promotion, service improvement and training. **Methods**:A cross sectional survey was done with retrospective collection of data from All admitted inpatient records from August 2016 to July 2017 and analysis done by using SPSS version 22 .**Main results** :A total number of(1893) files were found73 file excluded due to messing information's. Females were 26.3 % (497) and males were 73.4%(1390).There were 4 age groups neonate were 10%(193),from 1 year up to five year 29%(547)and from five years to 18 years 47.2 (894). The common diagnostic category was congenital anomaly 37.7%(685) trauma and burn was 8%(160).The common diagnosis is appendicitis 19% (345) followed by inguinal hernia and Hydrocele 11%(125).the common diagnosis according to age group was Hirschsprung Disease and Anorectal malformations28.3% (53)fallowed by atresia16% (30)in the neonate group. In the last group acute appendicitis was 32%(279)fallowed by Undescended Testes, inguinal hernia and Hydrocele7.7%(67) which is also bigger than the percentage in the other groups .the common operation performed was Appendicectomy.The highest mortality rate was in the neonate group10%(21).**Conclusions**: Community level :There is problem of the very late presentation of Undescended Testes and detection of congenital anomaly need community based intervention.primary health service and rural hospital:there high rate of complicated appendicitis and acute abdomen condition. Center:Reducing neonatal mortality should be taken priority and establishment of specialized gastrointestinal center because it's the most common diagnostic category. Researches needed: There is patient not receiving the definitive surgical treatment after admission specially at the oncology conditions and congenital abdominal wall defect .

[SP 162] Title: CHILDHOOD SPLENECTOMIES: A SINGLE-CENTRE EXPERIENCE

Author: Gerard Si Bong

Aim of the study:Childhood splenectomy is performed for a variety of conditions, such as haematological disease and splenic cysts. The aim of this study is to identify the indications, benefits and complications for splenectomy in our hospital.**Methods**: Retrospective review of clinical and electronic notes was performed on patients who underwent splenectomy from March 2010 to May 2019 for gender, age at operation, indications, operative technique, complications, length of stay, vaccinations, antibiotic prophylaxis and transfusion requirements.**Main results**: 24 patients were identified. Follow-up time was 45.75 ± 33.81 months. 15 patients (62.5%) were female. Mean age at operation was 12.54 ± 5.20 years old. 19 patients underwent total splenectomy for haemoglobin E-beta thalassemia (8), hereditary spherocytosis (6), beta-thalassemia major (3) and non-Hodgkin lymphoma (1). 17 patients (89.47%) underwent laparoscopic resection. Four patients required conversion to open resection (23.53%). Seven patients (36.84%) underwent concurrent cholecystectomy for cholelithiasis. Persistent thrombocytosis (at least 10 days post-operatively) was observed in 18 patients (94.74%). One patient (5%) suffered from haematoperitoneum post-operatively.Five patients underwent partial splenectomy for splenic cyst (4) and inflammatory myofibroblastic tumour (1). All patients underwent laparoscopic resection. Persistent thrombocytosis was not observed. Two patients (40%) suffered from perisplenic collection and pleural effusion post-operatively.19 patients (79.17%) were vaccinated, and 19 patients (79.17%) took at least 1 year of antibiotic prophylaxis with Penicillin V. Overwhelming sepsis and complications from persistent thrombocytosis were not seen.11 patients with haemoglobin E-beta thalassemia or beta-thalassemia major who required regular transfusions pre-operatively had

a statistically significant mean percentage reduction in transfusion requirements of 27.75%. **Conclusion:** Childhood splenectomy is a safe procedure and is effective at reducing transfusion requirements for patients suffering from haematological diseases such as beta-thalassemia. Longer length of stay and higher rates of basal atelectasis were observed in patients who underwent partial splenectomy.

[SP 163] Title: THE MICROBIOLOGICAL ETIOLOGICAL SPECTRUM OF ACUTE COMPLICATED AND UNCOMPLICATED APPENDICITIS: PRELIMINARY RESULTS.

Author: Mohits Kakars Renars Broks, Marisa M. Butnere , Aigars Reinis, Juta Kroica, Arnis Engelis, Mathilde Delo

Aim of study:The appendix is hypothesized as a beneficial bacterial reservoir; however, its microbial role only recently is being discussed as the etiology of appendicitis. Current evidence directs to bacterial infections being the primary cause of appendicitis, although previously luminal obstructions were highly considered. The purpose of this study is to determine the most common microorganism which causes pediatric acute complicated (AcA) and uncomplicated appendicitis (AnA) and therefore, determine the ideal treatment therapy. **Methods**: Luminal cultures from the proximal and distal ends were collected from 79 operated appendiceal specimens. Peritoneal cavity cultures of these operated patients were also examined. **Main results**: Escherichia coli was overall the most prominent pathogen in both AnA and AcA, followed by Pseudomonas aeruginosa. Other isolates that were recorded included Klebsiella pneumoniae and Citrobacter braakii. Patients with gangrenous appendicitis all had additional growths with P.aeruginosa, K.pneumoniae or Citrobacter freundi. The peritoneal culture results showed statistical significance between the two groups, 97,46% of the cases in AcA and 2,53% in AnA ($p<0,001$). Yersinia enterocolitica was negative in all cases.**Conclusion**: Further research is needed to determine whether these organisms directly cause appendicitis or rather proliferate as secondary consequence of appendiceal inflammation. There is no conclusive evidence that differentiates the microbiota from each appendiceal anatomical location. AcA seems to have a positive relation to peritoneal microbiota as well as to specific pathogens. rme, Lasma Asare. Amulya K. Saxena, Aigars Petersons

[SP 164] Title: MICROBIOLOGICAL PERITONEAL FLUID ANALYSIS IN PEDIATRIC PATIENTS WITH SURGICALLY TREATED APPENDICITIS.

Author: Mohits Kakars[1],Jana Protasa[1], Zane Abola, Astra Zviedre, Paulis Laizans, Marisa M. Butnere, Arnis Engelis, Aigars Petersons

Aim of the study: To evaluate microbiological findings of peritoneal fluid in patients with surgically treated appendicitis. To assess the clinical significance of the sensitivity of microorganisms to antimicrobial therapy and its impact on the length of hospitalization.**Methods:**Retrospective clinical and laboratory data of 466 patients who underwent appendectomy from 2017 - 2018 in Riga's Children`s Clinical University hospital (CCUH) were obtained from the "Andromeda" software. SPSS 22.0 software was used for statistical analyses.**Results:**Total of 466 appendectomies were performed including 332 laparoscopies (71.2%). 16 patients (3,4%) underwent appendectomy due to other pathologies than appendicitis and were excluded from this study. In 316 (70.2%) cases, peritoneal fluid was collected during the operation and microbiologically tested. In 140 (31.1%) of these cases, no pathogen was found. Pathogens which were identified in these cultures include E.coli (122), different Bacteroides, especially B. fragillis (76), Streptococcus constellatus (53), Streptococcus anginosus (29) and Pseudomonas aeruginosa (24).In 95 (21.1%) patients, antibacterial resistance was found and most frequently to Ampicillin (61), followed by Amoxicillin/clavulanic acid (25) and Tetracycline (11). Ampicillin resistant E.coli was found in 49 (10,8%) patients. The average length of hospitalization was 5,8 days. In our study 14 (3,1%) patients received antibacterial therapy to which pathogen was not sensitive, nevertheless it did not result in any statistically significant longer hospitalization. The length of hospitalization was associated with factors such as type of peritonitis (local, diffuse or none), type of operation, and whether complications occurred.**Conslusions:**In more than half (55,7%) of the peritoneal fluid samples bacteria were found (E.coli, Bacteroides and Streptococci). Hospitalization did not depend on the microbiological findings of the peritoneal fluid culture. 40 % of E.coli identified in this study were resistant to Ampicillin.

[SP 165] Title: PRIMARY PROCEDURE FOR RECTOVESTIBULAR FISTULA IN FEMALE CHILDLREN AN EARLY EXPEIRENCE AT KYBER TEACHING HOSPITAL PESHAWAR

Author: Muhammad Uzair. Muhammad Javed Khan, Tariq Waheed, Muhammad Imran, Farooq Abdullah

Background: Rectovestibular fistula is the most common variant of Anorectal malformation in female children. Traditional management of this entity is a three stages procedure i.e. colostomy, PSARP, and colostomy closure. The aim of this study was to manage these patients by a primary definitive surgical procedure without colostomy and to know the procedure feasibility, cost effectiveness, complications , safety and short term functional outcome. **Results**: A total of 40 female children fulfilling inclusion criteria of the study were studied. Age range was 28 days to 8 months. No mortality noted during study period. Mean operative time was50±15minutes. Mean Hospital stay in days were 6.65.Procedure related complications were recorded as wound infection 5(12.5%), wound dehiscence1(2.5%),posterior vaginal wall injury 5(12.5%).Overall parental satisfaction regarding procedure was 92.5%. **Conclusion**: Primary single stage procedure either by PSARP or ASARP is for the correction of Rectovestibular fistula in female children of ARM having less traumatic to children, acceptable to their parents, having cost effectiveness for poor socioeconomic parents and encouraging functional outcome.

[SP 166] Title: PERIANAL VERRUCA VULGARIS IN A CHILD: TREATMENT WITH YAG LASER

Author: Merve Altin Gulburun, Hayrunnisa Oral, Sibel Eryilmaz, Ramazan Karabulut, Zaafer Turkyilmaz, Kaan Sonmez

Institution: Gazi University, Turkey

Aim of study: Verruca vulgaris is common benign disease. The lesions are typical and usually located on fingers, hands, elbows and feet. Anogenital verrucas are rare locations. **Case description**: A 2,5-year-old boy was admitted to our pediatric surgery outpatient clinic. His parents noticed some warts at his perineum. Parents declaimed that mother had wart at her finger and it was transmitted to child while diaper changing. The dermatologist was not recommend chemical therapy because of lesions which were too large. The patient was consulted to pediatric surgery for surgical approach and to pediatrics to be sure that there was no abuse. Under general anesthesia with all protective measures, the lesion was treated with holmium: yttrium-aluminum-garnet (HO-YAG) laser with preservation of safe surgical margin. The laser energy and frequency were 0.6-1.0 J and 5-10 Hz, respectively. No recurrences had been noted in the observed on follow-up period. Only complication was irregular hypopigmentations..**Conclusion**: YAG laser usage effective and alternative to other treatment methods. This method applied on a 2,5-year-old child for the first time

[SP 167] Title: PROFILE OF LAPAROSCOPY PEDIATRIC SURGERY AT A CENTRAL HOSPITAL IN INDONESIA AS A LOW-MIDDLE INCOME COUNTRY

Author: Ibnu Sina Ibrohim

Background: Laparoscopic surgery was first introduced in the 1980s and is the preferred approach to a number of surgical procedures in High Income Country. There are growing numbers of global surgery initiatives that have acknowledged surgical need and volume will continue to rise in Low Middle Income Country. Nevertheless, laparoscopic procedures are performed in a number of surgical specialties in Low Middle Income Country especially in pediatrics surgery division.**Aim:**To Describe the profile of laparoscopy pediatric surgery that routinely performed at a Central Hospital in Indonesia**.Method:** We Retrospectively ascertained all the laparoscopy pediatric surgery that have been performed between April 2015 – September 2019.**Result:**Our data showed that there were 7 kind of cases had been mostly performed. Laparoscopic appendectomy 41%, Laparoscopy assisted Transanal Endorectal Pulltrough 16%, Laparoscopy Hernia Repair 13%, Laparoscopy assisted orchidopexy 11%, Laparoscopy for Diagnostic 11%, Laparoscopy assisted Anoplasty 5%, Laparoscopy Cholecystectomy 3%. **Conclusion:** The obstacles factor for minimally invasive surgery being commonly used are intrinsically health care system related, others financially driven such as inadequately trained personnel and lack of equipment.

[SP 168] Title: INFLAMMATORY FALCIFORM LIGAMENT MASS POST GALLSTONE PANCREATITIS IN A 10YO FEMALE

Author: Snigdha Mettu Reddy

Aim of the study: Cholelithasis is an increasingly common paediatric condition requiring surgical intervention. We describe here a case that shows a rare complication with a falciform inflammatory mass following gallstone pancreatitis, not previously reported within the paediatric population. **Case description :**A 10yr old girl, who initially presented aged 9 with a one-month history of intermittent abdominal pain, not clearly associated with food and mildly deranged liver function. There was a maternal history of a cholecystectomy aged 19 for cholelithasis. An outpatient ultrasound subsequently confirmed small gallstones and a 2mm common bile duct. Prior to her planned operative date for a semiurgent laparoscopic cholecystectomy she represented with worsening right upper quadrant abdominal pain, radiating posteriorly, with a raised lipase of 553U/L. Gallstone pancreatitis was diagnosed and her laparoscopic cholecystectomy expedited. Ultrasound abdomen reconfirmed cholelithiasis, with a nondilated common bile duct and no other pathologies.Intraoperatively, an inflammatory mass at the falciform ligament was noted on laparoscopy (Image1), initially obscured by omental wrapping. The inflammatory mass was partially resected laparoscopically to the level of the liver. Within the mass there was necrotic tissue with haemoserous fluid, which was evacuated. A standard laparoscopic cholecystectomy was then carried out. The patient made an uneventful recovery and was discharged day two postoperatively. Histologically the falciform mass showed necrotic fibroadipose tissue with no evidence of malignancy, felt to be consistent with fat necrosis related to pancreatitis. A postoperative ultrasound demonstrated increased echogenicity along the region of the falciform ligament likely representing a postsurgical appearance, with clinically no further episodes of pain to date. **Conclusions:** This case presents a very rare but important complication of gallstone pancreatitis, for the first time in a paediatric patient, and its' effective management by laparoscopic excision and drainage.

Hepatobiliary Posters Day 2: Group 7
Moderator: Javier Svetliza

[SP 169] Title: NEGATIVE PRESSURE THERAPY IN THE MANAGEMENT OF COMPLICATED WOUNDS OF THE ANTERIOR ABDOMINAL WALL, INCOMPLETE INTESTINAL AND BILIARY FISTULAS IN CHILDREN.

Author: Iuliia Aver'ianova

Aim: to present the possibilities of negative pressure therapy (NPT) using VAC device in the treatment of complications after abdominal surgical interventions.**Methods**: seventeen patients aged 1 month to 15 years with various complications after multiple abdominal operations have been treated using VAC device over the past 10 years. Cases included: complicated abdominal wounds along with incomplete intestinal fistulas (n=11), incomplete biliary fistula (n=1), incomplete both biliary and intestinal fistulas (n=1), multiple internal fistulas opening into a single cavity (n=3), large anterior abdominal wall defects (n=1). All patients received complex standard care along with negative pressure therapy using VAC device.**Results**: In twelve patients (71%), the reduction in the size of wounds were noted within 7 days of VAC application. In patients with multiple internal fistulas, opening in a single cavity, a decrease in the number of discharge through the fistula was observed on day 3 of VAC therapy. In this case, the VAC device was connected to one of the drainage tubes installed directly into the cavity. In 9 patients (53%), the closure of at least one intestinal fistula was detected on average of day 15 (7-24) of VAC therapy. Closing of all fistulas and wound healing in all patients was observed on average of 28 days (16-42) after the initiation of NPT.**Conclusion**: NPT using VAC device is safe, effective and economically beneficial way to treat complicated wounds of the anterior abdominal wall and / or incomplete intestinal, biliary, urinary fistulas, as well as their different combinations.

[SP 170] Title: AORTOMESENTERIC COMPRESSION OF LEFT RENAL VEIN IN CHILDREN WITH EXTRAHEPATIC PORTAL HYPERTENSION

Author: Rustam Yuldashev

Aim of the study was to determine influence of aortomesenteric compression of left renal vein on outcomes of splenorenal shunting procedures in children with extrahepatic portal hypertension.**Methods.** 112 children with extrahepatic portal hypertension (EHPH) included in this study. We studied images from computed tomography angiography (CTA) to characterize the compression of left renal vein (LRV) between the abdominal aorta and superior mesenteric artery (SMA), aortomesenteric angle (AMA), and the course of LRV, whether it is retroaortic or circumaortic. Effectiveness of splenorenal shunting (SRSh) procedures were studied on the basis of the reduction of esophageal and gastric varices according to upper GI endoscopy and the SRSh's patency according to the Doppler US (DUS) and CTA.**Main results.** According to CTA 15 (13.4%) patients showed signs of aortomesenteric compression of LRV. The AMA in this group was significantly lower - 28.54±1.4 mm ($p<0.001$). The hilar diameter of the LRV in children with aortomesenteric compression of LRV was significantly higher - 9.75±0.59 mm ($p<0.05$) than in children with a normal AMA. Patients with aortomesenteric compression of LRV prior to SRSh did not present clinical symptoms. Two children with EHPH managed with meso-Rex bypass (MRB), eight with mesocaval shunt (MCSh) and five SRSh. DUS follow-up has confirmed shunt patency in all cases, and absence of complication related to portal hypertension. However, 4 of 5 (80%) patients after SRSh in the postoperative period presented with symptoms of renal venous hypertension, manifested by an increase in the diameter of the gonadal and pelvic veins, as well as recurrent left flank pain and gross hematuria. **Conclusion.** Surgical success and resolution of symptoms of portal hypertension achieved in all cases with associated aortomesenteric compression of LRV. However, there is high risk of renal venous hypertension and its consequences after splenorenal shunting in children with EHPP and aortomesenteric compression of left renal vein

[SP 171] Title: REX SHUNT FOR THE TREATMENT OF PORTAL CAVERNOMA AFTER HEPATICOJEJUNOSTOMY IN CHILDREN WITH CHOLEDOCHAL CYST

Author: Jinshan Zhang, Li Long

Purpose: To investigate the effectiveness and feasibility of Rex shunt in the treatment of extrahepatic portal venous obstruction after hepaticojejunostomy in children with choledochal cyst. **Methods**: From Aug 2010 to Nov 2018, five children with upper gastrointestinal bleeding or splenomegaly were diagnosed as portal cavernoma, and underwent Rex shunt in our hospital. All patients had undergone the hepaticojejunostomy for the treatment of choledochal cyst before suffering from the portal hypertension. Three children underwent the gastro-portal bypass, and two children underwent the Roux-Y jejunal vein-portal bypass due to an unsuitable left gastric vein. All patients were followed-up for 2-100 months (mean: 46 months). **Results**： The Rex shunt was successfully performed in all patients. The average operative time was 219 minutes (range: 180-375 min). Three patients underwent blood transfusion during surgery, and the length of hospital stay varied from 7 to 12 days (mean: 8 days). Postoperatively, one child undergoing Roux-Y jejunal vein-portal bypass suffered from rebleeding due to the atresia of bypass vein, and was treated by conservative therapy. The other four children had no rebleeding, the patent bypass vein shown by postoperative ultrasound and the improved routine blood test after Rex shunt. The splenic size was reduced after surgery in three children, and the postoperative splenic size was bigger than preoperative splenic size in two children undergoing Roux-Y jejunal vein-portal bypass. There was no esophageal varices in three children after Rex shunt, and one child with postoperative esophageal varices suffered from postoperative rebleeding, and one with postoperative esophageal varices was only followed-up for two months. **Conclusions**： Rex shunt is a safe and feasible treatment of extra-hepatic portal hypertension after hepaticojejunostomy in children with choledochal cyst, and gastro-portal bypass is a reliable Rex shunt.

Key words: Rex shunt; portal cavernoma; Children; choledochal cyst; hepaticojejunostomy; extrahepatic portal hypertension

[SP 172] Title: LAPAROSCOPIC LIGATION OF SPLENIC VESSELS FOR THE TREATMENT OF HEREDITARY SPHEROCYTOSIS IN CHILDREN

Author: Jinshan Zhang

Background: Total splenectomy is the most effective surgical treatment for hereditary spherocytosis (HS). However, post-splenectomy sepsis and hypoimmunity can pose a great risk to children. Some alternative treatments have been proposed to avoid the post-splenectomy complications. In this study, we propose such procedure (laparoscopic ligation of splenic vessels, L-LSV) for the treatment of HS in children and investigate its effectiveness and feasibility.**Materials and Methods**: A total of seventeen children with HS who underwent the L-LSV at our hospital between May 2015 and Apr 2018 were enrolled in the current study. All patients were followed-up for 3-38 months (mean: 19.8 months). The volume of spleen was preoperatively and postoperatively measured using the AW VolumeShare5. The size of functional spleen and the condition of splenic infarction were evaluated using ultrasound and computed tomography after surgery. The routine blood, biochemistry and coagulation tests were carried out after surgery.**Results**: The L-LSV was successfully performed in all patients. The average operative time was 115 minutes (range: 60-180 min). No patients underwent blood transfusion during surgery, and the length of hospital stay varied from 5 to 9 days after surgery (mean: 7 days). Postoperatively, the red blood cells, platelet and hemoglobin were significantly increased ($P<0.05$). The postoperative volume of functional spleen was significantly smaller than preoperative volume of spleen (307.393±177.634 cm3 VS. 581.242±270.260cm3, $P=0.000$). The recent volume of functional spleen was significantly bigger than the postoperative 1 month volume of functional spleen in ten children who were followed-up for more than one year ($P=0.004$). The index of splenic infarction (the proportion of the postoperative 1-month volume of splenic infarction in the preoperative volume of spleen) was 0.31-0.99 (mean: 0.53). There were no patients undergoing the blood transfusion after surgery.**Conclusions**: The L-LSV is an effective treatment for HS in children; however, future studies should re-evaluate the long-term prognosis.

[SP 173] Title: DRAINAGE BEFORE DEFINITIVE REPAIR - IN COMPLICATED NEONATAL CHOLEDOCHAL CYST IS IT WORTH?

Author: Vijai Datt Upadhyaya

Introduction: 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.**Material and 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.**Results**Five cases age ranged from 25-40 days 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**:Biliary drainage before surgery helps in early recovery from cholangitis and optimization of liver function. It also delays progression of liver fibrosis by reliving the biliary outflow obstruction before definitive repair.

[SP 174] Title: SURGICAL MANAGEMENT OF COMPLICATED HYDATID CYST OF THE LIVER IN CHILDREN

Author: Nahla Kechiche, Dorsaf Makhlouf, Rachida Lamiri, Arije Zouaoui, Amine Ksia, Lassaad Sahnoun, Mongi Mekki , Mohssen Belguith , Abdellatif Nouri

Institution: University Hospital Fattouma Bourguiba Monastir , Tunisia

Aim of the study: To review the clinical presentation and surgical management of complicated hydatid cysts of the liver in children.**Methods**: The medical documents were reviewed retrospectively. The perioperative history of

eleven children was taken who underwent surgical treatment of hydatid cyst of liver from January 2000 to December 2018. These patients were in regular follow-up. Patients were evaluated by the clinical presentation, laboratory investigation, imaging and surgical intervention. All patients were put on albendazole therapy in the post operative period.**Main results**: The mean age of presentation was 7 years. Cysts with infection, rupture into biliary tract, rupture into peritoneal cavity, rupture into the thorax and compression of adjacent structures were categorized as complicated cysts and formed the basis of our study. The most common presentations were chest and abdominal pain in ten cases and fever in nine cases. The most common preoperative complication was intraperitoneal rupture (6 cases). In this respect, surgical procedures were laparotomy in 4 cases, laparoscopy in two cases, evacuation of the cyst, irrigation and drainage. In cases with rupture into biliary tract (2 patients), a fistula was revealed by an open bile duct communicating with the removed cyst and confirmed by cholangiography. We opted for evacuation of cavity, pericystectomy and choledochotomy with external drainage. We reported also a case of a child who developed biliary obstruction due to compression of the bile duct by a large hepatic cyst. Finally, invasion of the diaphragm was observed in 2 patients. Surgical treatment consisted of excision of the fistulous tract, direct suture and pleural drainage. The evolution was good in all cases. The mean follow-up was 24 months.**Conclusion**: Complicated liver hydatid cyst represent a special subset of patients who require a timely and appropriate treatment of complications which can be life threatening.

[SP 175] Title: PRESENTATION AND MANAGEMENT OF CHOLEDOCHAL CYST IN CHILDREN: 26 YEARS OF EXPERIENCE AND RESULTS IN A SINGLE CENTER

Author: Nahla Kechiche, Dorsaf Makhlouf, Rachida Lamiri, Arije Zouaoui, Amine Ksia, Lassaad Sahnoun, Mongi Mekki , Mohssen Belguith , Abdellatif Nouri
Institution: University Hospital Fattouma Bourguiba Monastir , Tunisia

Aim of the study: analyze and discuss the clinical data, diagnosis and treatment of a number of patients with cystic dilatation of the common bile duct of a Tunisian paediatric hospital.**Methods**: We did a retrospective, hospital archive search for children admitted to our pediatric surgery department with the diagnosis of a choledochal cyst from January 1992 to November 2018. A total of 35 patients were included. **Results**: We observed a marked female predominance (71.42%), the diagnosis being made in the first decade of life in 88.57% of patients. The most prevalent clinical manifestation was abdominal pain (62.85%) and the classic triad of choledochal cyst was not observed. Abdominal ultrasound was the first imaging examination performed, with diagnostic definition in 21children. One patient had prenatal diagnosis. All patients underwent surgical treatment, cyst resection with Roux-en-Y hepaticojejunostomy. The evolution was good in 31 children (88.57%). Four patients (11.42%) had immediate postoperative complications. There were two postoperative deaths resulting from portal hypertension. One patient developed anastomotic stricture which was managed successfully by reoperation. Another patient developed perihepatic abscess, treated by percutaneous drainage with good evolution.**Conclusion**: Although rare, choledochal cyst remains an interesting clinical problem. The lack of observation of the classic triad of choledochal cyst in the studied cases suggests that its incidence in childhood is lower than that reported in the literature.

[SP 176] Title: 3D-RECONSTRUCTION IN SURGERY OF LIVER ECHINOCOCCOSIS

Author: Minaev S. V., Kirgizov I.V., Grigorova A.N., Bykov N.I., Gerasimenko I.N.

Laparoscopic approach in the treatment the liver with hydatid cyst is one of the fastest growing areas in the surgical treatment of this parasitic pathology. At the same time, preoperative assessment of cyst condition and planning of surgical treatment strategy are based on radiographic imaging techniques (ultrasound ,magnetic resonance imaging (MRI) and computed tomography (CT)). Unfortunately, most of these diagnostic techniques have the ability to represent the image in two projections.**Aim of the Study**. Evaluation of the effectiveness of use of technology 3D reconstruction of the liver in the laparoscopic treatment in a patient with hydatid cyst of the liver.**Methods**. Under our supervision in the clinic of pediatric surgery was a patient V., 8 years (medical history № 1324) with a clinical diagnosis: hydatid cyst VII-VIII segments of the liver. Type of cyst - CE1. The patient underwent a 3D reconstruction of the liver. Data for 3D-reconstruction were obtained in DICOM format from CT and processed in the following programs: DoctorCT version 1.0 (Stavropol, Russia) with DICOM module version 3.0;

Cyberscliff 1.0 (Stavropol, Russia - certificate of state registration № 2017619901); program for viewing Builder3D bundled with Windows 10 (Microsoft, USA). CT images were obtained by multi-dimensional high-resolution scanning with a slice thickness of 0.5 mm. Further, two-dimensional images were processed using medical image processing algorithms. Initially, the noise reduction algorithm (anisotropic diffusion filter) was used, followed by the segmentation algorithm of anatomical structures of interest and the creation of a three-dimensional image of each structure. These images were exported to a sterolitographic (stl) file. After that, the final processing of the virtual reconstruction was performed.**Main results**. On the basis of the data we have been compiled tactics of surgical treatment, taking into account the data and the alleged difficulties in conducting surgical benefits. Given the 3D reconstruction of the liver with cyst, the formulation of laparoscopic ports was changed . After the audit of the liver, the data of 3D liver reconstruction with localization hydatid cyst of the liver were fully confirmed. During the revision of the residual cavity, as was established during the creation of 3D-reconstruction, a bile fistula was found, which opened in the depth of the cavity and was covered with a fibrin film. It and the residual cavity were treated with plasma flow using the Arco 3000 electrosurgical apparatus (Söring GmbH, Germany). To control the effectiveness of the manipulation performed setting PVC drainage in the residual cavity. **Conclusions**. Thus, the result obtained in this paper suggests that the use of virtual 3D reconstruction in surgical Hepatology is a useful tool to improve the result of laparoscopic echinococcectomy. Further development of this approach will provide an appropriate place in the planning of preoperative preparation.

[SP 177] Title: RETROSPECTIVE REVIEW OF THE MESENTRIC-LEFT PORTAL BYPASS (MESO-REX SHUNT) FOR EXTRAHEPATIC PORTAL VEIN OCCLUSION (EHPVO) IN CHILDREN

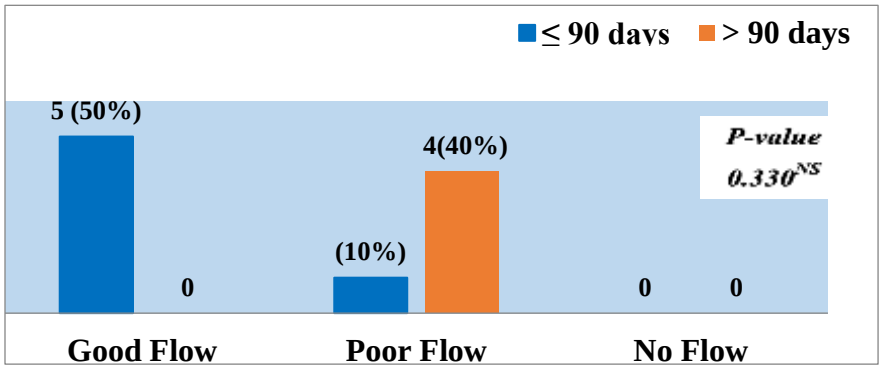
Author: OMER KHAMAG

Background: Portal hypertension (PH) caused by EHPVO occurs when the site of block is in the portal vein before the blood reaches the liver. It accounts for almost 70% of paediatric patients with PH and is also the most common cause of upper gastrointestinal (GIT) bleeding in children. Meso-Rex shunt is a treatment option in certain clinical contexts.**Aim:** To describe patients presented with EHPVO and long-term outcome of Meso-Rex bypass in preventing further upper GIT Variceal bleeding as an indicator of resolved PH.**Methods:** A retrospective folder review on all patients presented with EHPVO between January 2001 and December 2018.**Results:** 22 patients were identified with EHPVO, 9 females and 13 males. All children presented with upper GIT Variceal bleeding. Six patients had portal vein thrombosis post liver transplantation.Rex vein was assessed preoperatively with ultrasound, CT, MRI angiograms or wedged hepatic vein portography. Four children had a non-patent Rex vein and went directly into a Warren shunt, 18 children underwent Rex shunt surgery. Left internal jugular vein used as a conduit in 17 and the great saphenous vein used in one. Mean age at surgery was 6 years (2-13). One patient had a graft thrombosis day one post Rex shunt surgery and subsequently received a spleno-adrenal shunt. Seventeen children were followed up clinically and with portal ultrasound for an average of 125 months (17 – 222). On follow up 16 children had no further variceal bleeding, one presented with two further episodes during early follow up despite having a patent shunt. Seventeen shunts remained patent**Conclusions:** Meso-Rex shunt re-established hepatopetal portal blood flow, offered an effective solution to manage PH secondary to EHPVO and should be considered as the definitive intervention.

[SP 178] Title: EFFECTIVENESS OF BILE DRAINAGE IN RELATION TO AGE AT OPERATION IN EARLY POST-OPERATIVE PERIOD AFTER KASAI PORTOENTEROSTOMY FOR BILIARY ATRESIA

Author: Mridul Joshi

Aim: The purpose of this study is to determine the effectiveness of bile drainage represented by jaundice disappearance rate in relation to age at the time of operation after Kasai Portoenterostomy (KPE) in patients with Biliary Atresia (BA).**Methods**: This prospective analytical study was done on thirty-one BA infants treated by KPE. Serial measurements of serum bilirubin were made pre and post-operatively to assess the degree of bile drainage as early indicator. Serum total bilirubin less than 2mg/dl at 3-months and subsequent postoperative follow-ups beyond indicated significant bilirubin has been cleared and patient is jaundice free. As a direct evidence of bile drainage, Isotope clearance study was done at 1-year follow-up



. **Main Results**: The mean age at surgery was 88.562 (±25.78SD) days. Twenty-two infants were operated before 90 days and nine were operated beyond 90 days. Sixteen out of thirty one (52%) infants at three months after surgery are jaundice free, of which fourteen belonged to the group operated at less than 90 days and only two patients belonged to the other group. However these two infants again developed jaundice on later follow-ups. Among the fourteen, eleven were jaundice free at six months and one year after surgery. Isotope clearance study could be done only in ten infants; six jaundice free patient and four who were operated more than 90days. Among the six infants who were jaundice free at one year, five children had good hepatic isotope clearance and one had poor clearance. Those operated at more than 90days all had poor clearance.(Figure)**Conclusion**: This study reveals that infants when operated below 90days have more chance of achieving jaundice disappearance state in comparison to when operated after 90days. This allows the patient to have both a good length and quality of life to live, until liver transplantation becomes inevitable. **Keywords**: Biliary Atresia (BA), Kasai Portoenterostomy (KPE), Extended KPE, Bilirubin Clearance, Bile flow, Bile drainage, Isotope clearance *Figure: Number of patients with hepatic isotope clearance in HIDA scan at 1 year after operation according to age at Kasai*

[SP 179] Title: WHAT ARE THE BEST IMMEDIATE POST-KASAI PREDICTORS FOR NATIVE LIVER SURVIVAL AND POST-TRANSPLANT OUTCOME FOR BILIARY ATRESIA PATIENTS?

Author: Jeik Byun, Hyun-Young Kim, Nam-Joon Yi, Ji-Won Han, Dayoung Ko, Young Woo Youn
Institution: Seoul National University Hospital, Seoul, Korea

Background/Purpose Many scoring systems and prognostic factors have been proposed for biliary atresia for their outcome and prognosis. Among them were CTP score, PELD score, APRi, SAZ, CPR, VPR, BALF score, King's VaPS,* and other laboratory biomarkers. The purpose of our study was to evaluate best prognostic factors among the previously suggested factors and to analyze its predictive value on both native liver survival and post-transplant outcome.**Methods**A retrospective single center study was conducted for 89 patients who underwent Kasai portoenterostomy at Seoul National University Children's Hospital between 2003 and 2015. Within 89 patients, 55 underwent liver transplantation. 0-, 1-, 2-, 3-, 6- months post-Kasai scores and factors were collected. Three-years post Kasai native liver survival, and post transplant complications were analyzed using Cox proportional hazards model and multivariate regression model. The study protocol was reviewed and approved by the institutional review board of the Seoul National University Hospital (H-1806-067-950).**Result**Among 89 patients who underwent Kasai portoenterostomy, 55 underwent liver transplantation and 1 expired on waitlist. Among 55 liver transplant patients 3 expired on following. Mean age at Kasai was 66 days and mean bodyweight was 4617g. Mean operation time at Kasai was 142 minutes and estimated blood loss were 41mL. Three-years native liver survival was 54.5%. Mean age at liver transplantation was 21 months. 25 underwent living donor liver transplantation and 30 underwent deceased donor liver transplantation. There were 18 post transplant EBV infection and 8 CMV infections. There were 4 acute rejection and one required re-transplantation. There were 9 cases needing for intervention after transplantation on vascular or bile duct stenosis. 2-months post Kasai APRi best matched for significance for three-years native liver survival, and 2-months post Kasai Total bilirubin best matched for significance for post transplant complications. **Conclusion**2-months post Kasai APRi was significant prognostic factor for native liver survival. 2-months post Kasai serum total bilirubin level was significant prognostic factor for post transplant complications. CTP; Child-Turcotte-Pugh, PELD score={(0.463xage-0687xlogeAlbumin)+0.480xlogeTB +1.857xlogeINR)+0.667x(Growth failure<-2 standard deviation)}x10, APRi=AST/Platelet count, SAZ=(Spleen size - Population mean spleen size)/(population standard deviation),

CPR=(0.75xPlatelet count)/(SAZ+5)+(2.5xAlbumin), VPR=(AlbuminxPlatelet count)/100, BALF score = 7.196+1.438xlogeTB+0.434xlogeGGT-3.491xlogeAlbumin-0.670xlogeAge, King's VaPS = (3xAlbumin)-(2xEASS)

[SP 180] Title: VARIOUS BILIARY RECONSTRUCTIONS IN CHILDREN WITH LIVER AND BILIARY TRACT DISEASES
Author: Iuliia Aver'ianova
Aim: to present the results of treatment of children with liver and biliary tract diseases requiring repeated biliary reconstructions.**Methods:** from 2001 to 2017, repeated biliary reconstructions were performed in 53 patients aged 1 month to 17 years. Depending on the nature of the biliary complications that arose after previous operations, all patients were divided into the following groups: patients after Kasai surgery with dilated intrahepatic bile ducts or isolated bile cysts (n=14); patients with stenosis of previously created hepaticojejunoanastomosis (n=12); patients with the consequences of postoperative and post-traumatic perforations of the external bile ducts (n=5); children with biliary complications after hemihepatectomy performed for liver tumors (n=3), surgical treatment of giant echinococcal liver cysts (n=3) and liver alveococcosis (n=4); patients with "wrong" cholecystoduodeno- and cholecystojejunoanastomosis, cystojejuno- and cystoduodenoanastomosis (10) and other errors in the biliodigestive reconstructions (2).**Results:** all patients underwent repeated biliary reconstructions, in 36% of cases supplemented with various types of draining of the reconstructed biliary-digestive anastomosis. Fatal outcomes due to relapse of cholangiogenic sepsis and/or acute decompensation of chronic liver disease (ACLF) were noted only in the group of children with biliary atresia (BA) (n=3; 5.7%). One patient with biliary atresia after two «bridge» surgeries — biliary reconstruction and spleno-renal bypass surgery required a liver transplant. In 8 children who underwent Kasai surgery and repeated biliary reconstruction, 5-year survival with a native liver was noted, in 2 patients - 10-year survival.**Conclusion:** timely reconstructive operations on the bile ducts contribute to the restoration of an adequate passage of bile, the elimination of chronic cholangitis and prolong the life with a native liver.

Lower GI Posters Day 2: Group 8
Moderator: Marshall Schwartz

[SO 181] Title: CLINICAL DIAGNOSTIC : A RARE CASE OF CONGENITAL PERINEAL HAMARTOMA AT GENERAL HOSPITAL IN INDONESIA BETWEEN 2014-2019
Author: Andi Lestiano
Background Perineal hamartoma is a tumor-like malformation that is uncommon. In the last 5 years (2014-2019) there is only 1 case in our General Hospital in Indonesia. We present a case of a 5 year-old girl with a large mass in perineal near anus and the left side of genitalia- since birth. Examination has been conduct for diagnostic reason, from lab analysis to biopsy. The result came as a benign malformation and histopathological analysis confirm it is a perineal hamartoma. We present this case because the rarity and the simplicity of management.**Case** 5 year-old girl came to our pediatric surgery outpatient with a mass in perineal near anus and left side of genitalia. The mass has been detected since birth with size 3x2cm, mobile and firm, with no further congenital abnormalities. From physical examination, we found that there was no sign defecation, no bleeding detected and no weight loss. Surgical has been performed as biopsy excision with general anesthetic. Histopatological examination came with a result of benign mass, confirm the diagnosis of hamartoma.**Conclusion** Diagnostic assessment for perineal hamartoma can be done by physical examination, lab diagnostic and then could proceed for undergoing an excision biopsy surgery.

[SP 182] Title: EXPEDITED FEEDING REGIMEN AFTER ELECTIVE RESTORATION OF BOWEL CONTINUITY IN CHILDREN
Author: Kirtikumar J Rathod, Jayakumar TK, Avinash Jadhav, Bala Eradi, Arvind Sinha
BackgroundTraditionally feeding after intestinal anastomosis is started after the child has passed stools or atleast flatus. This might take 3-4 days after the surgery. We recommend expedited feeding regimen after six hrs of

surgery and compared it with the patients who had delayed enteral feeding.**Methodology**Retrospective study using data from two centres. Patients who had elective intestinal anastomosis during the period from Jan 2015 to July 2018 were included. Patients who had stoma done for necrotising enterocolitis, stoma done in the patient for gastroschisis, previous adhesive intestinal obstruction or requirement of adhesiolysis during the operation were excluded. Patient were divided in two group. Group A included patients in whom feeding was commenced within 6 hrs of surgery while in Group B feeds were started after the child had passed stools. Parameters studied age, gender, whether small bowel or colonic anastomosis done, length of hospital stay, days of analgesia requirement, surgical site infection, readmission within 1 week of discharge.**Results**Total 58 patients were included in the study (Group A =26, Group B=32). Gender was comparable in both groups. Age was not normally distributed in both groups due to outliers. Both groups had six ileostomy closure each rest all patients had colostomy closure. Length of stay was significantly less in expedited feeding regimen group (Mean +/- SD = 3.38+/- 1.7 vs 5.00+/-1.59, p=0.001). Surgical site infection was comparable in both the groups (Group A =1 vs Group B =4, p=0.3668). Incidence of postoperative abdominal distension or vomiting was not significantly different in both the groups. One patient in-group B was readmitted after 2 days of discharge for wound collection.**Conclusion**Expedited feeding regimen after elective intestinal stoma closure is safe and associated with decreased length of hospital stay. It can also reduce parental anxiety due to keeping the child fasting for longer duration post operatively.

[SP 183] Title: SURGICAL TREATMENT IN HIGH FORMS OF RECTUM ATRESIA (MULTICENTER RESEARCH)

Author: Kirgizov I.V, Aprosimov M.N, Minaev S.V., Shishkin I.A , Grigorova A.N

Actuality is considered by the high percent of postoperative complications, of both inflammatory and functional nature.**Materials and methods:** for the last 9 years (2010-2019) endoscopically assisted abdominal-peritoneal proctoplasty was carried out in 257 patients aged from 3 months to 1 year with congenital high rectum atresia. Rectourethral fistula was revealed in 73.5% of patients, rectovesical – in 16 %, rectovaginal – in 11.5% 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 muscle stimulation, that help us to pass colon right in the centre of perineal muscles and anal sphincter ring. **Results:** in all cases neoanus was formed correctly and extrasphincteric pass of colon was completely excluded. In 12 months after operation excellent results with improved continence function and good cosmetic effect was registered in 51.7% of patients. In 30.3% partial mucosa prolapse was revealed. Significant mucosa prolapse was revealed in 6.5%. 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.

[SP 184] Title: THE USE OF BIPOLAR ELECTROSTIMULATION IN THE TREATMENT OF ANORECTAL MALFORMATIONS (MULTICENTER RESEARCH)

Author: Kirgizov I.V. 1, Minaev S.V.2, Shishkin I.A. 3, Aprosimova S.I Axelrov M.A. 4, Efremenkov A.M.1, Koshurnikov O.Y.5, Gramzin A.V.6, Safronov B.G.7, Kirgizov F.I.8, Grigorova A.N.2

Aim of our study was to follow up of bipolar myostimulator in surgical treatment and rehabilitation of patients with anorectal malformations. **Methods**: Based on the experience of surgical treatment from 2015 to 2019, of 612 children with anorectal malformations, we have developed and use a medical-diagnostic platform – bipolar **Results**: 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 during surgery, and by doctors and parents for a long time on the 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 (tweezers), which is easy to be sterilized. 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, the possibility of using in on-site operations. The device is used by parents in home and at the stage of rehabilitation in the postoperative period in the special mode "Rehabilitation". This is ensured by the safety, presence of rectal electrode, and price of the

device. Changeble scale of the rehabilitation mode with current strength 0.1-25mA; and mode of repetitive stimulation with frequency of 1-30Hz. 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 by the appearance of strong feeling, but not pain. The frequency also varies and is chosen individualy for each patient by parents. **Conclusion**: Thus, developed medical-diagnostic platform - bipolar myostimulator proven it's safety and efficiency during surgical treatment of children, and subsequent rehabilitation of anorectal malformations in children.

[SP 185] Title: 50% GLUCOSE INJECTION IN PRESACRAL SPACE FOR RECTAL PROLAPSE IN CHILDREN

Author: Leily Mohajerzadeh

Aim of study:A wide variety of sclerosing agents have been used in rectal submucosa in treatment of rectal prolapse in children.We have used 50% glucose in presacral space for the first time in the treatment.The aim of this study is to review the results of a 50% glucose injection in presacral space.

PATIENTS AND METHODS:In this study we included children who failed to respond to conservative treatment.The outcome OF 50% glucose injection sclerotherapy and the presence of complications were investigated.Under general anesthesia,the patient was placed in the lithotomy position.The left index finger was inserted into the rectum to control the position of the needle.A 20-gauge spinal needle was introduced through the perianal skin and was advanced.The 50% glucose was slowly injected through presacral space into,the right perirectal area the left perirectal area and posterior to the rectum at3points.The injection was continued until 5-6 ml of 50% glucose were injected in each quadrant.**Results**: A total of15children with complete rectal prolapse aged from4to 7 years,were treated between2012until 2015.Conservative treatment had previously failed in all patients.All of them were cured after one injections without any recurrence.Only one patient led to presacral abscess that underwent derange. There were no other complications. No fecal soiling was seen. **Conclusions**: The success rates and complications of the treatment reported in the literature differ for each sclerosing agent.Injection sclerotherapy by50%glucose for treatment rectal prolapse in children is a simple and effective treatment.

Key words:50% glucose,rectal prolapse,sclerotherapy

[SP 186] Title: HIGH DOSE BOTOX INJECTION FOR PATIENTS WITH INTERNAL ANAL SPHINCTER ACHALASIA PERSISTENT TO POSTERIOR INTERNAL ANAL SPHINCTER MYECTOMY

Author: Leily Mohajerzadeh

Background and Aim: In studies, the gold standard for treatment internal anal sphincter achalasia (IASA) is considered posterior internal anal sphincter myectomy(ISM).We present our results of Botox injection treatment (BIT) in patients with non-relaxing internal anal sphincter after posterior internal anal sphincter myectomy .

Patients and methods: The medical records of 35 patients with internal anal sphincter achalasia(IASA) managed by posterior internal anal sphincter myectomy during 2011-2015 were inspected. All patients presented with intractable constipation with or without soiling. Before posterior myectomy, all patients underwent barium enema and anorectal manometry .IASA was defined as the absence of rectoanal inhibitory reflex with normal rectal biopsies. In14 patients (8 males) with Mean ages 95month(60-128) symptoms persisted. All of them had Constipation Grade3, Resistance to laxatives and diet and 5 had degrees of soiling.Botox injection 20U/kg was performed in general anesthesia in four quadrants into the intersphincteric groove. Laxative after injection continued in all cases.**Results**: Patients were followed For 2 years later(range 18–26 month).No intraoperative complications happened. In one patient ,transient soiling occurred for 2 weeks after BIT.12 patients had improvement in bowel function more than 6 months,2 had improvement for less than 6 month.12 of 14 patient had normal bowel function afte BIT with aP value of less than .05 considered significant. Bowel Function required continued use of laxatives in 4 cases but 10 cases remained on small doses of laxatives .altough all patients were resistant to use of laxatives,they were able to use laxatives for having normal bowel fumction after BIT.5 patient had soiling before injection (4 occasionally and 1 every day without social problem) but after injection 4 patient had improvement and 1 patient had soiling occasioanally and with aP value of less than .05 considered significant.. No patients required enema after botox injection. There was no need to another injection after 2 year follow up.

Conclusions: Intrasphincteric botulinum toxin is a safe and less-invasive for symptomatic internal sphincter hypertonicity after posterior myectomy.But it needs more long-term follow-up
Keywords Hirschsprung's disease _Internal sphincter achalasia _ Botox

[SP 187] Title: PROSPECTIVE FOLLOW UP OF CHILDREN WITH ANORECTAL MALFORMATION:OUR CENTER EXPERIENCE UNTIL 10 YEAR OF AGE
Author: Mohajerzadeh L, Rouzrokh M, Khaleghnejad Tabari A, Mirshemirani A,Sadeghian N, Ghoroubi J,Roshanzamir F,Mahdavi A, Kazemi M,Hatefi S, Abasi A
Purpose: Longitudinal follow-up of bowel function in children with anorectal malformations (ARMs)) as they grow, to determine the anorectal function problems and help to resolve them somedeal.**Material and Methods**: This study included 262 patients with ARM that operated in our center between 2006 until 2013.Patients that definitive reconstruction was performed in another center and underwent reoperation in this center excluded. Also children that expired or did not come for visit removed. Bowel function was prospectively evaluated by using a structured questionnaire that asked from their parents. Additional bowel treatment with enemas and stool softeners and use of diapers were recorded.**Results**: Interviews were completed with 242 children, age ranging from 3 to 10 years. 37.7% of patients had constipation.32.5% Grade 1 Manageable by changes in diet,54.3% Grade 2 Requires laxative and 13.2% Grade 3 Resistant to laxatives and diet.18.6% of patients had fecal soiling , 31.5% Grade 1: Occasionally (once or twice per week),24% Grade 2: Every day, no social problem and 44.5% Grade 3:Constant, social problem.**Conclusion**: In the present study there were many bowel function problems in ARM children, that needs additional attention to achieve them more near to level of healthy children.Pediatric surgeons who do the definitive surgery on anorectal malformationsShould don't lose contact with the patients as they become adults .These patients have many great troubles in adolescence.**Key words**:Anorectal malformation; Postoperative complications, Bowel functional outcome; fecal incontinence

[SP 188] Title: SOAVE TECHNIQUE IN THE MANAGEMENT OF DIAGNOSED CASES OF HIRSCHSPRUNG DISEASE: A RETROSPECTIVE SINGLE CENTER EXPERIENCE
Author: Ubaidullah Khan
Background and objectives: Soave a single stage transanal procedure most commonly done early In life with good outcome. We used this technique in our patients with Hirschsprung disease (HD) presented in our hospital. Our research's main objective is to outline Soave technical aspects, outcome and rate of success in our center.**Methods**: This is a retrospective review study series of HD patients in our center who managed by Soave transanal approach, to look for postoperative adverse event including: stricture, anastomotic leakage, enterocolitis, and bowel functions.**Results**: In this study we operated 17 patients with HD, 14 of them primarily went for Soave transanal resection, except these three patients: 2 underwent a levelling colostomy, 1 with ileostomy, at neonatal period, follow by Soave. The length of resection was 20±10.5 cm. The follow-up period was 12.2 months (range 5–22 months). The patients ages between 3-14 years old. All patients on follow up bowel movements were voluntary, no fecal incontinence and no constipation which required the use of laxative.
Conclusions: Our researchstrongly approve the fact that a single stage Soave approach without transabdominal dissection is agood technique for lateHD patients with a good outcome. A multicenter prospective study and large number of patients is required to validate our results.**Key words**: Hirschsprung disease; Soave; Transanal

[SP 189] Title: FUNCTIONAL OUTCOMES IN ANORECTAL MALFORMATION PATIENTS FOLLOWING DEFINITIVE SURGERY
Author: Hesti Gunarti
Aim of the Study: Current focus of ARM management is to ensure patients have good bowel functional outcomes following definitive surgery. We determined the functional outcomes of ARM patients after definitive surgery associated with the prognostic factors. **Methods:** Medical records of ARM patients who underwent definitive procedure at a pediatric surgical center, Indonesia from August 2012 to September 2016 were reviewed. Krickenbeck classification was used to determine ARM type, while Rintala scoring system was utilized to determine functional

outcomes. **Main Results:** A total of 72 patients were involved in this study, consisting of 38 males and 34 females. Most patients had no soiling (94.4%), no constipation (90.2%), defecation frequency of every other day to twice a day (83.3%), ability to hold back defecation (60%) and feels/reports the urge to defecate (60%), whereas none of the patients suffered either from accident or social problems. Fourteen patients had Rintala score of ≥18, whereas most children (72.2%) showed score of 13-14. Male patients revealed higher risk (4.2-fold) for having a more/less often frequency of defecation compared with female subjects (p=0.035; 95% CI=1.03-17.1), while bouginage procedure almost reached a significant association with the feel/report the urge to defecate (p=0.06). Furthermore, male patients tended to have a Rintala score of ≥18 (better outcome) higher than female patients, but it did not reach a significant level (p=0.12).**Conclusions:** The functional outcomes of ARM patients after definitive surgery in our hospital are considered good. Gender and bougienage procedure might have an impact on the functional outcomes of ARM patients following surgical procedure

[SP 190] Title: CONTRAST ENEMA ACCURACY TO DIAGNOSE HIRSCHSPRUNG DISEASE IN INDONESIA

Author: Hesti Gunarti

Aim of the Study: While full-thickness biopsy method has been determined as a gold standard to diagnose a Hirschsprung disease (HSCR), there are many institution, especially in developing countries, that still rely on contrast enema (CE) to diagnose it due to unavailability of histopathological services. We investigated the accuracy of CE to diagnose HSCR.**Methods:** We retrospectively reviewed all CE and histopathological findings for HSCR patients at a pediatric surgical center in Indonesia, from January 2017 to June 2018. We analyzed transitional zone and rectosigmoid index (RSI) in CE and utilized hematoxylin and eosin and S100 staining for histopathological examination.**Main Results:** We recruited 84 HSCR patients, of whom 48 males and 36 females. Most patients (66.7%) were diagnosed for HSCR at less than one year old. The sensitivity, specificity, positive predictive value, negative predictive value, and accuracy of the transitional zone were 83.8% (95% CI: 0.73-0.91), 80% (95% CI: 0.44-0.97), 96.9% (95% CI: 0.90-0.99), 40% (95% CI: 0.27-0.55), and 83.3% (95% CI: 0.74-0.91), respectively; while those of the RSI were 71.6% (95% CI: 0.60-0.82), 80% (95% CI: 0.44-0.97), 96.4% (95% CI: 0.88-0.99), 27.6% (95% CI: 0.19-0.38), and 72.6% (95% CI: 0.62-0.82), respectively. Combination of transitional zone and RSI revealed the sensitivity, specificity, positive predictive value, negative predictive value, and accuracy of 66.9% (95% CI: 0.53-0.76), 80% (95% CI: 0.44-0.97), 96% (95% CI: 0.87-0.99), 23.5% (95% CI: 0.17-0.32), and 66.7% (95% CI: 0.56-0.77), respectively. The pairwise comparison between CE and histopathological findings for the transitional zone, RSI and combination both were 0.01, 0.000066, and 0.000003, respectively; whereas the Cohen's Kappa index were 44.5%, 28.3%, and 22%, respectively.**Conclusions:** Transitional zone shows the highest accuracy to diagnose HSCR. CE might be useful to determine the diagnosis of HSCR given the resource limitations for histopathological facilities in some hospitals.

[SP 191] Title: LARGE BOWEL VOLVULUS - A RARE ENTITY IN CHILDREN AND ADOLESCENTS

Author: Kush Kumar Luthra

Introduction: Large bowel volvulus (sigmoid and caecal) is a rare cause of intestinal obstruction in children and adolescents. It occurs due to lack of retroperitoneal attachment (fixation) of large bowel and sudden abnormal dilatation, predisposing it to torsion around its mesenteric axis. This leads to venous congestion and subsequently compromises arterial blood flow to the bowel. If left untreated, it may cause progressive ischemia, necrosis and perforation. The child may present with severe acute abdominal pain, intractable vomiting and gross abdominal distension with toxic features or recurrent vague abdominal pain. Diagnosis depends on high index of clinical suspicion and plain abdominal radiography; contrast enhanced computed tomography (CECT) of the abdomen remains the best diagnostic modality. Early surgical intervention is mandatory.**Aim**: To highlight the two extreme ends of clinical presentation and to create awareness about this uncommon clinical entity, since prompt clinical diagnosis can facilitate early surgical intervention.**Methods**: Case series of 3 cases of large bowel obstruction that presented to our institution between Jan 2018 to Jan 2019. Initial work up done and diagnosis of large bowel obstruction due to volvulus was made. All three cases were managed with surgical intervention. **Results**: Two children had grossly dilated and redundant sigmoid and had resection and anastomosis of colon. One child had gangrene of the bowel extending from terminal ileum till rectosigmoid junction and had staged surgery. All the

children are doing well. **Conclusion**: High index of clinical suspicion remain the basis of diagnosis of large bowel volvulus. Spectrum of clinical presentation should always be kept in mind. **ETHICS**: Ethical clearance has been obtained from the institute. All patients included in the study have given an informed valid consent.

[SP 192] Title: POSTOPERATIVE OBSTRUCTIVE SYMPTOMS IN HIRSCHSPRUNG DISEASE: AN EXPERIENCE IN SINGLE INSTITUTION

Author: Emiliana Lia

Background: Hirschsprung's disease (HD) is a serious developmental disorder of intestinal tracts resulting in functional gut obstruction. Various techniques of surgery for the treatment of HD have been proposed, resulting a variety post operative problems. The aim of this study is to describe the postoperative obstructive symptoms in children with Hirschsprung's disease.**Methods**: The medical records of HD patients were reviewed during period July 2016 – June 2019. The diagnosis was proven on the basis of rectal biopsy or barium enema who underwent pullthrough, both transanal or with laparotomy. All patients had postoperative obstructive symptoms. **Results**: Of 105 patients (68 boys, 37 girls). 39 had transanal resection, 10 had transanal plus laparoscopy, 8 had transanal with laparotomy, and 48 patients had a leveling colostomy prior pullthrough. Mean of age was 16,1 months old. Enterocolitis occurred in 31 patients (29,5%). Postoperative obstructive symptoms were found in 17 patients. The symptoms were abdominal distention occurred in 14 patients, and severe constipation occurred in 3 patients. Mechanical obstruction occurred in 5 patients; anastomotic stricture was found in 3 patients, twisted of the pullthrough bowel was found in 1 patient, and postoperative adhesions was found in 1 patient. Persistent aganglionosis or loss of ganglion cells after pullthrough or transition zone pullthrough were occurred in 12 patients.**Conclusion**: Persistent aganglionosis or loss of ganglion cells after pullthrough or transition zone pullthrough bowel are still a challenging issues in our institution. A long term assessment and follow up are needed. **Keywords** : Hirschsprung's disease, Pullthrough, Postoperative, Obstructive symptoms

General Surgery Poster Group 9
Moderator: Leopoldo Torres Contreras

[SP 193] Title: SURGICAL TREATMENT OF CHRONIC CONSTIPATIONS WITH IDIOPATHIC MEGARECTUM IN CHILDREN (MULTICENTER RESEARCH).

Author: Kirgizov I.V. 1, Aprosimov M.N. 1, Minaev S.V.2, Shishkin I.A. 3, Axelrov M.A. 4, Grigorova A.N

Currently in pediatric surgery, the conventional method of surgical treatment of chronic constipation with idiopathic megarectum does not exist, and the effectiveness of existing methods is not proven enough yet. In the literature there are such methods of treatment as antegrade cleansing enema, proctocolectomy with reservoir ileoanal anastomosis, vertical reduction rectoplasty, longitudinal proctoplasty, transanal resection of rectum and so on. Most of these operations envisage resection of a part of the intestine without an objective record of pathologically altered part of the organ and are potentially dangerous for the child.

Aim: Analysis of the results of treatment, development of optimal method of surgical treatment of idiopathic constipations.**Materials and methods**: Study included 143 children. From 2006 to 2010, we performed operative treatment according to the Soave methods, in various modifications, group 1 (n=32). From 2010, in idiopathic constipations we use laparoscopically assisted anterior low resection of colon with hardware endorectal anastomosis in our modification, with laparoscopic ultrasound control of volume of resected colon, group 2 (n=111). Age of children is from 4-17. Boys are 24%, girls are 76%. All children underwent irrigography, to confirm the diagnosis. The indication for operation was a persistent lack of the effect of ongoing conservative therapy for 2 years, decompensation of constipation with encopresis phenomena. All children underwent specific medical examinations to exclude Hirschsprung's disease. Clinical effect was evaluated by the: effective daily bowel movements, absence of encopresis in the postoperative period, serious complications of operation that required colostomy.**Results**: In children of 1 group, constipations were in 5/32, in 2 group in 10/111, there were no statistical differences in the level of the clinical results. Encopresis in children of the 1 group was in 11/32, in 2

group in 5/111. Serious complications that required colostomy, were in children of 1 group in 7/32, in 2 group in 6/111. **Conclusions**: Thus, in chronic constipations with idiopathic megarectum in children, operation of choice is laparoscopically assisted low anterior resection of colon, with hardware endorectal anastomosis and with laparoscopic ultrasound control of the volume of resected colon in our modification.

[SP 194] Title: 20 YEARS EXPERIENCE WITH REHBIEN S PROCEDURE IN MANAGEMENT OF HIRSCHSPRUNG S DISEASE

Author: Nawfal Dawood

Background; Since Hirschsprung's disease is a complicated and frightful congenital anomaly patient, parents and surgeon also. Its incidence is 1: 5000, more common in male. The principle for treatment by Rehbien's procedure is to remove the agangilonic narrow segment including the dilated sigmoid colon by dissection of the upper rectum deep down into the pelvic cavity about 2cm from peritoneal reflection and to elimination of achalasia of internal anal sphincter by vigorous dilatation . **Objective**; Assessment of the advantage of the Rehbien's procedure in treatment of Hirschsprung's diseasePatient and methods ; 180 cases diagnosed as Hirschsprung's disease depending on history,clinical examination , Ba enema and rectal biobsy.All patient had a positive history of delayed passing meconium ,in the period between 1998 to 2018 at child central hospital. 1998 _2003 38 cases treated by 3 stage operation(loop transverse colostomy plus multiple colonic biobsy ,Rebiene operation then closure of colostomy)122 patients treated by 2 stage (segmoidectomy pluse end colostomy) then followed by Rebien procedure (colo_lower rectal anastomosis)Children who were well corresponding to their age were treated with one stage operation 20 patients (resection of aganglonic segment pluse colo rectal anastomosis)All patints checked by digital PR after one month for anastomotic stenosis**Results**: (158 male ,22 femal) .141 cases classified as very good (78.3%); (passing motions normaly without difficulty and with no auxiliary means). 31cases classified as good (17.2%)(occasionally laxative was necessary); 8 cases classified as satisfactory (4.5%); 145 short segment ,33 long segment and 2 cases with total agangilonosis . No disorders of urinary evacuation such as retention or incontinence were seen. We never observed anal incontinence. In 43 cases(24%), an anastomotic line stenosis were treated by Hegar's dilator under general anesthesia and continued at home by the family, No anastomotic leak was found . 8 cases(4.5%) needed frequent anal dilatation under general anesthesia at intervals, 4 of 8 need internal sphincter injection by Botiulem toxin . 2 case needed sphincterotomy.30 cases had onc or tow attacks of enterocolitis which treated conservatively.**Conclusions**: Hirschsprung's disease is not an uncommon disease. Its treatment needs experience and surgery can have uncorrectable complications. I found that this procedure is efficient, easy to perform, and less time- consuming and carries few manageable complications and finally keeps good relation with the families of the children

[SP 195] Title: PROGRESSIVE EXTERNAL COMPRESSION AS INITIAL MANAGEMENT FOR GIANT UNRUPTURED OMPHALOCELES

Author: Hiranya Borah

Aim of Study:External compression as initial management of giant omphaloceles was first reported in 1996.We wish to report a series of 7 cases treated thus.**Case description:**We had satisfactorily used this method during the late 1990s through the early 2000s in the public sector general hospital in a Low Income Country (LIC) where I was working as a pediatric surgeon in a general surgical setup and with no NICU facility at that point of time. Photos of a baby so managed are attached (Fig.1). The crepe bandage that we had used for the compression became loose as the viscera returned to the abdomen. To avoid the daily need of removing the elastic bandage completely and to retighten it, as well as for hastening the early return of the contents, we had incorporated a blood pressure intrument cuff between the layers of the crepe bandage. We had inflated the cuff gradually a little every day or after every 2/3 days as felt necessary, taking care that the baby did not feel any discomfort due to the increased pressure. The omphaloceles, so managed, were completely reduced in about 3 to 4 weeks of such continued progressive external pressure bandaging and did not require any further surgical intervention in our series of 7 cases. **Conclusion**:In LMIC settings, perhaps a pre-used but intact

tissue expander (re-sterilized), if available, would be a better alternative for the blood pressure instrument cuff to be used as above.Even in the tertiary centers of High Income countries (HIC), early surgical management of giant omphaloceles is still associated with high mortality and morbidity. Hence there seems to have been a renewed interest in its early nonoperative management.

[SP 196] Title: UPDATE SYSTEMATIC REVIEW ON BOWEL PREPARATION IN ADULTS AND PEDIATRIC.

Author: Noora Al-Shahwani, Tessa Robinson, Helene Flageole
Institution: McMaster Children's Hospital, Canada

Aim of the Study: Surgical site infections (SSI) after elective colorectal surgery remain a significant burden to the healthcare system. The role of mechanical bowel preparation (MBP) combined with oral non-absorbable antibiotics (OA) in reducing these post-operative infectious complications is largely unknown. The aim of this systematic review was to synthesize the current literature on the use of MBP combined with OA for reducing post-operative infectious complications in both adult and pediatric patients undergoing elective colorectal surgery.
Methods: Update of the systematic review conducted by Koullouros et al., in 2017. Systematic search through Medline, EMBASE, and CENTRAL restricted from November 2015 to present. Search terms included: colorectal surgery, post-operative complications/infections, oral antibiotics and related terms. The primary outcome of interest was the rate of post-operative SSIs. We separated studies by design (observational and RCT) and performed subgroup analysis based on age (< and >18 yrs).**Main results**: The previous review suggested a protective effect of oral antibiotics with no additional benefit added with mechanical bowel prep. In this revieiw, eight studies where identified, two of which were retrospective studies in pediatrics. Three studies were excluded from the meta-analysis due to the use of overlapping patient datasets. Important results included reduced overall surgical site infection(SSI) with MBP+OA compared to no preparation. One study suggested improved outcomes with combination MBP+OA compared to OA alone. One study found a reduction in the occurrence of Clostridium difficile(C. diff) infection with OA alone compared to no prep (OR0.51[0.11-2.37[), and potentially higher rate of C.diff with combination prep MBP+OA compared to OA alone (OR[1.2[0.16-9.09]). **Conclusions**: This review showed a reduction in surgical site infection rates with the use of combination antibiotics. This is consistent with the previous review. Whether the addition of mechanical bowel preparation to oral antibiotics adds any benefit remains unclear and should be an area of focus in future research.

Table 1: Meta-analysis results

*** No preparation: Involve peri-operative IV antibiotics following guidelines for prophylactic antibiotic use.**

Comparison group	Outcome or Subgroup	Studies	Participants	OR
MBP+OA vs No prep	**1.1 6 Any SSI**	**2**	**29910**	**0.50 [0.31, 0.79]**
	1.1.1 pediatrics	*1*	*1152*	*0.69 [0.40, 1.19]*
	1.1.2 Adults	*1*	*28758*	*0.42 [0.37, 0.47]*
OA vs No prep*	**3.1 Any SSI**	**3**	**14832**	**0.66 [0.53, 0.82]**
	3.1.1 Pediatrics	*1*	*564*	*1.08 [0.38, 3.07]*
	3.1.2 Adults	*2*	*14268*	*0.65 [0.52, 0.80]*
	3.7 C. diff infection	**2**	**1210**	**0.51 [0.11, 2.37]**
MBP+O	**2.1 Any SSI**	**1**	**18651**	**0.62 [0.49, 0.79]**

	2.7 C. diff infection	**1**	**1567**	**1.20 [0.16, 9.09]**

[SP 197] Title: SPONTANOUS RUPTURE OF COMMON BILE DUCT: A CASE REPORT

Author: Taimur Qureshi, Shabbir Hussain

Institution: Liaquat National Hospital and Medical College

Case presentation: We report case of 11month old child with spontaneous rupture of common bile duct (SPBD).Non specific presentation resulted in un due stay in a peripheral hospital. Triad of abdominal distension due to ascities, jaundice and passage of clay colored stools, clinically led to diagnosis of biliary leak which was confirmed by biochemical analysis of ascitic fluid. Surgical exploration confirmed common bile duct (CBD) rupture. Cholecystectomy and excision of CBD with Roux-en-Y hepatico-jejunostomy was performed. Blood culture was negative for salmonella typhus and histopathology report did not report any pathological cause.**Conclusion**: Spontaneous perforation of common bile duct (SPBD) is a rare disease and high index of suspicion is required for diagnosis. Triad of ascities, jaundice and clay colored stool should raise suspicion with conformation by analysis of ascitic fluid.**Keywords**: Spontaneous perforation of the common bile duct (SPBD), common bile duct (CBD)

[SP 198] Title: PROPHYLACYIC THYROIDECTOMY IN THREE COUSINS WITH HYPERCALCITONINEMIA AND RET MUTATION

Author: Selin Ural, Güngör Karagüzel, Mesut Parlak, Mustafa Melikoğlu

Institution: Akdeniz University Faculty Of Medicine, Turkey

Aim: There are different protocols for the timing and endication of thyroidectomy in pediatric patients who have RET oncogene mutations. Herein, we aimed to present 3 pediatric patients with known Ret oncogene mutations who underwent prophylactic thyroidectomy.**Case Report**: In genetic screening of a family with multiple adults who have medullary thyroid cancer, 3 pediatric patients were detected to have Ret oncogene heterozygous p.634r mutations. In the preoperative evaluation of these 3 cousins, case 1 (aged 6) had a nodule in the right thyroid lobe. Cases 2 (aged 6) and 3 (aged 11) had normal clinical and radiological findings. TSH, T3 and T4 levels were normal in all cases. Preoperative calcitonin levels were elevated in all 3 patients. With the decision of Multidisciplinary Pediatric Endocrionology Committee, prophylactic total thyroidectomy was performed in all 3 cases. In the histopathologic reports case 1 had colloidal hyperplasia, cases 2 and 3 had neoplastic C cell hyperplasia. The lypmh node samplings in cases 1 and 3 were reported as reactive lymph nodes. In cases 1 and 3, 1 parathyroid gland was excised. Postoperatively in all 3 cases, calcitonin levels were reduced to normal. Length of inpatient care in order was as 3,6 and 4 days, postperative follow up time was 1, 5.5 and 1.5 months in order. None of the patients had hypoparathyroidism or recurrent nerve damage.**Conclusion**: It is important to include children in the genetic screening of families who have adults with known medullary thyroid carcinomas. While prophylactic thyroidectomy can eliminate the risk of C cell malignancies in patients who have Ret mutations with concomitant high calcitonin levels, it is safely applicable in younger children.

[SP 199] Title: INGUINAL ORCHIDOPEXY - A BENCHMARK FOR PAEDIATRIC SURGERY

Author: Leel Nellihela

Aim: To assess the outcome following primary and redo inguinal orchidopexy.**Method:** Retrospective review of all inguinal orchidopexies performed between 2010 and 2014. Impalpable testes requiring a laparoscopic procedure were excluded.**Results:** A total of 373 boys underwent orchidopexy with 460 testes operated upon. Of these 87 patients had bilateral undescended testes. 47 boys had synchronous bilateral orchidopexy. Age at operation was 2.5 to 189 months (median 32). Table 1 shows the postoperative outcome between 3 and 24 months follow up. No significant early complications were recorded. Satisfactory testicular size and position were observed in 436 (95%) testes. Overall testicular atrophy rate was 1.7 % per testis.

16 (3.5%) testes were re-ascended. (3.8% following unilateral orchidopexy with one atrophic, and 5.3% following bilateral synchronous procedure with three unilateral and one bilateral).

Repeat orchidopexy was done for 15 testes. On further follow-up, there was one atrophic testis, one lost to follow up and the rest had a satisfactory outcome (overall success rate 449/460, 98%).**Conclusion:** Our results and the

outcome of orchidopexies are comparable with the published data. Orchidopexy carries need for a sound operative technicality, aiming a normal testis in the scrotum. Achieving a satisfactory scrotal position without a testicular loss can be considered as bench mark in paediatric surgical training and subsequent practice.

		Unilateral UDT		Bilateral UDT			
				Sequential orchidopexy		Synchronous orchidopexy	
		Boys	Testes, n (%)	Boys	Testes n (%)	Boys	Testes n (%)
	Total	286	286	40	80	47	94
Satisfactory position	Acceptable size	270	270 (95)	39	79 (99)	41	87 (93)
	Atrophy	5	5 (1.7)	1	1 (1.3)	2	2 (2.1)
Re-ascent	Acceptable size	10	10 (3.5)	-	-	4	5 (5.3)

[SP 200] Title: THINK â€œVOLVULUS?â€ NOT EVERY NEONATAL ACUTE ABDOMEN IS NEC

Author: Leel Nellihela

Aim: To describe four neonates who presented with abdominal distension and clinical suspicion of necrotising enterocolitis (NEC). Laparotomy revealed small bowel volvulus with haemorrhagic necrosis.**Case description:** Four neonates (two preterm and two term) presented with sudden onset of abdominal distension, three with bilious vomiting. All four experienced an acute deterioration with a mixed acidosis, and were referred to the surgical team for management of NEC. Subsequent gases as well as laboratory samples of blood showed an acute drop in haemoglobin and raised serum potassium (Table 1). Following resuscitation, all four underwent urgent laparotomy and were found to have a volvulus with haemorrhagic necrosis of small bowel. Two had midgut volvulus secondary to malrotation, in two volvulus was localised to ileum. Three survived, one with short gut syndrome. These four neonates presented with a rapid deterioration and abdominal symptoms, and the assumed diagnosis was NEC. All neonates had an acute drop in Haemoglobin and hyperkalemia. Hyperkalemia was initially attributed to haemolysed blood samples, rather than a true reading.**Conclusion:** Not all neonates with an acute abdominal emergency have NEC. Deranged laboratory results such as hyperkalemia with acute anaemia are suggestive of haemorrhagic infarction of bowel due to volvulus. Pre-operative suspicion of volvulus will impact upon parental counselling and resuscitation strategy, and requires immediate laparotomy.

	Age at presentation (weeks)	Haemoglobin (Hb)g/L	Potassium (K) Mmol/L
Case 1	1 (term)	106 > 56	6.8
Case 2	4 (CGA 30)	90	6.9
Case 3	4 (CGA 36)	86	7.7
Case 4	4 (term)	8.3 > 5.7	5.6 > 6.3

[SP 201] Title: ARTERIOVENOUS MALFORMATION OF THE SPERMATIC CORD MASQUERADING AS TESTICULAR TORSION

Author: Haitham Dagash

Aim of the study An arteriovenous malformation (AVM) is an abnormal mass of connecting arteries and veins, which bypasses the capillary network, and are most commonly seen within the central nervous system. There are only a

handful of reported cases of AVMs within the spermatic cord.**Case description**An otherwise healthy 6-year-old boy presented with a 1 day history of sudden onset right testicular swelling and pain. On examination there was swelling of the right testicle and mild pain on palpation. It was possible to palpate above the right testicle. The abdomen was soft non-tender, and no groin lumps or cough impulse were found. Observations were normal as were bladder and bowels movements. A provisional diagnosis of testicular torsion was made and he underwent emergency exploration. A right paratesticular mass extending into the groin alongside a normal right testis, hydatid and epididymis was observed. A groin incision was made and a high ligation of the spermatic cord performed and the mass excised. The left testis was fixed. Tumour markers were taken post-operatively (AFP and B-HcG), which returned as normal. He made an uneventful recovery and was discharged home the following day. Histology of the mass revealed clusters of small vessels embedded in a myxoid stroma consistent with a diagnosis of an AVM of the spermatic cord. **Conclusion**This case highlights the importance of considering AVMs of the spermatic cord as a differential diagnosis of testicular swelling.

[SP 202] Title: THE EFFECT OF POST WAR LIMITIED RESOURCES IN MANAGEMENT OF ANORECTAL MALFORMATION" EDUCATIONAL REVIEW"

Author:ObayAbdulAziz,BassamKhalidAlhajar,AhmadMHamodat,Zaidoonmoayedaltaee,AbdulkareemS.Aljuboory,MajidKh.Alsultan,MahmoodMousaMahmood,Muataz Alani,Waad E.Al-taee,Ranaa N.Bazzoiee,Ahmad M.Al-sharabi,Mujahid aldabbagh,Rekan M.DARAK,Saad S. Yousif,Sinan N.Al-jarrah,Aws A. Al-hamdani

Background : Anorectal malformations (ARMs) comprise a wide spectrum of disease which can affect boys and girls and involve distal anus ,rectum as well as genital and urinary tract**Method** :This was a closed cohort study of patients with ARMs admitted to the hospital between January 2018- January 2019. The study included all patients with ARMs in the neonatal period , those for pull through or closure colostomy , patient born before 2018 or not operated on were excluded from study.**Results** : A total of 62 patients (M:F ratio 1.3:1) were studied with estimated incidence 4 for each 5000 live birth .The median age at diagnosis was 2 days the majority of patients 59 (95%) were less than one year. Most of the patient had major clinical type that need colostomy. Associated congenital anomalies were recorded in 25 (40.3%) .Delay in diagnosis(>48 hours) were found in28(45.2%) patients . Out of 60 patient ,41(68%) had colostomy (mainly transverse colon) , with some cases had their three stages procedure . Mortality recorded in 5(8%) patients mainly males with pouch colon .**Conclusion** : ARMs is a common(stressful) practice among pediatric surgery services , the type which need colostomy demands great effort with more hospital resources. The outcome greatly affected by age at diagnosis , surgical experience and associated anomalies .We recommend wide spread teaching program for midwives and health worker to refer ARMs case to tertiary facility as soon as possible to decrease complication and hopping lessen the mortality rate among ARMs cases.

Oncology Posters Day 2: Group 10
Moderator: Steve Warmann

[SP 203] Title: CONSEQUENCES OF LATE DIAGNOSIS OF INFANT SACROCOCCYGEAL TERATOMA

Author: SARRA AGGOUN

Background / Objectives: Sacrococcygeal teratoma (SCT) is the most common congenital and neonatal neoplasm .It is associated with high rates of perinatal mortality and morbidity. Only an early diagnosis cans avoid its high risk of malignant transformation. We report the case of a child with late diagnosis of SCT and its heavy consequences.
Design / Methods: An 18 months old boy with history of sacrococcygeal cystic mass appeared at the age of two months, has been referred to our pediatric oncology center. This mass was followed up by regular ultrasonography without serum dosage of alfa fetoprotein.Our physical examination reveals a sacrococcygeal solid mass and the CT scan shows a huge multi nodular Hepatomegaly associated with a pelvic heterogeneous mass, so the SCT was classified (Altman III). The serum level of the tumor marker (alpha fetoprotein) was very increased. Two protocols of chemotherapy were necessary to reduce the size of the mass and that of the nodular hepatomegaly , then the patient underwent surgery for resection of his mass using a combined abdominal and coccygeal approach.**Results:** The resection was microscopically irradical and Histopathological study reported malignant teratoma. No post operative complications occurred but a post operative chemotherapy was indicated to avoid the high risk of recurrence. A regular follow up including clinical examination, biological monitoring and radiological imaging was

conducted, which results to normal abdominal CT scan and decreasing levels of tumor marker.**Conclusions:**SCT has a high risk of malignant transformation in the first few years after birth, which emphasizes the need for early and complete resection of SCT to reduce the risk of cancer. Furthermore it is necessary to do a regular follow-up for these patients even if the resection was complete because of the risk of recurrent (malignant) tumor
Keywordssacrococcygeal teratoma**,**early diagnosis**,**radical resection**.**malignant transformation

[SP 204] Title: DIAGNOSIS AND THERAPEUTIC DIFFICULTIES IN PEDIATRIC GENITOURINARY RHABDOMYOSARCOMA: A REPORT OF TWO CASES

Author: SARRA AGGOUN

Background / Objectives: The Rhabdomyosarcoma (RMS) is the most common soft tissue tumor in children. The genitourinary tract is the second most frequent site for RMS in children. The mean objective of surgery is to achieve local control for tumors that do or not respond to chemotherapy or radiotherapy.**Design / Methods:**We describe our experience with two recent cases of urogenital RMS1st case: a three years old girl applied with an emerging mass from the vagina, radiological investigations showed multi papillary tumors attached to the vagina wall. The patient underwent a trans vaginal biopsy.2nd case: a nine month old girl presents an hematuria, MRI revealed a pelvic mass arising from the bladder wall; a trans urethral biopsy was done in this case too.In both cases the pathology report revealed an embryonic rhabdomyosarcoma and chemotherapy has been indicated before the surgical treatment.**Results:**complete tumor resection has been done in the 1st case by a trans vaginal approach and postoperative radiological monitoring does not shows recurrent tumor ; however in the 2nd case we assist to an Important reduction of the mass size after chemotherapy so the patient underwent a trans urethral resection.**Conclusions:**Pediatric RMS requires multimodality therapy including: surgery, chemotherapy and radiotherapy. Conservative approach can be indicated in cases with localized tumor.**Keywords:**genitourinary,rhabdomyosarcoma**,**Conservative approach **,**multimodality therapy

[SP 205] Title: PARATESTICULAR TUMOR A CASE REPORT

Author: Kawtar BOUCHERBAT

Aim of study Spermatic cord tumors are very rare representing <5% of gonadal tumors in children, of great histological diversity and therapeutic ranging from simple tumorectomy to orchiectomy with or without lymph node dissection with sometimes chemo or radiotherapy**Case description**A 12-year-old boy, consulting for a scrotal mass that appeared more than 8 months ago, is firm, non-painful, fixed in the deep, regular plane, located at the superior pole of the testis, measuring about 1 cm of major axis, there is no regional lymphadenopathy or hepatomegaly.Biological balance: NFS: normal. VS correct. beta hCG, Alfafoetoprotein and LDH normal.Testicular ultrasound examination shows a homogeneous hypoechogenic formation in extra-epididymal of the left testicle of 14.5 mm diameter. While CT; small nodule with vascular type contrast enhancement of the lower part of the inguinal canal 15 x 8 mm recalling an angioma with an associated beginner varicocele.Treatment: Exclusively Surgical: by a left transverse inguinal incision. The exploration found a cord of normal non-indurate appearance with some varicose veins behind an extra-epididymal mass oblong about 15mm long, well limited, encapsulated. We perform a complete biopsy exerese sent to anatomo-pathology which returns in favor of a benign hemangioma.The child is regularly monitored for his varicocele.**Conclusion**Our case of hemangioma of the spermatic cord is a rare benign form whose diagnosis was mainly based on clinical and radiological data, our patient has benefited from a conservative surgical treatment, underlining the role of anatomopathology in the therapeutic management and the fellow up.

[SP 206] Title: PRIMARY ADRENAL TERATOMA IN 9 MONTHS OLD CHILD

Author: Abdelrahma Idris

Teratomas are uncommon neoplasms comprised of mixed dermal elements derived from the three germ cell layers, While the majority of teratomas present congenitally in the sacrococcygeal region, within the ovaries of adolescent females and within the testes of young men, they have been identified throughout the body. Extragonadalteratomas tend to occur in midline structures as the anterior mediastinum, retroperitoneum, sacrococcygeal region, and pineal gland..2A primary adrenal teratom is a rare disease. We present a rare case of

primary adrenal teratoma in a 9 months old female infant, This patient initially presented with a 2-months history of a gradually increasing abdominal distention and no other symptoms, She was otherwise growing and developing well, on examination there is palpable intra-abdominal mass, Abdominal CT imaging revealed a right suprarenal heterogeneous mass measuring 12 ×10.5 × 8.5 cm, oncological resection was done, The mass was completely excised, Histopathology showed primary adrenal teratomaOccurrence of adrenal gland teratoma in children is very rare with less than 10 pediatric case reports in English literature.2Surgical resection remains the mainstay of therapy and is required for definitive diagnosis.1Our reported case was typical of primary adrenal teratoma in children as compared to the few cases reported from the English literature . Our search in the literature documented that this case is the fourth case of primary adrenal teratoma to be reported in an infant.

Case Report Day 2: OA10
Moderator: S. Shilpa

[OA 10.1] Title: A CIRCUMAORTIC LEFT RENAL VEIN ACCOMPANIED BY A LEFT OVARIAN VEIN DILATION AND PELVIC CONGESTION SYNDROME IN A 13- YEAR- OLD GIRL.

Author: VERONICA ALONSO

Case descriptionA 13-year-old girl presented with a recurrent abdominal pain of months of evolution that started after her menarche. The physical exam was normal except for the abdominal palpation, that revealed tenderness over the left ovarian point. The laboratory study, ultrasonography and abdominal x- ray were normal. The CT and MRI showed a double left renal vein with a retroaortic component. Additionally, an increased left parauterine circulation and ipsilateral ovarian vein engorgement were present (caliber of 8 mm and grade II reflux). A diagnostic and therapeutic phlebography was scheduled. A venous access through the basilic vein of the right upper extremity allowed the identification of a circumaortic left renal vein. After a selective catheterization, a group of pelvic varicose veins draining to the left ovarian and to the internal iliac veins was identified. An embolization with hydrocoils (calibers of 8 and 10 mm) was performed. The complete occlusion of the pelvic varicose veins was confirmed. There were no complications during the procedure and the symptoms disappeared 2 days later. The patient remains asymptomatic after 6 months.**Conclusions**In the circumaortic left renal vein, two veins arise from the left renal trunk and surround the aorta. This anomaly may cause, haematuria, proteinuria, pelvic congestion syndrome, and massive haemorrhage during surgery. Its recognition is extremely important to avoid complications.A conservative treatment is recommended for patients without renal symptoms or mild hematuria. The endovascular treatment by gonadal venous embolization is safe and effective.

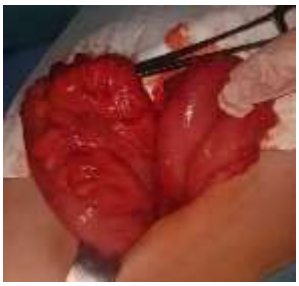
[OA 10.2] Title: PHYTOBEZOAR IN A 2 DAY OLD NEONATE- A MYSTERIOUS CAUSE OF INTESTINAL OBSTRUCTION

Author: Ravi Patcharu

Aim of the study Neonatal intestinal obstruction is commonly caused by small bowel atresia, malrotation, Hirschsprung's disease or meconeum ileus, with subtle differences in clinical features and radiological findings. Phytobezoars, though are the most common types of bezoars associated with small bowel obstruction in children, however it is extremely unusual in newborns. Because of its rarity, phytobezoar obstruction poses diagnostic difficulties. Here, we present a case of intestinal obstruction in a 2-day-old neonate, who on exploratory laparotomy was found to have a raisin impacted in the distal ileum.**Case description:**Term baby, 3.2kg, male,vaginal delivery, cried at birth, passed meconeum on day 1 of life, accepted breast feeds normally till about 30 hours of life when he developed vomiting which was initially non bilious, then bilious. Baby was taken to a hospital where a nasogastric tube was placed and referred to a higher surgical centre. Heart rate was 140/min, respiratory rate 42/min, SpO2 97% and nasogastric output was bilious. Abdomen was soft, hernial sites were normal. Anal opening was normally located. X ray abdomen showed features of dilated small bowel loops but no air shadow in the pelvis. A diagnosis of neonatal intestinal obstruction was made and the child was taken up for exploratory laparotomy. Intraoperatively, an intraluminal foreign body was found impacted in the distal ileum and enterotomy revealed a raisin. Transverse two layered closure of enterotomy was done. On further interrogation in

the post op period it was revealed that the elder sibling had playfully put a raisin into the mouth of the newborn, which he swallowed. **Conclusions:**Bezoars, though rare, should be considered as a cause of neonatal intestinal obstruction in a child who otherwise had normal passage of meconeum and was feeding normally. A careful history needs to be taken to suspect the cause and an early exploration is recommended in all neonates with bilious vomiting.

[OA 10.3] Title: DELAYED SIGMIOD STENOSIS AFTER BLUNT ABDOMINAL PELVIC TRAUMA
Author: SARRA AGGOUN
Aim of the study: Blunt abdominal injury is common in children, most often managed conservatively. Post-traumatic delayed bowel obstruction is a rare complication. We review the literature and report the case of a child managed in our department. **Case description** A 2 years-old boy developed intestinal obstruction 8 weeks following a blunt abdominal pelvic trauma, managed non-operatively. Physical examination revealed vomiting, abdominal distension, abdominal wall ecchymosis and obstipation. Initially, he was treated conservatively, abdominal pain gradually decreased, bowel movements returned but the obstruction was not resolved definitely. The diagnosis was in doubt in view of the intermittent symptoms, so several investigations were set up to recognize the clinical entity.Plain abdominal radiographs confirmed the intestinal obstruction showing several mildly dilated bowel loops in the left mid-abdomen containing air-fluid levels. A CT scan reveals an area of mesenteric haziness adjacent to a thickened loop of sigmoid bowel attracted to site of the existing iliac fracture. A contrast enema found an isolated short segment of narrowed sigmoid loop.The intraoperative findings confirm that the sigmoid bowel was matted to the fracture site by thick fibrous layers of adhesions leading to the narrowing of the sigmoid loop (FIG. 1)We performed adhesiolysis and resection of the involved stenosis segment with an end to end primary anastomosisThe patient was discharged home 7 days later, after an uneventful recovery.**Conclusion**Symptoms suggestive of intestinal obstruction could not be present at the time of initial physical examination therefor a late post traumatic bowel obstruction is a possible condition that needs to be watched for and highlighted.Children who sustain blunt abdominal trauma should be followed up closely. *FIG 1. Operative view of segment of sigmoid bowel with late stricture from blunt trauma.*



[OA 10.4] Title: LIVER ABSCESS IN AN EIGHT-YEAR-OLD BOY AFTER PERFORATED APPENDIX
Author: Marko BaÅ¡koviÄ‡
Aim of the study:Pyogenic liver abscess is rare in healthy children, especially in developed countries. It occurs mainly in immunocompromised children. In the world, there are only a few cases after appendicitis in healthy immunocompetent children (Table 1).**Case description**: We present case of an eight-year-old boy who was referred to our Clinic with acute abdomen. The abdominal ultrasound showed the perforated appendix of the retrocecal and subhepatic position 9mm in diameter with the appendicolith inside the lumen. An urgent appendectomy was initiated. Clindamycin/gentamicin therapy was started immediately preoperatively. When the peritoneum was opened, the abdomen was full of pus that was taken for microbiological analysis. Appendix was positioned according to the ultrasound finding, in addition to being extensively coupled with the ascendant colon. Partial omentectomy and appendectomy were performed. The abdomen is abundantly washed and an abdominal drain is placed. The boy was in the intensive care unit three postoperative days. The fourth postoperative day abdominal drain was removed. On the tenth postoperative day CEUS (contrast-enhanced ultrasound) was performed showing the newly discovered subcapsular lesion of the right lobe of 30 mm diameter liver corresponding to liver abscess. Clindamycin/gentamicin therapy was replaced in piperacilin/tazobactam therapy. Control ultrasounds showed regressive dynamics of hepatic abscess. Two weeks after piperacilin/tazobactam therapy abscesses have almost completely disappeared. After release from the hospital, the boy continued to undergo oral therapy (amoxicillin/clavulanic acid, trimethoprim-sulfamethoxazole) next 2 weeks. Six months after the appendectomy, the boy is healthy, without other complications.**Conclusions**: Pyogenic liver abscess was first

well-characterized as a potential complication of appendicitis by Dieulafoy in 1898. In the period of powerful antibiotics this complication of appendicitis has become exceedingly rare. This is the first case of liver abscess in a child described in our country and in this part of Europe.

Table 1: Patients with liver abscess after appendicitis

Case	Sex / Age (y)	Presenting symptoms and signs	Location and No. of abscesses	Organisms
Pineiro-Carrero VM, Andres MJ. (1989)	Female, 12y	Fever, abdominal pain, vomiting	Right lobe, multiple	Bacteroides, Propionibacterium
Nasir AA et al. (2009)	Female, 12y	Fever, respiratory distress	Right lobe, solitary	/
Salahi et al. (2011)	Female, 6y Female 4y	Fever, abdominal pain, vomiting Fever, abdominal pain anorexia, vomiting	Right and left lobe, multiple Right lobe, two abscesses	Escherichia coli
Hsu YL et al. (2015)	2 patients <18y	Fever, abdominal pain	Right lobe, solitary	Klebsiella pneumoniae, Streptococcus spp.
Piqueras AI et al. (2016)	Female, 14y	Fever,right upper quadrant abdominal pain	Right lobe, solitary	Streptococcus constellatus, Bacteroides ovatus, Bacteroides thetaiotaomicron
Tannous LP et al. (2017)	Female, 11y	Fever, abdominal pain, weight loss	Right lobe, solitary	Streptococcus gallolyticus
Ayers BC et al. (2019)	Male, 11y	Fever	Right lobe, solitary	Bacteroides fragilis, Escherichia coli

Trauma and General surgery Day 3: OA11
Moderator: Sebastian Van As

[OA 11.1] Title: OPERATIVE PEDIATRIC HAND FRACTURES. HOW TO TREAT?

Author: Gergo Jozsa MD, Zoltan Kispal MD, Péter Vajda MD

Introduction: Fractures in the bones of the hand are a common injury both in children and adolescents, its incidence is 15% of all pediatric fractures. Hand fractures which are unstable, oblique, or have a rotational deformity, or are pathologic or open are an indication for surgery. **Aims**: To present the methods and results of operative treatment options for pediatric hand fractures.**Patient and Method**: The authors evaluated in a retrospective study the therapeutic options and results of operatively treated paediatric hand fractures of patients treated between 1st January 2016 and 1st January 2018. Gender distribution, age specifics, fracture mechanism, operative treatment method, and final results after metal removal were inspected. In the above period alltogether 42 patients were treated because of the fracture of one or more long finger phalanx (33/42) or fracture of the metacarpus (9).**Results**: In the case of the phalangeal injuries (33/42), 21 patients were male and 12 were female. All patients with the metacarpal fractures were male. Most injuries occured both in the phalanx (25/33) as well as in the metacarpus group (9/9) above the age of 10. The most common mechanism of injury was direct trauma caused by a ball. Among the patients with phalangeal fractures an identical function to the contralateral side was found in 28/33 patients, whereas in 5/33 patiens good functional results were found. In the metacarpal injury group identical functional results to the contralateral side were found in 7/9 patients, good function was seen in 1/9 and bad function was found in 1/9. In most phalanx injured patients the external retention (aluminum splint, plaster, orthesis) was removed at the 3rd week, whereas the K wires were removed on the 5th-6th week. In the case of patients treated with elastic nails because of a metacarpal fracture (7/9), the involved finger was taped to

the neighbouring intact finger. Following a week in a cast, functional therapy was started with a physical therapist. The elastic nail was removed after complete remodelling of the fracture. In the cases of angle stable plate osteosynthesis (2/9) we used external fixation till the healing of the soft tissue. In these cases there was no metal removal.**Conclusion**: In the case of hand injuries requiring operative treatment, one should always strive for an accurate reduction. In the case of minimally invasive methods, the most stable and simple fixation should be used. By choosing the above operation types in most cases outstanding results can be achieved in childhood and adolescence.

[OA 11.2] Title: MANAGEMENT OF SPLENIC AND HEPATIC PSEUDOANEURYSMS AFTER BLUNT ABDOMINAL TRAUMA. Author: Josué Eduardo Betancourth-Alvarenga

Aim: Splenic and Hepatic pseudoaneurysms (PA) are rare arteriovenous lesions that may develop after abdominal trauma. Rupture or late hemorrhage are the most common complications leading to hemodynamic shock if unattended. In children, its incidence is unknown, and treatment is not well established. Our **aim** is to present our experience managing splenic (SPA) and hepatic (HPA) pseudoaneurysms.**Methods:** A 5-year retrospective review of all blunt abdominal trauma in children under 15 years with splenic or hepatic involvement analyzing the development of PA and its treatment. All cases had an initial CT scan to assess the trauma, a repeat image study was performed in the first week (1-12 days). If PA was diagnosed and hemodynamically stable an angiogram and percutaneous embolization was performed. Postoperative follow-up where made with both doppler and contrast enhanced ultrasound.**Results:** 32 patients with blunt abdominal trauma, mean age of 8.7±3.2 years (2-15 years), 68.7% (n=22) males and a median injury grade III (grade II-V). 40.0% (n=6/15) of splenic trauma developed a SPA and 35.8% (n=1/17) of hepatic trauma developed HPA, with a diagnostic time of 3.7±3 days (1-8 days). PA formation was associated to higher injury severity score with a mean difference of 15.6± 5.3 (CI95% 4.37:26.14 p<0.008). Treatment included percutaneous embolization of SPA in 85.7% (n=5/6) and 1 urgent splenectomy for delayed hemorrhage. The HPA embolization was successful. One case of recurrent SPA after embolization was managed conservatively with strict imaging controls until spontaneous thrombosis. **Conclusions:** Pseudoaneurysms after blunt abdominal trauma is probably underdiagnosed in the pediatric population with a higher incidence than previously reported. We consider advisable to perform an image study before discharging a patient with abdominal trauma to discard PA formation. Treatment is still controversial, but we advocate for percutaneous embolization reserving splenectomy if hemodynamically unstable.

[OA 11.3] Title: DIAGNOSTIC VALIDITY OF THE NEAR INFRARED SPECTROSCOPY (NIRS) DEVICE IN THE PEDIATRIC AGE GROUP WITH CLOSED HEAD INJURY IN A PHILIPPINE TRAUMA CENTER

Author: Brent Andrew Viray

AimThe objective of the study was to determine the validity of the use of Near Infrared Spectroscopy (NIRS) device in the assessment of mild closed-head injury in the pediatric age group, using Cranial CT-Scan as gold standard. **Methods**All hemodynamically stable pediatric patients (aged 0-15 years) with mild closed-head injury admitted at the Emergency Department of a Philippine Trauma Center, from November 2018-May 2019 were include. A trained examiner administered the Near Infrared Spectroscopy (NIRS) scanning to eligible participants who subsequently had a Cranial CT-Scan (as warranted by the Canadian Assessment of Tomography for Childhood Head Injury-CATCH rule) read by a blinded radiologist.**Results**:There were 185 subjects, mostly male (60.54%), and in the toddler (12-36 months) age group (24.32%). Most of these had brain contusions with extra-axial hematomas with ≥ 3.5 ml.. Compared to the gold standard, the accuracy of the assessment using NIRS had a sensitivity (sen) of 92.50%, specificity (spec) of 86.67%, positive predictive value (ppv) of 85.91%, and a negative predictive value (npv) of 93.81%. On stratified analysis, the toddlers (n-73) had the highest accuracy (sen=96.56%, spec=90.91%, ppv=87.5%, and npv=93.81%); ≥ 3.5 ml amount of hematoma (sen-95.74%-100%, spec-87.5%,) and in the epidural and subdural group (sen-100%, spec-87.5%)**Conclusion**NIRS device may be used in the assessment of mild closed-head injury in pediatric patients with high accuracy. The accuracy is even higher in the toddler age group. The portability and ease in the use of the NIRS device, makes it ideal in the pre-hospital setting and a busy resource-limited emergency department. As an aid in the rapid assessment of these patients in the triage, further imaging and management may

be facilitated. The diagnostic validity of the device may provide promising added benefits of not subjecting the patient to intravenous sedation and unnecessary CT-Scan radiation.

Total sample	185	100%
Male	112	60.54%
Female	73	36.36%
Age	Mean-6.11 years old Range-7days-15 years SD-2.34 years	
neonate 0-12 months old	n=7 Mean-9 months old	3.79%
infant 1-2 years old	n=44 Mean-1.48 years old	23.78%
toddler 3-6 years old	n=73 Mean-4.55 years old	39.46%
child 7-12 years old	n=45 Mean-9.58 years old	24.32%
adolescent 13-15 years old	n=16 Mean-14.26 years old	8.65%
Mechanism of Injury		
Fall	136	73.51%
Vehicular crash	37	20%
Mauling/child abuse	12	6.49%
Symptoms		
Headache	87	47.03%
Vomiting	76	41.08%
Loss of consciousness	54	29.19%
irritability	65	35.13%
GCS Score		
15	132	71.35%
14	34	18.39%
13	19	10.27%
CT-Scan Results (Positive results: n-81)		
contusion	45	24.32%
Subdural	12	6.49%
Epidural	15	8.11%
Mixed epidural and subdural	4	2.16%
Intraparenchymal	5	2.70%
Negative	106	57.30%
Needs IV Sedation	53/185	28.64%
infant 1-2 years old	12/53	22.64%
toddler 3-6 years old	38/53	71.70%
child 7-12 years old	3/53	5.66%
Operability		
Operative	4	2.16%
Non-operative	181	97.84%
Mean time between TOI to admission	5.04 hours SD-2.19	
Mean time from admission to CT-Scan	8.23 hours SD-1.43	
Mean time TOI to CT-Scan	13.27 hours SD-3.21	

Mean time between NIRS Scan and CT-Scan	23.43 mins SD-2.76	
Mean NIRS Scanning time	10.03 mins SD-2.81	

General Diagnostic Validity

Parameter	Sen (%)	Spec (%)	PPV (%)	NPV (%)	LR+	LR-
General (n-185)	92.50	86.67	84.91	93.81	6.94	0.09
By Age Group						
Neonate (n-7)	66.67	75	66.67	75	2.67	0.44
Infant (n-44)	86.67	83.76	72.22	92.31	2.67	0.16
Toddler (n-73)	96.56	90.91	87.50	97.56	10.62	0.38
Child (45)	96	89.47	92.31	94.44	9.12	0.04
Adolescent (n-16)	87.5	77.78	77.78	87.50	3.94	0.16
Amount of hematoma						
< 3.5 ml	25	87.50	7.14	96.81	2	0.86
≥ 3.5 ml	95.74	87.50	77.59	97.85	7.66	0.05
>10 ml	100	87.50	66.67	100	8	0
>30 ml	100	87.50	23.53	100	8	0
Kind of hematoma						
Contusion	95.74	87.50	77.59	97.85	7.70	0.05
Epidural	100	87.50	53.57	100	8	0
Subdural	100	87.50	48	100	8	0
Mixed	80	87.50	23.52	98.91	6.4	0.23
Intraparenchymal	71.42	87.50	27.78	97.85	5.71	0.33

[OA 11.4] Title: A TWIST IN THE TAIL: MALROTATION AND HIRSCHSPRUNGS DISEASE

Author: Woodward B., Ghattaura H., Hallows R., Paramalingam S

Aim of the study: Surgeons are classically taught to identify a single, unifying diagnosis that accounts for a patient's symptoms, often with the aid of investigations. However, we present here a rare association between intestinal malrotation and Hirschsprung's Disease, highlighting a diagnostic challenge that may inevitably result in delays in recognition and management.**Case description**:We present 2 cases of infants in whom intestinal malrotation co-existed with Hirschsprung's Disease (HD). The infants each presented with bilious vomiting at birth. There was no evidence of a lower gastrointestinal obstruction at initial presentation, with one infant having passed meconium within the first 24 hours.

			Operative Findings					
	UGI Contrast	Age (hours)	Volvulus	Ladd's Bands	DJ Flexure	Abnormal Finding	HD	Definitive Treatment
1	Abnormal	24	Partial	Yes	Right of midline	Thick meconium	Total Intestinal Aganglionosis	Ileostomy (70cm DJ)
2	Abnormal	48	Nil	Yes	Right of midline	Colonic Dilatation	Standard Segment	Duhamel

Currently, case 1 is perenteral nutrition (PN)-dependant at 6 years of age, having oral 'tasters', while case 2 was managed with rectal washouts and a single stage Duhamel pull-through procedure. He remains well at follow-up.**Conclusions**:Intestinal malrotation and HD can co-exist.We propose considering rectal or colonic biopsies in patients post successful Ladd's procedure with ongoing obstructive symptoms. Our practice is supported additionally by the UK BAPS CASS data, in which 44.2% of patients with HD passed meconium within 48 hours, therefore refuting traditional teaching.Additionally, this is the first report of intestinal malrotation with total intestinal aganglionosis to be described in the literature.

[OA 11.5] Title: NONPARASITIC SPLENIC CYSTS IN CHILDREN AND ADOLESCENTS: CHANGING TRENDS IN THE TREATMENT

Author: Attila Vastyan

Aim: Nonparasitic splenic cysts (Npscs) are uncommon in children. The aim of this study was to present the authors experience as well as the changing trends in the management of Npscs over the last 3 decades.**Materials and methods**: Twenty two children and adolescents were treated for Npscs in 3 paediatric surgical centers in Hungary. The medical records of the patients with Npscs were rewievd retrospectively.**Results**: Thirteen male and eight female patients were treated. Age at surgery ranged from 8 to 16 years (mean: 12,5). Seventeen patients were symptomatic. One total (open) and 6 partial (open)splenectomies were performed. Three open total cystectomies were carried out. In 8 patients laparoscopic deroofing was the method of treatment. Three patients had recurrence later and required re-do laparoscopy or open surgery. In 4 patients sclerotherapy was applied using Doxycycline combined with Vitamin-C instilled into the cyst.**Conclusion**: The surgical treatment of Npscs has changed from from total splenectomy to spleen-preserving procedures (partial splenectomy , cystectomy or partial cystectomy) over the last 3 decades . These therapeutic modalities can be performed open and laparoscopically. Deroofing of the cysts may result recurrence. Sclerotherapy is a newer, less invasiv and promising treatment option for Npscs.

[OA 11.6] Title: COMPLICATED ACUTE GASTRIC VOLVULUS IN CHILDHOOD, AN UNCOMMON AND POTENTIALLY FATAL SURGICAL EMERGENCY â€“ CASE REPORT

Author: Arze L, Rubio M, Korman L, Alvarez L, Gonzales C, Barrenechea M.

Institution: Prof. Dr. JP. Garrahan Pediatric Hospital, Argentina

Introduction: Acute gastric volvulus is an uncommon and potentially fatal entity in childhood due to an abnormal rotation of a part of the stomach over another. It is a potentially fatal surgical emergency due to the circulatory impairment resulting from strangulation. We aim to describe the clinical presentation, imaging and surgical approach in a patient with a complicated acute gastric volvulus. **Case report**: A three year old previously healthy female patient presented with abdominal pain, gastric distention and vomiting for 48 hours. Abdominal xRays showed a marked dilatation of the upper part of the stomach, air under the diaphragm and peritoneal cavity and absent air in the small bowell, suggestive of an acute gastric volvulus complicated with gastric perforation and leading to exploratory laparotomy. An organo axial gastric volvulus was found with devitalized patches in the mayor curvature and a perforation in the fundus. The stomach was devolvulated and the perforation closed. Early post operative course was uneventful. 48 hours later, the patient developed severe abdominal pain, distention and absent bowell sounds, blood stained vomiting and poor tolerance through the transpiloric tube. Abdominal ultrasound showed fluid in the peritoneal cavity and small bowell distention. Abdominal xRays showed air in the peritoneal cavity and marked colonic distention. At laparotomy, a perforation was found over a gangrenous patch in the gastric fundus leading to a partial gastrectomy. Uneventful post operative course, being discharged 23 days later. **Conclusions**: When an acute gastric volvulus is found, we insist in an early surgical approach in order to improve the prognosis, avoiding the loss of gastric irrigation and a potentially fatal gastric perforation as occurred in our patient.

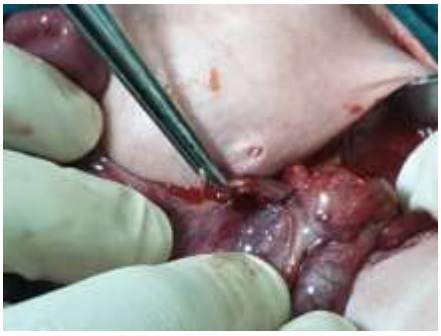
[OA 11.7] Title: MAMMARY DUCT ECTASIA: AN ONGOING CHALLENGE

Author: Ottavio Domenico Adorisio

Aim of the study Mammary duct ectasia (MDE) is an uncommon finding in children, and rarely considered as differential diagnosis in pediatric breast lump. This may be due to its rarity, and the presumption that duct ectasia is essentially an acquired disease in adulthood. **Case description**A five-year-old girl was referred for sudden onset of a left breast lump. Physical examination revealed a 5 cm palpable mass under the left breast without signs of both inflammation and bloody discharge (BD) from the nipple. Remaining physical examination was normal. Ultrasound examination revealed a 5 × 4 × 2 cm complex mass in the sub-areolar tissue. The results of blood cell count and coagulation tests were normal. Hormonal serum levels, on such as prolactin, estradiol, follicle-stimulating hormone, luteinizing hormone, thyrotropin, thyroxine were unremarkable. One months after, a second

US was unchanged. Due to the suspect of vascular tumor, surgical excision was performed via a circum-areolar incision and was a large cystic lesion containing dark fluid was excised. Pathological examination revealed a mammary duct ectasia.**Conclusions** Mammary duct ectasia is an uncommon finding in children in which breast masses usually represent a benign physiological enlargement or a developmental soft tissue anomaly. Only thirty case have been reported in literature. Most of them were male presenting with bloody discharge (BD). Ultrasonographic findings may be very changeable. In our case US was not diriment, BD was absent and laboratory tests were normal. A definitive diagnosis was obtained only after the pathological examination. Mammary duct ectasia should be considered in the differential diagnosis of pediatric breast lumps. Treatment may be expectant in the great part of cases while surgical treatment should be reserved to those cases in which MDE do not solve after 6-9 months of close observation or in the suspect of mammary neoplasm.

[OA 11.8] Title: PERFORATED APPENDICITIS IN PREMATURE NEWBORN A VERY RARE CASE REPORT
Author: MUSTAFA Azizoglu,
Aim Of Study In this study, we aimed to present the case of a perforated appendicitis in premature newborn.**Case Description**Premature infant boy born at 24 weeks of gestation by cesarean section (CS) from a 22 years-old mother primigravida with preeclampsia. The neonate birth weight was 725 g. On the 37th day of life, feeding intoleration and abdominal distension were started and bloody defecation began. Pneumotisis intestinalis, pneuomobilia or free air under the diaphragm were not detected but in radiograph dilated abnormal bowel loops were clearly observed.. After the diagnosis of Necrotizing Enterocolitis (NEC-Ib) clinically and radiologically, NEC treatment and management started. Management included bowel rest, gastric decompression and administration of broad-spectrum antibiotics. On the 40th day of life, infant had bile vomiting and he didn't defecate during last 3 days even doing rectal irrigation and stimulation. Increased the abdominal distension. Procalcitonin: 0,48 ng/mL, CRP: 8,82 mg/dl, Albumin: 1,7 gr/dL WBC: 15,33/mm3 %63 neutrophil, neutrophil / lymphocyte ratio: 3,9, Hgb: 9,26 gr/dL PLT: 229000/mm3. AXR showed free air under the diaphragm (Figure 1). He was underwent surgery with a preliminary diagnosis of gastrointestinal perforation due to NEC. Surprisingly, her small bowel appeared viable without evidence of any necrotizing process and any abnormal appearance like dilated bowel as seem in



hirschsprung dissease. There was fibrinous exudate and the appendix was indurated, hyperemic, and perforated distally (Figure 2). Then, we have done appendectomy procedure. Appendectomy material has sent to patology's department to check ganglion cells microscopically to rule out hirschsprung dissease (Figure 3). **Conclusion**The beggining symptoms of NEC and perforated appendicitis are similar. Perforated appendicitis can be the early symptom of hirschsprung dissease. Perforated appendicitis should be kept in mind in patients who suspected hirschsprung disease or NEC in the newborn period.**Key words**; Newborn, perforated appendicitis, NEC

Hepatobiliary Day 3:OA12
Moderator: Mark Davenport

[OA 12.1] Title: SPLEEN STIFFNESS MEASUREMENT AS NON-INVASIVE TEST TO EVALUATE AND MONITORING PORTAL HYPERTENSION IN CHILDREN WITH EXTRAHEPATIC PORTAL VEIN OBSTRUCTION
Author: Rustam Yuldashev
Aim of the study was to test the feasibility of spleen stiffness measurement (SSM) by two dimensional-shear wave elastography (2D-SWE) and compare data on its diagnostic use with upper gastrointestinal endoscopy in children with extrahepatic portal hypertension (EHPH) before and after surgery**Methods.** 34 children with EHPH (mean age 10.11±0.76 years; 23 boys and 11 girls) and ten controls (mean age 7.57±1.22 years; 6 boys and 4 girls) were included in the study. All patients with EHPH initially underwent upper gastrointestinal endoscopy (UGE) followed by

ultrasonography including SSM by 2D-SWE. Spleen stiffness was compared in 4 groups of patients: group A – patients with EHPH without large spontaneous portosystemic shunts (n=15);group B – patients with EHPH with large spontaneous portosystemic shunts (n=9);group C – patients with EHPVO and after surgical portosystemic shunts (n=10);group D – normal subjects (n=10).**Results.** According to UGE **c**hildren in group A had significantly higher grades of esophageal varices (EV) (2.3±0.14; p<0.001) from those in groups B and C. After performing surgical shunting procedures (in group C) grade of EV declined to 0.37±0.14. There was significant difference (p<0.001) in the mean SS of children in group A (70±4.64 kPa) from those in group B (37.04±4.62 kPa) and group C (26.3±2.9 kPa). After surgery SS decreased but remained elevated compared with controls (26.3±2.9 vs 17.85±1.3 kPa p=0.016). The SS show mild but significant correlation with grades of EV (*r*=0.56, p=0.002). **Conclusions:** The SS measured by 2D-SWE is feasible in children with EHPH and the results reflect the presence or degree of esophageal varices, thus elastography of spleen is useful in monitoring portal hypertension before and after shunt surgeries.

[OA 12.2] Title: APPLICATION OF ENHANCED RECOVERY AFTER SURGERY FOR 3D LAPAROSCOPIC EXCISION FOR CHOLEDOCHAL CYST IN CHILDREN

Author: Tan Yunpu

Objective To explore the clinic value of enhanced recovery after surgery(ERAS) for laparoscopic choledochal cyst(CDC) excision in children. **Methods Retrospective** review the clinical data of 33 inpatients whose fianl diagnosis is CDC. Those patients in the April 2017 to October 2018 were in the control group (18case) which adapt the traditional treatment for CDC . Those patients in the November 2017 to May 2018 were in the ERAS group which adapt ERAS application (15case). All the patients have received the three-dimensional laparoscopic choledochal cyst excision and Roux-en-Y hepatojejunostomy by the same pediatric surgeon group. Intraoperative blood loss, operation time, rate of conversion to laparotomy, time for initial water intake,post-operative time to total enteral nutrition,post-operative hospital stay, total cost in hospital,post-operative complication, readmission rate within 30 days were reviewed. **Results** The Intraoperative blood loss ,operation time, rate of conversion to laparotomy shows no significant difference between the ERAS and control group(P>0.05). The time for post-operative initial water intake,post-operative time to total enteral nutrition,post-operative hospital stay, total cost in hospital were (21.5±2.1)h, (4.3±0.5)d, (5.3±0.6)d, (35945.49±6071.46)yuan in the ERAS group and (44.1±3.5)h, (7.7±2)d, (9.1±2.5)d, (45609.08±11439.80)yuan in the control group,respectively. The ERAS group were significantly less than the control group(P>0.05). There were no significant differences between the two groups on post-operative complication. Readmission within 30 days are not found in both of the two groups. **Conclusion** Perioperative ERAS program can shorten post-operative hospital stay, relieve perioperative discomfortlighten the financial burden, is great of importance for the treatment of CDC.

[OA 12.3] Title: PHENOTYPIC FORMS OF BILIARY ATRESIA AND THEIR CLINICAL MANIFESTATIONS

Author: Rustam Yuldashev

There is an anatomical classification of biliary atresia (BA), but its clinical manifestations are almost always homogeneous. Since the cause of BA is still unclear, we **aimed** to study the clinical signs of its different phenotypic forms. **Methods.** 37 infants diagnosed with BA included in this study. They underwent clinical and laboratory-biochemical studies, abdominal US and liver stiffness measurements. Children with diagnosed BA were divided into 5 groups of analysis:I – infants with isolated BA (n = 6);II - Cytomegalovirus (CMV IgM positive) associated BA (n = 12);III - biliary atresia splenic malformation syndrome (BASM) (n = 3);IV - CMV associated BASM (n = 8);V - cystic form of BA (n = 8).**Results.** Biliary atresia splenic malformation syndrome was more often observed among girls (80%). These infants had also higher levels of GGT - 766.5 ± 187.3 U/l (p <0.001) and lower mean age - 60 ± 10 days (p <0.001). Association of BA with CMV (groups II and IV) manifested with significantly higher levels of alkaline phosphate (ALP) 715.7 ± 121.8 and 747.8 ± 187.9 U/l (p <0.001). Hyperbilirubinemia and elevated ALT and AST were more pronounced among infants with isolated BA (p <0.05). According to abdominal US more often ascites was observed among infants with BASM - 33% observations. Children with cystic form of BA had ascites in 25% cases. They also had a cystic structure at the porta hepatis with average size of 11,1 ± 1.63 mm. More pronounced dilatation of the hepatic artery on Doppler US noted in group III. Fibrous triangle was significantly higher in infants with CMV associated BASM. Liver stiffness according to FibroScan was highest in group III (26.5 ± 2.1 kPa) and lowest in those with isolated BA (12.2 ± 3.2 kPa).**Conclusion**. Thus, BASM is the most severe variant of BA, which characterized by

an earlier clinical manifestation, pronounced biochemical disturbances and as a consequence higher liver stiffness according to elastography

[OA 12.4] Title: CROSS-SECTIONAL STUDY ON NUTRITION RISK SCREENING AND GROWTH AND DEVELOPMENT STATUS OF CHILDREN WITH BILIARY ATRESIA

Author: Yu Ning, Zhe Wen, Liyan Pan, Jing Sun, Huiying Liang
Institution: Guangzhou Medical University,China;

To analyze the baseline growth and development status of patients with biliary atresia, evaluate their nutritional risk and characteristics between different ages and sexes, and provide evidence-based medical evidence for clinical nutritional intervention.**Method** The admission data of patients less than 6 months old with biliary atresia diagnosed surgically in Guangzhou Women and Children's Medical Center from July 2015 to April 2019 were collected. Nutrition risk screening based on NRS-2002 was carried out, Height for Age Z-score(HAZ),Weight for Age Z-score(WAZ) and Weight for Height Z-score(WHZ) were calculated by using WHO Anthro.**Result** A total of 343 effective cases were collected.There were 180 cases of males and 163 cases of females, the median age was 71 days. (1) 30.6% of BA patients had high-risk of nutrition, the proportion of high-risk patients in the＞90-day group was significantly higher than that in the≤90-day group(42.2% vs 26.9%, P＜0.01, OR=1.98, 95%CI:1.18~3.31), and the proportion of high-risk patients in female group was significantly higher than that of male(38.0% vs 23.5% , P＜0.01, OR=1.96, 95%CI:1.23~ 3.12). (2) 36.7% of the patients had abnormal growth and development,among them, growth retardation (HAZ＜-2) accounted for 17.3%, emaciation (WHZ < -2) accounted for 12.4%, and low weight (WAZ < -2) accounted for 7%,and there was no significant difference between age and sex groups.**Conclusion**About one-third of patients with biliary atresia are in high-risk of nutrition at admission, and the risk increases with age. Female are more likely to have high nutritional risk.More than one-third of patients with biliary atresia have abnormal growth and development.Clinical attention should be paid more to the importance of nutrition screening of biliary atresia, and nutritional interventions should be actively taken to improve the quality of life of patients with biliary atresia.

[OA 12.5] Title: LAPAROSCOPIC STAGED AND REDO SURGERY FOR CHILDREN WITH CHOLEDOCHAL CYSTS

Author: Mei DIAO, Long LI, Rui-Jie ZHOU
Institution: Capital Institute of Pediatrics

Aim of the Study: Conventionally, staged and redo surgeries are thought to be contra-indications for laparoscopy in children with choledochal cysts (CDC) because of adhesions, deranged anatomy, and demanding techniques. The current study is to assess the efficacy of laparoscopic staged and redo surgeries in CDC children.**Method**: Between January 2006 and July 2019, 203 patients were referred to our hospital for the second stage or redo surgeries. A series of retraction sutures were placed through 1) serosa of gallbladder fundus or gallbladder fossa, 2) proximal common hepatic duct to facilitate dissection and anastomosis, 3) proximal→distal→posterior wall of CDC in staged surgery, 4) hepatic lobe to facilitate anastomosis of aberrant hepatic duct to jejunum. **Main Results:** Sixteen (7.9%) patients converted to open procedures because of unclear anatomical structure caused by dense adhesions, uncontrolled oozing, stenotic segments extended to the intrahepatic bile ducts requiring extensive dissections, anastomosis of aberrant hepatic duct to jejunum in early practice. The remaining 187 patients successfully underwent laparoscopic 1) staged surgery (n=85); or 2) redo surgeries (n=102): i) revision of choledocho- or cholecysto-jejunostomies, ii) postoperative bile leak repairs, iii) postoperative biliary obstructions. The mean age at surgery was 3.8 years. Average operative time was 4.5 hours. Mean postoperative hospital stay, resumption of full diet, and duration of drainage were 6.5 days, 3.2 days, and 4.5 days respectively. Median follow-up period was 54 months. None of patients had biliary re-obstruction, intrahepatic stone formation, cholangitis, pancreatic fluid leak, pancreatitis, wound infection/ dehiscence, or accidental injury of viscera which were directly adherent to the abdominal scar of primary surgery. Two (1.1%) patients undergoing staged surgeries developed bile leaks because of unrecognized aberrant hepatic ducts and repaired laparoscopically. Liver function tests were normalized within 1 year.**Conclusions**: Laparoscopic staged and redo surgeries are safe and effective in selected CDC children.

[OA 12.6] Title: A SERIOUS COMPLICATION OF LIVER HYDATID CYSTS IN CHILDREN; CYSTOBILIARY FISTULAS
Author: Sabri Demir
Aim: We aimed to determine predictive-factors for predicting cysto-biliary fistulas (CBF) in children after treatment of liver hydatid cyst (LHD).
Methods: The records of patients who were treated for LHD between 01.06.2009-1.06.2019 were retrospectively reviewed. Age, sex, laboratory test results, size and number of cysts, method of first-intervention (percutaneous or surgery), whether or not CBF-developed and how it was treated were investigated. Among findings, those could be predictive were investigated. Data were evaluated with SPSS 21.0 program, p <0.05 was considered significant.
Results: Of the 97 patients, 48 (49.5%) were male, 49 (50.5%) female, the mean age was 11.2 years, Eighty-patients had right (82.5%), 13 had left, and 4 had bilobar involvement. As first-intervention, surgery was performed in 39 (40.2%); percutaneous treatment was performed in 58 (59.8%) patients. In 8 patients (20.5%) in surgery group and in 6 patients (10.3%) in percutaneous group, totally in 14 patients (14.4%) CBF developed. The mean cyst-diameter of CBF-developed group was 114.36 mm, and of CBF-undeveloped group was 74.30 mm. There was no statistically significant differences between groups in terms of age, sex, involved lobe, other organ involvement, and preoperative results (p> 0.5). There was a significant relationship between the cyst diameter and the rate of CBF development in both surgical and percutaneous groups (p <0.05). ROC analysis was performed, and the cut-off value for the development of CBF detected as 69 mm for children. Since obstructive jaundice seen in adults is not common in children, an increase in liver function tests and bilirubin levels were not seen in our patients.**Conclusion**: A significant correlation was found only between the size of the cyst and developing CBF. Cysts greater than 69 mm have a higher risk of developing CBF after both percutaneous and surgical treatment and should be closely monitored.

[OA 12.7]Title: HEPATIC EXPRESSIONS OF HGF/C-MET AND NATIVE LIVER SURVIVAL IN BILIARY ATRESIA
Author: Panicha Tangtrongchit
Background: Prognosis of biliary atresia (BA) remains difficult to predict. This study evaluated the roles of hepatocyte growth factor (HGF) and its receptor (C-met) towards clinical outcome and native liver survival.**Methods**: Hepatic HGF and C-met expression was determined using immunohistochemistry from liver biopsies of 41 BA patients during Kasai operation, and 17 non-cholestatic patients. The HGF and C-met expression was visually scored as per its intensity and percentage of stained area. BA Patients were classified as high- and low-HGF and C-met receptor status. Native liver survival was compared between the two groups at 3-year follow-up. Data are shown as median (min-max).**Main results**: Median age of BA patients was 2 (1-6) months. Hepatic HGF and C-met staining scores of BA patients were higher than those of non-cholestatic patients (P<0.0001). There was a correlation between HGF and C-met (spearman r = 0.77, P<0.0001). However, there was no association between their expression and early outcome at 6 months post-op. Mean follow-up time was 68.6 (0-160) months, survival analysis revealed that native liver survival at 1 year and 3 years were 88% and 77%, respectively. Additionally, 82.6% (19/23) of patients in low-HGF group survived with native liver, compared with 66.7% (10/15) of those in high-HGF group (p=0.436). For C-met expression, 78.6% (22/28) of low-score and 70% (7/10) of high score groups survived with native liver (p=0.673).**Conclusion**: Strong expression of hepatic HGF and its receptor in BA patients was demonstrated. However, the expression was not associated with the early outcome and native liver survival. These results suggest that HGF involved in the liver pathology of BA but its expression cannot be used as a prognostic indicator. Small sample size of patients was a main limitation. Further studies are warranted to validate and extend our findings.

[OA 12.8] Title: EFFECTS OF PARTIAL INTERNAL BILIARY DIVERSION ON LONG-TERM OUTCOMES IN PATIENTS WITH PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS: EXPERIENCE IN 44 PATIENTS
Author: Mohammad Ali Ashraf
Purpose: Progressive familial intrahepatic cholestasis (PFIC) is a hereditary disease characterized by cholestasis, which may cause jaundice, severe pruritus, and cirrhosis in the later stages. By the invention of biliary diversion

methods, these patients were prevented from undergoing liver transplant. Using biliary diversion techniques, we Break the entero-hepatic cycle, and thus, lowering the bile acids pool will help the pruritus to be resolved. Herein, we report 44 cases of PFIC underwent Partial internal biliary diversion (PIBD) and long-term outcome of these children, which are sparsely reported.**Methods**: All patients were confirmed by liver biopsy as PFIC before the operation. All underwent cholecysto colic bypass by jejunal interposition due to severe pruritus non-responding to medication. Laboratory blood tests, sonography, and physical exam were done before and after the operation once every three months. Also, a questionnaire was designed to ask the patients about the symptoms after the operation, and Pruritus score was measured using the 5D-itch scale.**Results**: 44 children (25 boys, 19 girls), between 1.75 to 27.5 years (at the time of this study) were followed for a mean period of 5 years. Age at operation ranged from 2 months to 18 years, with a mean of 4.3 years. Of these children, 11 were lost to follow up. Results showed a significant decrease in pruritus and sleep disturbance after the surgery ($p<0.001$). Also, jaundice decreased from 81/8 % before to 3.7% following the surgery. 50 % of the patients became medication-free at follow-up.**Conclusion**: PIBD is a safe procedure which helps non-cirrhotic children preserve their liver function. Therefore prevents them from undergoing liver transplant. Effective results were achieved in terms of severe pruritus and jaundice, and children were able to regain their sleep pattern. It also avoids external stoma, which is more convenient from the patient's point of view.

General Surgery and Case Report Day 3: OA13
Moderator: Dragon Kravaruscic

[OA 13.1] Title: ANTIREFLUX SURGERY: ARGENTINE PEDIATRIC SURGEONSâ€™S PERSPECTIVE
Author: Juan Bois
Aim of the Study: Antireflux surgery is a common procedure in daily practice, but several aspects remain controversial. Objective: To determine the current state of this practice in our country.**Methods**: A web-based structured survey was conducted, raising different scenarios frequent in the clinical practice. **Results**: 105 pediatric surgeons completed the survey. 71% work in the public system. Number of procedures/ year: 55% < 5; 25% between 5 y 10; 20% > 10. 87% work together with a pediatric gastroenterologist. 52% deny regular MDT meetings with Gastroenterology, but 63% share their decisions with colleagues. Preoperative studies: >70% use contrast study and pHmetry. 54% use endoscopy in non- neurological patients and 68% in esophageal atresia (EA). In neurologically impaired patients (NI) that require a gastrostomy, GER investigation was performed in 63% (the rest of the surgeons would indicate fundoplication without documented evidence of GER). 54% would add a fundoplication if GER were observed in contrast study.Technique: Nissen fundoplication indicated by 96%. Laparoscopic approach in 57,2%. 51/105 do not use an esophageal bougie for wrap calibration. 37% routinely ligate short gastric vessels. Sutures: 56% non-absorbable polyfilament, 71% use three stitches in the wrap. 62% routinely close the crural space. Pyloroplasty: 2,9% in all NI patients, 36,9% only if abnormal gastric emptying.Postoperative period: Refeeding: 24 hs (mean). Follow up assumed by surgeon only in 91%, 82% do not indicate additional studies routinely. Perceived need of postoperative long term PPI treatment was <10%. 64.7% only prescribe PPI for GER recurrence, and 41.9% reoperate for postoperative hiatal hernia.**Conclusions**: Our results show significant variability in clinical practice on antireflux surgery in our country. Also non- compliance with Pediatric Gastroenterology current practice guidelines was observed. Future multicenter collaboration is needed to assess the real scenarios and propose actions for improvement.

[OA 13.2] Title: ESOPHAGEAL REPLACEMENT: 13 YEARS EXPERIENCE AT THE CHILDRENÂ€™S HOSPITAL LAHORE
Author: Muhammad Saleem, Asif Iqbal Sandhu, Uzma Ather, Nabila Talat, Imran Hashim, Muhammad Bilal Mirza, Jamal Butt,
Introduction: The ingestion of corrosive substances remains a major health Problem in children. It can be associated with life long consequences. Approximately 20% of ingestions of caustic substances result in some degree of esophageal injury. Extensive esophageal injury not manageable by dilatation may need esophageal

replacement some times subjecting the patient to noticeable morbidity and mortality. Corrosive ingestion along with long gap esophageal atresia remains the major indication of esophageal atresia in our setup. **Objectives:** To share our experience of esophageal replacement in terms of Clinical scenarios requiring replacement and to address the complications encountered and outcome of definitive procedure. Study design: Retrospective analysis.Place: Department of Pediatric Surgery, The Children's Hospital and The Institute of Child Health Lahore.Duration of study: January 2005 to July 2019. **Methodology:** All the patients are admitted through OPD, emergency or shifted from medical department. Detailed history and clinical examination was done. All baseline investigation, X-ray Chest PA-View and Barium swallow and meal were done. Usually staged procedures i.e. Esophagoscopy, and Dilatation, if failed, then either directly esophageal replacement, or feeding jejunostomy was performed to build up the patients. Sometimes, patients were built up by TPN and at fitness, esophageal replacement was performed.**Results:** A total of 93 patients with esophageal replacement were included. Males=61 (65.59%) & Females=32 (34.41%). Gastric Transposition 84 cases (90.32%), Colon replacement 06 cases (6.45%) & Jejunal replacement in 02 cases (2.15%) and revision of colonic replacement 01 (1.08%) were performed. Routes of esophageal replacement were trans hiatal 71 (76.34%), retrosternal 19 (20.43%), trans hiatal with thoracotomy 09 (9.68%). In one patient we anastomosed conduit just in pharynx as pharynx was also burnt.
Complications: No graft necrosis, wound infection 10 (10.75%), wound dehiscence 5 (5.37%), anastomotic leak 9 (9.68%), anastomotic stenosis 12 (12.90%), fistula formation 4 (4.30%), aortic injury 1 (1.08%), dumping syndrome 8(8.60%), reflux 18 (19.35%), dysphagia 15 (16.13%) & early and late mortality 12 (12.75%) and one failure of replacement. **Conclusion:** There are problems with esophageal replacement in 3rd world countries, with low resources and suboptimal intensive care services. Gastric conduit is the best conduit as esophageal replacement having advantage of single anastomosis and Transhiatal route is best shortest route for replacement.**Key words:** Corrosive ingestion, Esophageal replacement, gastric pull up, Trans hiatal route, retrosternal route.

[OA 13.3] Title: DIFFERENTIAL ADVANTAGE OF LIVER RETRACTION METHODS IN LAPAROSCOPIC FUNDOPLICATION FOR NEUROLOGICAL IMPAIRED PATIENTS â€"COMPARISON OF 3 KINDS OF PROCEDURES-
Author: Toshio Harumatsu, Taichiro Nagai, Keisuke Yano, Shun Onishi, Koji Yamada, Waka Yamada, Makoto Matsukubo, Mitsuru Muto, Tatsuru Kaji, Satoshi Ieiri
Aim of the Study: Liver retraction during laparoscopic fundoplication is important for obtaining an optimal space. There are some kinds of methods, which risk and benefit are unclear. We compared 3 different liver retraction method and evaluated their safety and utility. **Methods**:Forty-four patients who underwent laparoscopic fundoplication in our institution between 2005 and 2018 were included. Patients were classified into three groups (A, B and C) based on the liver retraction method. A: Snake retractor method, n=18. B: The crural suture method, n=13. C: The needle grasper method, n=12. Patients' characteristics, operative data and postoperative outcomes were reviewed

Table 1 Patients' characteristics and clinical data

Methods	Snake retractor	Crural suture	Needle grasper	*p*-value		
						
Group	Group A	Group B	Group C	A:B	A:C	B:C
No. of Patient	18	13	12			
Patient characteristics						
Age (years)	19.7±13.6	10.0 ± 9.4	24.4±16.7	0.05	0.78	0.07
Height (cm)	130.6±21.8	114.6 ± 25.4	137.9 ± 27.9	0.13	0.16	0.07
Weight (kg)	24.3 ± 12.5	18.0 ± 5.3	26.4 ± 9.9	0.17	0.58	0.05
Operative information						
Operative time (minute)	318 ± 102	238 ± 89	228 ± 63	0.05	0.03	0.99
The time requiring the liver retraction (minute)	11.7 ± 4.9	14.6 ± 10.7	4.1 ± 4.9	0.99	0.02	<0.01
blood loss (ml)	41.6 ± 85	18.5 ± 42	25.6 ± 47	0.84	0.99	0.92
Blood test data at post-operation						
AST (U/l)	108.7 ± 94.8	65.6 ± 31.6	112.3 ± 85.5	0.22	0.97	0.36
ALT (U/l)	97.5 ± 75.4	56.1 ± 28.9	86.7 ± 69.4	0.6	0.8	0.32
CRP (mg/dl)	9.4 ± 6.4	3.8 ± 2.5	10.0 ± 6.7	<0.01	0.9	0.03
Overall complication	0.6 ± 0.6	0.4 ± 0.5	0.8 ± 0.6	0.47	0.31	0.08
Liver enzyme elevation	7 (37%)	4 (30%)	5 (42%)	0.7	0.96	0.59
Pancreatic enzyme elevation	2 (11%)	2 (15%)	2 (17%)	0.91	0.88	0.99
Postoperative mortality	0	0	0	NA	NA	NA
Postoperative hospital stay (days)	13.6 ± 5.1	17.7 ± 9.3	13.0 ± 3.3	0.52	0.97	0.51

based on medical record. **Main results**: Patients' characteristics and clinical data were showed in Table 1. There was no significant difference about background of patients between three groups. The time requiring the liver retraction of group C was significantly shorter than A and B (minutes, A; 11.7 ± 4.9, B; 14.6 ± 10.7, C; 4.1 ± 4.9, $p < 0.05$). The operative time of group B and C were shorter than A. There was no significant difference in liver enzyme elevation in 3 groups. The serum liver enzymes elevated temporarily, but improved within a week in all groups. C-reactive protein levels were significantly lower in the group B than A and C ($p < 0.05$). In all groups, no serious complications associated with liver retraction were recognized. **Conclusions**:
Most convenient methods in laparoscopic fundoplication for neurological impaired patients is needle grasper method. But snake retractor and needle grasper have the confliction with operator's forceps depending of patients' size. Crural suture method do less damage to liver, but require the technique. It is important to select the appropriate method according to operator's skill and patients' size and deformity.

[OA 13.4] Title: BISHOP KOOP CONVERSION OF TEMPORARY STOMA CAN BE AN OPTION TO ESTABLISH GUT CONTINUITY EARLY WHEN PRIMARY ANASTOMOSIS IS NOT SAFE

Author: Md Samiul Hasan

Objective: Closure of the diverting stomas in infants and children are associated with life threatening complications in many instances, especially in a low resource setup because of poor nutritional status of babies with diverting stoma and Inadequate or improper function of unused distal gut. The aim of this study was to evaluate the effectiveness of Bishop Koop stoma in establishing early continuity of gut and confirming the function of distal gut.**Methods**: This was a retrospective analytical study performed in Dhaka Shishu(Children) Hospital from July 2016 to June 2018. Patients with diverting stoma for neonatal intestinal perforation or obstruction, whose histopathology and distal loopogram were equivocal or nutritional status was poor were selected for Bishop Koop conversion of stoma. Informed written consents were taken from legal guardians. **Results**: Numbers of patient were 29 (16 male &13 female). Mean age of conversion was 5.69±2.54 months. Primary diagnosis were complicated meconium ileus in 8 patients, NEC in 5 patients, Ileal atresia in 2 patients, Volvulus neonatorum in 3 patients, intestinal perforation due to perinatal asphyxia in 4 patients and intestinal obstruction in 7 patients. Normal bowel movement was established in 26 patients. One patient died of sepsis on 6th post operative day and one had anastomotic leakage. There was no significant difference in respect to outcome between perforation and obstruction group. Bishop Koop stomas were closed after 6 weeks of formation.
Conclusions: Though it requires further prospective comparative studies with primary closure, still it reveals that Bishop Koop conversion of temporary stoma is an alternative approach to establish early gut continuity in low resource setup.**Key words**: Bishop Koop stoma, Diverting stoma, intestinal perforation.

[OA 13.5] Title: HEPATICO CHOLECYSTODUODENOSTOMY: A NEW SURGICAL APPROACH FOR BILIARY DRAINAGE IN PATIENTS WITH CHOLEDOCHAL CYST (HEPATOBILIARY LEFT OVER)

Author: Md. Abdul Aziz

Background & Aim: Choledochal cyst is a common hepatobiliary anomaly in children. Choice of surgical procedure is still a matter of debate. We intended to establish an anatomically and physiologically compatible biliary drainage in children with Choledochal cyst.**Methodology**: Data of all patients who underwent hepatico cholecystoduodenostomy for Choledochal cyst from March 2011 to July 2018 were analyzed retrospectively. The operations were done at Dhaka Shishu (Children) Hospital and some other private hospital in Dhaka, Bangladesh. In all patients, Choledochal cyst was excised keeping the gall bladder in situ. Neck of the gall bladder then anastomosed with common hepatic duct and fundus of gall bladder was anastomosed with duodenum. Data regarding patient's demography and surgical outcome were recorded and analyzed.**Results**: Total numbers of patients were 61. Mean ages of the patients were 37 months. Male and female ratio was 1:1.7. Average operation time was 1 hour 50 minutes. Oral feeding was started on 4th post operative day in patients without complications. Average hospital stay was 11 days. Three patients developed post operative biliary leakage, two of them improved with conservative management and another required re laparotomy and repair of leakage. Four patients had superficial wound infection, they were managed conservatively.**Conclusion**: In our observation, hepatico

cholecystoduodenostomy provides excellent anatomically and physiologically compatible biliary drainage after excision of Choledochal cyst and avoid Roux –en-Y related intestinal complications.**Key words**: Choledochal cyst, Hepatico cholecystoduodenostomy.

[OA 13.6] Title HETEROPAGUS TWINS: A CASE SERIES FROM A LOW/MIDDLE INCOME COUNTRY
Author: Haitham Dagash
Aims of the study Conjoined twins can be symmetrical or asymmetrical (heteropagus). Heteropagus twins consist of the anatomically normal autosite and a parasitic twin (incompletely formed) attached to the autosite. Heteropagus twins however have a reported incidence of 0.05 to 0.1 in 100 000 births. We present a case series of 3 heteropagus twins managed at two Paediatric surgical centres in Sudan.**Case series:** Case 1**:** A 2-day baby boy was transferred to our unit with heteropagus with the site of fusion being the upper lip. Investigations and echo were normal. Emergency surgery was undertaken as the parasite had become ischaemic. Intubation was smooth and the seperation uneventful. The patient had bilateral cleft lip and incomplete unilateral cleft palate. Feeding started on the second post-operative day and was discharged after five days. Case 2: A 3-day old baby boy presented following a home rural delivery. Antenatal scans were normal. He was found to have a parasitic twin attached to the epigastric region. The parasite was composed of lower limbs and genitalia. Echocardiography revealed a single ventricle and large VSD. A CT scan was done preoperatively. Surgery was done on day 9 and the patient recovered with no morbidity.Case 3**:** A 26-day old baby boy delivered vaginally at home and referred with a heteropagus. The parasite was attached to the epigastric region, and gain consisted of lower limbs and genitalia. Mother had no antenatal scans. Echocardiography revealed transposition of great vessels, VSD, severe pulmonary stenosis and mild tricuspid regurgitation. Surgery was undertaken when the baby was 40 days. The separation was sucessful and the patient made an unremarkable recovery.**Conclusions:** Heteropagus surgery can be safely performed in low/middle income countries. Despite the late presentation and comorbidities, the outcome is generally favourable.

General Surgery Poster Day 3: Group 1
Moderator: Abdellatif Nouri

[SP 207] Title: EFFICACY OF ACACIA SENEGAL FOR STOMA CARE IN CHILDREN WITH COLOSTOMY
Author: Ali Fazeli
Introduction: The creation of a stoma on the abdomen and the need for appliance on the peristomal skin make this region vulnerable to inflammatory skin disorders .In this study, we introduce a novel protection with Acacia senegal and compare the protective effects of this barrier with zinc sulfate ointment. **Methods and Materials:** To examine the effect of protective interventions, a prospec- tive, controlled, clinical study was conducted. Participants were all infants consecutively admitted to the pediatric surgery unit of the study hospitals for elective surgery of colostomy creation. After laparotomy and double barrel colostomy creation, patients were randomly assigned to use one barrier (gum acacia or zinc sulfate ointment) for 4 weeks. **Results:** In this study, a total of 60 infants (30 as case and 30 as control) were evaluated. Results showed that there was a statistically significant difference in peristomal skin inflammation rate in groups; infants who had Acacia senegal barrier showed lower and less sever inflammation rates (p 1⁄4 0.05). **Conclusion:** Compared with zinc oxide, we found a lower rate of dermatitis in the Acacia group.

[SP 208] Title: IMPACT OF STANDARDISED VACTERL SCREENING FOR ASSOCIATED ANOMALIES IN ANORECTAL MALFORMATION AND ESOPHAGEAL ATRESIA/TRACHEOESOPHAGEAL FISTULA CASES IN A NEWLY ESTABLISEHD TERTIARY HEALTH CENTRE
Author: Jayakumar TK
Aim:A standardised performa for screening VACTERL associated anomalies was introduced in our newly established tertiary health centre. The impact of VACTERL screening was assessed in these cases. **Material and**

methods:Neonates with anorectal malformations and esophageal atresia/tracheo-esophageal atresia (EA/TEF) are often affected by other congenital anomalies in VACTERL spectrum. We introduced a standardised performa in July 2018 to effectively implement VACTERL screening. Data was analysed until July 2019. Cases which had complete evaluation were included. Types of anomalies and their clinical impact were assessed. **Main results**:Cases were reviewed between July 2018 and July 2019. Out of these 42 cases underwent complete evaluation for VACTERL anomalies. 36 cases (85.7 %) were anorectal malformations, 6 (14.2 %) had EA/TEF. 12 (28.5 %) cases had vertebral anomalies, of which 11 (26%) were sacral anomalies and 1 (2.3%) case had tethered cord. 8 cases (19 %) had cardiac anomalies, of which 6 (14.2 %) had ASD, 1 case (2.3%) had VSD and another had mitral regurgitation. 11 cases (26 %) had genitourinary anomalies, of which 6 cases (14.2 %) had hydronephrosis, 2 cases (4.7 %) had single kidney and 2 cases (4.7 %) had hypospadias. Limb anomalies, both being polydactyly, were found in 2 cases (4.7 %). Apart from their primary disease, among these associated anomalies, only hypospadias patients underwent surgical treatment. Other anomalies did not require any immediate surgical treatment. **Conclusion**:In our study we found that most of the associated anomalies in VACTERL spectrum did not require immediate surgical treatment. We suggest that all cases of anorectal malformations and EA/TEF undergo compulsory screening to detect associated anomalies that can contribute to morbidity of these patients.

[SP 209] Title: HIRSCHSPRUNGâ€™S DISEASE : THERAPEUTICS SIDES IN RESULTS

Author: OUEDRAOGO Isso, Yé Siko, Tapsoba W Toussaint, Ouédraogo S Francis, Béré Bernadette, Savadogo Lassané, Bandré Emile, Wandaogo Albert

Introduction: Hirschsprung's disease is a frequent malformation. **Study objective** The aims of this study were to describe the therapeutics sides and to value the cure results of Hirschsprung's disease**.Results** During the period of January 2008 to December 2015, 39 children had operated for HD. The pulls through technical were Swenson procedure in 79, 5 % of cases (31 patients) and De la TORRE procedure in 20, 5 % of cases (8 patients). Most patients (59 % of cases) profited two-time treatment (colostomy- pullthrough in). Age mean in pull-through time was 36, 33 and 25 mouths in Swenson, De la TORRE procedure respectively. The mean regress was 3, 31 Bears. Twenty-five were revised during the study. According to Holschneider clinical continence scale 8/18, 9/18 and 2/18 of patient operate by Swenson procedure had respectively excellent, good and fair continence. Underwent to De la TORRE procedure 3/7, 2/7 and 2/7 respectively had good, fair and poor continence. **Conclusion** Something residues about HD treatment. The follow up in short, mean and long time after cure is necessary to value the continence and quality of life. **Keywords** : Hirschsprung disease, therapeutics sides ; outcome, continence, childrens.

[SP 210] Title: INVESTIGATION OF METHOD OF TISSUE VITALITY MEASUREMENT IN NEWBORNS WITH NECROTIZING ENTEROCOLITIS.

Author: Tatiana Zebrova

Aim of the Study. The goal of the study is experimental research aiming to find the best and most appropriate way of tissue vitality measurement of intestines in newborns with necrotizing enterocolitis in order to prevent short bowel syndrome development.**Methods**. 12 rats aged 1-2 years 250-390 grams (6 male and 6 female) were investigated. After intravenous anesthesia, the middle laparotomy was performed (the cuts around 4 cm length). Intestines were brought out of the abdomen and the measurements of bioimpedance were made under specific conditions: live intestines, ischemic intestines (with tied artery), and removed (dead) intestines. The measurements were made every 20-30 minutes during 3 hours. The rats were out of the experiment after intracardiac injection of thiopental sodium. Maths were done afterwards. The intestines were fixated in formalin and sent for histological verification. The method is currently under copyright registration and clinical approval. The next stage of clinical implementation is planned for October 2019. The study passed the ethical approval of the Ethical Committee of the University in November 2017. **Main results**. The results prove the decrease of bioimpedance in rats' intestines with time which is also proved and verified histologically. **Conclusions**. This showcases the validity of methods and brings us to the conclusion that it can be further used in practical surgery and may significantly help in urgent neonatal surgery in order to save as much live tissues as possible. We also

foresee this method to reduce the amount of short bowel syndrome complications in newborns with necrotizing enterocolitis.

[SP 211] Title: NEONATAL SURGERY: A NEW MODEL FOR LOCAL HEALTH SYSTEM

Author: Ernesto Leva

Neonatal surgery represent the most complex and delicate field in pediatric surgery, which requires dedicated surgeons with adequate experience. Literature also report that centralisation of complex diseases guarantee a better outcome and results. Authors suggest a new model of management of this aspect in the Health Italian system.**Method**: since 2010 surgeons of a tertiary hospital (Central Hospital) activated a system of counselling of neonatal surgery in newborns admitted in other Hospitals 2-3° level without the presence of a service of pediatric surgery (District Hospital). Evaluation of the patients was done after call of the local neonatologist where suspicion of surgical pathologies occur; after this first evaluation was organised if necessary the transfer of the patient from the District Hospital to the Central Hospital.**Results**: in a period of 8 years this system was actuated; with this system an area of 38.000 deliveries/year was covered, compare to the 6.500 of the Central Hospital. Due to this increase of patients, from 60 neonatal surgical procedures/year at the beginning in the last year 153 procedures were performed. All the procedures were for major complex neonatal surgery. Moreover, thank to this system there were a reduction of transport of patients to Central Hospital from the District Hospitals of 45%. Patients which remained in the District Hospital didn't received any surgical procedures and required only clinical observation.**Conclusion**: this innovative model presents several benefits: the most important is to reduce the discomfort for the parents of the newborn without inappropriate transfer. Second, a reduction in terms of costs for the Health System. Third, the increase of the experiences for the surgical team, and the possibility to enlarge the training for young surgeons under supervision of experts. Last, the possibility to obtain contracts for young qualified pediatric surgeons.

[SP 212] Title: THE INTERVAL BETWEEN ONSET OF SYMPTOM AND DIAGNOSIS OF PEDIATRICS MALIGNANT ABDOMINAL TUMORS

Author: Hazem Alageb

Purpose:Childhood cancer remains the one of the most cause of pediatric Deaths. Evaluation of child with an abdominal mass remains to be a challenging problem to the clinicians.Previous studies have shown significant delay between the onset of symptom and diagnosis. This study aimed to evaluate the interval between the onsets of the symptoms and the final diagnose. And factors associated with diagnostic delay.**Method**:Retrospective study for 154 patients between the ages of 1 and 18 years, diagnosed as malignant abdominal Cancer from (2017-2019) in paediatric surgery centers in Sudan.**Result**:The average lag time to diagnosed pediatrics solid malignant abdominal tumors is (9, 5) weeks.Short delay seen in the patients whom diagnosed as case of abdominal lymphoma presented with acute abdomen to emergency units.Wilms tumors have short lag time.Older children present later than infant.**Conclusions**: Parent first presentation is early but the delay in the diagnosis due to financial issues or social causes like traditional medicine and multiple consultations.Diagnostic delay was associated with age and site of presentation, and points of first symptom Detection, first healthcare contact, and first suspicion of malignancy.

[SP 213] Title: INTRAPARENCHYMAL HEPATIC FOREIGN BODY IN A 10-YEAR-OLD BOY: ULTRASOUND-GUIDED BULLET EXTRACTION

Author: AvrianaPety Wardani, Erik Prabowo, PangeranAitara

Background: Intraparenchymal hepatic foreign body is rarely encountered. Utilization of ultrasond (US) for foreign body extraction possess significant advantages compared to conventional radiography (e.g. C-arm)**Case report**: A 10-year-old boy suffered from a gunshot to his upper right abdomen. CT-scan evaluation showed metallic foreign body lodged deeply between the 5 and 6 liver segment. The patient have underwent two previous operations that failed in attempt to remove the bullet. Ultrasound-guided bullet extraction was successfully performed quickly without injuring any vascular and biliary structures.**Discussion**: Intraparenchymal foreign body extraction with

intraoperative Ultrasound guidance possesses numerous advantages. It is non-invasive, non-radiating, and provides satisfactory real-time visualization of vascular and billiary structures, allowing the operator to avoid injuring such structures.**Conclusion**: Ultrasound-guided laparotomy for intraparenchymal hepatic extraction of foreign body results in high success rate, quicker operating time and minimal complications.**Keywords**: extraction, foreign body, intraparenchymal, liver, Ultrasound-guided laparotomy

[SP 214] Title: DIFFERENTIATION OF ANAL POSITION INDEX BETWEEN MALE ANORECTAL MALFORMATION PATIENTS AND NORMAL BABIES

Author: Eva Linda

Aim of the study: Anorectal Malformation (ARM) was congenital anomalies of neonates who born without a normal anus. The goal for treating ARM is to make an anus within the sphincter muscle complex and to gain continence without social impairment. Muscle stimulator used to determine sphincter location but this tool not available in every pediatric surgery institutions. Other method to determine the anal location that often used was reffered to anal position index (API) of normal babies. Aim of this study was to analyzed the differences of API between male ARM patients and normal babies. This study had been approved by health research ethics committee in our institution.**Methods** : This was a cross-sectional study to find out the differences API of 20 ARM patients and 20 normal babies (age less than 28 days) by consecutive sampling since June 2018 until January 2019. API in ARM patients measured using muscle stimulator in operating room before surgical procedure begin while conventional method of API measurement done for normal babies.**Main Result:** In ARM group age and body weight distribution were 4,75 ±1,9 days and 2847,5±399,2 grams. There were 7 babies ARM without fistula, 7 babies ARM rectourethral fistula, 3 babies ARM rectovesica fistula and 3 babies ARM Midline Raphe fistula. In control group (normal babies) age and body weight distribution were 3,35±2,6 days and 2855,0±344,4 grams. In ARM group API range was 0,41-0,55 and mean 0,46 (0,462±0,057). In control group API range was 0,49-0,55 and mean 0,53 (0,534±0,021). There was significant difference of API value of both group using Mann-Whitney statistical test ($p<0.001$).**Conclusion:** There was significant difference of API value of ARM group and control group.

[SP 215] Title: PRE-OPERATIVE HIRSCHSPRUNG-ASSOCIATED ENTEROCOLITIS COMPARISOAN BETWEEN CLASSICAL CRITERIA AND DELPHI METHOD

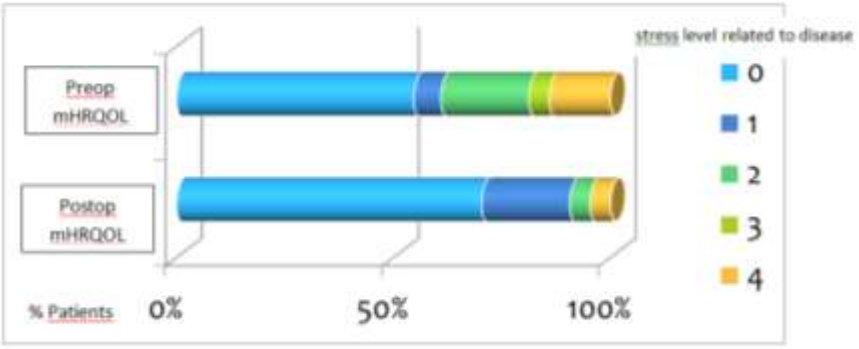
Author: Akhmad Makhmudi

Aim of the Study: Hirschsprung-associated enterocolitis (HAEC) is the most common complication of Hirschsprung disease (HSCR) that may happen pre- and post-operatively. Several methods have been reported to determine the diagnosis of HAEC. This study aimed to compare the diagnosis of pre-operative HAEC using the classical criteria and the Delphi method. **Methods:** We analyzed medical records of HSCR patients who were admitted to our hospital from January 2009 to December 2015. The Delphi method indicates that the diagnosis of HAEC requires a score of 10 or greater, while the classical criteria determine diagnosis of HAEC by three characteristics: abdominal distension, explosive diarrhea and intestinal cutoff sign.**MainResults:** Ninety-six subjects were involved in this study, consisting of seventy-four males and twenty-two females. The most common findings of the Delphi score were abdominal distension (100%) and dilated loops of bowel (100%), followed by leucocytosis (78.6%), lethargy (71.4%), cutoff sign in rectosigmoid with absence of distal air (71.4%), and shift to left (71.4%). The incidence of pre-operative HAEC was significantly higher using the Delphi method (14/96, 14.6%) compared to the classical criteria (4/96, 4.2%) with *p*-value of 0.013.**Conclusions:** The incidence of pre-operative HAEC in our hospital is considered relative low. Discrepancy in diagnosis rates of HAEC using the Delphi method and classical criteria suggests the need of a more standardized definition for HAEC.

[SP 216] Title: LIFE QUALITY AND LONG TERM RESULTS AFTER THYROID SURGERY IN PEDIATRIC PATIENTS

Author: Henar Souto

Aim of study To describe the long term results and complication rates after thyroid surgery in a single pediatric institution.**Methods**Retrospective study of 68 patients (25 boys and 43 girls) who underwent thyroid surgery during the years 1996-2018. Clinical data were recovered from medical records and telephonic interview including a modified health related life quality questionnaire (mHRQOL measuring stress level related to disease from 0-4) was carried to asses hypocalcaemia, voice disturbance, scar cosmesis and life quality. Patients who were not reached or did not answer the questionnaire were excluded.**Results**During the period of study 37 patients underwent total thyroidectomy and 31 hemithyroidectomy. The mean age of patients was 10.6 years (range 1-16). Indication for surgery was a benign disease in 33 patients (48,5%), a malignant disease in 24 (35,2%) and in 11 patients (16.1%) thyroidectomy was performed for prophylactic reason in multiple endocrine neoplasia syndrome. There were no major postoperative or immediate complications. The mean follow-up was 4.8 years (range 1-10 years). One patient suffered temporary unilateral recurrent laryngeal nerve palsy, no permanent palsy was found in our series, and no patients had voice disturbance. Post-operative temporary hypocalcaemia was found in 6 patients (9.3%) and only one patient had permanent hypocalcaemia. Most of the patients (83.8%) had a positive perception of their scar cosmesis, and only 3 referred to have an unaesthetic scar significantly affecting their life quality. The patients with a benign disease referred an overall increase in their life quality and stress level when compared to the management of their disease previous to the surgery (table 1). **Conclusions** Thyroid surgery is becoming a frequent procedure in the pediatric population. When performed by experienced surgeons in a methodical way, it is a safe procedure with low incidence of complications that improves life quality of the patients.



Trauma Poster Day 3: Group 2
Moderator: Sebastian VAN AS

[SP 217] Title: SUPRACONDYLAER HUMERUS FACTURE REGISTER
Author: Gergo Jozsa
Introduction: Fracture of supracondylaer humerus (SCH) is one of the most frequent childhood fractures. Due to high-energy injuries, more severe fractures with greater displacement are formed today. Part of the fractures without displacement and with small displacement can be treated in a conservative way with plaster, collar and cuff attachment. Fractures with greater displacement and rotational deviation are clearly operative.**Aim:** In view of the lack of Hungarian and European epidemiology data on the above injuries, we would like to classify it based on the classification, the nature of the injury and the therapy used, by the data obtained through the collection of data and by the variety of its treatment. **Patients and Methods:** The authors evaluated in a prospective study in the therapeutic operative options in three Hungarian pediatric trauma center and results of operatively treated pediatric SCH fractures of patients treated between 1st September 2018 and 1st August 2019. Gender distribution, age specifics, BMI, fracture mechanism, operative treatment method, and final results after metal removal were inspected. In the above period altogether 76 patients were treated because of the fracture of SCH. **Results:** In Budapest 59, in Miskolc 7 and in Pécs 10 patients were treated because of SCH fracture. The main age at the time of surgery was 6 years. The average BMI was 16. Six patients suffered flexion type and 70 patient's extension SCH fracture. Prophylactic antibiotic was administer to 64 patients. We didn't find any correlation between septic complication and prophylactic antibiotic. Cefazolin was the most commonly used antibiotic. Closed reduction was performed in 47 cases and percutan or open reduction was done is 29 patients. Radial crossing K-wire fixation was the most commonly used technique in 42 patients. Half of the cases local anesthesia (Bupivacain) was injected to the fracture hematoma. In most SCH injured patients the external retention (cast, orthesis) was removed at the 3rd week, whereas the K wires were removed on the 3th-8th week, the average time was 4.7

weeks. Frequency of the ulnar nerve lesion after the operation was significantly higher in case of distal crossing fixation method. **Conclusions:** Based on the results of our prospective registry, a suitable treatment algorithm of the childhood SCH fracture can be developed and national and European acceptance of the least complicated surgical technique can be achieved.

[SP 218] Title: AN EVALUATION OF PEDIATRIC TRAUMA SYSTEMS: A SYSTEMS THINKING ANALYSIS

Author: Carmen Ramos-Irizarry

Aim: The current trauma system in our County disperses pediatric patients to Trauma Centers (TCs) outside the County. This study aims to do an in-depth analysis of our current trauma system, addressing the challenges in transporting children to the appropriate center, identifying key variables and develop a causal loop diagram of the current trauma system.**Methods**: This is a cross sectional, descriptive study using a sequential mixed-methods design. A thorough review of the literature and interviews of key stakeholders were conducted in August 2017. Data obtained from the interviews was used to develop a causal loop diagram using Vensim modeling software version 7.2. De-identified Emergency Medical Services database from January 1, 2012 to April 20, 2018 was analyzed. Descriptive statistics were calculated for age, gender, ethnicity, race, reason for transport, refusal of care, mechanism of injury, disposition and zone of injury variables. Statistical analyses were conducted using SPSS version 25 and R 3.3.1.2. Statistical significance was set at alpha <0.05.**Main results**: Our County has a complex trauma system, with 4 major subsystems identified (Fig. 1). A total of 5,297 EMS records were evaluated. 95% of the calls were trauma related. 90% of injured children are being cared for at the County's acute care hospitals. 7/10,000 children are trauma alerts transported out of the County every year. Weather is the main factor impeding transport outside the County. There is lack of data on trauma alert patients who are cared for at the local hospitals and outside the County.**Conclusions**: Our County lacks data on trauma services and outcomes for pediatric patients, despite population growth. Severe weather impedes the transfer to TCs, keeping these patients at the local hospitals. There is insufficient evidence to demonstrate that the current management of injured children in the County provides the best outcomes.

[SP 219] Title: PROSPEROUS RELEASE OF REPEATED CONTRACTURES AND PSEUDOSYNDACTYLIES IN CHILDREN AFFECTED BY DYSTROPHIC EPIDERMOLYSIS BULLOSA (DEB)- ADVANCES OF OUR ORIGINAL ZSRP HAND SURGERY TECHNIQUE

Author: Antun Kljenak

Aim of the Study Cutaneous scarring in genetically determined disorder called DEB characterised by excessive suspectibility of the skin and mucosae to separate from the underlying tissues following mechanical trauma may lead to a varity of complications.The choice of the best treatment modalities for hand contractures and pseudosyndactylies in DEB children has always been a matter of controversy.Does our ZSRP technique provide favorable results and could it be carried out repeatedly? **Methods**In collaborations with Debra Europe we established international expert's team for EB. All inovations, the best practice records and modifications of DEB hand surgery were collected together and standardised as ZSRP protocol. We provided 84 reconstructive hand surgical procedures for 23 EB patients (range5-27years) involving extensive release of contractures and pseudosyndactyly, with split skin grafting of secondary defects. We prefere an"aggresive" surgical approach aiming for complete correction of their hand deformity at the time of surgery.

A retrospective chart review was performed.Treatment benefit was measured by objective assessment. Outcomes were graded into five classifications.**Main results**

After reconstruction of the hand with ZSRP technique our patients showed significant improvement postoperatively.In all of our patients there was no need for additional dressing changes for donor side after use of our PRST technique. Finger extension and functional assessment was significantly improved for up to 7 years postoperatively.Surgery and the postoperative regimen of rigid night splints has allowed arrest or minimal

progression of contractures in short-term follow-up study. **Conclusions**Surgical intervention is relatively often recommended and performed to correct DEB hand deformities,but recurrence and the need for repeated surgery are due to nature of DEB common. Our ZSRP surgical technique with originally designed body-shaped acrylic gloves for long-term night splintage after hand surgery yields excellent cosmetic and functional results and can be carried out repeatedly for up to 4 times.

[SP 220] Title: HEALTHCARE DETERMINANTS OF CLUBFOOT IN LOW AND MIDDLE INCOME COUNTRIES

Author: Sharaf Sheik-Ali

Background: The management of Clubfoot or Congenital Talipes Equinovarus (CTEV) in newborn infants involves a relatively simple, non-invasive manipulation, without which much more extensive corrective surgery is required. For a condition that can be primarily managed non-surgically if identified early with basic training, it is still a common problem in low and middle income countries (LMICs) in which less than 15% of patients with CTEV will access treatment. This study provides an analysis on the current state of CTEV management in LMIC's. **Methods**: A cross sectional study was undertaken of 1,489 medical institutions in 62 LMICs. Data was evaluated from the "World Health Organisation Situation Analysis tool" database. SPSS was used to examine the number of institutions (involving primary and other levels of service delivery) referring cases of CTEV and reasons for referral. **Results**: 72.7% (1083/1395) of institutions did not manage CTEV. The majority were level 1 or 2 institutions/hospitals who referred on to level 3 institutions. Lack of sufficient skills was the cited reason for referral in 92.1% (668/725) ($p<0.001$). Skills ranged from non-invasive and surgical approaches. 39.4% (286/725) of institutions also cited lack of functioning equipment as a reason ($p<0.001$). 39.6% (287/725) of institutions also cited lack of medical supplies/drugs as a reason ($p<0.001$). Non-management differed among the level of facilities with level 3 institutions being more likely to facilitate CTEV treatment compared to non-level 3 institutions. **Conclusions**: The study provides insight into the lack of management of CTEV by 62 LMICs. Reasons include lack of skills and medical equipment. Increasing the capacity of sustainable training programmes that teach basic manipulative methods to a wide range of health care providers in LMICs may reduce the present available skill deficit in treating CTEV in LMIC's.

[SP 221] Title: THE USE OF HD 3D VIDEOSYSTEM IN AN INDIVIDUAL APPROACH FOR SELECTION OF COMPONENTS FOR ENDOPROSTHESIS OF HIP JOINT

Author: Kirgizov F.I.4 , Frolov E.B.1, Minaev S.V.3, Efremenkov A.M.2, Kirgizov I.V.2, Grigorova A.N.

Aim: Using the hd 3d video system, develop and individual approach for component selection for endoprosthesis of hip joint in children with varying degrees of pathology severity of proximal femur and of hip joint as well. **Materials and methods**: A study on polyethylene liners while revising the endoprosthesis was conducted. 12 children with varying degrees of hip joint pathology were selected for the study group. An individual approach was developed for components selection for endoprosthesis, with the use of hd 3d videosystem under experimental conditions.
The area of wear of polyethylene was investigated with use of HD 3d video system, with high resolution, color image, it makes easier to visualize the area of concave on liner surface. The "Image Scope S" program was used to analyze and process the images. It has a function of highlighting objects of interest on the image, measuring their areas, applying text on image, and also a function of calculating area of irregular shaped image. Analysis of statistical data showed, that in varying severity of pathology of proximal femur and hip joint, using HD 3d videosystem, made it possible to plan the selection of optimal components of endoprosthesis in preoperative period, and determine their correct anatomical position. **Results**: Analysis of ratio of wear area of liners with initially not eliminated pathological valgisation and antetorsion, leading to increase of horizontal inclinare angle in hip joint endoprosthesis module, reliably found uneven wear of polyethylene in anterior part of inner surface of studied liners. **Conclusion**: It was experimentally proven that using of HD 3d videosystem, the performed analysis of polyethylene wear with different types of disease of hip joint with not eliminated pathological valgisation and antetorsion, causes uneven wear of polyethylene with load bias. Consequently, with use of HD 3d videosystem, the developed individual approach for component selection for endoprosthesis of hip joint allows in preoperative period to select the most optimal components of endoprosthesis, and determine much accurate anatomical position. The introduction of computer

technologies in HD 3d videosystem allows to conduct all calculations automatically with great precision, which will significantly optimize the results of research and introduce into a program of preoperative planning not only in orthopedics.

[SP 222] Title: DIAGNOSTIC VALIDITY OF THE NEAR INFRARED SPECTROSCOPY (NIRS) DEVICE IN THE PEDIATRIC AGE GROUP WITH CLOSED HEAD INJURY IN A PHILIPPINE TRAUMA CENTER

Author: Brent Andrew Viray, Esther A. Saguil, Eric SM Talens, Teodoro Herbosa

AimThe objective of the study was to determine the validity of the use of Near Infrared Spectroscopy (NIRS) device in the assessment of mild closed-head injury in the pediatric age group, using Cranial CT-Scan as gold standard. **Methods**All hemodynamically stable pediatric patients (aged 0-15 years) with mild closed-head injury admitted at the Emergency Department of a Philippine Trauma Center, from November 2018-May 2019 were include. A trained examiner administered the Near Infrared Spectroscopy (NIRS) scanning to eligible participants who subsequently had a Cranial CT-Scan (as warranted by the Canadian Assessment of Tomography for Childhood Head Injury-CATCH rule) read by a blinded radiologist. **Results**:There were 185 subjects, mostly male (60.54%), and in the toddler (12-36 months) age group (24.32%). Most of these had brain contusions with extra-axial hematomas with ≥ 3.5 ml.. Compared to the gold standard, the accuracy of the assessment using NIRS had a sensitivity (sen) of 92.50%, specificity (spec) of 86.67%, positive predictive value (ppv) of 85.91%, and a negative predictive value (npv) of 93.81%. On stratified analysis, the toddlers (n-73) had the highest accuracy (sen=96.56%, spec=90.91%, ppv=87.5%, and npv=93.81%); ≥ 3.5 ml amount of hematoma (sen-95.74%-100%, spec-87.5%,) and in the epidural and subdural group (sen-100%, spec-87.5%)**Conclusion**NIRS device may be used in the assessment of mild closed-head injury in pediatric patients with high accuracy. The accuracy is even higher in the toddler age group. The portability and ease in the use of the NIRS device, makes it ideal in the pre-hospital setting and a busy resource-limited emergency department. As an aid in the rapid assessment of these patients in the triage, further imaging and management may be facilitated. The diagnostic validity of the device may provide promising added benefits of not subjecting the patient to intravenous sedation and unnecessary CT-Scan radiation.

PARAMETER	VALUE	PERCENTAGE
Total sample	185	100%
Male	112	60.54%
Female	73	36.36%
Age	Mean-6.11 years old Range-7days-15 years SD-2.34 years	
neonate 0-12 months old	n=7 Mean-9 months old	3.79%
infant 1-2 years old	n=44 Mean-1.48 years old	23.78%
toddler 3-6 years old	n=73 Mean-4.55 years old	39.46%
child 7-12 years old	n=45 Mean-9.58 years old	24.32%
adolescent 13-15 years old	n=16 Mean-14.26 years old	8.65%
Mechanism of Injury		
Fall	136	73.51%
Vehicular crash	37	20%
Mauling/child abuse	12	6.49%
Symptoms		
Headache	87	47.03%
Vomiting	76	41.08%
Loss of consciousness	54	29.19%

irritability	65	35.13%
GCS Score		
15	132	71.35%
14	34	18.39%
13	19	10.27%
CT-Scan Results (Positive results: n-81)		
contusion	45	24.32%
Subdural	12	6.49%
Epidural	15	8.11%
Mixed epidural and subdural	4	2.16%
Intraparenchymal	5	2.70%
Negative	106	57.30%
Needs IV Sedation	53/185	28.64%
infant 1-2 years old	12/53	22.64%
toddler 3-6 years old	38/53	71.70%
child 7-12 years old	3/53	5.66%
Operability		
Operative	4	2.16%
Non-operative	181	97.84%
Mean time between TOI to admission	5.04 hours SD-2.19	
Mean time from admission to CT-Scan	8.23 hours SD-1.43	
Mean time TOI to CT-Scan	13.27 hours SD-3.21	
Mean time between NIRS Scan and CT-Scan	23.43 mins SD-2.76	
Mean NIRS Scanning time	10.03 mins SD-2.81	

General Diagnostic Validity

Parameter	Sen (%)	Spec (%)	PPV (%)	NPV (%)	LR+	LR-
General (n-185)	92.50	86.67	84.91	93.81	6.94	0.09
By Age Group						
Neonate (n-7)	66.67	75	66.67	75	2.67	0.44
Infant (n-44)	86.67	83.76	72.22	92.31	2.67	0.16
Toddler (n-73)	96.56	90.91	87.50	97.56	10.62	0.38
Child (45)	96	89.47	92.31	94.44	9.12	0.04
Adolescent (n-16)	87.5	77.78	77.78	87.50	3.94	0.16
Amount of hematoma						
< 3.5 ml	25	87.50	7.14	96.81	2	0.86
≥ 3.5 ml	95.74	87.50	77.59	97.85	7.66	0.05
>10 ml	100	87.50	66.67	100	8	0
>30 ml	100	87.50	23.53	100	8	0
Kind of hematoma						
Contusion	95.74	87.50	77.59	97.85	7.70	0.05
Epidural	100	87.50	53.57	100	8	0
Subdural	100	87.50	48	100	8	0
Mixed	80	87.50	23.52	98.91	6.4	0.23
Intraparenchymal	71.42	87.50	27.78	97.85	5.71	0.33

[SP 223] Title: PAEDIATRIC BLUNT ABDOMINAL TRAUMA IN THE UNITED KINGDOM: THE REGIONAL MAJOR TRAUMA CENTRE EXPERIENCE

Author: James Price1, Johanna Selway1, Paul Cocker2, Stephen Farrell3, Shruti Agrawal

AimTo describe the demographics, mechanisms, management and outcomes for paediatric patients with blunt abdominal trauma presenting to a regional major trauma centre in the United Kingdom.**Methods**An anonymized data set was requested from the local Trauma Audit and Research Network Office to include all paediatric patients (aged <16) who presented from January 2012 to October 2018 with blunt abdominal traumatic injuries (defined as Abbreviated Injury Scale 'Abdomen' of ≥1). A multiple linear regression model was built to determine any predictive relationship between injury severity and age, gender, length of stay and management strategy. Statistical analysis was performed using R (R core team, (2008)). Ethical approval was obtained from the Cambridge University Hospitals NHS Foundation Trust Safety and Quality Support Department (PRN7828).**Results** 512 children presented with major traumatic injuries during the recruitment period. 108 patients (21%) met the inclusion criteria for blunt abdominal traumatic injury. 70 patients were excluded due to incomplete data. The median age at presentation was 13 [IQR 9-15], 76% (n=29) were male. The most common mechanism of injury was from vehicle incidents and collisions (55%, n=21) presenting between 0800-2359 (89%). The median injury severity score was 16 [11-25], most presenting with isolated abdominal injuries (53%, n=20). Age was the only element of the regression model that predicted injury severity, with younger patients more likely to experience higher grades of abdominal injury (p=0.02). 63% (n=24) were managed conservatively (non-operative intervention) with a median length of hospital stay of 7 days [5-11]. 97% (n=37) of children were discharged from hospital with a Glasgow Outcome Scale of 4 or 5. **Conclusion**Paediatric blunt abdominal trauma remains relatively uncommon. The demographic of children presenting with blunt abdominal trauma is unique and differs to all-cause paediatric major trauma cases. Most children are managed conservatively and mortality is low.

[SP 224] Title: RISK FACTORS OF REDISLOCATION OF FOREARM DIAPHYSIS FRACTURES IN CHILDREN

Author: Ladislav Planka

IntroductionForearm diaphyseal fractures in children belong to relative common paediatric skeletal injuries (3.2% from all paediatric fractures (authors statistic), the second most common skeletal injury in theforearm region). The choice of treatment depends on several factors and includes a wide range ofoptions from closed reduction to splint osteosynthesis. The aim of the study is to analyze possiblepredictive factors of redislocation after closed reduction under general anesthesia.**Methods**The 73 patients with complete fracture of both forearm bones or green stick fracture of bothforearm bones underwent closed reduction at the Department of paediatric surgery, orthopaedicsand traumatology University Hospital Brno (Czech Republic) between 2016–2018. In 6 patients we observed redisplacement requiring further closed reduction and osteosynthesis. Both groups were compared, patients without the further surgical therapy and patients with fracture redisplacement requiring surgical therapy. The groups were statistically compared in terms of age, sex and difference in angle of fracture lines (angle of radial fracture line - angle of ulnar fracture line).**Results**A statistically significant difference was not found betwen boys and girls (p = 0.233) and in age distribution (p = 0.896). Statistically significant was found the difference of angle between the radial and ulnar fracture (p = 0.001) and statistical analysis showed, that fractures from the redislocated group had a larger angle of radial fracture than the ulnar fracture compared to the first group. **Conclusion**Closed forearm fracture reduction is one of the frequent therapeutic interventions in children. Even with the relatively great success of this method, we can observe a certain number of redislocations. The analysis shows that fractures are more unstable, when the angle of the radial fracture line is larger then angle of the ulnar fracture line. In contrast, the angle of the ulnar fracture line does not appear to be essential for the prediction of redislocation.

[SP 225] Title: NEW DRESSING COMBINATION FOR THE TREATMENT OF PARTIAL THICKNESS HAND BURN INJURIES IN CHILDREN.

Author: Gergo Jozsa

Introduction: Burns is a common type of traumatic injury in childhood. Nowadays, several wound dressings are available to treat the second-degree hand burns conservatively. **Patients and Methods**: At the authors' institute, 45 children were treated conservatively with a special dressing at first intervention containing Aquacel Ag foam and Zn-hyaluronic gel to determine their effectiveness on partial thickness hand burns. The dressing was checked on the second day, and removed on the sixth or seventh day.**Results**: None of the 45 children treated with this dressing were diagnosed with wound infection. The authors observed the epithelialization of the burned areas on the 6-7th day after primary conservative treatment. The dressing efficiently promotes epithelialization in all cases. Further advantage of Zn-hyaluronic gel is to enhance cell regeneration and inhibits dressing fixation into the wound. **Conclusion**: Based on the authors' experience, with this special combination of wound dressing, a gentle, child-friendly, cost-effective treatment and excellent wound healing observed with favourable cosmetic results.
Keywords: second burn hand injury, treatment, silver foam dressing, Zn-hyaluronic gel, children

[SP 226] Title: THE ISHIGURO TECHNIQUE FOR THE TREATMENT OF MALLET FINGER FRACTURE IN ADOLESCENT.
Author: Gergo Jozsa
Introduction: Mallet finger fracture is a deformity produced by avulsion of the extensor tendon insertion at the base of the distal phalanx. In most of the cases, complete healing and functional restoration can be achieved by conservative treatment. However, when the disrupted part affects more than one third of the articular surface and the extent of the dislocation is more than 1.5 mm, then surgical intervention is necessary.**Aims**: To present our initial experience with the Ishiguro surgical technique for the treatment of avulsion of the extensor tendon injury in 20 children.**Patients and Methods**: We applied the minimally invasive surgical technique for the treatment of mallet finger fracture in 20 adolescent children between from 2014 to 2018. The interventions were performed under regional anesthesia controlled by fluoroscopy. External fixation of the affected fingers were carried out for 3 weeks, followed by removal of the wires under local anesthesia at 6 weeks post-operative. After the removal of the wires, regular physical therapy was carried out. **Results**: At 8 weeks follow up investigation all of the 20 children had normal function with full extent of the affected articular motion and without any complaint. We did not observe any extension deficit, though in three of the cases there was infection complication at the pin site, which healed following antibiotic treatment.**Conclusion**: Ishiguro technique is an effective, safe and easily learnable procedure for the treatment of mallet finger fracture in the adolescent age group too. In the cases of the 20 children we could achieve good functional results without open surgical exposure.

[SP 227] Title: COMPARATIVE STUDY OF THE DRESSINGS MEPITHEL AND AQUACEL AG FOAM COMBINED WITH CURIOSA GEL IN THE MANAGEMENT AFTER AUTOLOGOUS TRANSPLANTATION.
Author: Gergo Jozsa
Introduction: The deep – II/2, III, IV. degree – burn injurys are demanding surgical treatment. The operation consists of the tangential removal of dead tissue (necrectomy) and autologous transplant of half-thick skin.
Aim: Comparison of the postoperative treatment of the patients who were transplanted because of deep (II/2, III degree) burn injurys.**Patients and methods**: Twenty transplantation were performed because of deep burn injury in the Pediatric Surgery ward of the Children's Hospital of Pecs between 2015 and 2018. Two groups were developed for the retrospective study. In Group 1 traditional bandage – Grassolind or Mepithel mesh with Betadine solution –, while in Group 2 gel foam – Aquacel Ag foam dressing with Curiosa gel – were applied to cover the transplanted skin. The authors examined the gender and age distribution, the mechanism of the burn, the extent of the injury, the healing time as well as the number of anesthesia and the days spent in the hospital. **Results**: In Group one 7 children (2 girls, 5 boys), while in Group two 13 children (5 girls, 8 boys) were involved in the clinical study. The average age were under 5 years in both groups. The cause of the injury were scalding with hot liquids in all cases in Group 1. The extent of the burn in three cases was 5-10%, and in four cases was more than 10%. The children spent average 21.9 days (12-35) in hospital, meanwhile average six (4-8) anesthesia were performed to change the bandage. The removal of the bandage usually happened on the 13th day (8-18), due to the proper adhesion.Six children were injured because of scalding, while 7 children suffered from contact burns in Group 2. The extent of the injury in six cases was less than 5%, in four cases was 5-10%, and in three cases was

more than 10%. The children who were treated with this type bandage, spent average 13.8 days (5-25) in the hospital, meanwhile average three anesthesia were performed on them. The removal of the bandage usually happened on the 10th day (7-15).**Conclusions**: In case of a II/2, III degree deep burn injury, after the required transplantation and the use of the Aquacel Ag foam dressing and Curiosa gel resulted in significant decrease of the number of performed anaesthesias and the days spent in the hospital. In Group 2, where the intelligent bandage was used, the final removal happened 3 days earlier.

[SP 228] Title: CLOSTRIDIAL SOFT-TISSUE INFECTION AFTER SEVERE LEG INJURY

Author: Risto Simeonov, Cokleska N

BackgroundClostridial soft-tissue infection usually occurs after trauma. Symptoms may include edema, pain, gas with crepitation, foul-smelling exudates, intense coloration of the site, and progression to shock, renal failure, and sometimes death. It's treatment is very difficult and uncertain.**Case summary**This is a case report of a 5 years old child with concomitant unilateral leg and foot trauma after being run over by agriculture machine. In the time of admission the child is with normal vital parameters, normal blood tension and normal heart rate. Plane x-ray shows small abris fracture on distal femur. After short preoperative preparation the child is transported to the operating room.There was an extensive wound on the thigh, popliteal fossa,calfandthe foot on the same leg. After exploring the wound, lesion on the popliteal artery was detected, and crushed muscles(soleus and gastrocnemius). Large quantity of soil and plant debris were detected in the wound. Initial wound cleaning was performed. Then popliteal artery reconstruction procedure with venous graft and primary muscular and skin reconstruction.Few vacuum drainage systemsare set under the skin and under the muscles in order to avoid infection.The child was admitted to the intensive care unit. Double antibiotic therapy was used,good hydration and monitoring. Vascular dopplerultarasonography was performed the next day. Doppler pulse recordings onpopliteal artery, doraslispedisartery and retromaleolaris artery were normal.Three days after the injury, the first signs of infection were detected. Microbiological result was positive forClostridium species, as expected. Clostridial soft-tissue infection included cellulitis, myositis, and clostridialmyonecrosis. Symptoms included edema, pain, foul-smelling exudates, intense coloration of the site, fever, butdespite high temperature, bloodculture test was negative, no signs for sepsis or kidney failure.Surgical debridement to all necrotic tissue(skin and muscles) was the next step in the treatment. The skin of the dorsal site of the thigh, popliteal fossa and calfwas completely removed. After the procedure, the patient undergo to intensive local wound treatment.After dealing with the infection, Thierschskin graft was indicated. It was placed on the popliteal fossa in order to avoid knee joint contracture. On the areas which were lack of skin, we used special treatment with Platelet Rich Fibrin for better and faster epithelization and regeneration. The final result is very good. After three mounts of treatment, there is complete wound epithelization. Intensive physical therapy resulted with good knee joint movement, good muscle condition and return to everyday activities.**Conclusion**Clostridial soft-tissue infection in children is a serious life-threateningcomplication that can occur after trauma. High index of suspicion is crucial to start early management and treatment. **Keywords**:clostridium, vascular injury, trauma, children, debridement, skin graft

Upper GI Poster Day 3: Group 3
Moderator: Ahmed Zaki

[SP 229] Title: ESOPHAGEAL REPLACEMENT DY STOMACH OR COLONIC INTERPOSITION IN CHILDREN. COMPARATIVE ANALYSIS OF TREATMENT RESULTS

Author: Saidkhassan Bataev

The purpose of this study was to compare the results of treatment of children who had esophageal replacement by the stomach or colonic interposition.**Materials and methods.** From 2009 to 2015 172 patients who were underwent esophageal replacement at the Filatov Children's Hospital in Moscow were analyzed The operated children were divided into 2 groups. Group 1 (main) - 46 children aged from 2 months to 13 years were made plastics of the esophagus with the stomach pull-up.Group 2 (control) consisted of 126 children aged from 2 months

to 18 years who were underwent colonic interposition. In both groups, children with atresia and cicatrical stenosis of the esophagus prevailed.For evaluation of immediate and long-term results of treatment, the following methods were used: clinical observation, OGD, contrast radiography, CT and MRI studies and patient questionnaires.**Results**. In general, the analyzed groups were comparable in the course of the early postoperative period. There were no complications in the early postoperative period in 54% of cases in group 1 and in 54.4% of cases in group 2.In groups with postoperative complications additional surgical interventions were made: more in group 1 (23.9%) compared with group 2 (10.3%). Statistically significant indicators (p = 0.04).The patients' quality of life in the compared groups points at statistically significant differences in the frequency of almost all the complications of the long-term period. The patients with colonic interposition have a better quality of life.**Conclusion.** A higher quality of life in children after colonic interposition compared with children after a stomach pull-up allows us to consider this operation more preferable in choice of surgical treatment in children.**Key words:** colonic interposition; stomach pull-up; the quality of life; children.

[SP 230] Title: "EVALUATION OF OUTCOME OF BISHOP KOOP PROCEDURE FOR MANAGEMENT OF JEJUNOILEAL ATRESIA COMPARED TO PRIMARY ANASTOMOSIS'

Author: Fateema Sayeed

Background:Jejunoileal atresia is a common congenital anomaly of small intestine. The most common technique which is currently practiced is the resection of the dilated and hypertrophied proximal bowel with primary end-to-end anastomosis. To reduce the complication of primary anastomosis, Bishop Koop procedure is considered as an alternative in developing countries like ours where NICU facilities and provision for TPN are less attainable. **Objective**:The objective of this study was to evaluate and compare the outcome of Bishop Koop procedure and Primary anastomosis for management of jejunoileal atresia.**Materials and Methods**:This prospective interventional study was conducted with the intention to observe the outcome of 50 randomly selected patients, divided equally in two groups, who had surgical management for type II and IIIa atresia in three tertiary centres in Dhaka, over a period of 24 months from July, 2017 to June, 2019.Group A was assigned for Bishop Koop procedure and Group B was assigned for primary anastomosis. Results were analysed using SPSS 24. Significance of difference was estimated with Independent sample t test and Chi square test where appropriate.**Results**:There were 50 neonates whose mean age was 5.5±3.41 days and mean birth weight was 2.56±0.49 kg. Results of each objective were statistically significant. Mean operative time was 38.88 ± 6.41 minutes and 31.16 ± 8.23 minutes for group A and B respectively. The mean time of bowel movement of group A (4.60±1.50 days) was earlier than group B (6.53±1.50) after surgery. For which, enteral feeding could be initiated as well as established in group A (7.36 ± 1.61) earlier than group B (9.33 ± 2.16). Therefore, duration of hospital stay is shorter in group A (mean, 8.52 ± 1.78 days) than group B (mean, 11.00 ± 3.88 days). Postoperative complications which included anastomotic leakage and obstruction were more in group B (52%) than group A (12%). Significant statistical difference was seen in postoperative anastomotic leakage (group A=2% vs group B=40%) but not in obstruction between two groups. Survival rate was more in group A (88%) than group B (60%).**Conclusion**: Outcome of Bishop Koop procedure is better than Primary anastomosis for management of jejunoileal atresia.**Key words**:Bishop Koop procedure, Primary anastomosis, Jejunoileal atesia

[SP 231] Title: CHEMICAL BURN OF THE ESOPHAGUS IN CHILDREN

Author: Minaev S. V., Kirgizov I.V., Grigorova A.N., Bykov N.I., Gerasimenko I.N., Pogosan A.A

Aim of the Study. To study of burns of the esophagus and their treatment in childhood. **Methods**. We observed 64 children in 2015–2016 with burns of the esophagus with varying degrees of severity and localization, of which 11 (17.2%) children with esophageal strictures. The age of children ranged from 1 to 7 years. Boys - 41 (64.1%), girls - 23 (35.9%). Patient data was bougied. Determination of the degree of burns made after inspection for 10-14 days; Bougienage by pneumosuper was performed the first month from the day of the burn - 2 times in 1 week, the second month - 1 time in 1 week; the third month - 1 time in 2 weeks up to 6-8 months. In the absence of effect - the choice of an alternative method of treatment.**Main results**. The chemical burns of the esophagus were most susceptible to children aged 1 to 3 years (52.85%), less - children from 4 to 7 years (47.14%). The highest incidence

of burns to the esophagus was due to acid exposure - 30 cases (46.9%). Alkali burns - in 14 children (21.8%). Burned with other substances received - 20 (31.3%) children. I degree burn of the esophagus was found in 28 (43.7%) patients; Grade II - in 25 (39.0%) of the subjects. Burns of the III degree esophagus in 11 (17.2%). **Conclusions**. Chemical burns of the esophagus are most susceptible to children aged 1 to 3 years (52,85%). The highest frequency of esophageal burns is due to the influence of acids (46.9%). The proposed approach in the early esophageal bougienage allowed to achieve a positive effect in 96.9%.

[SP 232] Title: APPLICATION OF PROSTHETIC MESH IN REDO FUNDOPLICATIONS IN CHLDREN

Author: Andrzej Grabowski

Introduction:Laparoscopic approach in cases of recurrent hiatal hernia is still controversial, so is the implementation of synthetic mesh in children. The aim of the study was the assessment of the reasons of recurrences of hiatal hernia and the feasibility of laparoscopic redo fundoplication and implementation of synthetic mesh in such cases. **Material and method**:In the years 2000-2018 we have operated 19 patients due to recurrent hiatal hernia. 5 of them were girls, 14 – boys. The mean age was 9.5 year, ranging from 3.5 to 18 years. All redo operations were done laparoscopically. The operations were done from half to 13 years after initial surgery (mean 4.2 years). During the procedure we found in 10 cases (58.8%)the rupture of hiatal crura and sliding hernia, in 5 cases (29.4%) the sliding hernia and the fundoplication torn, in one case (5.8%) the torn fundoplication only and in one periosephageal hernia with the fundoplication intact. In all of the patients we did suture the crura and made refundoplication. In 11 cases (58.8%) the crura were reinforced with the synthetic mesh which was fixed with titan screw clips. **Results**:There were no conversions nor complications though the procedure was substantially longer and tough due to postoperative adhesions. Perioperative course was smooth in all cases anyway. In all cases good outcome were achieved what was proven by releasing of symptoms. In postoperative diagnostics (ph-metry, gastroscopy, X-ray) in all patient no symptoms was found.Two of the patients died in follow up period, but due to conditions bound to initial conditions.**Conclusions**:Predisposing factors for the recurrence of GERD or hiatal hernia after the surgery were neurologic impairment, concomitant congenital defects and young age during the initial surgery.The main background of the recurrence was hiatal hernia so the proper suturing of crura seems to be crucial to prevent it.Redo laparoscopic procedures are feasible and beneficial but technically demanding.Implementation of synthetic mesh for reinforcement of crura seems to be the proper manner to prevent recurrences.

[SP 233] Title: INGESTION OF FOREIGN BODY (BUTTON BATTERY): 3 YEAR EXPERIENCE AT TERTIARY CARE HOSPITAL

Author: Mudassar Fiaz, Adnan Bashir Bhatti, Khawar Abbas, Amjad Choudhry

Objective: Button batteries (BB) in the aero digestive tract are a common cause of morbidity and mortality in infants and children worldwide. After the nose and ear, the esophagus is the most common site of foreign body impaction. The purpose of this study is to study the different presentations of button battery as a foreign body and present our experience in the diagnosis and management of this hazardous problem in children.**Methods**: This study included 50 patients. The diagnostic protocol comprised of a detail history taking, physical examination of head and neck, and appropriate radiographic evaluation. The button batteries were emergently extracted under general anesthesia. **Results**: The average follow-up period was 2.5 months. Thirty-five patients had an esophageal button battery. Six patients had button battery in the tracheobronchial area. Nine patients had a button battery in the stomach and below. One patient developed tracheoesophageal fistula, and one patient expired of aortoesophageal fistula.**Conclusion**: Early detection is the key to the management of button battery as foreign bodies. They have a distinctive radiological appearance, and its prompt removal is mandatory, especially for batteries lodged in the aero digestive tract. Physicians must recognize the hazardous potential and serious implications of such an accident. There is also a definite need for more public education and awareness about this serious problem.**Keywords**: Aero Digestive Tract, Button Battery, Oesophagoscopy

[SP 234] Title: FOREIGN BODY INGESTION IN CHILDREN: CHARACTERISTICS AND OUTCOMES, SINGLE CENTER EXPERIENCE Author: Doniyor Asadullaev

Background. Foreign body (FB) ingestions remain quite common in children under 3 years of age, and their rate of ingestions has been increasing progressively. Some cases require endoscopic or surgical removal.**Aim.** To describe the characteristics and outcomes of FB ingestions of children, who were treated in tertiary referral hospital in Uzbekistan.**Methods**. This retrospective study enrolled 1044 children aged from 1 month to 18 years, who were treated due to concern of foreign body ingestion from January 2014 through February 2019. Clinical data, type and location of the foreign body, treatments and outcomes were recorded**Results**. The patients' mean age was 4.27±0.11 years. Overall, boys more frequently ingested foreign bodies (59.4%), as did children 1 to 3 years of age (43%). Annually during the study period, the foreign body ingestion rate increased, on average, by 57.8 cases per year. The most frequent foreign bodies located in esophagus (36%) and stomach (30%). surgery was required in only 10 (0,95%) patients. 76 (7.3%) children ingested batteries, and 22 of them had complications. Their mean age was 1.98±0.35 years. There was no death due to FB ingestion.**Conclusion**. Foreign body ingestion is common problem of pediatric emergency care. Batteries should be removed immediately, as they cause major chemical injury within hours of ingestion. Endoscopy is safe modality to locate and effective in removing ingested foreign bodies.

[SP 235] Title: THE SURGICAL EXPERIENCE FOR RETROPERITONEAL CYSTIC LYMPHANGIOMA IN THE PAEDIATRIC POPULATION.

Author: Dorsaf Makhlouf

Aim of the study:Cystic lymphangioma is a rare, benign malformation of the lymphatic vessels which may be observed on various locations. The retroperitoneal location is uncommon: only 1% of all CL are reported to be retroperitoneal in location. CL has a polymorphic clinical presentation. Surgery is the treatment of choice. The aim of our study is to assess the clinical manifestations, diagnostic, therapeutic modalities and complications of this tumor.**Methods**:We retrospectively reviewed charts of children treated for retroperitoneal CL in the department of pediatric surgery of Fattouma Bourguiba Hospital in Monastir during a period of 15 years from 2004 to 2019. **Main results**:Six cases were collected reparted in 3 girls and three boys. The mean age of patients at the time of surgery was 4,1 years (8 days,10 years) the circumstances of diagnosis were abdominal pain in 3 cases, abdominal mass in 2 cases and antenatal diagnosis in one case. A CT scan was performed to all patients completed by MRI in one case guiding to the diagnosis of CL in all cases. On peroperatory CL was exclusively retroperitoneal in 4 cases and retroperitoneal with intraperitoneal extension in 2 cases. Total resection was achived in 4 cases and partial resection in 2 cases due to intimate adherences to other strustures. The mean hospital stay was 7,5 days. The evolution was uncomplicated in 5 cases and a recurrence occurred in one case requiring reintervention 7 years later. The diagnosis was confirmed by histhological study in all cases.**Conclusion**:Retroperitoneal CL is a rare condition. Diagnosis is based on imaging but requires histological confirmation. Its therapeutic management is based if possible on complete resection in patients with symptomatic lesions in order to limit the risk of recurrence.

[SP 236] Title: OUTCOME OF CHILDRENâ€™S GASTRIC VOLVULUS IN A DEVELOPING COUNTRY : A REPORT ON 6 CASES

Author: Ndeye Fatou SECK

Aim of this study: The aim of this article is to report the findings of a study on the diagnostic difficulties of the gastric volvulus at two pediatric surgery departments of a low income country. **Methods**: This study spanning a period of 75 months is retrospective, prospective, descriptive and analytical. Between January 2012 and March 2018, 6 cases were observed. **Results**: Non-bilious vomiting was the most frequent functional sign. In all cases, patients had previously consulted in at least one medical center, with an incorrect baseline diagnosis. The delay between the beginning of the symptomatology and the consultation in our service ranged from 1 day to 8 months. Abdominal distention was present in all patients. Standard radiography and gastrointestinal barium were the most requested imaging tests. Three acute forms and 3 chronic forms were noted. The diagnosis of gastric volvulus was

made preoperatively in 2 cases. The delay between the first consultation in the pediatric surgery departments and the date of surgery ranged from 4 days to 4 months and 14 days in patients with chronic gastric volvulus and from 1 to 4 days in patients with acute gastric volvulus. The predominant type of volvulus was the mesenteroaxial type with a diaphragmatic hernia associated in 4 cases, and one case of gastric perforation. The treatment was in all cases a gastropexy, with diaphragmatic hernia repairs in 3 cases. The outcome was favorable in five patients; one patient has subsequently undergone a surgical revision revealing a gastric perforation that has been sutured. With an average follow-up of 25.5 months, five patients presented a good evolution without sequelae. One patient presented a recurrence of diaphragmatic hernia.**Conclusions**: The management of gastric volvulus in our context is marked by diagnosis errancy and the absence of new therapeutic technologies.

[SP 237] Title: THE REPAIR OF ACQUIRED TRACHEO-ESOPHAGEAL FISTULA CAUSED BY BUTTON BATTERY INGESTION

Author: Luciana Coutinho

The tracheo-esophageal fistula (TEF) after ingestion of foreign body is a serious complication. Children with foreign bodies impacted in the esophagus present, initially, nonspecific symptoms, delaying the correct diagnosis.
The most common symptoms include: vomiting, difficulty feeding, cough, and bloody nasal discharge. However, none of these signs and symptoms are predictors of severity or complications. For how long the battery stays impacted in the esophagus is associated with a longer time of hospitalization, some authors mention that after 15 hours of ingestion, the risk of complications increase considerably. Therewith, we should consider that the impact of batteries in the airways and in the upper digestive tract is a medical emergency. The morbidity is considerably reduced with the rapid extraction of the foreign body. We present a 2-year-old girl who was admitted at emergency service with the report of foreign body intake . She was submited to chest X-ray that showed the foreign body - battery in the proximal esophagus. The patient was submitted to a upper gastrointestinal (GI) tract endoscopy, and the disc battery was removed 21 hours after the ingestion, with significant bleeding during the procedure. The child developed recurrent pneumonia associated with weight loss, when she was submitted to a second upper gastrointestinal (GI) tract endoscopy, which identified ulcerative lesion in the upper esophageal sphincter. After a third episode of pneumonia, a new endoscopy was perfomed, and at this time, large tracheoesophageal fistula was seen. At this moment, we tried to clamp the fistula. She was then transferred to our hospital. As the child was undernourished, she remained hospitalized for nutritional support and to program the surgical procedure. During the first surgical time, endoscopy was performed and a fistula of 3cm in length and 1cm in diameter was identified, 20cm from the upper dental arch (ADS), during this exam, it was possible to cross through the fistula to show its exact location in the trachea: 03cm of carina We proceeded to the second time of the procedure, the child was submitted to right lateral thoracotomy, fistula ligation and tracheoplasty with nonabsorbable wire. The esophagoplasty was performed with nasoenteric catheter passing under direct visualization. Left chest drain. The child was maintained with sedoanalgesia, orotracheal intubation and mechanical ventilation for 6 days.On the 9th postoperative day after drainage clamping, air leakage through the surgical wound was evidenced, and a CT scan of the chest revealed a small tracheal fistula, treated conservatively. On the 13th postoperative day the SNE was withdrawn and the oral pasty diet was released. After favorable evolution, he was discharged and followed up in ambulatory follow-up, with progressive weight gain.
Foreign body ingestion occurs predominantly below the age of 5 years.The battery generates the tissue damage through a chemical burn and corrosion, due to the production of cathodes and anodes that generate electrical current and alter the normal physiology of the mucosa. After ingestion of these foreign bodies, the main goal is rapid withdrawal, however, when such a procedure is not available or when the diagnosis is late, morbimortality is greatly increased. From this case, it is possible to evaluate the importance of appropriate management of these cases, treating them as an emergency, always aiming to reduce the initial complications, but not forgetting also the late complications, such as tracheoesophageal fistula, button battery impaction places the patient athigh risk for tracheoesophageal fistula.

[SP 238] Title: USE OF BIOFEEDBACK FOR FECAL INCONTINENCE IN CHILDREN. SINGLE CENTER EXPERIENCE
Author: Henar Souto
Aim of the study To review the utility and results of biofeedback training therapy in children with fecal incontinence due to organic and functional causes in a single pediatric institution.**Methods** Retrospective review of all patients treated with biofeedback therapy between 1996 – 2016. Demographic, clinic and manometry diagnostic data were recorded as well as information regarding the training program given to each patient. Analysis was performed comparing anorectal manometric pressures (resting and squeeze anal pressure, rectosphincter reflex, rectal sensation) and number of soiling episodes and voluntary bowel movements per week before and after treatment.**Results** A total of 128 patients have been included (mean age 7,6 years old). Most of them were males (91/128). 96/132 of the patients had functional disorders and 32/128 patients had fecal incontinence due to organic causes (17/32 had a neurological damage due to spine surgery or congenital defects, 4/32 associated Hirschprung´s disease and 9/32 had previously corrected an anorectal malformation).Median number of sessions were 9 during an 8 months average time.Significative difference was found in defecation dynamics in the functional group before and after treatment. There were not significant differences in pressure amplitudes in the organic group eventhough a clinical improvement was achieved in 26/32 of these patients. No complications during biofeedback sessions or related to this therapy were found.**Conclusion**Biofeedback therapy used combined with a behavioral intervention associated to laxative procedures improves both manometric and clinic parameters in children with functional fecal incontinence. It is also useful in the treatment of fecal incontinence due to organic causes.

[SP 239] Title: RISK FACTORS FOR THE DEVELOPMENT OF SCOLIOSIS AFTER CHEST WALL RESECTIONS FOR MALIGNANT TUMORS IN CHILDREN
Author: Henar Souto
Aim of study:To identify and describe the risk factors associated with scoliosis following a rib or chest wall resection **Methods**: Retrospective review of patients who underwent a resection of a malignant tumor of the chest wall in a single pediatric institution between 2008-2018. Demographic, clinical and diagnostic data were recorded as well as information regarding treatment given to each patient. Changes in curvature were measured based on radiograph or CT during follow-up period. Scoliosis was defined by Cobb´s angle > 10º**Results**:Fourteen patients, mean age at surgical thoracic resection 12,6 yo [7,1-17,8], were included. Most of them were males (9/14) and Ewing sarcoma family tumor was the most frequent underlying disease (8/14) followed by costal metastasis. The median number of ribs resected was 2 [1-4].Gore-Tex reconstruction was performed in 5/14 patients, 4/14 associated a resorbable fixation system to Gore-Tex and in 5/14 no reconstruction was needed.Seven patients (50%) developed scoliosis with a mean Cobb´s angle of 13,64º [3-28] that was related to the number of ribs resected ($p<0,05$). Four patients developed a convex towards the resection, while 3/7 developed a convex away from the surgical site. All patients with resections between T4-T8 developed scoliosis no matter how many ribs were resected or thoracic reconstruction needed ($p<0,001$)Mean follow-up period was 24 months.**Conclusions**: Patients undergoing rib or chest wall resection are at risk for developing scoliosis, particularly if the resection is performed between forth and eight rib or when the it involves three or more ribs.

Hepatobiliary Posters Day 3: Group 4
Moderator: Mark DAVENPORT

[SP 240] Title: MANAGEMENT OF MULTIPLE HYDATID CYSTS IN CHILDREN WITH ALBENDAZOLE AND SURGERY
Author: Kechiche Nahla; Dorsaf Makhlouf , Arije Zouaoui, Rachida Lamiri, Lassaad Sahnoun, Mongi Mekki, Mohssen Belguith, Abdellatif Nouri
Aim: Multiple hydatid cysts is one of the major problems in children inaccessible to an initial radical surgical treatment. The aim of this study is to evaluate the efficacy of medical treatment in multiple echinococcosis and to discuss the role of surgery in this pathology.**Methods:** Twenty-six children were included in a prospective study

between 1996 and 2018. Multiple echinococcosis was defined by the presence of 10 or more cysts in the same organ or in several organs in the same patient. Albendazole was given as 10 mg/kg daily continuously.Treatment outcome was defined as cure, improvement, stabilization or deterioration. Surgery was discussed after 1 year of treatment.**Main results:** Our patients totalized 665 cysts located essentially on the liver (447 cysts) and the lungs (174 cysts). With exclusive Albendazole therapy, 57% pulmonary cysts and 95% peritoneal cysts were considered as cured. This rate was only 30% in hepatic localization. After surgical therapy, 70% of hepatic cysts were cured. No productive biliary fistula was observed. Three patients were operated laparoscpically. The total treatment duration ranged between 1 and 5 years. Parasitologic examination of operated cysts showed that 30% of them were viable even after 3 years of treatment.**Conclusion:** We concluded that in treatment of multiple hydatid cysts, albendazole has proven a strong efficacy in pulmonary and peritoneal localizations. A combined medical and surgical approach is often necessary in hepatic localizations.

[SP 241] Title: HEPATOBLASTOMA: ANALYSIS OF TUNISIAN EXPERIENCE

Author: Kechiche Nahla, Rabeb Farhani, Dorsaf Makhlouf, Rachida Lamiri,Lassaad Shnoun, Mongi Mekki, Abdellatif Nouri

The aim of the study : to describe the clinical characteristics of our population and the survival **Materiels et methodes :** This is a retrospective study of 21 cases of HBL treated in our center during the last 23 years (1995 - 2017) . The data was collected retrospectively and analysed with SPSS19.0.**Results :**The mean age at diagnosis was 2.2 years (2months-8years) with a sex ratio of 0.9. The most common presenting symptom was abdominal mass (66.6%) and the median Alpha Fetoprotein (AFP) level at the time of diagnosis was 296,500 ng/ml (25O-2183130 ng/ml). All patients benefited from the couple ultrasound / TDM for the diagnosis. Liver biopsy was performed in 17 cases,.Lung metastases at diagnosis were found in 3 cases. Tumors were unifocal in 17 patients and multifocal in 4 patients. Neoadjuvant chemotherapy was performed for 17patients(81%). Surgery was performed in 14 children (66.6%) followed by chemotherapy in 9 cases.The median follow-up was 53 (1 day-21 years) . Evolution has been marked by a complete remission in 9 cases, local recurrence in 3 cases, and 5 cases lost of seen.**Conclusion :**The prognosis of children with hepatoblastoma was improved substantially during the past few years through the efforts of all the cooperative study groups. In limited resource country , outcome need more care for multidisplinary management.

[SP 242] Title: OUR EXPERIENCE OF 81 PATIENTS WITH LIVER MASSES; A STUDY FROM PAKISTAN

Author: Muhammad Saleem

Introduction: Liver is the third-most-common site for intra-abdominal malignancy in children after Neuroblastoma and Wilms tumor. Two thirds of liver tumors in children are malignant. Complete surgical excision remains the cornerstone of cure in liver cancer. The aim of this study is to share our experience of surgical outcome in the management of liver tumors.**Methods**: This was a retrospective study conducted at The Children`s hospital & The Institute of child health, Lahore over the period of 14 years. Malignant tumors were first dealt with neo-adjuvant chemotherapy. Hepatic resection was performed with of harmonic scalpel. All the patients' undergone liver surgery for begin & malignant liver tumors were included. Demographic details, pre & post operative event were noted; also the long term follow-up visits data was retrieved. **Results**: Total 81 children with liver mass were included. The mean age of patients was found to be 50.47 ± 45.89 months. Most common malignant tumor was Hepatoblastoma (HB) (60.4%) with hepatocellular carcinoma (HCC) (18.5%) taking the second place, other were Mesencymal hamartomas, Metastatic and Biliary cystadenoma. Right-sided involvement was more common. Right lobectomy was most commonly performed procedure in this series. The mean follow up of patients was 42.84 ± 48.40 months. Most important postoperative complication was recurrence which occurred in three patients (3.7%). It was observed that all recurrences occurred among those who had age less than 3 years (P=0.000), other complications included subphrenic abscess (2.46%) and wound infection (9.88%). There was no operative mortality in this series. Hepatoblastoma (P=0.036), had received both neoadjuvant and post-operative chemotherapy (P=0.000) and had malignant type of liver tumor (60.49%) (P=0.028). For long-term results, 32 patients could not be traced. So long-term follow up was available for 49 patients. Seven patients died in this series (1 early, 8 days after surgery deaths,

a case of sarcoma) and 42 patients were alive and healthy. **Conclusion**: Hepatoblastoma is the most common tumor among patients undergoing surgery. Recurrence rate depends upon age, histopathology and chemotherapy status of the patients.

[SP 243] Title: PROGNOSTIC FACTOR OF KASAI HEPATOPORTOENTEROSTOMY IN MONTHS OLD BILIARY ATRESIA PATIENTS: LESSONS LEARNED FROM DEVELOPING COUNTRY

Author: Diaz Adi Pradana, Matulatan F
Institution: Airlangga University, Surabaya, Indonesia

Background : The overall prognosis of patients with biliary atresia depends on the successive steps of their management: diagnosis, Kasai operation and liver transplantation. In our country where the diagnosis is severely delayed and liver transplant haven't been commonly performed due to high cost or another factor, Kasai become the mainstay of treatment in older aged Biliary Atresia Patients. The significance of age at when the Kasai operation performed was widely accepted, another prognostic factors is still debated.**Aim** : Identify which prognostic factor is more related to the outcome of Kasai in late age Biliary Atresia patients.**Method** : Patients with BA treated during 2015-2019 at a large-volume pediatric tertiary referral center in developing country were reviewed retrospectively with regard to demographic, clinical, laboratory, and diagnostic characteristics for identifying the prognostic factors and long-term clinical outcomes.**Result** : Overall, 36 patients (20 males, 16 females) were included. Mean age at operation was 143.1±64.7 (median: 164) days. All the patients underwent a portoenterostomy procedure. All the patients have fibrosis on their liver pathology before surgery. 20 (55%) patients (12 males 8 females) have their IgM CMV (+) before their surgery. IgM CMV (+) and preoperative AST/PLT ratio are the determinant of successful bile clearance before 6 months after the surgery ($p<0.05$). Methylprednisolone and ursodeoxycholic acid treatment before the surgery have no significance to the bile clearance. Overall Survival at 6 months after surgery is 75%.**Keyword**: Biliary Atresia, Late Age Kasai Operation, Prognostic Factors

[SP 244] Title: CHOLEDOCAL CYSTS IN CHILDREN: A SINGLE CENTER 10-YEAR EXPERIENCE

Author: MEHMET Hanifi okur

Aim: We aimed to present the preoperative and postoperative evaluations of patients who underwent surgery due to the choledochal cysts.**Materials and Methods:** The records of patients who were operated for choledochal cyts in our hospital between January 2009 and May 2019 were analyzed retrospectively**Results:** A total of 26 patients with choledochal cyst were treated within 10 years. The ages of the patients ranged from 20 days to 15 years (mean 50 months). 15 patients were female and 11 were male. Eleven of the patients presented with jaundice (8 had a palpable mass in the right upper quadrant), 14 of the patients with abdominal pain, and the other one patient was referred to our clinic for pancreatitis. Ultrasound was performed in all patients. MDCT in 3 patients and MRCP was performed as further imaging studies in 21 patients. Twenty-four patients (92%) had type I cysts and 2 (8%) patients had type II, according to Todanı's classification. The average cyst diameter was 3.7 cm. In all but two patients, total cyst excision and Roux-en-Y hepaticojejunostomy were chosen. Two patients who had type II cyst was treated by cyst excision. The average time of hospital stay was 7 days. In the early postoperative period, wound infection was detected in one patient. In follow-up period of our patients except for one patient were uneventfull. The one patient operated due to the ileus eight months later.**Conclusion:** Choledochal cyst should not be ignored in differential diagnosis in patients presenting with jaundice in newborn and infant period and with abdominal pain in further age.**Key words;** Choledochal cyst, newborn, infant

[SP 245] Title: LAPAROSCOPIC SURGICAL TREATMENT COMBINED WITH PUNCTURE, ASPIRATION, INJECTION, REASPIRATION, OF ABDOMINOPELVIC ECHINOCOCCOSIS IN CHILDREN AND ADOLESCENT

Author: HAIF ASSIA

Aim of the study Echinococcosis is an important parasitic and a real problem in the Algerian public health. Surgical treatment is still the gold standard in our country, in association with medical treatment. Minimally invasive surgery has become an advantage in the case of hydatic pathology. A review of the literature shows few

publications concerning children, about the feasibility of the technique. The aim of our work is to prove the place of laparoscopy combined with puncture, aspiration, injection of scolicidal agent, reaspiration, in the treatment of abdomino-pelvic echinococcosis in children. To demonstrate also the reliability of the approach and its benefits in children. **Methods**:This is a prospective study collected between March 2015- July 2019. A total of 95 cysts were detected in 57 patients, who underwent laparoscopic surgery combined with PAIR, for echinococcosis of the abdominopelvic localization at the pediatric surgical of hospital university center of SETIF. We have included all the epidemiological aspects, the clinical and paraclinical data, as well as the therapeutic strategy, and the postoperative follow-up. **Main results:**The mean age of the patients was 8.43 ± 3.5 years (2-16). The mean size of the cysts was 62.93 mm (11-150). Three trocars were sufficient for the practice of this approach. The mean operation time of a single cyst was 78.26 min (50 - 210). Complications were classified according to the Clavien-Dindo classification. The average hospital stay was 4.7 ± 3.3 days (2 - 20). The cosmetic result was perfectly excellent. The follow-up of our patients finds one recurrence confirmed surgically. **Conclusion**:Laparoscopic surgical treatment combined with PAIR, for children with hydatid cyst, is a safe and effective approach; it is an alternative to conventional surgery; and a reproducible method.

[SP 246] Title: RISK FACTORS FOR BILIARY ATRESIA: A TWO-CENTER CASE-CONTROL STUDY IN CHINA
Author: Yu Ning,Master, Mingman Zhang, , Huiying Liang, Yi Xu, MD , Zhe Wen
ObjectiveTo evaluate and analyze the risk factors for biliary atresia and provide possible clues for early differential diagnosis and etiological study.Study designThis survey was conducted for patients who were ≤ 6 months old and admitted for jaundice from July 2016 to April 2019 to the Children's Hospital of Chongqing Medical University and Guangzhou Women and Children's Medical Center. Univariate analysis and multivariate logistic regression analysis were performed.**Results**A total of 377 patients ultimately being enrolled, with 206 cases in the BA group and 171 cases in the control group. Univariate analysis showed that sex, birth weight, birth season, gestational age, twin pregnancy, neonatal respiratory distress, feeding mode, maternal gestational diabetes mellitus, intrahepatic cholestasis of pregnancy, hyperemesis gravidarum, history of maternal hepatitis and gynecopathia were significantly different between the two groups (P < 0.05). Multivariate logistic regression analysis showed that low birth weight, hyperemesis gravidarum and history of maternal gynecopathia were independent protective factors for BA(P=0.013, OR=0.332, 95%CI: 0.139~0.795; P=0.032, OR=0.238, 95%CI: 0.064~0.884; P=0.032, OR=0.422, 95%CI: 0.192~0.930), and female sex, breastfeeding, maternal GDM, intrahepatic cholestasis of pregnancy and history of maternal hepatitis were independent risk factors for BA(P=0.027, OR=1.691, 95%CI: 1.062~2.694; P=0.001, OR=2.159, 95%CI: 1.357~3.436; P=0.038, OR=2.685, 95%CI: 1.058~6.814; P=0.047, OR=9.786, 95%CI: 1.030~92.929; P=0.027, OR=3.969, 95%CI: 1.168~13.483).**Conclusion** Female sex, breastfeeding, GDM, intrahepatic cholestasis of pregnancy and history of maternal hepatitis are independent risk factors for BA, which can help with early differential diagnosis and provide valuable clues for etiological studies.**Key words**Biliary atresia; Risk factors; Gestational diabetes mellitus; Breastfeeding

[SP 247] Title: HISOPATHOLOGICAL SCORES AND CLINICAL OUTCOMES IN BILIARY ATRESAIA PATIENTS
Author: Asma Siddiqui
Objective: To correlate the histopathological findings of the liver and portal plate with the clinical outcome in patients of biliary atresia using a 7 feature,15 point histological scoring system.**Materials and Methods:** All cases that underwent surgery for Biliary atresia between 2012 and 2017 in the Pediatric Surgery Department of Liaquat National Hospital were included in the study. Biopsies of the liver and from the porta hepatis were analyzed. The parameters correlated on histology were bile ductular proliferation, bile plugging, multinucleated giant cells, focal necrosis of liver parenchyma, extramedullary hematopoiesis and inflammatory cell infiltrate. Histological scores were then correlated with the survival.**Results:** Total patients were 31 and 6 patients were excluded. 52 %(n=13) patients presented within a 90 day bracket.mortality was 64% (n=16).The median histological score of survivors was11 whereas, the mean histological score of patients who did not survive was 10.**Conclusions:** We have not found histological scores to correlate with age at presentation or survival. However, our study is limited by the small sample size and follow-up period.

[SP 248] Title: ABSCESS OF ROUND LIGAMENT OF LIVER A RARE CUASE OF ACUTE ABDOMEN IN 50 DAYS INFANT

Author: Hazem Alageb

Introduction:An abscess of the round ligament (ligamentum teres hepatis) is very rare ,and can be difficult to diagnosis, it is known complication of omphalitis, low birth weight ,preterm home delivery and umbilical catheter all known risk factors.**Case presentation**:52 days female baby was outcome of vaginal delivery at home attended by midwife, umbilical cord was cut and fixed without use of antiseptic measures, breast fed immediately and passed meconium within first 24 hours. Pregnancy was uneventful apart from recurrent urinary tract infection.

She was quite well until 5 days prior to admission when she developed high grade fever, remittent associated with abdominal distention.2 days later she developed bilious vomiting large amount 3-4 times per day, there was no constipation or jaundice.No signs of omphalitis.Patient underwent exploration, we found a bucket of pus in the extension of the round ligament which was thickened. also there was pus inside peritoneum and granulation tissue. The bowel was healthy no perforation and liver was normal.**Discussion**:Home delivery carries risk of infection and sepsis specially when done in a septic condition .round ligament abscess can occur in the absent of omphalitis (latent infection). Treating sepsis in low income countries with limited resources cause burden on the health system, application of simple measures like educating midwives about importance of sterilization can make better outcome. **Keywords** Abscess , round ligament, infant

[SP 249] Title: BILIARY ATRESIA OUTCOMES FROM A SINGLE CENTER IN KARACHI

Author: Asna Siddiqui, Asma Idrees

Objective: To correlate the histopathological findings of the liver and portal plate with the clinical outcome in patients of Biliary Atresia.**Materials and Methods**: All cases who underwent surgery for Biliary atresia between 2012 and 2017 in the Pediatric Surgery Department of Liaquat National Hospital were included in the study. Biopsies of the liver and from the porta hepatis were analyzed. The parameters correlated with histology were bile ductular proliferation, bile plugging, multinucleated giant cells, focal necrosis of liver parenchyma, extramedullary hematopoiesis and inflammatory cell infiltrate. Histological scores were then correlated with survival.**Results**: Total patients were 31 and 6 patients were excluded. 52 %(n=13) patients presented within a 90-day bracket.Mortality was 64% (n=16).The median histological score of survivors was11 whereas, the mean histological score of patients who did not survive was 10.

Case Report Posters Day 3: Group 5
Moderator: Nathan Novotny

[SP 250] Title: A COMPLICATED THORACOSCOPIC LUNG RESECTION BIOPSY USING GIA - JUST RELY ON YOUR OWN RESOURCE, CASE PRESENTATION

Author: Anatole Kotlovsky

Aim of the study To present a case of thoracoscopic pulmonary resection biopsy with the use of GIA, which, once complicated with air leak and bleeding, was still completed thoracoscopically by employing conventional maneuvers without conversion to open surgery.**Case description** An 11 year old female presented with 1-month history of persistent coughing associated with intermittent low-grade temperatures and malaise. The pulmonary imaging (CT scan) was suggestive of possible fungal lung infection. To establish the definitive diagnosis with pulmonary biopsy a thoracoscopic right middle lobe wedge resection was undertaken with the use of Endo GIA 60 mm tri-staple technology. Intra-operative findings were multiple round-shaped nodules 0.5-1.5 cm in diameter with perifocal inflammatory changes and adhesions throughout the lung. The resection, including the most prominent nodule in the segment B 4, undertaken by applying GIA in the wedge mode was accidentally complicated with instant bleeding and air leak at the resection line. Full control in reaching the hemostasis and

sealing the air leak was regained wholly thoracoscopically by using conventional maneuvers, which involved suction, grasping and over sewing the bleeding and air leaking point. The postoperative recovery was prompt and uneventful. The histopathology findings confirmed the diagnosis of invasive pulmonary aspergillosis, for which patient successfully received appropriate therapy.**Conclusions** The GIA failure to reliably staple the resection line could occur due to presumably underlying bulla in the presence of chronic pulmonary inflammation. The use of conventional surgical maneuvers in such a situation was conversely effective in achieving the final hemostasis and air leak seal thoracoscopically thus avoiding conversion to thoracotomy.

[SP 251] Title: METASTATIC UNDIFFERENTIATED NEUROBLASTOMA TO THE ORBIT; A CASE REPORT
Author: Ahmed Shoukrie
Aim:To describe the clinical, imaging, and immunohistochemical findings observed in a pediatric neuroblastoma, which had an orbital metastasis and an unfavorable histology.**Case Description**:A 2-year-old female child presented to the emergency department for a worsening left-sided ocular swelling lasting 10 days and bilateral profuse tearing for 1 day. Examining the patient showed ecchymotic left orbit with proptosis and pale right conjunctiva. MRI of the brain, sinus and face revealed enhancing soft tissue mass centered in the lateral wall of the left orbit measuring 3.4 x 3.0 cm in axial cross-section with extension into the left middle cranial fossa and left masticator space. MRI of the abdomen showed large heterogeneous well-circumscribed mass in the left upper abdomen measuring up to 7.4 x 6.5 x 8.4 cm. The hematoxylin and eosin (H&E) sections showed small blue round cells with areas of crushing artifact invading throughout the skeletal muscle and soft tissue. The mitotic-karryorrhectic index (MKI) is low of less than 100 cells per 5000 cells. We established the final diagnosis after an immunohistochemical evaluation that utilized CD56, synaptophysin, chromogranin, neuron-specific enolase, and FISH with amplification of the N-MYC oncogene. Given the patient's age >1.5 years, the lack of differentiation, and the low mitosis-karyorrhexis index, this tumor has an unfavorable histology.**Conclusion**:A thorough immunohistochemical investigation utilizing CD56, synaptophysin, chromogranin and neuron-specific enolase is crucial for a definitive diagnosis of neuroblastomas.

[SP 252] Title: INTRAURETHAL LASER-EPILATION IN URETHRAL HAIR GROWTH AFTER HYPOSPADIA CORRECTION Â€“ AN ALTERNATIVE APPROACH.
Author: Anna-Katharina Winkler , Karin Kunzi-Rapp , Detlef Russ , Alexandre Serra
Aim of the study: Intraurethral hair growths after hypospadia repair stays a challenging condition difficult to treat. Often it is socialized with various complications and long term treatments. It is well known that laser therapy in intraurethral hair can permanently be removed preventing stenosis, fistulas as well as urinary stones. Many different laser types have been described. To our knowledge the alexandrite laser has not been used to date and is here presented. **Case description**: The alexandrite laser was used in several sessions in a boy with former repair of penoscrotal hypospadia in childhood. The sessions started before reaching puberty. Initially the intraurethral procedure was applied initially in short time periods, later on once a year was sufficient. After various sessions the intraurethral hair of the boy was permanently removed. **Conclusion**: The transurethral use of the alexandrite laser is a safe and effective method to obtain sustained epilation of urethral hair after hypospadias repair.**Keywords** Intraurethral hair growth, hypospadias repair, laser epilation, urethrocystoscopy.

[SP 253] Title: IDIOPATHIC CHILDHOOD CONSTIPATION: A SOMATIC DISEASE OR A BEHAVIORAL DISORDER?
Author: Reza shojaeian
Background: Childhood Idiopathic constipation (CIC) represents one of the most frequent consults in pediatric surgery clinic. Most of these cases have been failed to treat with medical treatments. The families are frustrated and the child is rejected and isolated in community. Pathophisiology of childhood idiopathic constipation remains still illusive and a unified therapeutic approach is not available so most pediatric surgeons start walking blindly in this dark era. Colon motility, Rectum reservoir, anal canal sensation and sphincter complex function are mainstays of fecal continence and normal defecation. Manipulation of each factor may displace the balance in to a retentive colon or improve the transit and evacuation of rectum regardless of the etiologic basis, however the question

remains unsolved: What is the basic pathophisiology of Childhood Idiopathic constipation.**Method and materials**: We performed a systematic review of all published articles about Childhood Idiopathic constipation in pub med and Scopus with mesh words including Pediatrics, Idiopathic (Intestinal Psudo-obstruction), Constipation. We reviewed 437 articles and selected those publications that discussed about etiology or pathophysiology of childhood constipation.**Results**: Different theories were suggested explaining clinical findings in childhood constipation, include diet effects, Intestinal dismotility, lack of sphincter relaxation and psychological disorders while the final conclusion mostly have no solid scientific basis and also it's not clear whether these pathologies are primary or secondary findings. One of highly suggested and accepted theories in Childhood idiopathic chronic constipation is vicious cycle formation. Regardless of the baseline etiology, Constipation and hard fecal material formation may cause painful bowel movements or evacuation which may induce a Psychological memory effect and makes the infant a "stool retainer". Some secondary abnormalities may happen thereafter such as megarectum, hypoganglionosis, spastic external sphincter and etc.**Conclusion**: The most prominent problem in childhood idiopathic constipation is vicious cycle formation while some of abnormal findings may be secondary changes and be reversible while breaking the vicious cycle so less invasive approaches are encouraged and become more popular recently.

[SP 254] Title: COEXISTENCE OF MULTIPLE URETERAL AND URETEROCELE STONES IN A PATIENT

Author: Zafer Turkyilmaz, Suleyman Yesil, Ramazan Karabulut, Fazli Polat, Kivanc Seref, Hayrunnisa Oral, Kaan Sonmez

Institution: Gazi University, Turkey

Aim of study: Uroterocele cause atony and stagnation in the ureter, thus predisposing the patient to stone formation. Multiple calculi in uroteroceles are common in adults but very rare in children. **Case description**: A 3-year-old boy was admitted with hematuria of 1-month duration. The patient had no previous history of urinary tract infection, hematuria, or abdominal pain. The physical examination was unremarkable, and all laboratory tests were normal, except for hematuria. A plain abdominal radiograph was normal. Urinary tract computed tomography revealed normal renal parenchyma and a normal pelvis. At the lower end of the left ureter, it showed a 4 mm × 24 mm opacity, as well as an 11X6 mm opacity extending into the bladder adjacent to the first opacity. Transurethral lithotripsy was performed. During the cystoscopy procedure, no left ureteral orifice was observed. However, a balloon-like ureterocele containing numerous millimeter-sized stones was observed . We describe the case of a 3-year old boy who presented with hematuria and was found to have multiple ureteral and ureterocele stones. The diagnosis was made during an endoscopic lithotripsy. A holmium: yttrium-aluminum-garnet (Ho-YAG) laser was used to excise the uroterocele.**Conclusion**: In appropriate cases, minimally invasive techniques, for example, Ho-YAG laser lithotripsy and ureterocele excision may be preferred.

[SP 255] Title: PEDIATRIC HIDDEN TRAUMA: INTRA-OPERATIVE AWARENESS IN CHILDREN; ITS RECALL AND POST-TRAUMATIC STRESS DISORDERâ€⍰

Author: Reza shojaeian

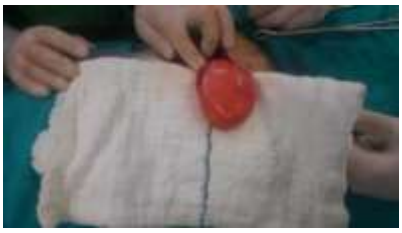
Background: Intraoperative awareness is defined as the recall of events during general anesthesia is reported mostly in adults, while few studies describing the consequences of awareness in children. This may be due to the difficulties in relying on children's declaration or communication.The incidence of such experiences like auditory, visual and sensory perception or feeling of pain, weakness or paralysis and anxiety is reported in less than 1% of adults while this rate supposed to be as high as 5% in children. Evaluation of intraoperative awareness, recall and their psychological consequences in pediatrics is not easy as the standard interview, questionnaire and assessments are not applicable on children. In the other hand, postoperative behavioral changes such as anxiety, irritability and sleep disorders are reported frequently and encountered by the authors in clinic. Unfortunately, anesthesia depth monitoring is not common in pediatrics and specially neonates which make this topic more ambiguous and untouched.**Methods and Materials**: This lecture will introduce a 14 year old girl who has experienced intraoperative awareness during a surgery for adrenal tumor excision and poly site placement. We will present the case by her words and discuss about this less recognized pediatric trauma and its subsequent

complications and discuse about probable relations between behavioral changes after surgery and this phenomena.**Conclusions**: Incidence of Intra- operative awareness seems to be higher than expected in pediatrics who underwent surgery especially in same day surgery setting that the operation supposed to be minor but the patient will experience the pain and operation stress insult.

[SP 256] Title: SPONTANEOUS NEONATAL GASTRIC PERFORATION: ABOUT TWO CASES TREATED WITH SUCCESS
Author: Antoine GBENOU
Neonatal gastric perforation is rare with a serious prognosis. Over a period of 10 years we had two cases successfully treated in our departments.**Observations**: It was a girl and a boy, vaginely delivered in the same year. The pregnancy was well followed in the first case and badly followed in the second case. APGAR score at birth, at 2700 g girl was 10-10-10, and at 2900 g boy at 7-7-8 after resuscitation. On admission, newborns were cyanotic, tachycardic and tachypnotic; there was abdominal distension with diffuse abdominal tympanism, occurring on the second day of life in the girl, and on the second day in the boy in addition to scrotal swelling. The radiography of the abdomen without preparation had made it possible to objectify a massive pneumoperitoneum in the shape of a "saddle of horse". Laparotomy found gastric perforation in the area of parietal hypoplasia in both cases. An excision suture had been performed. The postoperative course was simple.**Conclusion**: Spontaneous neonatal gastric perforation is rare. Early diagnosis and management had resulted in a favourable outcome of the cases.

[SP 257] Title: UNUSUAL CAUSES OF ACUTE SURGICAL ABDOMEN IN PEDIATRIC AGE GROUP
Author: Sayeed F, Hasina K, Ferdous NS
Objectives: Acute abdomen is a common surgical problem encountered in pediatric surgery. Many of the causes arise from congenital anomalies that can present at any time from infancy to adulthood. We want to report some unusual causes from our experiences.**Patients & Method**: This is a prospective observational study starting from March, 2016 to till date in department of Pediatric surgery, DMCH. This study has enrolled those patients who presented with features of acute surgical abdomen due to uncommon causes, required surgical intervention. **Results**: In the first patient (12 years), we found twisted wandering spleen with left hemi diaphragm eventration. The second patient (11 years) had gastric volvulus with left sided diaphragmatic hernia. The third patient (8 years) presented with intestinal obstruction due to small intestine volvulus with mesenteric cyst. The fourth patient (32 days) presented with per rectal bleeding due to intussusception. **Conclusion**: Awareness of these rare causes would help in early diagnosis and prompt intervention which is crucial factor to improve the outcome in acute surgical abdomen.**Keyword**: Acute abdomen

[SP 258] Title: LIPOBLASTOMA IN A YOUNG GIRL UNCOMMON AGE AND SEX
Author: Levent Cankorkmaz
Aim of the study Lipoblastoma is a relatively rare benign mesenchymal tumor of infancy and early childhood. Symptoms vary depending on localization, and may cause various clinical symptoms. It derives from embryonic white fat cells. It almost exclusively affects children less than 3 years of age. We report a case of lipoblastoma of the intraabdominal detected in a 13 year-old girl. **Case description**A 13-year-old girl was admitted to our hospital with abdominal pain for about 4 months duration. Magnetic Resonance Imaging of the child revealed a lipoid-like image in right lower abdominal cavity, she underwent a laparotomy with a preoperative diagnosis of intra-abdominal tumor containing fat tissues. On operation, it was noticed that a soft and lobulated tumor with a smooth, glistening capsule arose from the mesentery of ileum (Figure). The tumor was easily dissected without injury to adjacent intestinal segment. The gross specimen was diameter in 8x6x4 cm and weighed 80 g. At microscopic examination the tumor was composed of small lobules of mature and immature fat cells. The histopathologic diagnosis was lipoblastoma. The postoperative course was simple with a follow-up period of 10 months.**Conclusions**Abdominal lipoblastoma arising in the mesentery are rare but should be included in the differential diagnosis of childhood rapidly growing abdominal mass.



Differential diagnosis is hibernoma, lipoma, hemangioma, myxoid liposarcoma has an infiltrating pattern similar to lipoblastomatosis. Total excision is the treatment of choice with preservation of vital organs. The prognosis is excellent despite large tumor size and local invasion. Regular post op follow up is important because of recurrence rate is high in incompletely resected tumors.

[SP 259] Title: JUVENILE XANTHOGRANULOMAS: A VERY RARE MASS CAUSED A TESTICULAR TORSION IN A CHILD.

Author: Mohammed Aboud

Aim of the study Our report describes a case of juvenile xanthogranulomas(JXG) presenting as a solitary mass in the testicle of a child without manifestations of JXG elsewhere.**Case description**A 20 months old boy presented to the pediatric surgery unit with acute history of pain in his right hemi scrotum of 2 days duration, a pain radiated to the abdomen, with nausea and vomiting of more than 14 hours onset. There was no history of urinary tract symptoms or trauma. Physical examination revealed a tender swelling of the right hemi scrotum, this testicle was found to be larger in volume to the left one, local temperature had risen and there was a positive Prehn sign which exacerbated the pain on raising the affected testicle, with an absence of the cremasteric reflex. Skin over the scrotum was normal. The left scrotal area was normal. Ultrasound showed a round tumor with distinct boundary between the tumor and the irregular heterogeneous testicular tissue, Doppler ultrasound showed changes suggestive of testicular torsion. Complete blood count and testicular tumor markers were within normal ranges and urinalysis was normal. Surgery was performed that showed findings of a necrotic right testicle and tumor-like lesion attached to the cord with rotation of the spermatic cord of 360°. A right orchiectomy was performed. Histopathology revealed that the architecture of the testis was totally lost, hemorrhagic testicular infarction, with no seminiferous tubules seen. Instead, there was an inflammatory process composed of fibrosis and granulation tissue. There were nodular collections of abundant xanthomatous foamy macrophages, lymphocytes, plasma cells and acute inflammatory cells, and involvement of the epididymis whose pattern resembled leukemic and lymphomatous involvement of the testis. Juvenile xanthogranulomas was submitted.**Conclusions**Though it is uncommon pathology, JXG joins several other distinctive neoplasms presenting in the infantile testis.

[SP 260] Title: CASE REPORT: PIERRE ROBIN SEQUENCE IN ASSOCIATION WITH TRACHEOESOPHAGEAL FISTULA AND ESOPHAGEAL ATRESIA.

Author: Yusuf Atakan Baltrak

Institution: Kocaeli Derince Education and Research Hospital, TURKEY

Pierre Robin's sequence, described for the first time by a French doctor Pierre Robin in 1923, manifests itself with a single structural anomaly and more than one clinical symptom. In the postpartum examination, it is observed that the lower jaw is small (micrognathia) and is positioned relatively behind the upper jaw (retrognathia); the tongue is placed backward towards the throat obstructing airway (glossoptosis) and there is also cleft palate deformity. It is important to evaluate respiratory and feeding problems in babies with PRS and esophageal atresia. Respiratory problems that may emerge could occur later. In this case report, we aimed to present a rare case of esophageal atresia, tracheoesophageal fistula and Pierre Robin Sequence in neonatal infants. **Key Words**: Esophageal atresia, Pierre Robin Sequence**Introduction**Pierre Robin's sequence, described for the first time by a French doctor Pierre Robin in 1923, manifests itself with a single structural anomaly and more than one clinical symptom. In the postpartum examination, it is observed that the lower jaw is small (micrognathia) and is positioned relatively behind the upper jaw (retrognathia); the tongue is placed backward towards the throat obstructing airway (glossoptosis) and there is also cleft palate deformity. Esophageal atresia occurring together with Pierre Robin Sequence is a rare condition. In this case report, we aimed to present a rare case of esophageal atresia, tracheoesophageal fistula and Pierre Robin Sequence in neonatal infants [Robin P. Glossoptosis due to atresia and hypotrophy of the mandible. Am J Dis Child. 1934; 48: 541-547]. **Case**Our case was delivered with a normal spontaneous vaginal delivery with a body weight of 3,435 g, a head circumference of 34 cm, and a height of 50 cm, from the 2nd pregnancy of a 28-year-old mother as the second live birth. In the patient's first physical examination performed in the delivery room, the patient was thought to have Pierre Robin Sequence after micrognathia and

cleft palate were observed (Figure 1a,1b,1c). The patient turned blue after the first feeding and there was plenty of mucus in the mouth. The patient was considered to have esophageal atresia, and orogastric tube was tried to be descended into the stomach. Esophageal atresia was suspected because the orogastric tube could not be advanced more than 12 cm. When X-ray was taken with contrast material, atresic proximal esophageal pouch was detected (Figure 2). The patient was diagnosed with esophageal atresia and tracheoesophageal fistula because of the gas in the stomach and intestines. Abdominal USG for additional anomaly screening was reported as normal. Cardiac echocardiography was reported as ''PDA and sequinum ASD may be operated under infective endocarditis prophylaxis''. The patient with cleft palate and micrognathia was evaluated for difficult intubation by anesthesia. The patient's Piere Robin gene was sent for analysis.On the postnatal first day, as a result of the exploration on patient who underwent surgery for esophageal atresia and tracheoesophageal fistula, tracheal esophageal fistula was seen on tracheal bifurcation line (Figure 2). The patient underwent tracheoesophageal fistula repair and primary repair of esophageal atresia and was discharged on the 8th postoperative day due to cleft palate with feeding recommendations. In the postoperative follow-up, no problem has been observed until now. In this case report, written and oral consent was obtained from the patient's family

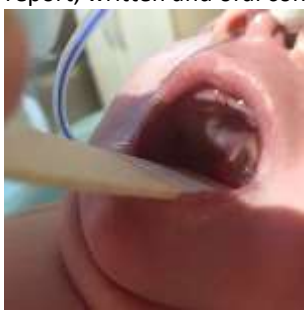


Figure 1a: Cleft palate

Figure 1b: Micrognathia

Figure 1c: Glossoptosis

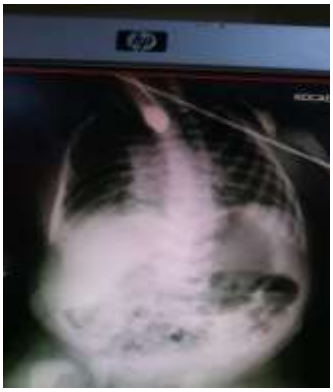


Figure 2: Atresic proximal esophageal pouch and tracheoesophageal fistula DiscussionPRS has an autosomal recessive inheritance type. Its prevalence is approximately 1 in 8500 live births. Male female ratio is 1: 1 [Robin P. Glossoptosis due to atresia and hypotrophy of the mandible. Am J Dis Child. 1934; 48: 541-7; Gruen PM, Carranza A, Karmody CS, et al., Anomalies of the ear in the Pierre Robin triad. Ann Otol Rhinol Laryngol. 2005 ; 114: 605-613]. PRS may be caused by a genetic abnormality in chromosome 2, 11 or 17, or it may be caused by an isolated or underlying cause. It may be associated with a disorder or syndrome such as Syndromic PRS Stickler Syndrome, Velocardiofacial syndrome, Treacher Collins syndrome, while non-syndromic PRS may be caused by a disorder in SOX9 and KCNJ2 genes [Robin P. Glossoptosis due to atresia and hypotrophy of the mandible. Am J Dis Child. 1934;48: 541-7; Elzen AP, Semmekrot BA, Bongers EM, et al., Diagnosis and treatment of the Pierre Robin sequence: results of a retrospective clinical study and review of the literature. Eur J Pediatr. 2001 ; 160: 47-53].PRS is thought to be caused by compression of mandible during intrauterine period, teratogenic exposure and genetic growth disorder. Micrognathia is thought to occur before birth. The lower jaw grows rapidly between 7-10th week of intra uterine life. If the jaw does not grow properly, the closure defect, which results in cleft palate, occurs in the palate. When the mandible is too small, the downward descent of the tongue is restricted. Due to the small and backward placed lower jaw, the tongue that is positioned backwards in the mouth may cause respiratory distress [Thakur GV, Kandakure VT, Thote A,et al., Pierrie Robin syndrome - case review. Int J Sci Res Publicat. 2013 Mar; 3: 1-4]. The child may suffer respiratory distress due to micrognathia and glossoptosis. If there is a cleft palate associated with them, there may be feeding problems. It may be accompanied by obstructive sleep apnea. The most common ear anomaly is otitis media. Gastroesophageal reflux and esophageal reflux can also be seen. Extremity anomalies, syndactyly, and hypoplastic fingers may accompany this [Farnsworth PB, Pacik PT. Glossoptotic hypoxia and micrognathia. The Pierre Robin syndrome reviewed. Clin Pediatr. 1971;10: 600-606]. Treatment in PRS infants is focused on overcoming

respiratory difficulties and feeding problems. Parents can minimize these problems by keeping babies in a proper position. The baby should not be placed in the supine position. In case of severe feeding problem and respiratory distress, the device is used to facilitate feeding and breathing. In some cases surgery may be necessary to correct the deformity [Bath AP, Bull PD. Management of upper airway obstruction in Pierre Robin Sequence. J Laryngol Otol.1997 ; 111: 1155-1157].It is important to evaluate respiratory and feeding problems in babies with PRS and esophageal atresia. Respiratory problems that may arise could occur later [Ogborn MR, Pemberton PJ. Late development of airway obstruction in the Robin Anomolad (Pierre Robin Syndrome) in the new-born. Aust Paediatr J.1985; 21:199-200]. Development retardation in PRS babies is thought to be due to respiratory problems [Dennison WM. The Pierre Robin Syndrome. Pediatrics. 1965;36: 336-341]. In the solution of respiratory problems that may arise in patients with PRS, lying in prone position, using nasopharyngeal respiratory device and long-term intubation and tracheostomy tube opening be considered.

Lower GI Posters Day 3: Group 6
Moderator: Mikko Pakarinen

[SP 261] Title: SOILING MANAGEMENT IN PATIENTS WITH HABITUAL CONSTIPATION
Author: Maryam Ghavami Ad, Mamak Shariat
Constipation is a very common problem in the pediatric population. It can be treated with simple things such as dietary changes and laxatives. But it can be intractable to medical management either. In sever not managed form it can be presented as overflow incontinence. This can be very bothering both for children and parents. Bowel management program with a defined protocol can have a dramatic effect on patients overflow incontinence. But this needs special consideration on teaching the family and patients. **Material and Method**- It's a prospective study on 15 patients from 2016-2018.Patients older than 3 with habitual constipation confirmed either by history, physical exam or barium enema included. Patients with anorectal malformation or other structural anomalies have been excluded. The main complain of the patients was soiling. If there was a fecal impaction disimpaction performed and after precise parents training, the patients put on laxative and bowel management program. It was performed daily for a month then one other day for another month and twice a week in the third month. Results- Mean age of patients was 4.97±1.3 years and their symptom duration is 14.9±7.7 months. There are 10(66.7%) girls and 5(33.3%) boys. All patients had a good response and after 2.6 months (±1.07) and were clean with normal defecation. There was a meaningful relation between age and duration of management (>52%) by increasing the age the management duration has been increased.(P value=0.043, r=0.529) There was no relation between duration of management and sex and duration of symptoms. (P value=0.518 and 0.290 accordingly) **Conclusion**- Bowel management program although first introduced for fecal incontinence in ARM patients and other structural anomalies. It can also be a good way to control soiling in patients with intractable constipation, regardless of sex and age, who don't response to routine medical management. Family training plays an important role in good results.

[SP 262] Title: AESTHETIC RESULTS AFTER LAPAROSCOPICALLY ASSISTED PERCUTANEOUS CLOSURE OF THE INTERNAL INGUINAL RING IN CHILDREN-IS EVALUATION INFLUENCED?
Author: Toni Risteski
Aim of the study: Inguinal hernia is congenital condition and a common problem of the modern world. Inguinal hernia is the most performed operation in pediatric surgery worldwide. To assess the aesthetic results as perceived by parents after laparoscopically-assisted technique of percutaneous closure of the internal inguinal ring (PIRS technique) in their children, and to determine the potential influence of selected demographic and clinical characteristics for differences in such subjective aspect. **Methods:** We used a simple six item questionnaire on the aesthetic result of 49 female children aged between 1 to 14 years, all with clinically diagnosed indirect inguinal hernia treated with PIRS technique. Interviews with the parents were done 3 months after the intervention. Regarding the location of hernia 29 (59.2%) were right-sided; 19 (38.8%) were left-sided, and 1 (2.0%) were two-sided. The presence of hidden hernia was found in 16 (32.7%) subjects, and it was treated during the intervention

itself. **Main results**: All ninety eight parents completed the questionnaire. About 75,5% consider esthetics to be important, and 17,4 didn't have a particular opinion. That the scars didn't disrupt the esthetics answered 77,5%. There was not significant differences between gender of parents related the responses concerning overall aesthetics and intention to recommend the intervention. The age of the parent, and pre intervention condition of the child determined statistically significant differences in the evaluation as regards the number, size and overall aesthetic result of the intervention. **Conclusion**: Laparoscopy plays a great role in the treatment of inguinal hernia in children. Cosmesis and the ability to detect and simultaneously repair CPPV are associated with this method. The PIRS technique is a safe, simple, effective procedure for girls, with excellent cosmetic results and good patient satisfaction.

[SP 263] Title: THE CHALLENGING FEATURES OF THE RIGHT LOWER QUADRANT PAIN IN CHILDREN

Author: Ferizat Dika - Haxhirexha, Nehat Baftia, Aulona Haxhirexha, Ledia Qatipi, Aferdita Ademi, Kastriot Haxhirexha

Abdominal pain is one of the most common symptom in the pediatric department. Diagnosis of acute abdominal pain remain a real challenge for pediatricians as a result of the way of presenting and often the atypical signs of these pains.**Aim of the study**: the aim of this study is to show the etiology of right-lower-quadrant pain in children and our experience in management of this patients. **Material and methods**: records for 89 patients who were treated in our clinics during the past six months - from January to July 2019, because of acute right lower abdominal pain are the subject of this study. **Results**: all patients included in this study were referred to our department for the right lower quadrant pain with the positive peritoneal signs. After the clinical examination and laboratory analysis the patient were observed for a certain period of time. Despite that the majority of children were suspected of acute appendicitis, examinations and dynamic observation showed a non-surgical etiology of acute pain in most of them. The cause of RLQ pain in this group of children differ by age nad gender. Among the most common causes of acute abdominal pain was acute mesenterial lymphadenitis (62) , followed by acute enteritis (14), urinary infection and PID (7), Meckel's diverticulitis (1), and acute appendicitis in only five patients or 5.6 % of them. **Key words**: RLQ pain, appendicitis, children

[SP 264] Title: PERFORATED MECKEL'S DIVERTICULUM ASSOCIATED WITH ACUTE APPENDICITIS

Author: Kastriot Haxhirexha, Sadi Bexheti, Lutfi Zylbehari, Agron Dogjani, Nehat Baftia, Ferizat Dika - Haxhirexha

Meckel's diverticulum is the most common congenital malformation of the gastrointestinal tract, whereas the most common complication of MD is inflammation of the diverticulum sometimes associated with perforation and intestinal obstruction as a consequence of intussusceptions. The presence of acute appendicitis and inflammatory MD in the same patient is very rare condition in children. **Aim of the study**: to report two cases from our experience with this rare condition - simultaneous occurrence of acute appendicitis and Meckel Diverticulitis. **Material and methods**: two children aged 5 and 9 years old were admitted in our clinic with the sign of acute abdomen. After clinical examination, the diagnosis of acute appendicitis was established and the children were operated**Results**: in both children admitted in our clinic with the signs of acute abdomen, pains began a day earlier. In admission they were febrile with the temperature of 39 and 39.50 C, whereas during the abdominal palpation a tenderness in RLQ were detected. Bowel sounds were present and no any abdominal masses were palpated. The blood analysis showed leukocytosis of 14.2 x 109/L and 16.7 x 109/L. Abdominal x- ray examination revealed dilated small bowel in both patient, whereas abdominal ultrasound report for the increased diameter of appendix. After laparatomy and appendectomy we found ileal segments of bowel covered with fibrinous exudates. Small bowel exploration revealed inflameted Meckel diverticulitis with the signs of perforation located 50 – 60 cm proximal to the ileocecal valve. MD was covered with omentum and no any signs of generalized intestinal leakage was present at the time of operation. Segmental resection of the small intestine with MD and TT anastomosis was performed in both patient.**Conclusion**: perforated MD associated with acute appendicitis is a very rare occurrence and present a big challenge for the surgeon. **Key words**: appendicitis, MD, perforated

[SP 265] Title: SWENSON-LIKE, FULL-THICKNESS WITHOUT SHEATH VERSUS SOAVE-LIKE ENDORECTAL TECHNIQUE IN TRANSANAL PULL-THROUGH PROCEDURE FOR HIRSCHSPRUNG DISEASE

Author: Minzhong Zhang a, Weihua Pan a, Jie Chen a, Jun Wang

Aim of the Study: Soave-like endorectal transanal pull-through procedure has been widely used as standard operation for Hirschsrprung disease. In recent years, Swenson-like full-thickness technique has been adapted to the transanal approach for complete removal of aganglionic bowel and preventing cuff related complications. In this study, we aim to compare clinical outcomes following the transanal Soave-like and Swenson-like approach. **Methods**: A retrospective cohort study including all patients with Hirschsprung disease who underwent transanal pull-through procedure in our institution between 2013 and 2018 was conducted. Medical records and follow-up data were reviewed to access for clinical outcome and bowel function.**Main results**: Of 218 patients, 96 had a Swenson-like approach (Swenson group), and 112 had a Soave-like approach (Soave group). The method of operation in Swenson group was modified without any sheath. No significant differences in gender, mean age at time of operation, level of aganglionoisis, mean length of resection, postoperative leak, anastomotic stricture, and postoperative obstructive symptoms were noted between two groups. The mean operating time was shorter in Swenson group (112±37 vs 138±48 mins, p=0.008). Median follow-up was 31.2 months (range 6-64 months). There is no statistically difference in postoperative constipation problems (4.2% vs 7.6%, p=0.292) and incidence of enterocolitis (38.5% vs 39.0%, p=0.947). The need for anal dilation was prolonged in Soave group (6.7±4.1 vs 4.6±2.9 months, p=0.041). 112 patients were at least three years old at follow-up and were assessed for urinary and fecal continence. None of their parents reported urinary incontinence after operation. Soiling problems was noted in 16 (16.7%) in Swenson group and 11 (21.2%) in Soave group, which did not reveal significantly difference (p=0.496).**Conclusions**:The Swenson-like, full-thickness without sheath technique for transanal approach reduced the operating time and the length of postoperative anal dilation. For experienced pediatric surgeons, Swenson-like transanal approach does not impair fecal and urinary function and leads to a satisfactory outcome.

[SP 266] Title: COMPARISON OF TRANSPELVIC-PERINEUM ULTRASONOGRAPHY AND DISTAL COLOGRAPHY FOR DETERMINATE FISTULA IN BOYS WITH ANORECTAL MALFORMATION

Author: Vita Indriasari, Miftahurrahmah, , kurniawan Oki, Eva Linda

Aim of the study: The type and location of rectourinary fistula in boys with anorectal malformation (ARM), usually determined by distal colography (DC). This fluoroscopic study is not always alvailable at hospitals in Indonesian rural area. Ultrasound examination could be an alternative method for solving this problem. The aim of this study is to compare trans-pelvic perineum ultrasonography (TPPUS) and distal colography for determination of fistula in boys with ARM.**Method:** This is an observational analytic study with cross sectional design. Thirty boys diagnosed with ARM after colostomy were designated to have both TPPUS and DC to determine the type of rectourinary fistula. The result were compared to the intraoperative findings and statistically analyzed with McNemar test (P≤ 0.05= significant).**Results:** The mean age of patients was 1.68±1.44 years old. Eighteen (60%) patients had meconium mixed with urine in neonatal period. The fistula was not detected in 8 patients underwent both examination. Rectobulbar fistula was detected in 11 DC, 12 TPPUS, and 11 IOF (P=1.00). Rectoprostatic fistula was detected in 5 DC, 6 TPPUS and 5 IOF (P=1.00). Rectovesical fistula was detected in 6 DC, 4 TPPUS and 6 IOF (P=0.5)**Conclusion:** There is no difference between TPPUS and DC in determining fistulas, thus the TPPUS could be safe and simple alternative method for diagnosing rectourinary fistula in boys with ARM.**Keywords:** ARM, rectourinary fistula, distal colostography, transpelvis-perineum ultrasound

[SP 267] Title: A COMPARATIVE STUDY OF THE EFFICIENCY OF LOCALLY FORMULATED SOLUTION â€œQSLâ€ WITH THAT OF KINUREA-H® IN INJECTION SCLEROTHERAPY OF CHILDRENâ€™S RECTAL PROLAPSE

Author: Ndeye Fatou SECK

Aim of the study: To compare the efficiency of a locally formulated product with that of a ready-to-use pharmaceutical product for injection sclerotherapy of rectal prolapse in children. **Methods**: This was a bicentric, prospective, descriptive and analytical study. All patients with a persistent rectal prolapse after a well-conducted medical treatment were included. Over a period of 3 years, 18 cases were collected, 10 in the 1st medical center

(Group 1) and 8 in the 2nd medical Center (Group 2). Group 1 patients were treated with a locally formulated solution called QSL: a mixture of 5ml of isotonic Saline Solution, 3ml of quinine and 2ml of xylocaine. Group 2 patients were treated with Kinurea-H ®.**Results**: The results were very satisfactory for all patients based on our assessment criteria, with an average follow-up of 12 months.The analytical study showed that with an equal number of infiltrations, the therapeutic results of QSL and Kinurea-H ® were identical with a non-significant p-value(data: X-squared 0,22222; df=1; p 0,6374). Kinurea-H ® was more expensive than QSL with a statistically significant difference (p0,0001).**onclusions**: The therapeutic results of Kinurea-H ® and QSL solution are identical whereas financially, QSL is more advantageous than Kinurea-H ®.

[SP 268] Title: ROLE OF PREOPERATIVE LABRORATORY INVESTIGATIONS TO PREDICT PERFORATED APPENDICITIS IN CHILDREN

Author: Ayushi Vig

Aim Acute appendicitis is one of the most common paediatric surgical emergencies. Herewith we present our study to determine the correlation of pre-operative laboratory investigations with intraoperative findings and histopathological report in children with appendicitis.**Materials and Methods**A retrospective analysis of 60 appendicectomies was conducted at Department of Pediatric Surgery, All India Institute of Medical Sciences Jodhpur, India from July 2018 to July 2019. Parameters studied were age, gender, duration of symptoms, Total leucocyte counts and HsCRP at presentation, ultrasonography, intraoperative findings (perforated or not perforated appendix), placement of drain in perforated cases, post-operative duration of antibiotics and hospital stay. We compared the values of TLC and CRP in perforated and non-perforated cases. The placement of drain versus no drain was also studied in respect to post-operative recovery. **Results**The mean age of the patients was 11.23 years (range- 2-18years) with a male preponderance; M:F-2:1. The mean TLC value was 16,772 cells/cc in the perforated group which was significantly higher than the non-perforated group 10,872cells/cc (p value<0.001). Mean Hs CRP for the perforated group was 104.3mg/L which was significantly higher (p value-0.015) as compared to 40.69mg/L of the non-perforated group. We calculated a cutoff TLC value of 17,930 cells/cc and Hs CRP value of 32.9microgram/ml was found to be suitable preoperative parameter suggestive of perforated appendicitis. USG correctly identified perforated appendicitis in 56% (n=23) patients. The negative Appendicectomy rate was <5% which is comparable to the previous studies. No significant difference was noted in the post-operative course and duration of hospital stay if drain was placed intraoperatively in perforated appendicitis.**Conclusion**High TLC count and Hs CRP can accurately predict perforation in appendicitis cases pre-operatively and we propose administration of higher antibiotics according to perforated appendicitis protocol in patients who initially present with high TLC count and CRP

[SP 269] Title: COMPLEX AND RARE VARIANTS OF ANORECTAL MALFORMATIONS: NEED FOR CENTRALIZATION

Author: Anna Morandi

Aim of the study: anorectal malformations (ARMs) include a wide spectrum of defects, ranging from forms with a more favorable outcome to extremely complex ones. The correct classification of the anomaly is crucial for adequate treatment. The aim of the study is to evaluate the incidence and the diagnostic accuracy of complex and rare variants of ARMs.**Methods:** data of patients treated at our Center between January 2014 and June 2019 for complex ARMs and variants defined as rare according to the Krinckenbeck classification were collected and analyzed. **Results:** in the study period 84 patients with ARM were treated in our Center. 16% of these patients (13/84) presented complex ARMs or rare variants: 1 rectal stenosis, 1 recto-vaginal fistula, 5 cloacas, 1 bladder exstrophy with perineal ARM, 4 cloacal exstrophies and 1 posterior cloaca. 4/13 patients were inborn (31%), while 9/13 (69%) were outborn. A correct diagnosis at birth was present in 4/9 (44%) of the outborn patients before referral. The remaining 5/9 (56%) were transferred with an incorrect diagnosis. An enterostomy was performed in 11/13patients, followed by anorectoplasty in 7 cases. Four patients still have the enterostomy. Two patients received primary anorectoplasty without enterostomy.**Conclusion:** ARMs require a specific standardized approach both for correct clinical assessment and for the most appropriate surgical management. Adequate surgical expertise and multidisciplinary involvement are essential to offer the best management and achieve an optimal outcome.

[SP 270] Title: CORRELATION BETWEEN LONG TERM BOWEL FUNCTION IN ANORECTAL MALFORMATION PATIENTS WITH SPINAL CORD AND VERTEBRAL ANOMALY

Author: Yongwoo Yune, Da-Young Ko, Jeik Byun, Ji-Won Han, Hyun-Young Kim,Sung Eun Jung,

Aim of study To investigate the correlation between spinal cord anomaly(SCA) and vertebral anomaly(VA) with bowel function in patients undergoing corrective surgery for anorectal malformation(ARM).**Methods** A retrospective study was performed in patients with SCA or VA diagnosed with ARM who underwent corrective surgery at Seoul National University Hospital from January 2003 to December 2017. The SCA group included patients with low lying conus, lipomeningocele, spinal lipoma, meningomyelocele, meningocele and thickened/fatty cord. The VA group included scoliosis, kyphosis and bony defect from the cervical spine to the coccyx. Bowel function was assessed at ages 5 and 10 using the Krickenbeck defecation scores(KDS).**Results** Among the 461 patients diagnosed with ARM who underwent corrective surgery, 99 patients had SCA and VA. The median age was 13 years old. 54 presented SCA alone, 27 VA only and 18 showed both. 72 patients were found with SCA and 45 with VA. Patients with SCA displayed higher grade of soiling compared with patients without SCA at 10 years of age(p=0.015). There was no significant difference in KDS at age 10. When comparing patients with VA and those without VA, there was no significant difference in KDS at age 5 and 10. When comparing patients with SCA alone and VA alone, patients with SCA alone showed higher grade of soiling at 10 years of age(p=0.031). There was no significant difference in KDS between SCA alone and VA alone at age 5. **Conclusion** SCA corelates with soiling in patients undergoing corrective surgery for ARM, whereas VA does not. Both SCA and VA do not seem to correlate with voluntary bowel movement and constipation in patients undergoing corrective surgery for ARM.

MIS Posters Day 3: Group 7
Moderator: Abdalla Zarroug

[SP 271] Title: THE ROLE OF WRAP-CRURAL FIXATION IN THE PREVENTION OF TRANSMIGRATION AFTER LAPAROSCOPIC NISSEN FUNDOPLICATION

Author: Mostafa Zain, Sameh Shehata, Ahmed Khairi, Khaled Ashour, Ahmed Fouad

Introduction: Gastro-esophageal reflux disease (GERD) is common in infants and children and has a varied clinical presentation. Mild cases respond well to medical therapy; however, in severe or refractory cases surgical intervention is required. laparoscopic fundoplication in children has become the gold standard for antireflux procedures. Intrathoracic migration of the fundic wrap is one of the commonest causes for fundoplication failure, leading to recurrence of GERD symptoms.**Objective**: The aim of this study is to compare the incidence of wrap transmigration after laparoscopic Nissen fundoplication with and without wrap crural fixation.
Patients and Methods: A prospective study was conducted on 20 patients at Pediatric Surgery Department, Alexandria University Hospitals. Redo fundoplication Patients and Cases requiring feeding gastrostomy in addition to fundoplication were excluded from the study. Patients were randomly divided into 2 groups using block randomization (ABAB): Group A where the wrap was fixed to the right crus only or to both crura and Group B without wrap crural fixation. The main outcome measurement was detection of wrap herniation with a contrast study 6 months after the surgery, secondary outcome measurements were operative time, hospital stay, intraoperative complications, postoperative complains and postoperative duration of antireflux medications.
Results: There were no significant differences between the 2 groups regarding age and mode of presentation. All cases were completed laparoscopically without conversion except in 2 cases. Group B showed wrap transmigration in 2 cases, whereas there was no significant difference in the operative time and hospital stay.**Conclusions**: Fixation of the wrap to the diaphragmatic crura decreases wrap transmigration after laparoscopic Nissen fundoplication. Future prospective studies should be conducted with larger patient populations and longer follow-up periods.

[SP 272] Title: PEDIATRIC THORACOSCOPIC SURGERY

Author: Najeh Alomari

Objectives: To present our early experience in pediatric thoracoscopic surgery, safety, efficacy, analgesic requirements, hospital stay and complications.**Methods**: Retrospective review of 54 patients underwent different thoracoscopic procedures over 10 years (June 2009-2019) at Queen Rania Hospital for Children/KHMC & private sector.**Results**: Patients included 35 males and 19 females. Age range from 3 days to 11 years.6 patients underwent thoracoscopic right side diaphragmatic plication for eventration, 16 patients underwent thoracoscopic decortications, 2 patients underwent excision of esophageal duplication cyst, one patient had excision of huge thymic cyst , 4 patients had repair of left side diaphragmatic hernia, 8 patients had lung biopsy and mediastinal LN biopsy,2 patients had thoracoscopic assisted ,bronchoscopic assisted removal of aspirated needle and 3 patients had evacuation of lung hydatid cyst. One patient had thymectomy, 2 patients had Lobectomy, 3 patients had tumor excision, 5 patients had thoracoscopy for trauma and one patient had thoracic duct clipping for chylothorax .No conversion to open surgery, no complications. All patients had moderate post operative pain and all discharged in excellent condition.**Conclusion**: Pediatric thoracoscopic surgery is safe, feasible, and effective, with minimal complications, less trauma & scar. It should be practiced in pediatric surgical units under experienced surgeons.

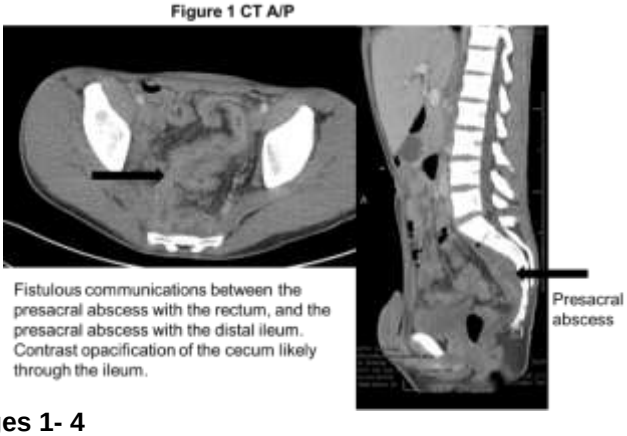
[SP 273] Title: LAPAROSCOPIC TAKEDOWN OF A CROHN ILEOCOLONIC FISTULA

Author: Dorothy Rocourt, MD, Danielle Peterson, MD and William Wong, DO

This is a case of a 17 year old male who presented to our Emergency Room (ER) with complaints of severe back and leg pain for 1 week. He had been self-treating with Tylenol and naproxen. He had a history of Ulcerative Colitis (UC) that was diagnosed at an outside facility approximately 1 years ago. His UC was treated with Sulfasalazine, which he reported he stopped taking some time ago because he felt better. He was a smoker for that past 8 years, ¼ of a pack daily and he used marijuana. As part of his evaluation in the ER, He had a computed tomography performed of his abdomen and pelvis (CTA/P). CT revealed acute inflammation of the distal colon and right a right lateral perirectal fistula in communication with a presacral abscess measuring 3.8 cm x 3.1 cm x 10.1 cm and a second collection posterior to the right psoas muscle measuring 2.8 cm x 3.8 cm, (Figure 1). He underwent CT guided drainage and was started on intravenous antibiotics consisting of Ciprofloxacin and Flagyl. He was also made nothing per os and started on total parenteral nutrition (TPN). Two weeks later, he had a CT guided contrast study performed via his presacral drain which showed fistulous communications between the presacral abscesses within the rectum and the distal ileum, (Figure 2). Repeat CT done 2 weeks later showed resolution of the collections but persistent inflammatory changes to the distal colon and small bowel in the right lower quadrant. He then received a 5 day course of intravenous steroids and was taken to the operating room for a diagnostic laparoscopy with takedown of the fistula and fecal diversion. We elected to divert and not resect given his presumptive diagnosis of Crohn's disease and unclear extent of disease. He was positioned in a modified Lloyd-Davies position in anticipation of performing a right sigmoidoscopy for a leak test. Intra operative, there were minimal adhesions but moderate inflammation in the pelvis and right lower quadrant. The ileocolic fistula was identified and a Penrose drain was used to facilitate exposure to staple across the fistula with an endoscopic stapler, (Images 1-4). The colonic fistula site was over sewn and a leak test was performed using rigid sigmoidoscopy, (Images 1 – 4). He had a loop ileostomy brought up proximal to diseased small bowel. Postoperative course was uneventful. He was discharge home on intravenous antibiotics and TPN. He was started on Remicade. Three months later he underwent upper which showed gastritis and a normal duodenum. Lower endoscopy showed visually abnormal mucosa in the rectum, sigmoid and descending colon, however pathology showed no significant pathologic alteration, (Images 5 -7). He also had an ileoscopy via his loop ileostomy and again pathology showed no significant pathologic alteration. He then had a barium enema to evaluate the colonic fistula site, which was normal, Figure 3. He was taken back to the operating room 8 months from his date of presentation for laparoscopic takedown of his ileostomy, ileocectomy with primary stapled ileocolic anastomosis. Final pathology was consisted with Crohn's ileitis. At his 2 week follow up appointment, Remicade was resumed.

He is now again non complaint and has not kept any of his follow up appointments nor scheduled Remicade infusion appointments.

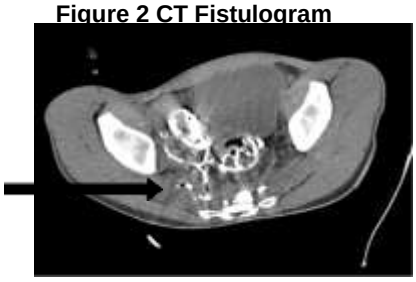
Figure 1 CT A/P



Fistulous communications between the presacral abscess with the rectum, and the presacral abscess with the distal ileum. Contrast opacification of the cecum likely through the ileum.

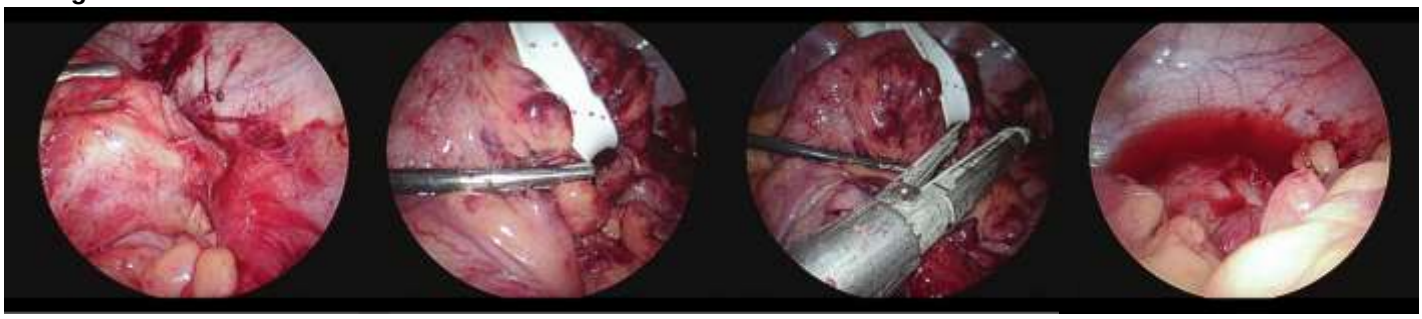
Presacral abscess

Figure 2 CT Fistulogram



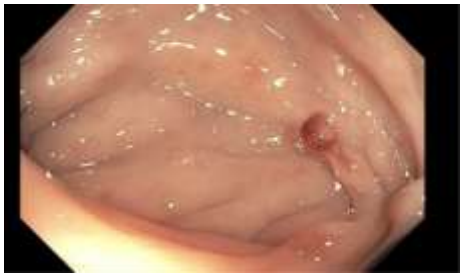
Fistulous communications between the presacral abscesses within the rectum

Images 1- 4

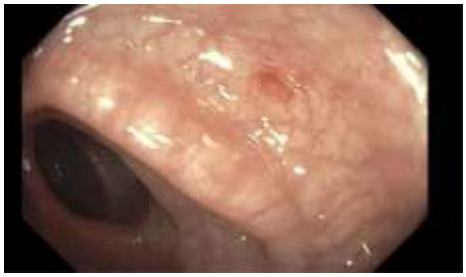


Images 5 – 7 Colonoscopy

Rectum

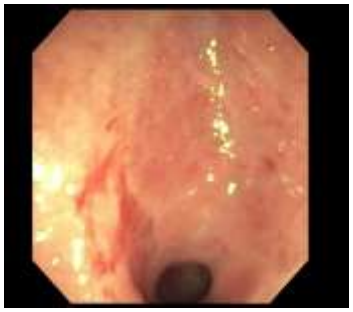


Sigmoid colon



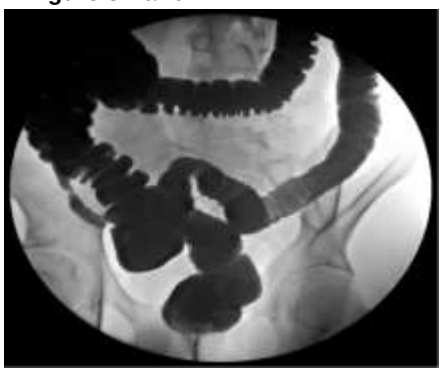
Descending colon

Image 8 Ileoscopy via loop ileostomy



Terminal

Figure 3 Barium



[SP 274] Title: OUTCOME OF LAPAROSCOPIC ORCHIDOPEXY AT SOBA UNIVERSITY HOSPITAL

Author: Sami Taha

Aim: To evaluate patients with undescended testes (UDT), their age presentation, diagnosis and outcome of laparoscopy as a mode of treatment in a low income setting.**Methods**: Retrospective study performed in 50 patients with UDT at Soba University Hospital, from January 2012 to April 2016. Data tabulated included personal data, age at presentation, age at time of operation, investigations, treatment and outcome of laparoscopy.**Results**: 80% of our patients underwent orchidopexy above 6 years. Size of the testes was normal in 68.0%, small in 20.0%, atrophied in 12.0% which was documented during the follow up (urinary catheter ballon simulating Prader orchiometer). Post operative complications included acute urinary retention in one patient (2.0%) and chest infection in 2 patients (4.0%). Forty patients (80%) came for follow up after two weeks of surgery. The results of this study demonstrate that outcome of laparoscopic orchidopexy for managing patients with impalpable testis was safe, feasible and effective.**Conclusion**: UDT present late in our country, with more than two-third of patients presenting between 3-10 years of age. The treatment outcome through laparoscopic orchidopexy was safe, feasible and effective.

[SP 275] Title: COMPARATIVE RESULTS OF OPEN AND LAPAROSCOPIC TREATMENT OF DUODENAL OBSTRUCTION IN NEWBORN

Author: VASILIY SHUMIKHIN

AimComparative study of the effectiveness of laparoscopy compared to laparotomy for the treatment of newborns with duodenal obstruction.**Methods**The study included 163 newborns with duodenal obstruction who underwent rhomboid duodenoanastomosis. The 1st group consisted of 90 patients after laparoscopic surgery, and the 2nd group included 73 patients who underwent open surgery.By comparing anthropometric and gestational indicators in both groups, we have not identified significant statistical differences. The age of surgery was not different in both groups. The duration of the surgery was comparable, there were no conversions in the 1st group, no intraoperative complications were found in both groups, and no hemotransfusion was required. There were no intergroup differences in the causes of duodenal obstruction. In the 1st group the duration of postoperative lung ventilation was on average 1.5 days (0-3), while in the 2nd - 4.8 days (2-8). In the 1st group the average duration of intestinal transit restoration was 6 days (min - 9), in the 2nd group - 7.6 days (3 - 10). A complicated postoperative period was observed in two laparoscopic group patients (2%) and in 12 laparotomy group patients (16%). 2 patients of the 1st group underwent relaparotomy due to the course of NEC, in the 2nd group NEC arose in 4 patients. Failure of anastomosis sutures was in 4 children, adhesion obstruction in 3, hiloperitoneum in one patient of group 2.
Results Our research has shown that laparosocpia avoids postoperative complications. The most serious of which were NEC and adhesive obstruction.

[SP 276] Title: LAPAROSCOPIC APPENDECTOMY IN CHILDREN UNDER SPINAL ANESTHESIA: MINIMIZES HOSPITAL STAY AND ANALGESIC REQUIREMENT

Author: MD JAFRUL HANNAN

Laparoscopy now-a-days has become the standard procedure for appendectomy in children and general anesthesia has been commonly used. Although spinal anesthesia is being increasingly used for adult laparoscopy, its use in children is still guarded. We have conducted the retrospective study after ethical approval.
From January 1, 2014 to December 31, 2018, total 671 laparoscopic appendectomies were performed in children between 6 and 12 years age and were enrolled into this study. Data collection could be completed in 574 and were divided into general anesthesia (GA) and spinal anesthesia (SA) groups. For Spinal anesthesia, Bupivacaine 0.5% in 8.5% dextrose at 0.4mg/kg plus Phentanyl 0.2 mcg/kg body weight were used. Ondansetron and ranitidine injections and diclofenac suppository were given to both groups. Feeding started 4-5 hours postoperatively in GA group and 2-3 hours in SA group. Pain scores recorded up to 6 hours postoperatively in the hospital and then relied upon subjective feeling of the patient/parents and analgesics (oral Naproxen/diclofenac suppository) given accordingly. Age, sex, operation theatre time, immediate and late postoperative analgesic requirements was noted.Of 574 children, 315 were males, 178 cases were done under GA and remainder under SAB. Of the SA group, 3 patients needed to convert to endotracheal Intubation and 104 patients needed ketamine hydrochloride.

Average operation theatre time was 43.325 ± minutes in GA group and 30.6 ±7.256 minutes in Sa group. Analgesic requirement during first 6 hours postoperatively was in 67% of GA group and 36% of SA group. During 4 postoperative days NSAID requirement was in 51% and 27% respectively. Twenty eight percent of GA group and 87% of SA group were discharged from hospital on same day of operation.Spinal anesthesia for laparoscopic appendectomy in children is feasible, safe, shortens hospital stay and lessens analgesic requirements.

[SP 277] Title: LAPAROSCOPY FOR PEDIATRIC COMPLICATED APPENDICITIS: A MULTICENTER STUDY ON FEASIBILITY, TECHNICAL CONSIDERATIONS AND SHORT TERM OUTCOME.

Author: Akram Elbatarny

Background/ Purpose: Laparoscopic appendectomy (LA) for complicated appendicitis (CA) in children is still controversial. This study aimed to evaluate the safety, feasibility and short term outcome of Laparoscopy for pediatric CA, as well as to discuss technical considerations.**Patients and methods:**The medical records of children, who underwent LA for CA by the authors, in Tanta University, Qena University, and Mansoura University Hospitals, from March 2015 to March 2018, were reviewed. Relevant data included; preoperative presentation, operative details, type of CA, intraoperative complications, method of extraction, drain placement, conversion, postoperative course, hospital stay, postoperative complications and need for secondary interventions. The authors were asked to provide a subjective assessment of LA for CA regarding both laparoscopic exposure and dissection in these cases; expressed as poor, fair, good or excellent, and also to mention the limitations of the technique. **Results:**The records of 59 patients were reviewed. Males represented 36 cases (61.1%) while 38.9% were females. The mean age of the patients was 10.16 years. The duration from onset of symptoms ranged from 1- 7 days with a mean of 3.4 days. The trocar sites were based on surgeon preference; Mishra arrangement; 53 cases (89.8%) and Kumar; 6 cases. All cases were completed laparoscopically. No major intraoperative complications. A drain was inserted in 47 cases. Mean operative time was 77.1 min. and mean hospital stay was 2.1 days. Postoperative complications included; port site infection; n = 9, port site hernia; n=1, and collection; n =5. **Conclusion**:Laparoscopy for pediatric CA is safe with low postoperative complications. It gives an exposure and exposure and dissection with caution. Use of sucker for dissection improves exposure. Postoperative collections still can be managed by interventional US and MIS.

[SP 278] Title: PERCUTANEOUS INTERNAL RING LAPAROSCOPIC ASSISTED LIGATION FOR INGUINAL HERNIA REPAIR IN CHILDREN: SAFETY AND EFFECTIVENESS RATING

Author: Chouaib Sayah

Background/Purpose Laparoscopic herniorrhaphy in pediatric surgery is usually performed through three ports in the abdominal wall with intraperitoneal suturing; Percutaneous Internal Ring Laparoscopic Assisted Ligation (PIRLAL) is a minimally invasive method for repair of pediatric inguinal hernia. In this study we report our experience with PIRLAL **Method** From November 2017 to October 2019, a total of 59 children had undergone with PIRLAL in our department. Children with inguinal hernia underwent surgery using the PIRLAL technique described by Patkowski. Demographic and perioperative findings, complications, and recurrences were evaluated. All patients were followed up at the out-patients' clinics and the medical records were reviewed with respect to all operative outcomes. **Results** A total of 59 inguinal hernia repairs were performed in children with a mean age of 5.5 years (3 years–12 years). In 40 girls (68 %) : the hernias were bilaterally repaired for 04 girsl (10%), while in 36 girls (90 %) hernias were unilaterally repaired. and for 19 boys (32%) 18 boys (95%) unilatereal and 01 boy (05%) . The mean follow-up time was 02 years (range 0.5– 2.1 years). No serious complications or recurrence were noted. Granuloma occurred in one patient **Conclusion**The PIRS technique is a safe, simple and effective procedure for children. Excellent cosmetic results and reduced recurrence rates are associated with this method.

[SP 279] Title: BLUNT ABDOMINAL TRAUMA IN CHILDREN - 10-YEAR SURVEY OF MECHANISMS OF ACCIDENT AND MANAGEMENT IN SOUTHWEST GERMANY

Author: Alexandre Serra

Introduction: This study analyzed mechanisms and management in children with blunt abdominal trauma at a tertiary hospital in Southwest Germany, aiming to identify regional particularities adapting prevention strategies. **Methods**: Data from all children aged 0 – 17 seen at the University of Ulm between 2005 and 2015 for blunt abdominal trauma were collected in regards to age and gender, mechanism of injury, clinical presentation, severity of injury, radiologic imaging, treatment modality, complications and length of hospital stay, among others. All data were statistically analyzed accepting a confidence interval of 95%.**Results**: 134 children were enrolled in the study. The mechanisms of accident were mostly associated with age. The leading causes of trauma were falls (56%, usually less than 1-meter), sport-related traumas (41,8%) and road-traffic accidents (21.6%). Boys suffered more often (67,9%) an intraabdominal injury (IAI; p=0.034) with higher scores for severe injury (p=0,014) in older age (p=0.008). These children also had more often abnormal laboratory (p<0.001). Focused Assessment with Sonography for Trauma (FAST) was primarily performed in 85,8% of the patients and identified a significant correlation between free abdominal fluid and injury pattern (p<0.001), in which 41,8% had an IAI with organ laceration and 46,3% had additional injuries. Conservative treatment of IAI was performed in 60,7% and abdominal surgery in 39,2% of the patients. Complications occurred in 34.4%, significantly higher after spleen (p=0.001), liver (p=0.001) and GI injuries (p=0.001). The length of hospital stay increased with the severity of the injury (p<0.001), especially after child abuse.**Conclusions**: Risks for severe IAI were present even in banal daily activities, for which parents and children must be aware. Despite its rarity, massive IAI after child abuse was observed and should always be considered as a potential differential diagnosis. Further programs of accident prevention should focus on the most susceptible group of school-age boys.

[SP 280] Title: ARE NECROTIZING ENTEROCOLITIS AND SPONTANEOUS GASTROINTESTINAL PERFORATION-SIMILAR CLINICAL ENTITY?

Author: Dinesh Prasad Koirala, Geharaj Dahal, Rameshwor Prasad pokhrel, Akash Chitrakar

Introduction; Spontaneous intestinal perforation (SGP) is extremely rare which is surgical emergency but etiology remains obscure. **Aim**; To highlight the need for increased awareness of spontaneous gastrointestinal perforations **Case Series**;We report case series of four newborn infant who had spontaneous perforation of gastrointestinal presented at first week, forty five days and two months of life. Three cases were managed successfully by urgent surgical intervention and one case was managed conservatively. Two patients had primary repair and one patient had loop illeostomy.All patients are doing well till date.**Conclusion**;Spontaneous gastrointestinal perforation is associated with high mortality because most of the cases are born with prematurity. Early identification and prompt surgical intervention are necessary to improve the outcomes.So, SGP is a distinct clinical entity and unlike NEC-has no long-term gastrointestinal sequele.Distinction between SGP and NEC is important for management and outcome considerations.Besides neonatal necrotizing enterocolitis (NNEC), there are numerous other causes of bowel perforation in a neonate and these include stress, hypoxia, or shock leading to the regional hypo-perfusion and transient intestinal ischemia initiating local hyperactivity of the defence mechanisms resulting in spontaneous intestinal perforation (SIP). Although the aetiology of SIP remains unknown, some authors argue that SIP and NEC represent different manifestations of the same pathogenic process. Premature rupture of membranes, lower Apgar scores, and the need for cardiovascular resuscitation in the perinatal period resulted in an increased susceptibility to SIP. The terminal ileum is more prone to local ischemia, but isolated perforations, like SIP, have also been observed in the transverse and descending colon. Other rare causes of neonatal intestinal perforation could be mechanical injury from the gavage tubes, rectal thermometers, resuscitation with oxygen under pressure in patients with distal pyloric or duodenal obstruction, congenital defects of the musculature, diverticula and meconium stasis. [5],[6],[7],[8] **Key words**; Spontaneous intestinal perforation, Necrotising enterocolitis,

[SP 281] Title: TIME HEALS ALL WOUNDS: INCISIONAL HERNIA AFTER LAPAROSCOPY

Author: Ghattaura H., Woodward B., Paramalingam S.

Aim of the study:We present what is, to our knowledge, the first report of non-operative management of incisional hernias in infants after laparoscopic surgery. By conducting a literature review we sought to garner a more comprehensive, evidence-based understanding of the optimum management of this condition. **Case description**:We present a case series of 4 term infants (3M, 1F) who underwent laparoscopic inguinal hernia repair (3 bilateral, 1 unilateral). The mean age at procedure was 32 days (25-44) and mean weight was 4.1kg (3.3-4.9). All procedures were performed by a single surgeon, with a personal series of over 200 cases and no previously reported complications of this nature.Operative technique: An open Hasson approach was used to insert a 5mm supra-umbilical self-retaining port. The fascial opening was approximated using a 2/0 absorbable synthetic braided suture in a purse string technique. No other ports were utilised, with two further working 3mm instruments being directly introduced into the abdomen.All 4 patients presented to clinic with an incisional hernia at the supra-umbilical port site. These were treated non-operatively. All patients were found to have complete resolution of their incisional hernias at follow-up. The median follow-up period was 10 months (8-11) with a median of 3 outpatient appointments (3-4). There were no visits to the general practitioner, emergency department or any reported symptoms during this period. Our literature review demonstrates a paucity of data, with existing literature focusing predominantly on the incidence of the problem and risk factors for its development. In the limited literature, primary closure is prescribed as the optimal treatment method. **Conclusions**:We are confident that our series demonstrates that incisional hernias, post laparoscopy, can be treated successfully using conservative management in the asymptomatic patient, given adequate follow-up to ensure complete resolution.

[SP 282] Title: A CASE OF METAL INTRA-INTESTINAL FOREIGN BODY IN CHILDREN

Author: Ines Ben chouchene

Introduction:Foreign body ingestion cases are very common in children. They usually are asymptomatic and don't allow proper diagnosis and management. The diagnosis is made following the occurrence of complications as bowel obstruction and peritonitisWe report a case of a 2 years old girl who was operated in our department for an intestinal foreign metal body.**Case presentation**:A girl aged 2 years, hospitalized in our department fora surgical management of an intra-intestinal metal foreign body .In fact the baby was followed for a year in our consultation, she was initially asymptomatic and during a one year of surveillance, she had many abdominal X-ray which revealed all an intra-intestinal metal foreign body always having the same location. For a month the parents reported the occurrence of a chronic diarrhoea Oeso-gastro-duodenal transit and CT angiography were performed and objective a metallic foreign body at the level of D3 without intra or extra digestive collection
Laboratory investigations were normal except for a mild leucocytosis. Surgery was performed and preoperatively the foreign body was incarcerated in the intestinal wall at the angle of treitz. She had an enterotomy with metal body extraction and end-intestinal intestinal anastomosis with simple operative sequences **Conclusion** Foreign body aspiration in children is a problem that can lead to several complications, including death. Usually a careful monitoring with radiological controls can solve the problem. There is no definite consensus on the duration of monitoring of its patients. However, we must be wary of complication in the event of no-elimination of this foreign body

[SP 283] Title: OUTCOMES OF EARLY ORAL FEEDING FOLLOWING BOWEL SURGERY IN PEDIATRIC PATIENTS IN SUDAN

Author: Omer Mohamed Ib

Keywords: Bowel surgery · Pediatric · Early oral feeding · Outcomes **Background**: Traditional postoperative practice following major abdominal surgery is to keep patients ''nill by mouth'' and provide gastric decompression via a nasogastric tube (NGT) until resolution of ileus. The benefits and safety of deferring oral feeding are not completely clear, especially in children. **Objectives**: This study was conducted to assess the clinical advantages of postoperative early oral feeding (EOF) in pediatric patients who underwent surgery distal to ligament of Treitz.

Methods: A retrospective, cross-sectional study including consecutive 26 children aged ≤ 14 –year-old who underwent open bowel surgery for varying surgical indications from March 2019 to May 2019. Contaminated cases and neonatal atresias were excluded. All operations were done by the same surgeon and the same technique at a single hospital. Patients were monitored for vomiting, abdominal distension and signs of leak and followed up for 3 months. Age, gender, intraoperative blood loss, pyrexia, surgery-related infectious, anemia, need for reoperation or readmission, and abscess formation were assessed. Time to first stool/flatus, full feeds and length of hospital stay (LOS) were recorded. **Results**: There were 22 (84.6%) boys and 4 (15.4%) girls aged 3 days to 9 years. Mean and median age of patient was 2.6 years and 45 months respectively. Oral feeding was commenced in all patients within 24 h following operation (day 1), if there was no contraindication. The most common indication of operation was Hirschsprung's disease (12, 46.1%) and the colon was the most commonly involved site. Of 26 cases, 15 (57.7 %) underwent elective surgery. NGT was removed immediately after surgery in all patients. Just one child complicated by anastomotic leakage. Most of the patients were discharged by postoperative day 2 (46.1 %). **Conclusion**: Early post-operative feeding is safe, well tolerated and reduces the LOS but need further studies in the future.

[SP 284] Title: USE OF LIQUID PARAFFIN IN CONSERVATIVE MANAGEMENT OF GASTRO INTESTINAL OBSTRUCTION DUE TO ASCARIASIS- CASE REPORT

Author: Qais Muraveji

Ascariasis is a condition that causes by Ascaris lumbricoides, which is a common parasitic infection worldwide, especially in developing countries that are located in the tropical and subtropical, with poor sanitation and hygiene. A. Lumbricoides is a well-known cause of serious complications in children. Here we report a case of ascariasis in a 3-year-old boy, presented to ER with abdominal pain, distention and vomiting. Patient admitted and the diagnosis of GI obstruction due Ascariasis made. Then conservative treatment with Liquid Paraffin started. The patient well tolerated the treatment and passed bunches of Ascaris worms, and intestinal obstruction resolved.

Keywords: Ascariasis, Intestinal Obstruction, Liquid Paraffin, Conservative treatment

[SP 285] Title: CYSTIC LYMPHANGIOMA OF THE MESENTERE (ABOUT A CASE)

Author: BELDJERD Imane

Aim of the Study :we report an observation of cystic lymphangioma of the mesentere which posed a differential diagnosis problem with ovarian tumors.We emphasize the importance of histological examination to confirm the diagnosis, the only treatment is surgical exeresis; recurrences are exceptional.Our objective is the identification of a case of cystic lymphangioma in it's abdominal form at the child.**Case description** :This is the 10-year-old female B.h, who consults for abdominal distention, for whom the complementary examinations evoke a giant ovarian cyst.in peroperative exploration we found a cystic mass polylobed at the expense of mesentere, Complette resection was made through a median incision straddling the umbilicus.confirmation of the diagnosis made by the histological examination.**Conclusions**: Cystic lymphangiomas are rare benign vascular tumors, their congenital malformative origin is currently the most accepted; the surgical exeresis represents the ideal treatment and must be as complete as possible with an excellent prognosis.histological examination is the key examination to confirm the diagnosis.

[SP 286] Title: OTOPLASTY FOR PROMINENT EARS IN CHILDREN: ARE WE IMPROVING THEIR LIFE?

Author: Catarina Carvalho

Aim of the Study: Evaluate influence of surgical treatment of prominent ears in children's quality of life.**Methods:** Patients submitted to otoplasty procedures between 2016 and 2018 were summoned for a re-evaluation consultation. 70 patients under 18 and respective caregivers agreed to participate. Surgical, demographic and clinical data were reviewed from the electronic hospital registry. Two sets of inquiries were performed: PedsQL standardized questionary of pediatric current quality of life (for parent and child) and an adaptation of the Glasgow Children Benefit Inventory (GCBIa), for parent-reported post-intervention health related benefit measurement. 15 patients were excluded for incomplete inquiries.**Main results:** From 55 patients included, 70.9%

were males (n=39). Mean age at surgery was 7.7±3.3 years (4-17). There were no surgical or anaesthesia-related complications. Esthetic dissatisfaction and teasing were the main negative pre-operative experiences. Mean PedsQL for patients self-report was 84.1% and 83.7% for the parents and mean GCBIa reported was 12.3, both indicating an improvement in the patients' health-related quality of life. History of bullying and teasing are predictive of the GCBIa scores ($p<0.05$). 85.5% of caregivers would perform the surgery again; 94.5% would recommend the surgery to other patients and 94.5% are satisfied with the surgical result.**Conclusions:** Otoplasty is a valid and safe option in treating prominent ears in children, allowing esthetics improvement and possibly psico-social development. General satisfaction is high with the procedure, and there was a positive post-intervention benefit reported.

[SP 287] Title: ASSESSMENT OF POST SURGICAL BOWEL FUNCTION IN CHILDREN WITH ANORECTAL MALFORMATIONS (ARM) 2019

Author: Walaa Ahmed

Background: Anorectal malformations (ARM) are group of congenital anomalies involving distal anus & rectum as well as the urinary and genital system. They occur in a wide spectrum, ranging from minor defects (which have excellent outcome) to complex defects which are difficult to manage and often have a poor functional outcome. **Objective**: To evaluate bowel function in children with anorectal malformations (ARM) using the Krickenbeck questionnaire, and also to compare the relationship between the functional outcome and the type of malformation.**Methods**: the study design was descriptive, cross sectional, hospital based. Study population: all patients with ARM admitted in the period of 2013-2015, aged more than 3yrs & completed all stages of surgery at least 6 months' back.**Results**:The total number of patients with ARM were 166, the responders who fulfilled the criteria were 37 (22.3 %). The maximum number of patients were in the age group 5-7 yrs. (48.6 %), The males were (51.4 %) and the females were (48.6 %). Maximum number of patients had Recto-vestibular fistula (35.1%), followed by Recto-perineal fistula (32.4%).The commonest malformation in males was Recto-perineal fistula (42%) followed by Recto-ureteral fistula (26%).The commonest malformation in females was Recto-vestibular fistula (72.3 %)Colostomy was performed in 54.1 % of patients. Regarding the main repair 37.8 % of patients underwent cut back, 24.3 % underwent PSARP, and 10.8 % underwent abdominal pull through.
Redo anoplasty was performed in 8.1 % of patients.Voluntary bowel movement (VBM) was present in 83 % of patients.All patients with recto-bladder neck did not have (VBM).15 % of patients with recto-vestibular fistula did not have (VBM)43.2 % had no soiling, 29% had grade 1, 8% had grade 2, 18% had grade 3. 81% did not have constipation.86.5% of patients were not counseled about the future of bowel function after surgery.**Conclusion**: Problems of bowel function (incontinence & constipation) occurred in many patients, they are more common with malformations that are considered as high (e.g. recto-bladder neck).They have huge impact on the quality of life of these children Solutions start by good counseling to the care givers about the nature of disease & possible modalities of treatment. A bowel management program should be tried.

[SP 288] Title: FETUS IN FETU , AN UNUSUAL CAUSE OF PELVI ABDOMINAL MASS IN A 3 MONTHS OLD BOY

Author: Walaa Ahmed

Introduction:Fetus in fetu is a rare congenital anomaly, that result from abnormal embryogenesis in twin's pregnancy.it occurs in 1 in 500,000 births. it has been reported to develop in the CNS, retroperitoneum, and genitourinary tract of the host twin. It is differentiated from fetiform teratoma by the presence of axial Skelton. **Case description**:We present a case of 3 months old boy, He was outcome of vaginal delivery at home and did not have any problems until 5 days PTA, when he developed crying with micturition, he was seen by a GP, given oral antibiotics and sent home. 3 days later he developed AUR, so he was brought to our ER. After initial resuscitation and catheterization, a physical examination revealed a pelvi abdominal mass of about 10*7. CT abdomen showed a complex mass filling the abdomen and extending into the pelvic floor, suggestive of teratoma. The patient underwent surgical excision through laparotomy, in which there was a well capsulated cystic mass emerging from behind the bladder. when opened a gush of turbid yellow fluid came out, then a fetus like mass came out, containing upper and lower limbs, with anencephaly and hair, it was connected with a vessel which was ligated

before excision. The specimen was then sent to histopathology department.**Conclusions**: Fetus in fetu is a rare cause of abdominal mass in infancy that should be kept in the back of mind when evaluating masses in neonates and infants.

Urology Oral Session Day 1: Session 1
Moderator: Y. El Hout

[UOA 1] Title: VOIDING CHARACTERISTICS OF A COHORT OF POSTERIOR URETHRAL VALVE PATIENTS WITH LONG TERM FOLLOW UP IN A UNIVERSITY HOSPITAL IN PORTO ALEGRE, BRAZIL
Author: Conrado Menegola
Aim of the study The posterior urethral valve (PUV) is a pathology of low incidence, with treatment and diagnosis being made every time earlier, but with persistence of high long-term morbidity; the voiding dysfunction has been raised as an important cause. Then, the evaluation of a cohort managed in a High complexity hospital with long-term follow-up was performed.**Material and methods**Retrospective study of patients with PUV taken to surgical management between 2005 and 2019. Description of preoperative and long-term follow-up characteristics in groups Early (G1) vs Late (G2) diagnosis, with average follow-up of 51 months. Statistical analysis of frequency and distribution variables. P Calculus by Mantel-Haenszel, use of statistical program StatCalc.**Results**36 patients with PUV were identified, G1: 24 (66.67%), G2: 12 (33.33%), with an average diagnosis at 8.5 months; 19.44% with history of previous surgery. 83% with adequate voiding jet, 5.5% inadequate and 11.1% presurgical urinary retention, with reduction of urinary retention at 5% post-surgical; 91.67% continence, with a 29.1% using antimuscarinics and 13.5% associated with alpha blocker, without finding statistically significant differences in the groups. As for catheterization, 36.11% require them, finding a significant difference with RR 2.33 (1,005 - 5,414), P = 0.05, with a higher risk for G2, starting at an average age of 1 year, on average every 5 hours, 23% managed to suspend them in successful way at 36 months. 25% required transient surgical urinary diversion and 5.56% definitive Mitrofanoff type. Urodynamics is performed routinely in 41.67% of patients, starting at 72 months on average, with 70% normal bladder capacity, 55.5% with significant residue, 60% normal sensitivity, 66.6% with bladder hyperactivity and 60% altered complacency.**Conclusions** In patients with PUV, it has been found that the early treatment decreases the likelihood of performing intermittent catheterizations. Despite the high incidence of bladder hyperactivity and alterations in complacency, the most of the patients are able to void and with adequate continence with medical therapies.

[UOA 2] Title: FETAL UROLOGY EXPERIENCE IN THE HIGH RISK PREGNANCY GROUP IN A UNIVERSITY HOSPITAL OF HIGH COMPLEXITY IN PORTO ALEGRE - BRAZIL
Author: Conrado Menegola
Aim of the study: High-risk pregnancies are considered those that increase the risk of maternal or fetal complications, in the fetal, birth or neonatal period, without an exact definition accepted, which makes epidemiological data difficult to report. It is estimated that 12% of pregnancies may require some special attention and that up to 1% of fetal ultrasounds will have urinary system alterations. The experience of a Brazilian high complexity hospital is described.**Material and methods**: Retrospective study of pregnant patients belonging to a high fetal maternal risk group between 2006 and 2019. Initial suspicion of urological pathology, findings during the accompaniment of pregnancy and long-term follow-up in the institution are described, defining real incidence of urological malformation, requirement of surgical intervention and mortality, among others. Statistical analysis of frequency and distribution variables was performed.**Results**: 2460 high-risk pregnant women were identified, with an average age of 27.3 years (15 - 44 years), over a period of 13 years of follow-up, with exponential increase in the suspicion of urological diseases over time; 3.41% (84 fetuses) had some characteristic that would lead to suspicion of possible urological alteration, identified on prenatal ultrasound. The most frequent alteration was hydronephrosis (67.86%), followed by mega bladder, polycystic kidneys or renal agenesis. 36.9% of patients were from the state capital and 63.1% from intermediate and small cities. During the follow-up was identified that 35.71% of the cases corresponded to physiological hydronephrosis and 64.29% (54 patients) had a urological

disease diagnosis in the newborn; with 15.48% (13 patients) of serious illness that caused fetal or neonatal mortality and 21.42% (18 patients) required some type of surgical management, being the most frequent fulguration of posterior urethral valve (38.89%).**Conclusions**: Urological manifestations within a group of high-risk pregnant women may appear to be of low incidence, however, the presence of serious diseases that lead to mortality or moderate diseases requiring surgical management, makes the involvement of pediatric urology in this context of vital importance, allowing diagnosis, early treatment and follow up for these patients and their families.

[UOA 3] Title: PARTICULIARITY OF URETER REIMPLANTATION AFTER ENDOSCOPIC CORRECTION OF VESICOURETERAL REFLUX BY BULKING AGENTS.

Author: Zukhra Sabirzyanova

During the last years subureteral injection of bulking materials has become more popular because it is minimally invasive. It has become an alternative to long-term antibiotic prophylaxis and surgical intervention in the treatment of vesicoureteral reflux (VUR) in children. But from 8 to 15% of patients still need the ureter reimplantation after the primary VUR endoscopic correction because the VUR recurring either the obstructive complications. The **aim** of the study was to assess the specificity of the ureter reimplantation after the previous endoscopic correction of VUR by bulking agents for choosing the better access.

Methods: 80 ureter reimplantations were assessed prospectively in 66 children in the age from 3 to 12 years old. Different bulking agents were used for correction: dextranomer/hyaluronic acid (Dx/HA) in 68%, and polyacrylate polyalcohol copolymer (PPC) in 32%. Previously 75% of them underwent 2 corrections; in 20% it was done 3 times, in 5% - the only. Extravesical ureter reimplantations were done in all of patients. **Main results**. In all patients during the operation the bolus of bulking agent were replacement and found behind the wall of bladder, in 25% of cases it was larger than 3ml. In 32 cases the bulking agent were in the bladder wall too and it was the indication for bladder wall resection in 18 children. In 42 cases there were distal ureter compression and deformation on the length to the 1-3cm.**Conclusions**. We suppose that the full removing of bulking agent is nessesary during the ureter reimplantation. So the extravesical approach is better, because it allows to separate the ureter on the length, to make the bladder wall resection if it is nessesary. and to do completely reposition of the ureterovesical junction to intact bladder wall.

[UOA 4] Title: COMPARISON OF TWO METHODS OF MIDLINE AND PARA-MEDIAN SURGERY FOR PERITONEAL DIALYSIS CATHETER PLACEMENT IN CHILDREN

Author: Jamshid M, Asadloo A, Badbarin D.

Introduction: There are several methods for dialysis in patients with chronic renal failure in children. One of these methods is the insertion of a peritoneal dialysis catheter, which can be embedded with para-median and midline. The purpose of this study is to compare the complications and the success rate of these two methods.**Methods**: All patients under the age of 7 years who had undergone a peritoneal dialysis catheter due to renal failure were randomly assigned to one of the midline or para-median methods. Patient files were extracted, and demographic data, and the occurrence of early and late complications and success rate in each group were extracted and recorded.**Results**: Peritoneal dialysis catheter was used for 41 patients (15 patients (36.58%) by Para-median method and 26 patients (63.42%) by midline method). Early complications such as obstruction (P = 0.035), Leak (P = 0.033) and local infection (P = 0.02) and late complications such as late discharge leakage (P = 0.033) and outbreak infection or tunnel (P = 0.028) is significantly lower in Para-median method. The success rate of higher peritoneal dialysis catheter in Para-median method was compared to midline method (P = 0.02).**Conclusion**: Due to the early and late complications and the success of the peritoneal dialysis catheter with Para-median, it can be used as a selective catheter insertion method.**Keywords**: Peritoneal Dialysis Catheter, Para-median, Midline.

[UOA 5] Title: TWO BIRDS WITH ONE SHOT: A NEW SIMULATOR FOR PEDIATRIC LAPAROSCOPIC PYELOPLASTY
Author: Maria Sole Valverde
Background: In recent years, increased the development in numerous inanimate models designed for specific training in pediatric and neonatal MIS. Inanimate models provide a safe environment by increasing technical performance and cognitive knowledge of a surgical procedure without compromising patient´s safety. This is the main reason for their rising popularity amongst pediatric urologists and surgeons.**Aim of the study** Our objectives are 1) present a new simulator of pediatric ureteral pyeloplasty (pyeloplasty MT-BOX1 simulator) with a singular feature that makes it unique: two exchangeable models in the same training box, 2) Evaluate the cost and 3) Recruit initial experience from trainees (pre-validation)**Methods**: An MT-BOX1 universal simulator box manufactured with polypropylene and 3D printed flexible columns, covered in thermoformed EVA foam simulating the abdominal wall of a neonate.Disposable: 1) balloons for the renal vessels, the inferior vena cava, the aorta and the renal pelvis; 2) semisolid gel for the kidney and the intestines; 3) nasogastric tube of 2,3 mm in diameter and 105 cm long; 4) three way stop cock and 60 ml syringe; 5) surgical adhesive drape; 6) 0,3 mm EVA foam used as the base for all the structures; 7) 5/0 prolene and 4/0 nylon; and 8) 3 mm laparoscopic surgical instruments.
Two working models were created: 1) Intrinsic pyeloureteral stenosis and 2) Pyeloureteral stenosis due to a polar vessel.Surveys were delivered to all the operators to begin the validation process.**Main results**: The development of the model cost 65 USD, the MT-BOX1 cost 50 USD and the artificial tissues cost 15 USD.3 urologists and 3 pediatric surgeons, all experts in minimally invasive surgery tried the simulator. All of them agreed that the simulator reflects many aspects of the real technique.Other interesting characteristics were its low weight of only 250 grams as well as its portability, ergonomics and animation.**Conclusion**: the pyeloplasty MT-BOX1 simulator is a low cost model that might prove a valuable resource for training in ureteropelvic anastomosis in pediatric patients. A formal validation process will be perfomed in order to evaluate its real benefits.

[UOA 6] Title: LONG TERM OUTCOME OF DISTAL URETERIC STUMP AFTER (HEMI)NEPHROURETERECTOMY IN OUR CLINIC.
Author: Bilge KARABULUT, Halil TOSUN, Hasan Deliağa, H.Tugrul TİRYAKİ
IntroductionLeaving a remnant distal ureteral stump especially in duplicated system in heminephroureterectomy is generally recommended. The uretheral stump is mostly ligated only if vesicoureteral reflux (VUR) is present into the affected system and is otherwise left open to allow decompression and prevent stasis of urine. In this study our aim is to examine the long term outcome of ureteral stump after (hemi)nephroureterectomy in our clinic.
Patients and Methods Between July 2008 and April 2019, 29 patient underwent (hemi)nephroureterectomy for poorly functioning displastic, scared, atrophic or hidronephrotic kidney. The median age was 4.7 years. Heminephroureterectomy was done to 7 patient of which 3 were upper pole moieties with ectopic ureter in one and ureterocele in two. Vesicoureteral reflux was present in four heminephroureterectomies and seven nephroureterectomies. In all our patients with VUR and without VUR the ureteral stump is ligated. Of these patients only in two distal ureteric stump resection was required because of recurrent urinary tract infection, pain and/or hematuria (ureteral stump syndrome) after a mean of 1.5 year follow up period. Both of these patients had total nephroureterectomy operations because of high grade VUR and poorly functioning displastic, scared kidneys.
ResultsAlthough none of our 7 heminephroureterectomy patients had distal ureteric stump problem 2 (9%) of our 22 total nephroureterectomy patients who had high grade VUR needed distal stump resection because of ureteral stump syndrome.**Conclusion** In our clinic although we left more distal ureteral stump to protect common sheath in heminephroureterectomy we didn't have any ureteral stump problem but we have 9% ureteral stump syndrome in our total nephroureterectomy patients. We think that high grade VUR is more impotant in development of ureteral stump syndrome than the ureteral stump length and stump ligation so no residue must be left in high grade VUR.

[UOA 7] Title: URETERO PELVIC JUNCTION SYNDROME WITH MUTE KIDNEY : WATCH OUT FOR THE TRAP ABOUT 1 CASE

Author: Ines ben Chouchene

Aim of the study: Uretero pelvic junction syndrome is a common condition in pediatric urology daily practice. Complementary examinations are of extreme importance to present the right therapeutic indications and to preserve the functional and vital prognosis of the child. We reported an observation where the indication was corrected and the renal prognosis of the child was preserved.**Case presentation :** It's abouta 7-year-old girl who consults following the fortuitous discovery of a right Uretero pelvic junction syndrome, with a medical background of a high urinary tract infection. During the interrogation she describes recurrent abdominal pains for a year. The clinical examination is without particularities.Ultrasonography found an anteroposterior diameter of renal pelvic at 46 mm and a requested MAG III renal scintigraphy found a non-functional right kidney. Nephrectomy was indicated along with pain and severe infectious episode.A renal scintigraphy with DMSA was requested before the intervention and showed a function right renal estimated at 37% of the overall function.The indication for surgery was then corrected to a Henderson Hynes pyeloplasty with placement of double J stent. Operative follow-up was simple with no functional complaints a strictly normal clinical examination and an abdominal ultrasound showing a decrease in renal pelvic diameter to 21 mm.**Conclusion:** It suits to be extremely careful before indicating nephrectomy in a child with uretero pelvic junction syndrome. Only DMSA scintigraphy allows to confirm the absence of renal function.

[UOA 8] Title: A SIMPLIFIED TECHNIQUE OF REMOVAL OF DOUBLE J STENT WITHOUT CYSTOSCOPE: IN A LOW RESOURCE CENTRE

Author: U Huq, M K Kabirul Islam, K M N Ferdous, S M Mahmud

Background: The mainstream technique of double J stent removal is through cystoscope, which requires general anesthesia and sometimes recognized a bit expensive procedure in a low economic country like Bangladesh. In Dhaka Shishu (Children) Hospital we successfully applied a simple method to retrieve double J stent without any aid of cystoscope or anesthesia.**Method**:. A self made device was made to carry out the procedure. A polypropylene suture was sewed at the tip of a feeding tube and was introduced per urethra into the bladder. After emptying the bladder it was pulled which came along with the D J stent. Four patients received nitrous oxide inhalation for sedation; rest of them did not get any sort of anesthesia.**Result**: From June 2019 to July 2019, we removed D-J stent in 8 patients with this novel technique. Most of the cases were following A-H pyeloplasty except one case of bilateral ureteric reimplantation. The stent was removed with a single attempt mostly and procedure time was less than 5 minutes. The total expenditure of patients for this method is only 15% of conventional cystoscopic method.**Conclusion**: This less invasive, simple, non expensive technique demands widespread popularity, so that the surgeons can elude the hazards of cystoscopy and anesthesia.

Urology Posters Day 1: Group 11:
Moderator: Y. El Hout

[UP 1] Title: THE FIXATION OF THE GLANS PENIS AND URETHRAL CATHETER TO ABDOMÄ°NAL SKIN AVOIDS GLANS DEHISCANCE AFTER DISTAL HYPOSPADIAS SURGERY

Author: Ali Atan, Ramazan Karabulut, Zafer Turkyilmaz, Kaan Sonmez

Aim of study: Although over the 300 techniques and modifications have been described in hypospadias surgery, tubularised incised plaque urethroplasty (TIPU) is one of the most common surgical techniques due to its ease of use, high success rate and good cosmetic results. The most common complication which is found in PubMed is hypospadias fistula but there are very less publications related to glans dehiscence(GD). In this paper, we presented our technique used to avoid GD in patients who underwent TIPU for hypospadias**Methods**: We presented our technique used to avoid GD in patients who underwent tubularised incised plaque urethroplasty(TIPU) for hypospadias. 21 pediatric patients who were underwent TIPU technique were evaluated

retrospectively. Before dressing, penis and urethral catheter were fixed to abdominal skin by a traction suture placed to the glans penis to avoid the catheter pressure over the suture line. Circular dressing with elastic bandage was not used.**Main Results**: . GD happened before catheter removal in 1 case with mid penile hypospadias (4.7%). It was due to small glans penis. There was no GD in the cases with distal penile hypospadias. **Conclusion**: Main idea of our study is that the catheter pressure on the anastomotic line will be reduced by glanular and urethral catheter fixation to lower abdominal skin and the wound healing will be better.

[UP 2] Title: ASSESSMENT OF THE QUALITY OF REPORTING IN ANIMAL STUDIES USING TISSUE ENGINEERING FOR URETHRAL RECONSTRUCTION

Author: Tariq Abbas, Abobakr Elawad2, Abdul Kareem Suliman5, Cristian P. Pennisi

Aim: To investigate the quality of reporting in published interventional studies using the rabbit model to assess tissue engineering approaches for urethral repair.**Methods**: We searched the electronic databases PubMed and Embase for rabbit preclinical experiments reporting on urethral tissue engineering between 2013 and September 2018. Quality assessment (i.e. scoring of a 20-item checklist in different categories) of all included full-text articles was conducted according to the Animal Research: Reporting of In Vivo Experiments (ARRIVE) guidelines. The extracted data included, for example, intervention type, the number of animals, scaffold utilized and funding. The studies were assessed for reporting quality, using the ARRIVE guidelines as a checklist. The range of ARRIVE score was from 0 to 100, taking into considerations having reported the item in question or not, or being non-applicable. **Results**: 26 studies were eligible and included in the analysis. The mean checklist score was 55%. A statement of the ethical review permission secured was reported in only 87%. Scores of randomization and assessor blinding were 41% and 48%, respectively. No paper has stated the calculation of sample size or allocation method. **Conclusion**: Some of the critical experiment design principles were poorly reported in preclinical research exploring potential therapies in tissue engineering for urethral repair. We support a more comprehensive implementation of the ARRIVE guidelines, with needful fine-tuning tailored to the tissue engineering for urethral repair experimentation. This would allow for rigorous appraisal of scientific quality and easier reproducibility of experiments in the published literature.

[UP 3] Title: ORAL MUCOSAL GRAFT VERSUS INNER PREPUTIAL GRAFT IN TWO STAGE SURGICAL REPAIR OF PROXIMAL HYPOSPADIAS: A COMPARATIVE STUDY.

Author: Ihab Khewkah

ObjectivesTo compare the surgical and histological outcome of both grafts when used in two-stage proximal hypospadias repair. **Patients and methods**Eighteen patients underwent two-stage graft hypospadias repair: first stage, urethral plate transection, graft harvesting and placement done. They were divided into two groups; group A, oral mucosal graft group; group B, inner preputial graft group. Second stage, urethroplasty and glansplasty done. Patients followed up for 6 months postoperatively after each stage.**Results**Eighteen patients were included. First stage: group A (8 patients) with mean age 9.7 years, 6 primary and 2 redo cases. The mean operating time was 199 minutes. Group B (10 patients) with mean age 7.4 years, 9 primary and 1 redo case. The mean operating time was 179 minutes (significant statistical difference). The graft take was successful in all cases. None had significant postoperative complication or graft contracture.Second stage: The mean time to perform second stage was 6.7 months. The second stage was event free in 75% of patients in group A while 12.5% had distal glans dehiscence and 12.5% had small distal fistula. Group B had 80% event free while 20% of patients had distal glans dehiscence (no significant statistical difference).Histological examination showed good vascularization and minimal fibrosis in both graft types.**Conclusions**The use of these graft types had excellent outcomes in terms of graft take and event free rates and the choice of graft governed by surgeon preference, patient preference and the state of prepuce.

[UP 4] Title: WHICH IS BETTER INNER PREPUTIAL DARTOS FLAP OR TUNICA VAGINALIS FLAP AS A LAYER TO COVER THE NEOURETHRA IN TUBULARIZED INCISED-PLATE URETHROPLASTY FOR PROXIMAL HYPOSPADIAS REPAIR

Author: Osama Almushhada

IntroductionHypospadias is one of the most frequent malformation of the genital system with a 1:300 incidence ratio in newborn boys.There is more than 200 technique for hypospadias repair There is no universal surgical technique that would suit the correction of all the different types and variations of hypospadic expression.
In 1994 Snodgrass used a new method for distal hypospadias repair in which tubularization of the urethral plate without skin flaps was facilitated by midline plate incisions . Then reports of Tubularized urethral plate (TIP) repair for proximal hypospadias indicated that the procedure could also be applied to more severe conditions.In the original TIP , inner preputial dartos fascia used as a vasculized flap interposed between the neourethra and the skin this to decrease the rate of complications mainly fistula, then many studies puplished used tunica vaginalis flap as a layer to cover the neourethra .**Aim of the study**To report the experience of one surgeon comparing the results of using inner preputial dartos flap(IPF) and tunica vaginalis flap(TVF)as interposing layer between neourethra and the skin in tubularized incised-plate (TIP) urethroplasty for proximal hypospadias repair in a consecutive series of boys.**PATIENTS and METHODS**:-This is a retrospective study of patients underwent TIP procedure for proximal hypospadias between 1/1/2010 to 1/1/2015. The operations done under general anesthesia, U shape incision done around the urethral opening up to the glans ,then degloving of the penis down to its base, resecting any tethered tissue causing chordee. In case of mild chordee (curvature less than 30 degree according to Baskin et al) we did dorsal plication using one stitch of 5/0 nylon in the midline at the site of maximum bending .For those who have more severe chordee (more than 30 degree) we shift to other techniques.Lateral glanular flaps were created. Deep relaxing inscion in the urethral plate down to Bucks fascia was used, then closure of the neourethral over No.6 or 8 nasogastric tube using 6/0 Vicryl full thickness continuous suturing .group 1 we use inner preputial dartos flaps to cover the neourethra either by rotating it or by button hole techniqueWhile in group 2 we use TVF as a layer to cover the neourethra The excess skin was trimmed and wound closed by interrupted using Byers flapslast 4 patients, piece of inner preputial dartos flap and part of TVF had been send for histology study to investigate the histological differences between them which may affect the result**Results**Forty tow patients with a mean age of 4 years (7 months to 12 years) with proximal hypospadias corrected by the author using TIP technique with or without dorsal plication ,the operative time range between 50 -90 minutes, follow up period range between 8 to 44 months. On initial evaluation before degloving, All patients had chordee of different degrees, After degloving and excision of tethered ventral skin and paraurethral bands the meatus move distally to change the hypospadias to more distal type Nine patients still had chordee of less than 30 degree which corrected by dorsal plication . In group 1,the number of patients was 24, urethrocautenous fistulas occurred in 7 patients.In group 2 the number of patients was 18, urethrocautenous fistula occurred in 1 patient which need closure 6 months later.In group 1 and 2 no patients had meatal stenosis or recurrence of chordee.

group	No. of pt	Proximal penile	penoscrotal	Dorsal plication	No. of patient had fistula	Fisula %
Group 1 IPF	24	14	10	5	7	30%
Group 2 TVF	18	11	7	4	1	5%

Histology study of TVF And inner preputial dartos flaps showed that, TVF is more vasculized and has epithelial layer which make it water proof. **DISCUSSION**
Many different surgical methods have been proposed to repair hypospadias. Some of these techniques use the penile skin while some other methods use extra penile tissues, including the buccal mucosa, skin graft and the tunica vaginalis as a flap or graft. A recent trend in hypospadias repair is to preserve the urethral plate and use it for urethroplasty. This is the result of two clinical observations. First, urethral plate is usually not the cause of ventral curvature, and so resection of these tissues often does not correct bending . Second, incorporation of the plate into the urethral

reconstruction may reduce complications In a study done at 2002 by Lorenzo and Snodgrass they used inner preputial dartos flap as interposing layer between neourethra and skin in proximal hypospadias repair fistula rate was 33% ,which nearly similar to our study in which the fistula rate was 30%In this study Using TVF has better result regarding the incidence of fistula 5% and this observed by others like Kamyer Tavakkoli, Shabnam Mohammadi their fistula rate was 10% , Other study published at 2011 done by Snodgrass and Nicol they had no fistula in 24 patients underwent TIP for proximal hypospadias repair using TVF as interposed layer between neourethra and skinAnother study done in India at 2004 by Chatterjee et al comparing the result of using inner preputial daros flap with TVF in proximal hypospadias repair showed that urothrocautenous fistula rate is 20% of patients had inner preputial flap and in 10% in TVF group.**CONCLUSION**
Tunica vaginalis can be used as a layer to cover the neourethra in proximal hypospadias repair. Advantages of this flap are it is epithelized layer which make it water proof, its availability and excellent vascularity with low fistula rate in comparism with inner preputial flap.

[UP 5] Title: HISTOLOGICAL EVALUATION OF THE MALE RABBIT URETHRA: REGIONAL AND AGE-RELATED VARIATIONS AND THEIR RELEVANCE IN TISSUE ENGINEERING AND RECONSTRUCTIVE SURGERY APPLICATIONS
Author: Tariq Abbas, Semir Vranic3, Cristian P. Pennisi1
Background data: The male rabbit is the most frequently utilized animal model for urethral preclinical experiments. Surprisingly, little is known about the regional variations in the tissue along the urethra, or how age influences these differences. **Objective**: To examine the histological changes during healthy ageing in the different regions of the rabbit urethra.**Methods**: Healthy New Zealand White rabbits of 3, 8 and 21 weeks of age were selected for the study. The rabbits' urethrae were analyzed by histochemical and immunohistochemical methods, with focus on the smooth and skeletal muscle layers, and the extracellular matrix (ECM) components.**Results**: The rabbits' urethrae displayed significant similarities to human male urethra. The proximal and middle third of the urethrae were histologically characterized by an abundance of smooth muscle, while the distal third was composed of numerous sinusoids scattered among smooth muscle bundles that are decreasing in thickness and uniformity with increasing age. Age-related histological changes occurred in the urethra at a significant rate. **Conclusion**: Our results demonstrate that the male rabbit urethra displays significant regional differences, which are influenced by age. It is therefore crucial to select an appropriate age range when designing preclinical studies for the evaluation of urethral reconstruction approaches.

[UP 6] Title: COMPARING RESULTS OF SNODGRASS VERSUS SPONGIOSAL ADVANCEMENT FOR CORONAL HYPOSPADIAS: PROSPECTIVE RANDOMIZED STUDY
Author: Taimur Qureshi, Shabbir Hussain
Aim of study To prospectively assess the outcome of spongiosal advancement technique for distal shaft hypospadias repair and compare it with Snodgrass technique.**Material and method**:Prospective cohort study with inclusion criteria containing all patients presenting with coronal / subcoronal hypospadias at liaquat national hospital, while children previously operated for hypospadias, those with hypoplastic distal urethra, severe chordee, and anterior hypospadias deformity (mid-penile and proximal hypospadias) were excluded from the study. The surgical procedures were performed by single surgeon with consecutive random sampling. The general principles of repair for all our patients included minimal use of cautery, avoidance of tension on the repair, use of loupe magnification but not the operating microscope. Patients in Group A were treated as originally described by Snodgrass, by tabularized incised Plate urethroplasty(TIP), while Patients in Group B were treated with spongiosal advancement technique. Outcome measures included early and late post operative complications such as urethrocutaneous fistula , meatal stenosis , postoperative penile rotation, wound infection, urethral stricture, haematoma formation, urinary dribbling, urinary retention , glandular dehiscence , ventral binding and recurrent or persistent chordee. Cosmetic appearance using HOPE – hypospadias objective penile **evaluation, was also evaluated in the 2 study groups.Main** RESULTS:The surgical outcome for both cohort were comparable as far as complication rate is concerned except urethrocutenous fistula formation was less in spongiosal advancement group, Hematoma formation was seen more in patients who underwent spongiosal advancement. HOPE score was

higher in group A patients as compare to Group B.**Conclusion**:There are various operative techniques used for repair of distal hypospadias. Snodgrass TIP and spongiosal advancement techniques can effectively be used for coronal and sub coronal hypospadias repair, with comparable post operative results both functional and cosmetic.

[UP 7] Title: ONE-STAGE URETHROPLASTY WITH TUBULARIZED NATIVE SKIN SPIRAL FLAP (OUTNSF) FOR PROXIMAL HYPOSPADIAS: NOVEL SURGICAL TECHNIQUE.

Author: Mohammed S Alam

Introduction:The purpose of this study was to find out success of the 'one-stage urethroplasty with tubularized native skin spiral flap (OUTNSF)' technique for the single-stage repair of all proximal hypospadias.**Materials and Methods**:Between January 2001 and December 2018, 146 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 one-stage urethroplasty with tubularized native skin spiral flap. 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. **Results**:The average age of the patients was 2.8 years (range age 7 months to 14 years). The overall success rate was 124 (84.93%) 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, 22 (15.06%) patients had major complications. Urethrocutaneous fistula was developed in 12 (8.30%) patients and persistent chordee was developed in 4 (2.74%) patient. In addition, 2 (1.36%)) patient had meatal stenosis, 2 (1.36%) patient had distal disruption of the repair due to sloughed flaps, and 2 (1.36%) patient had proximal urethral stricture. **Conclusions**:The one-stage urethroplasty with tubularized native skin spiral flap (OUTNSF) procedure can be used successfully for repair of proximal hypospadias. **Keywords**:One-stage urethroplasty with tubularized native skin spiral flap (OUTNSF) procedure, Proximal severe hypospadias.

[UP 8] Title: SNODGRASS SURGICAL REPAIR VERSUS DUPLAY TECHNIQUE IN DISTAL HYPOSPADIAS

Author: Ines Ben chouchene

Aim of the study:The Duplay and the Snodgrass urethroplasty are two of the most commonly used techniques for distal hypospadias repair in children. The objective of this study is to compare outcomes of Duplay and Snodgrass techniques in order to determine the procedure of choice in children undergoing primary distal hypospadias repair **Methods**:We perform a retrospective analysis of patients who underwent distal hypospadias repair using the Snodgrass or Duplay techniques in our Pediatric surgery department during ten years period, ensuring a follow-up of one year at least. We analyse the short and long term results, and the possible factors that could influence their success rate.**Main Results:** A total of 353 patients were included in the study, with a median age, at surgery, of 37 months There were 173 patients (49%) with Snodgrass technique and 180 patients (51%) with Duplay technique. The percentage of urethra-cutaneous fistula was 21, 1% in Duplay urethroplasty and 13, 3 % in Snodgrass, decreasing in the last years of the series.The complete licking of the urethroplasty was observed in 7, 7% cases with Duplay technique and in 3, 4 % cases with Snodgrass urethroplasty Fistula closure was done at least 6 months postoperatively, and there was no significant difference in success rate between the two groups. The meatal stenosis was higher in Snodgrass technique (4, 8% vs 1, 4%). **Conclusion**: There is no strong evidence to suggest that either technique offers more favourable outcomes. Decisions regarding the appropriate surgical repair should be based on the surgeon's experience and outcomes.

[UP 9] Title: USE OF TESTOSTERONE AS A CONTRIBUTOR FOR LESS MANIPULATION IN HYPOSPADIAS REPAIR A CASE SERIES

Author: Maryam Ghavami Ad

Hypospadias is one of the most common congenital anomalies occurring in approximately 1 of 200 to 1 of 300 live births.Local or systemic treatment with testosterone has been advocated in many studies for patients with a small penis or some cases of hypospadias in many studies. Testosterone can be used as a conjunction for hypospadias repair especially when the urethral plate is immature and not developed or the preputial skin is not enough for

shaft coverage. Testosterone deep intramuscularly 4 weeks before reconstructive surgery at the dose of 2 mg/kg body weight repeated 1 week later can increase penile length, transverse preputial diameter, and make urethral plate development. Here I present 8 patients with distal shaft hypospadias that I planned them for TIPS repair in my primary evaluation but according to a weak urethral plate or small glans, I'd rather use testosterone before the surgery. Their mean age was 29.8 months. During the operation, I found that I could use the MAGPI technique for these eight patients. During follow up all recovered with good results evenly.
As the MAGPI procedure is a less complex technique in comparison the TIPS with almost no serious complication such as urethrocutaneous fistula I suggest to perform a study to evaluate the effect of testosterone in selected patients with distal shaft hypospadias planned for TIPS technique

[UP 10] Title: A CASE OF URETHRA, PENIS AND BLADDER NECK DUPLICATION WITH URETHRAL FISTULA.
Author: S.P.Yatsyk, A.G.Burkin, A.O.Tarzyan, A.S.Gurskaya
Material: a male patient, 1 year 6 months old. First normal pregnancy, physiological delivery at 38 weeks. Evaluation of Apgar score 8|9. Psychomotor development by age.**Complains:** abnormal external genitalia, urination from an atypical place.**Results of clinical examination:** no UTI according to urine tests an anamnesis. Karyotyping: 46, XY. Sonography of scrotum: without pathology. Sonography of kidneys and urine bladder: iliac dystopia and hypoplasia of the left kidney, right kidney is intact, nonlinear fistula from the urine bladder to the suprapubic area, urine bladder not described (empty). Cystourethroscopy: urethrae duplication, bladder neck duplication, single seed tubercle (Colliculus seminalis), single common urine bladder. The communication between the posterior urethra and the suprapubic area was established by performing a "color" test (filling the bladder with indigo carmine solution and uncolored solution during urethroscopy through the fistula). **Treatment: surgical excision of the fistula, mobilization of urethrae and forming a one common corpus of the penis, glanduloplasty with single fossa navicularis. Postoperative period: antibiotics, compressive bandage for 7 days, urine bladder drained with Nelaton catheter 8Fr (both uretrae).**6 months follow up: spontaneous micturition thru the neomeatus, no deviation of penis. Renal function without negative dynamics.

Urology Posters Day 1 Group12
Modertor: Y. Huang

[UP 11] Title: OUR EXPERIENCE OF OPERATED PEDIATRIC URETEROPELVIC JUNCTION OBSTRUCTION PATIENTS.
Author: Teymursah Muradi, Kaan Sonmez , Zafer Turkyilmaz, Ramazan Karabulut, Fazli Polat, A.Can Basaklar
Aim of study: Herein we report our clinical data and treatment outcomes of pediatric ureteropelvic junction obstruction (UPJO) patients.**Methods:** We retrospectively reviewed the data of 53 patients who underwent open dismembered pyeloplasty(except one robotic) because of UPJO between 2006 and 2010 at our clinic. Cases were evaluated regarding age, gender, prenatal history, hydronephrosis, pre- and postoperative courses, differential renal functions (DRFs), half-time tracer clearance (½TC), histopathologic results, urinary infection, and reoperations. Anova and Chi-Square tests were used to test the differences between the groups, where $p < 0.05$ was taken as statistically significant. **Main Results:** The mean operation age of patients was 42.71 months. Thirty-eight of these children(71.7%) were male. UPJO was found the right side in 35.8%(n=19), left side in 58.5 %(n=31), and bilaterally in 5.7% (n=3). Antenatal hydronephrosis was detected in 71.7% of patients (n=38). Vesicoureteral reflux demonstrated only 3.8% (n=2). Pre and postoperatively, mean DRFs were 47.95%(21–74%) and 46.93%(20–56%), respectively. All patient $t_{1/2}$ was higher than 20 minutes. The mean diameter of AP was 20.98 mm(10–62 mm). The mean length of excised specimen was 8.9 mm(3-20 mm), muscular hypertrophy was seen dominantly. Crossing vessel(CV) was found in 18.9% (n=11).It was found statistically significant on the left side, higher operation age and female patients. Hydronephrosis was found statistically significant compared to the non-CV patients. There was no difference between the other parameters. Postoperative recurrence was seen in 3 patients (5.7%). **Conclusion**: Internal causes play an important role in the etiology of UPJO patients with antenatal diagnosis, and the operation is needed at an earlier age. However, CVs are more common in the etiology of patients who are diagnosed and operated on later.

[UP 12] Title: LAPAROSCOPIC ANDERSON-HYNES PYELOPLASTY IN CHILDREN: OUR EXPERIENCE.

Author: Mozammel Hoque, Allauddin Ahmed, Abdullh al Hasan, Sarwar Azam, Sumaiya Ahmed , Fahmida Sultana, Sanchita Roy, Firoz Md Rozesul, Priyanka Biswas, Naima Sharmin,Jafrul Hannan

Background: Pelvi-uretaric junction obstruction (PUJO) is one of the most common causes of obstructive uropathy in children. Laparoscopic pyeloplasty is well described in adults and has the same success rate as open with significantly less morbidity and complications. Feasibility of laparoscopic pyeloplasty in children was described with similar success rates as open procedure, but experience remains limited. We present our early experience of laparoscopic pyeloplasty in children.**Materials and Methods**: Sixteen patients of Pelvi-uretaric junction obstruction were randomly selected to undergo transperitoneal laparoscopic pyeloplasty after obtaining the informed consent from January 2016 to May 2019. Age ranged from 9 months to 4 years. Male were 12 and female 4. All patients were diagnosed with left sided PUJ obstruction by symptoms, ultrasonography, intravenous urography and radionuclide diuretic renography. Success was defined on the basis of either improvement in the symptoms and better drainage on post operative isotope renography.**Result**: Post operative evaluation done in all 16 patients. Mean operative time was 145 min(125-180min). DJ stent kept in situ in all patients and remove after 4 wks. None were required blood transfusion. There were no conversion to open surgery. Mean hospital stay 4 days (3-7days). Follow-up renogram done after 3 months in 12 patients. There were no demonstrable evidence of obstruction.**Conclusion**: Laparoscopic pyeloplasty provides excellent visualization of the renal pelvis and surrounding structure . It is effective and safe in children with minimal morbidity. Long term follow-up is essential for evaluation

[UP 13] Title: TRANSURETHRAL URETEROPLASTY IN CHILDREN WITH OBSTRUCTIVE MEGAURETER

Author: Akmal Rakhmatull

Purpose. To assess the effectiveness of transurethral endoscopic correction with lower stenting of congenital stenoses of the distal part of the ureter**Materials and methods**. A total of 109 patients aged from 1 to 4 years with stenosis of the ureter were included in this study. All patients underwent transurethral correction of vesicoureteral segment (VUS) by balloon dilatation of the narrowed portion with lower stenting. The effectiveness of the intervention in the early postoperative period was assessed by regression of the urinary syndrome and US Doppler of the vesicoureteral ejection of urine.**Results**. According to D. Beurton megaureter of IA degree was diagnosed in 15 (13.8%), IB in 36 (33%) children, grade II in 45 (41.3%) and grade III in 13 (11.9%) patients. Urine ejection according to US Doppler in the early postop period significantly improved, the urine flow was Vmax0.35±0.03 m/s. Urinary syndrome was observed in 4 (3.7%) patients, which was managed by the time of discharge. Long-term outcomes of 94 children with IA, IB and II grades of megaureters had a stable eradication of urinary syndrome, as well as a reduction in the ureter and the collector system of the kidneys. Five (5.3%) children with grade III megaureter had a tendency for ureteral contraction, two (1.8%) patients with grade II worsen the grade of vesicoureteral reflux to III grade. They underwent transurethral correction, as a result of which the vesicoureteral reflux and urinary syndrome were eliminated.**Conclusion**. In children with IA, IB and II degrees of obstructive megaureter transurethral ureteroplasty with lower antireflux stenting is effective and safe procedure. Preserving the degree of megaureter and urinary syndrome is an indication for repeated transurethral correction.

[UP 14] Title: PYELOPLASTY: INDICATIONS, OPERATIVE CHARACTERISTICS AND LONG TERM RESULTS â€“ THE EXPERIENCE OF A UNIVERSITY HOSPITAL IN PORTO ALEGRE, BRAZIL.

Author: Conrado Menegola

Aim of the sudy The pyeloureteral junction stenosis requires surgical management in approximately 30% of cases: symptomatic patients, with decreased renal function (<40%), loss >10% of renal function or progressive increase in hydronephrosis. Dismembered pyeloplasty is the technique of choice with an open, laparoscopic or robotic approach according to the surgeon's choice and available technology. The experience of a Brazilian University Hospital of high complexity is described.**Material and methods**Retrospective study of pediatric patients in whom pyeloplasty was performed. between 2005 and 2019. Preoperative diagnosis includes symptoms, urinary tract ultrasound, DMSA, DTPA, creatinine. According to the surgeon, open or laparoscopic dismembered pyeloplasty

was performed. During the postoperative control, clinical evaluation was performed with an interval of 3, 6 months and annually. Statistical analysis of frequency and distribution variables was performed.**Results**
110 patients with pyeloureteral junction stenosis who required surgical management were identified, mean age 6.4 years (3 months - 17.9 years), performing a total of 115 pyeloplasties, 61.74% girls and 38.26% boys; 80.87% with available pre-surgical exams; 45.22% symptomatic (50% urinary infection, 44% low back pain and 6% pain and concomitant infection), 46% urinary tract ultrasound with quantitative variables measurement (AP diameter of renal pelvis, renal parenchyma, resistance index measurement), 54.78% DMSA, 60% DTPA, 34.78% creatinine; 72.2% surgeries by pediatric urologists and 27.8% by pediatric surgeons, 49.57% right and 50.43% left; 59.13% open and 40.87% laparoscopic (50 minutes longer vs. open); 23.48% with polar vessel, 2.6% previous surgeries (2 endopyelotomies, 1 pyeloplasty), JJ catheter placement in 63.48%, with average duration 84 days (7-767 days), average hospitalization 4.8 days (1-30 days); 20% complications (Clavien Dindo 1: I, 5:II, 12: IIIB), 4.35% repieloplasty requirement, mean follow-up 38.9 months (1-156 months).**Conclusions**
Patients taken to pyeloplasty frequently present symptoms prior to diagnosis, associated with deterioration of relative renal function. It is a safe procedure, mostly performed by pediatric urologists, with a high success rate independent of the technique selected by the surgeon.

[UP 15] Title: FUNCTIONAL ALGORITHM OF PRENATAL HYDRONEPHROSIS OPERATION IN INFANCY.
Author: Zukhra Sabirzyanova
There are many dates about spontaneous resolution of prenatal hydronephrosis in infants, but about 20% of patients need the operation.The **aim** of the study was to optimize the time of operation according to the functional safety of the kidney parenchyma.**Methods**: 24 patients with hydronephrosis (20- unilateral, 4- bilateral) SFU 3-5 were accessed. US, DMSA, VCUG, MAG3 were done in all of them.**Main results**: 1 group – 12 infants with unilateral hydronephrosis and save kidney function. 2 group- 6 patients with moderate and 4 with severe kidney damage leftside hydronephrosis, bilateral hydronephrosis with both save kindey function (2) and severe damage in one of kidneys (2).In 1 group during the first 6month there was no decreasing of renal function in all patients in spite of the growing of dilatation by US in 2. By the 10 month of live 7 infants were operated due the increasing of pelvic dilatation (6) or decreasing of kidney function (2) and 5 showed the positive dynamics - reducing dilatation according to US with full resolution HN to 2.5 -3 years of life.In 2 group all were operated in the age of 3-10 months. Primary nephrostomy in 6 patients with severe parenchyma damage allowed to save kidney only in 2 cases. Pyeloplasty were successful in all patients independent of age. **Conclusions**. Dynamic follow up of hydronephrosis is possible in infants with the save kidney function and the absence of increasing of dilatation according to the ultrasound with a probability of spontaneous permission 40%. Restoration of urodynamic in the first 10months of life leads to preserve kidney function regardless of the age of the operation. Temporary urine diversion for restoration of dramatically reduced parenchyma's function is perspective in cases of hydronephrosis without kidney hypoplasia.

[UP 16] Title: PITFALLS AND COMPLICATIONS OF URETERAL STENTING IN CHILDREN.
Author: Beytullah YaÄŸÄ±z
Ureteral stenting is a common practice in pediatric urology which increases the success of surgical procedures. Neverthless, this simple procedure is challenging with pitfalls and may cause serious complications if left unrecognised or managed improperly.Patients who had undergone ureteral stent insertion between January 2010-June 2019 and challenges and complications encountered during and after the procedure were retrospectively evaluated.An ureteral stent was inserted in 382 patients (145 (38%) girls, 237(62%) boys). Indications were, urinary stone disease (n=127), Congenital Anomalies of Kidney and Urinary Tract (C-AKUT) (n=253) and other conditions (ureteral trauma in2 and external compression in 1). Complication and/or deviation from routine operative process was encountered in 43 patients (11%) with nephrolithiasis (n=7), UPJ obstruction (n=24), UVJ obstruction (n=10) and VUR (n=2). Stenting was performed in antegrade fashion in 22 and retrograde fashion in 21. Problems during antegrade stenting were failure to reach the bladder (n=15), prolapse through the urethra (n=6) and inadequate drainage (n=1), while failure to reach the kidney pelvis (n=10), upper migration to ureter (n=5),

inadequate drainage (n=3), prolapse through the urethra (n=2) and challenging ureteral intubation (n=1) were encountered during retrograde stenting.No Clavien-Dindo grade 4 or 5 complications were encountered while grade 3a and 3b complications were encountered in 8 (%19) and 19 (%44) patients, respectively. Among the 19 patients with grade 3b complications, 12 needed endoscopical, 5 needed percutaneous and 2 needed open unscheduled interventions.Although ureteral stenting related problems look more prevalent in boys and in C-AKUT, the difference was significant for C-AKUT ($p<0.05$) but wasn't significant for boys ($p>0.05$).
Convenient use of fluoroscopy, performing contrast enhanced imaging when necessary and availability of a wide spectrum of intsruments may reduce the challenges and complications of ureteral stenting.

[UP 17] Title: REZULTS OF TREATMENT OF INFANTS WITH NONFUNCTIONAL UPPER SEGMENT OF A DUPLEX KIDNEY IN THE PRESENCE OF URETEROCELE

Author: Nadezhda Erokhina

Aim of the Study To analyze the results of treatment of children with nonfunctional upper segment of a duplex kidney in the presence of ureterocele.**Methods**We performed a retrospective analysis of 75 children with an upper segment of a duplex kidney malfunctioning with non-refluxing megaureter, bearing ureterocele, for 2008-2017 years. In 63 patients diagnosis was made in utero. Patients were divided in 2 groups; group I – with cystic dysplasia of an upper segment – 21 patients, group II – without cystic dysplasia, 54 patients. We compared segment's function after endoscopic incision of ureterocele by means of Doppler ultrasonography, computed tomography, static nephroscintigraphy (DMSA). The extent of secondary surgical interventions was determined according to the data obtained.**Main results**Incision of ureterocele was done in group I - 15/21, in group II – 45/54. 3 patients from group I and 6 – from group II had initially collapsed ureterocele. Next examination showed lack of the upper segment function in all patients of group I, in 12 patients of group II (z=5,1, differences are statistically significant). All of the children with initially collapsed ureterocele had a complete loss of the upper segment function. Secondary surgical interventions in group I: organ-removing – 4, ureterocele resection and ureterocystoneoimplantation – 1 (in 2 years – epiheminephrurether-ectomia due to complete loss of function), endoscopic correction of VUR grade III – 1. 7 patients aged 1-3 years had complete involution of segment. In group II - epiheminephrurether-ectomia – 6. Histological examination of group I children showed signs of dysplasia in resected segment, presence of mesangial tissue. In group II – hyalinosis in glomeruli, signs of subtotal interstitial nephritis.**Conclusions**Cystic dysplasia of an upper segment of a kidney with signs of mesangial proliferation is a valid predictor of an upper segment function loss because of its involution tendency, so it is an indication for wait-and-see tactics. In group II involution probability is much lower, which serves as indication for organ-removing procedures.

[UP 18] Title: COMPARISON OF OUTCOMES OF ADULT X TRANSITIONING PATIENTS PRESENTING WITH HYPOSPADIAS: A RETROSPECTIVE ANALYSIS

Author: Conrado Menegola

Aim of the study:Hypospadias patients presenting to adult urologists do so with a range of symptoms and problems, including urethral stricture, lower urinary symptoms, urethrocutaneous fistula, persisting hypospadias, ventral curvature, urinary tract infections. Many of these man have concurrent complications as the result of multiple operations and a variety of techniques. Despite advances in hypospadiology, follow up of patients with hypospadias should extend into adulthood, as a significant portion of adult presentations ultimately require surgical intervention. We reviewed our experience with adult and transitioning hypospadias patients to identify key characteristics of this population and to compare the outcomes and presentation of both (transitioning patients and adult patients).**Materials and Methods**:We performed a retrospective chart review of adults and transitiong patients with hypospadias who underwent urethroplasty for urethral stricture, urethrocutaneous fistula or hypospadias repair between 2006 and 2019 at Hospital de Clinicas de Porto Alegre. The charts were reviewed for site of hypospadias, presenting complaint, history of repair and type of surgery performed. Transitioning patients were defined as those 14-22 years. Comparison between the two groups (transitioning patients x patients with more than 22 years) was made regarding on outcomes, characteristics, surgical technique

used and clinical presentation.**Results**:We found 26 patients, being 15 in the transitioning group and 11 in the adult group. The mean age in the transitioning group was 16.8 years and 38.8 in the dult group. The most common location of hypospadias location on both groups were coronal and the most commonly performed surgical technique was Snodgrass. The most likely clinical presentation on both groups was for esthetics reasons; urinary fistula was more common in transitioning patients (26.7% x 9%) and urethral stenosis was more common in adult patients (18% x 0%). Despite this, success rates were equal on both groups, which was considered as no post-operative complications and no need for reoperation (60%).**Conclusion**:Transitioning patients are a special population, with differences when compared with older patients that present to the urologist and that need surgical intervention, specially in clinical presentation, but the surgical results are very similar, as both group of patients in general have previous interventions and present as complex cases.

Urology Oral Day 2: Session 3
Moderator: F.Denes Brazil

[UOA 9] Title: PARENTAL REGRET FOLLOWING HYPOSPADIAS REPAIR USING DECISIONAL REGRET
Author: Mudassar Fiaz
Objective: Decisional regret is a state of anguishness which parents of sons with distal hypospadias suffer after opting the choice of its repair. We studied the family related variables which may lead to this phenomenon among parents. Moreover, how pre counseling alter this distress.**Methodology**: We collected charts of 72 patients who went distal hypospadias repair in last 2 years from March 2016 to March 2018. Only 50 families responded and a validated questionnaire including decisional regret scale was administered to all of them by direct questioning. Among those 50 families 74% had no to mild regret, 16% had moderate regret and only 10% had severe regret. Among mothers whose education level is above primary standard (48%) and can understand the situation very well have comparatively less regret with significance of 0.029. Qualified fathers with education level above primary standard have no significant effect on decisional regret with p-value of 0.073. 10% females had exposure to drugs during pregnancy and this factor had a significant effect on post op decisional regret with significance of 0.000. Another important factor of decisional regret is counseling level. Those who were counseled by consultant have less decisional regret as compared to PGR with significance of 0.014. Mode of delivery has no effect on decisional regret with significance of 0.804. Families of child who were previously circumcised, having another anomaly among siblings or family history of hypospadias also do not have any significant decisional regret (P-values of 0.520, 0.508 and 0.184 respectively). Post of complications does not cause any significant distress with p-value of 0.334.We can decrease the level of post op decisional regret among families of hypospadias by increasing the level of education of mothers, awareness of disease and level of counseling.**Key words**: hypospadias, decisional regret, anguishness among parents

[UOA 10] Title: THE IMPORTANCE OF FUNCTIONAL AND COSMETIC RESULTS AFTER HYPOSPADIAS CORRECTION IN CHILDHOOD
Author: Aulona Haxhirexha, Dritan Alushani, Kastriot Haxhirexha, Nehat Baftia, Agron Dogjani, Ferizat Haxhirexha
Hypospadias is a second most common congenital anomaly in boys after cryptorchidism, whereas the correction of hypospadias remain one of the most common surgical intervention in pediatric surgery. Hypospadias correction may have a great impact not only in urinary function but also in cosmetic and sexual outcomes
Aim of the study: the objective of this study is to assess the functional and cosmetics results of hypospadias repair according to the "Hypospadias Objective Penile Evaluation (HOPE)-score" in children treated in our clinic.
Material and methods: in this study we have included 220 children treated in our Clinic between Jun 2011 – 2019 with the different forms of distal and middle hypospadias. The correction of this malformation was done through different techniques like the technique of MAGPI, Mathieu, Ducket or TIPU. The assess of cosmetic and functional results was based on evaluating of some parameters such as meatal position and meatal shape, urine flow and the presence of any penile deformation or urethral fistula.**Results**: All the children included in this study

was operated at a age between 2.5 and 4 years old, whereas the follow up was realized during a period between 10 and 80 months. The most used technique for correction of hypospadias was MAGPI in 50 patients, TIPU in 48 , Mathieu in 15 and Ducket in 7 patients. The urine flow rate was normal in 220 children whereas in others was under the normal value. Fistula as the most severe complication was appeared in 18 patients and in 8 of them it was closed spontaneously, whereas in 12 others a surgical correction was required. Regarding to the cosmetic results most of the children and their parents were very satisfied with the penile appearance respectively 175 of them, 35 others were satisfied, whereas ten of the children were no satisfied and request a second intervention for improvement of penile appearance. The main reason for their dissatisfaction was the shape and size of the penis. **Conclusion**: Contemporary trends of correction of the hypospadias require not only the achievement of the best functional results but also the cosmetic ones.**Key words**: hypospadias, cosmetic, functional

[UOA 11] Title: TWO-STAGE FREE GRAFT (BRACKA) PROCEDURE FOR PRIMARY VERSUS FAILED CASES OF PROXIMAL HYPOSPADIAS

Author: R.V. Surov, I.M. Kagantsov, O.S. Shmyrov, A.V. Kulaev, M.N. Lasishvili

Aim of the Study The main goal of study is retrospective comparative analysis of surgical results two-stage free graft (Bracka) procedure for severe proximal hypospadias in primary or failed cases.**Methods** From 2016 to 2018 we performed two-stage procedures for proximal hypospadias repair in 46 patients who had severe curvature or/and major complication after previously operations (such as total stricture of artificial urethra, hair in artificial urethra and etc.). In 26 (56,5%) primary cases we did 2-stage Bracka procedure by preputial skin, average age of patients for it was 3,5 years old. For 20 (43,5%) failed cases Bracka repair by buccal mucosa (16 patients – 80%) or penile skin (4 children-20%) was performed, average age for it was 10,5 years old. When we found severe curvature (more than 40 degree) in primary cases we cut the urethral plate immediately below the glans of penis. Dorsal and ventral corporoplasty techniques were done. The second stage was performed after 6 months.
Main results In the group who underwent Bracka procedure in failed cases, complications occurred in 5 of 20 (25%) patients: three boys had significant scars on the mucosal graft, 1 patient had fistula and one boy had fistula and glans dehiscence. In the group of 26 patients with primary Bracka repair we had only 3 (11,5%) complicated case with fistula. Summary 100 operations was performed (2,17 per patient).**Conclusions**We find that results of two-stage free graft Bracka procedure were significant better ($p<0.05$) in primary cases by preputial skin, perhaps, it might be connected with: earlier age of children, no need to use mucosal graft and good tissues without scars in primary patients.

[UOA 12] Title: THREE YEARS STUDY ON ROUTINARY INTRODUCTION OF WOUND CARE PROTOCOLS FOR HYPOSPADIA CORRECTION IN A PEDIATRIC POPULATION

Author: Serena Crucianell

Aim of the study This cohort prospective interventional study with historical controls, is aimed at evaluating efficacy of both wound care preventing and rescue protocols in avoiding and managing complications after reconstructive penile surgery. **Methods**From June 2016 to June 2019, all hypospadic children undergoing correction received a post op preventing protocol to preserve integrity of the surgical wounds (group A-p): immediate post-surgical application of advanced non adhesive dressings (SAFETACT ® technology); wrapped around the shaft, assured by a cohesive bandage. At first wound examination on day 3, after PHMB solution cleansing, patients presenting early and late po-complications are moved to a rescue protocol (Group A-r) consisting of application of a proper advanced dressing as shown on table 1. Historical control groups, (GROUP B-p, r) composed of patients undergone hypospadias correction up to May 2016, in pre-protocol era, received standard dressings consisting of paraffin gauzes and cohesive bandage up to 3rd po day, followed by a daily application of an antibiotic ointment and no rescue protocol but povidone solution cleansing in case of complications. All groups children underwent urine diversion, removed on 10-13th po-day. All patients are hospitalized until 2nd dressing change. Follow up visits are set for a minimum of 3 months. Protocols are analized for their impact on pain at removal, complications rate, re-hospitalization, surgical re-do, costs and compared to

historical control group having same surgeons performing correction, timing of dressing changes, stent removal and follow up visits. Five pediatric andrologic surgeons joined the study with two pediatric wound care specialists **Main results**: Results are reported on table 1. **Conclusions** Appropriate wound care protocols are effective in preserving wound integrity and complications, sensibly reducing costs related to surgical re-do, hospitalization, re-admission and antibiotic administration.

PREVENTING PROTOCOL					
-**TIME 0** (OPERATING THEATRE) SAFETACT ® FOAM, COHESIVE BANDAGE, URINE DIVERSION					
-**1ST DRESSING CHANGE** (3 PO DAY) PHMB SOLUTION CLEANSING, SAFETACT ® FOAM, FIXATION					
-**2ND DRESSING CHANGES** (5 PO DAY) PHMB CLEANSING, SAFETACT ®FOAM, FIXATION					
-**3rd DRESSING CHANGE** :URINE DIVERSION REMOVAL (….PO DAY)					
RESCUE PROTOCOL (activated at any control)					
DRESSINGS	**BLEEDING**	**INFECTION**	**DEHISCENCE**	**NECROSIS**	**KELOID**
Prontosan®	*	*	*	*	
Aquacel Ag ®		*	*		
Mepilex Ag®		*			
Askina Sorb®	*				
Cutimed Sorbact Gel®		*		*	
Askina gel			*	*	
Novox gynogel®		*	*	*	
Silicon gel /layer					*
STUDY RESULTS					
-PREVENTING PROTOCOL STUDY					
VARIABLES	**Group A-p (case) n 261**		**Group B-p (control) n 276**		
PAIN	VAS 2, FLACC 2		VAS 4, FLACC 4		
TIME DRESSING CHANGE	13 minutes		18 minutes		
ANALGESIC ADM.	32%		87%		
Days hospitalization	days		days		
COMPLICATIONS	23 (8,8%)		47 (17,2%)		
• Bleeding	2 (moved to A-r group)		3		
• Infection	8 (moved to A-r group)		23		
• Dehiscence	9 (moved to A-r group)		31		
• Ischemia/necrosis	1 (moved to A-r group)		12		
• Skin breakdown	0 (moved to A-r group)		4		
• Keloid	4 (moved to A-r group)		9		
-RESCUE PROTOCOL STUDY					
VARIABLES	**Group A-r (case) n 23**		**Group B-r (control) n 47**		
RE-HOSPITALIZATION	1		21		
SURGICAL RE-DO	0		4		
ANTIBIOTIC PRESCRIPTION	0		29		

Urology Oral Day 2: Session 4
Moderator: L. Guerra

[UOA 13] Title: UTERO-VESICAL ANASTOMOSIS : A NOVEL OPERATION FOR A GIRL OF CLOACAL EXSTROPHY WITH VAGINAL AGENESIS

Author: Kiyoshi Tanaka

We performed utero-vesical anastomosis for an 11 year old girl of cloacal exstrophy with vaginal agenesis to establish the drainage route of menstrual blood.She suffered from cloacal exstrophy, anal atresia, meningocele, double uteruses with vaginal agenesis. The bladder neck was open between the separated pubis, and the left

kidney was located in the pelvic cavity. We separated the intestine and the bladder and made the colostomy just after birth. The bladder neck was not reconstructed. The meningocele was repaired at the three month of age. She was not able to walk because of paraplegia. It was necessary to establish the drainage route of menstrual blood before the menarche. The interposition of the intestine was impossible because the left kidney was located between the bladder and the sacrum. The continent urination was not expected even though the bladder neck was reconstructed because of the neurogenic bladder, and the divided apexes of the bladder was close to the uteruses. Therefore we consider to utilize the bladder for a vagina. The left and the right uteruses were anastomosed to the apexes of the bladder separately in concurrence with making an ileal conduit for urinary diversion. The menarche came one month after the operation. Menstruation has occurred regularly for three years since the menarche.This is an extremely rare case, but we consider utero-vesical anastomosis is one of the option for the drainage route of menstrual blood.

[UOA 14] Title: OMPHALOPLASTY IN GOSH-TECHNIQUE â€“ OUR FIRST EXPERIENCE IN PATIENTS WITH BLADDER EXTROPHY AND ABDOMINAL WALL DEFECTS

Author: R. SAADEH, M. MILOSEVIC, M. SCHMID, ST. BERGER, M. ZEINO

Aim of the Study:Body image perception is crucial for both males and females with abdominal wall defects, like the absence of a normal looking umbilicus with lower abdominal scars. We present our first experiences in omphaloplasty in GOSH-technique.**Materials and methods**:11 children received an omphaloplasty in GOSH-technique in our institution between 07/2014 and 04/2019.The technique involves using two skin flaps at each side of the midline incision, one with subcutaneous pedicle and the other with intact cutaneous bridge. The first flap is rolled with its pedicle to create the internal part of the umbilicus and fixed it in the midline. Then the other flap is used to configure the external portion of the neo-umbilicus by rolling it around the first flap. Finally the midline incision is closed and reconstructed.**Results**:In 8 children omphaloplasty was created during complex urologic reconstructive surgeries; 5 boys with bladder exstrophy, 2 boys with complex cloacal extrophy and in one girl with Prune-Belly syndrome associated with cloacal anomaly. In the other three cases, it was during reconstruction of abdominal wall; 2 boys with giant omphalocele and one boy after multiple surgeries of complicated gastroschisis.During follow up there were no complications of wound infection or necrosis, patients and their families were satisfied with the results of stable elastic and cosmetically acceptable neo-umbilicus. **Conclusion**:Omphaloplasty in GOSH-technique has been developed to obtain a stable inverted neo-umbilicus in children with bladder exstrophy and other abdominal wall defects.

[UOA 15] Title: SINGLE STAGE TOTAL RECONSTRUCTION IN CLOACAL EXTROPHY: MYTH OR REALITYâ€

Author: Nitin Sharma

Aim: Evaluation of outcome of single stage total reconstruction in Cloacal Extrophy.**Methods**: The data from Jan 2007 to March 2019 was evaluated. Cases operated after June 2014 were prospective while those before were retrospective. Single stage total reconstruction was defined as bladder closure with augmentation using caecal patch+bladder neck repair+urethroplasty+primary ileoanorectoplasty without colostomy without osteotomy. Closure was done with bilateral external ureteric catheters, urethral catheter, suprapubic catheter and prevesical drain. Ureteric catheters, urethral catheter and suprapubic catheters were removed on 14,21 and 28 days respectively. Those with incomplete data, doubtful diagnosis or multi stage reconstruction were excluded. The outcome parameters considered were wound infection, urinary leak, dehiscence and condition at discharge. The long term parameters considered were condition of scar, dry period and continence.**Results**: 12(8 prospective and 4 retrospective) of 16 cases formed the study group. Mean age at presentation was 48 hours(Range:0 hour–336 hours). Associated anomalies were seen in 8(67%). Mean age at surgery was 49 hours(Range:24-360 hours). Mean operating time was 138 minutes(Range124-240 min). Mean time of removal of the ureteral stent was 14 days(Range-13-16 days). Mean time of removal of the urethral stent was 21days(Range:20-24 days). Mean time of the removal of the suprapubic catheter was 28 days(Range:27-34days). Immediate outcomes parameters could be evaluated in the prospective limb, Long term outcome data could not be evaluated due to small sample size in the retrospective limb. One case had parietal wall dehiscence which required secondary suturing, 4 cases had wound

infection. Dehiscence of urethroplasty was seen in one. Complete dehiscence of the bladder closure was seen in one. **Conclusion**: Cloacal extrophy is a complex anomaly requiring highly technical reconstruction. The standard management protocol is yet to be proposed. Single stage total reconstruction can be offered to these cases and seems to be a viable option.

[UOA 16] Title: VESICO-CUTANEOUS FISTULA: CONTINENT VESICOSTOMY, AN EASIER ROUTE FOR COMFORTABLE CLEAN INTERMITTENT CATHETERIZATION

Author: Cynthia Sz Ting

Aim of the Study Vesicocutaneous fistula (VCF) is a continent catheterizable channel which is easy to perform with low rate of complications. The aim of the study was to report the author's experience of using VCF rather than vesicostomy in patients with voiding difficulties.**Methods** We retrospectively reviewed patients undergoing VCF for bladder drainage from December 1998 to December 2017. Demographic information, indication for VCF, pre and postoperative laboratory/radiologic studies, incidence of febrile urinary tract infection (UTI), and times of clean intermittent catheterization (CIC) per day were abstracted.**Main results**Twenty-two patients underwent VCF with a median age of 12.1 years (ranged 3.6 months to 22.4 years) and a median follow-up time of 30.5 months (ranged 4.5 months to 16.9 years). In 14 patients with non-neurogenic bladder, renal function improved or stabilized in 11 patients. Hydronephrosis resolved or improved in 10 patients. The incidence of UTI decreased to less than one episode per year in 9 patients. VCF were continent in all but two patients. None had major complications. Minor complications were found in 12 patients, including strictures and overgranulation. One required revision and others were managed non-surgically.**Conclusions**VCF served as an easy, effective and comfortable conduit for CIC. The VCF can provide a positive effect on the quality of life in patients by granting them social independence, convenient bladder management, and excellent continence rates.

Urology Posters Day 2: Group 11
Moderator: F.Denes

[UP 19] Title: IMPACT OF DISTAL HYPOSPADIAS REPAIR ON QUALITY OF LIFE AND LONG-TERM PSYCHOSOCIAL DEVELOPMENT

Author: Manuel Espinoza V

Aim of the study: To evaluate the impact on quality of life (QoL) and the long-term psychosocial development in patients who underwent urethral advancement for distal hypospadias repair.**Methods**: A total of 42 patients aged ≥ 13 years old were operated between 2009-2010 (median age at surgery: 48 months). Seventeen children agreed to participate in our study. We adapted the Pediatric Quality-of-life measurement tool (PinQ) to the presence of a penile malformation (h-PinQ). We eliminated question 20 because it was unrelated to our study. Psychological General Wellbeing Index (PGWBI) was used to determine current psychosocial development.**Main results**: Patients considered their QoL slightly affected by the presence of a penile malformation (h-PinQ = 6.1). Likewise, parents' evaluation of QoL of their children was similar to theirs (h-PinQ 7.3, intraclass correlation coefficient: 0.84 [95% CI: 0.64-0.94 p <0.01]). Only one patient showed a moderate deterioration of his QoL (h-PinQ = 20). This patient had a low score in PGWBI (54 points) related to a bad punctuation in well-being and anxiety-depression subscales. In contrast, PGWBI score was > 80 in most patients (15/17), considered as a good psychosocial development. There was a good-moderate correlation between h-PinQ and PGWBI (kappa coefficient: 0.47 [95% CI: 0.3-3.4 p <0.001]).**Conclusions**: There was minor impact on QoL of chidren who underwent urethral advancement for distal hypospadias repair.We found a good-moderate correlation between h-PinQ and PGWBI to assess QoL and psychosocial development in patients with distal hypospadias.

[UP 20] Title: CAN FIBRIN GLUE BE A USEFUL ADJUNCT TO SURGICAL MANAGEMENT OF RECURRENT FISTULA POST HYPOSPADIAS SURGERY?

Author: AHMED HASSAN

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.**Materials and methods**: Over the period from Oct. 2016 to Dec. 2018, 2 groups of patient:Group A: 20 patients 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.*Group B: Other 20 patients underwent classic repair with fistulectomy and layers repair.For those underwent repair using fibrin glue, during the operation, fibrin glue was applied over the suture lines and beneath the skin. For both groups a urethral catheter was kept in place for 5 – 7 days. Follow up ranged from 6 to 14 months (mean 10 months). **Results**: *Group A: 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.*Group B: Seventeen patients had an uneventful course. Accidentally early cath. removal occurred in one case. Fistula recurrence was reported during follow up period in 2 cases.**Conclusion**: A fibrin glue as a sealant agent could be a useful adjunct to surgical management of patients with recurrent Urethro-Cutanouse fistula post hypospadias surgery

[UP 21] Title: URETHROCUTANEOUS FISTULA AFTER HYPOSPADIAS REPAIR

Author: Sadeghian N. Mohajerzadeh L.Khaleghnejad Tabari A.Rouzrokh M.Mirshemirani AL Ghoroobi J.Izadi M. Sarafi M. Hatefi S. Abassian A.Ghafari P

Purpose:urethrocutaneous fistula is most common complication after hypospadias repair.In this study we would like to identify the individual risk factor for the urethrocutaneous fistula(UCF)in pediatric patients after hypospadias repair(HR).**Methods**:From2006until2016,990patients with hypospadias repaired primary in our center.Referral patients with complication removed from our study.Most common complication after surgery was urethrocutaneous fistula.The records of boys with primary fistula after repair were reviewed.Clinical data including the patient'age,type and urethral defect location,magnification,type of homeostasis were documented.Several variables potentially affecting the success of fistula closure were retrospectively assessed. **Results**:Among990patients,23%patients(n=227)developed UCF after primary HR.Patient age was3months to12years.Postoperative UCF occurred in26%of cases at age of0–1years,29%at1-2years,26%at2-4years,11%at4-6years and7%in6-12years.The incidences of UCF were17%(133/770)for distal,34%for middle and50%in proximal types of hypospadias.Penile chordea36%(89/242)(P<0.05),History of circumcision25%(9/36)(p>0.05),preoperative hormone therapy57%(16/ 28)(p<0.05%).49% of fistula(112/227) followed vicril material(112/422),and51%(100/227)after PDS(100/532)(p>0.05).Correlation with way of homeostasis:fistula rate after tourniquet33%(68/202),Epinephrine24%(68/283)and17% with no homeostasis agent(83/482).Fistula formation after Silasyic dripping stent28%and silastic foley catheter32%.9patients had suprapubic cystostomy or retrograde cystostomy after repair but fistula was carried in6cases.Rate of fistula after repair was3%(5/160)in patients with no urethral stent,16%(31/188)in1-3days stent,31%(154/485)in4-7days stent and49%(32/65)in8-10days.NO Oxybutinun administered in53%(525/990)of patients.Fistula observed in151(28%)patients.Rate of fistula was22%(94/409)in magnification with Loupe and23%(33/581)without loupe(p>0.05). **Conclusions**:There is no clear difference in fistua formation in positive history of circumcision,type of stent,urethral diversion,magnification with loupes,type of material suture,type of homeostasis and administration of oxybutinin.While proximal type,presence of penile chordea,type of surgery,prolong duration of urethral catheter significantly affect it(P<0.05).Older age at HR was associated with low incidence of UCF formation but they had distal shaft hypospadias in most of cases.**Key words**:Risk factors,urethrocutaneous,fistula,hypospadias repair

[UP 22] Title: URETHRAL ADVANCEMENT IN DISTAL HYPOSPADIAS. COSMETIC AND FUNCTIONAL EVALUATION OF LONG-TERM RESULTS

Author: Manuel Espinoza V

Aim of study To evaluate the cosmetic and functional outcome of patients who underwent urethral advancement (Koff procedure) for distal hypospadias.**Methods**We included 42 patients older than 13 years old who underwent urethral advancement between 2009-2010 (median age at surgery of 48 months). A total of 17 patients completed the assessment. Two surgeons independently evaluated the cosmetic result (HOPE score), while parents' and patients' appraisal was based on PPPS. An uroflowmetry was obtained and correlated with symptoms by an objective score (DVSS) to evaluate the functional outcome.**Main results**Out of 42 children, one presented urethral valves, another one had hydrocele; cryptorchidism was associated in one child and fetal-alcohol syndrome in another patient. Most children (37/42) had a distal meatus; in 5 the location was midshaft. Urethral advancement, orthoplasty and a Firlit skin collar was performed in all patients. Mean follow-up was 110 months. Five patients presented postoperative fistula, one child had a meatal stenosis and another one haematoma. All of them were treated surgically (7/42; 16%). Regarding cosmetic evaluation, all 17 patients were satisfied with their penile cosmesis (PPPS=12.41), as well as parents (PPPS=12.75) and surgeons (HOPE=46.5; intraclass correlation coefficient= 0,6 [95%CI: 0.2-0.8; p<0.01]). Concerning functional outcome, uroflowmetry was abnormal in 6/17, but only one patient had dysfunctional voiding symptoms (DVSS=12) compatible with voiding postponement.**Conclusions**Urethral advancement is a suitable alternative for distal hypospadias repair with low complication rate. We obtained satisfactory cosmetic and functional results from the point of view of patients, parents and surgeons.

[UP 23] Title: REPAIR OF VENTRAL PENILE TISSUE DEFECT WITH INGUINAL SKIN GRAFT AFTER MULTIPLE HYPOSPADIAS REPAIRS

Author: Bilge KARABULUT, Halil TOSUN, Hasan Deliağa, H.Tugrul TİRYAKİ

IntroductionUnsuccessful hypospadias operations result in the lack of foreskin for the repair of residual chordee, penis and urethra. We present a case of hypospadias presenting with penile skin defect.**Patient**A six year old patient who was operated due to hypospadias previously admitted to our clinic. As we learned from his history he had undergone TIPU repair for penoscrostal hypospadias at the age of 1 and a re-TIPU repair for urethral defect at the age of 2. At the time of admission a skin defect in front of the urethra from the subcoronal level to the scrotum and ventral penile cord were detected. The Urethral mea was located in the glans penis. During the operation, the urethra was catheterized with 10 F feeding and the penile skin was degloveed. Artificial erection test revealed 30 degree chordee and was repaired with modified Nesbit procedure. The ventral penil skin defect was closed with a 6x2 cm skin graft prepared from the left inguinal region.**Results**Cosmetic pathology was not detected in the patient whose dressing was closed for 4 days postoperatively. Graft necrosis and chordee was not detected in the third month after discharge.**Conclusion**In failed hypospadias cases, loss of penile skin may require removal of skin grafts from various areas for subsequent repairs. Therefore, especially in proximal hypospadias cases, performing repairs in experienced centers will minimize the complications.

[UP 24] Title: MICROLITHIASIS OF TESTIS AFTER ORCHIDOPEXY FOR CRYPTORCHIDISM

Author: Shohei Yoshimura

Background and purpose Testicular microlithiasis (TM) is an echogenic non-shadowing focus less than 3 mm on testicular ultrasound. Recent studies have reported that TM is sometimes came out during follow-up after orchidopexy for cryptorchidism and associated with male infertility and testicular malignancies, but its exact etiology is unclear. In this study, we aimed to investigate TM appearance before and after orchidopexy for cryptorchidism.**Methods**A total of 256 patients who received orchidopexy for cryptorchidism in our hospital between January 2004 and December 2018 were enrolled in this study. Of these, 237 patients who have had postoperative testicular ultrasound exams were included in the analyses. We retrospectively obtained pre- and post-operative ultrasound findings, operative findings, follow-up information etc. in all eligible cases by chart review. Statistical analyses were performed by using Fisher's exact test and Mann-Whitney's U test.**Results** Median age at orchidopexy was 1 year 9 months old (from 2 months to 10 years 3 months old) and median follow-up period was 4 years 9 months. Pre- and post-operative TM incidences were 7/183 (3.8%) and 36/237 (15.2%), respectively. Patients' demographics between TM positive group (n=36) and negative group (n=201) were almost

the same, however, only follow-up period was significantly longer in TM positive group than negative group (p=0.002). TMs detected before orchidopexy in 7 patients did not disappear after the operation. In the other 29 patients that TM had been detected newly after orchidopexy, median term from orchidopexy to TM appearance was 3 years 5 months and TM did not disappear once it showed up.**Conclusions**TM incidence after orchidopexy was more than 15% and TM did not disappear even if it appeared before and after orchidopexy. Further follow-up is needed to confirm the association among TM, male infertility and testicular malignancies.

[UP 25] Title: CONTRIBUTION OF AMNIOTIC MEMBRANE TO HEALING IN THE TREATMENT OF IATROGENIC VAS DEFERENS INJURY IN RATS

Author: Sabri Demir

Aim: We aimed to investigate the effect of amniotic membrane (AM) on wound healing in vas deferens injuries. **Methods**: Forty male-Albino rats, weighing between 250-350 g, were used in the study. Four-groups were formed consisting of ten-rats. Any procedure was not performed on rats in Group-I. Left vas deferens of subjects in Group-II were transected and left, by an incision made from the left-inguinal region. Vas deferens of the rats in Group-III were transected and end-to-end anastomosis was done. Vas deferens of the subjects in Group-IV were transected, and end-to-end anastomosis was done and closed by wrapping a layer of AM on the anastomosis-line. Rats were sacrificed after 60 days, their left vas deferens were removed, appearances of the anastomoses and lümen-apertures examined both macroscopically and histopathologically. Methylene-blue was passed through the lumen and its apertures were checked. Specimens were stained with Hematoxylin-Eosin and Masson-Trichrome dyes and evaluated under light microscope. Data were evaluated with SPSS 21.0 program. Comparisons of all groups were made using Kruskal-Wallis test and binary comparisons were made using Mann-Whitney U test, $p < 0.05$ was considered significant for all variables.**Results**: Anastomosis line of vas deferens of the rats in group-IV treated with AM improved better than that of the group without AM (group-III) and less-stenosis was observed. There were statistical differences between the subjects in Group-IV and in Group-III ($p = 0.03$) in terms of anastomosis condition and the separation of the ends of the vas deferens ($p = 0.03$). There was no difference between the groups in terms of lumen-patency ($p=0.09$). Histopathologically, there was less-fibrosis in the anastomosis-lines of Group-IV.**Conclusion**: AM can be used for the repair of vas deferens injuries, which can be seen especially during pediatric inguinal surgery. It may lead to better-healing and less-stenosis in anastomosis-line.

[UP 26] Title: REPAIR OF VENTRAL PENILE TISSUE DEFECT WITH INGUINAL SKIN GRAFT AFTER MULTIPLE HYPOSPADIAS REPAIRS

Author: Bilge KARABULUT, Halil TOSUN, Hasan Deliağa, H.Tugrul TİRYAKİ

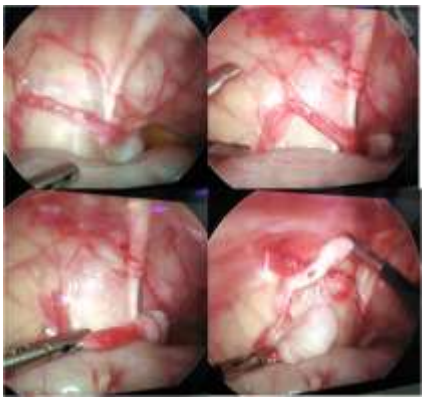
Introduction Unsuccessful hypospadias operations result in the lack of foreskin for the repair of residual chordee, penis and urethra. We present a case of hypospadias presenting with penile skin defect.

Patient A six year old patient who was operated due to hypospadias previously admitted to our clinic. As we learned from his history he had undergone TIPU repair for penoscrostal hypospadias at the age of 1 and a re-TIPU repair for urethral defect at the age of 2. At the time of admission a skin defect in front of the urethra from the subcoronal level to the scrotum and ventral penile cord were detected. The Urethral mea was located in the glans penis. During the operation, the urethra was catheterized with 10 F feeding and the penile skin was degloveed. Artificial erection test revealed 30 degree chordee and was repaired with modified Nesbit procedure. The ventral penil skin defect was closed with a 6x2 cm skin graft prepared from the left inguinal region.**Results**Cosmetic pathology was not detected in the patient whose dressing was closed for 4 days postoperatively. Graft necrosis and chordee was not detected in the third month after discharge.**Conclusion**In failed hypospadias cases, loss of penile skin may require removal of skin grafts from various areas for subsequent repairs. Therefore, especially in proximal hypospadias cases, performing repairs in experienced centers will minimize the complications.

[UP 27] Title: COMPLETE UROGENITAL NONUNION: A RARE CASE IN NON PALPABLE UNDESCENDED TESTICLE

Author: Nitin Sharma

Aim: Undescsended testis is a common anomaly but complete urogenital non-union is rare. The objective of this report is to share and highlight the rarity of the condition. **Case Description**: 10 month old male child presented with left sided non-palpable undescended testis. He was subjected to diagnostic laparoscopy and further management as per the standard protocol. 5 mm camera port was placed through umbilicus using open technique of port placement and 3 mm working ports were placed at the transumbilical line along the midaxillary line. It was seen that the vas was running separate of the testis and entering into the deep ring to go into the inguinal canal(fig1). The testis was lying separate and isolated with vessels and visible epididymis with no communication with the vas(fig2,3). Keeping the possibility of long loop vas it was decided to trace the vas. The deep ring area was dissected using the Maryland and scissiors and vas was traced down to find it ending blindly into a nubbin of tissue with continuation into the gubernaculum(fig4). Thus the diagnosis of complete urogenital non-union was made. As the opposite side was well descended and normal it was decided to remove the testis and the vas along with the nubbin of the tissue. The dissection and removal was done using 3mm bipolar and 3mm scissors and the specimen was removed from one of the port site. Histopathology revealed dysplastic epididymal tissue into the blind ending vas and dysplatic testis. Patient was operated as a day care case and was discharged after 12 hours of surgery



Conclusion: complete urogenital non-union is extremely uncommon in nonpalpable undescended testis and it should be kept in the back of mind while operating upon them.

Urology Posters Day 2: Group 12
Moderator: L. Guerra

[UP 28] Title: COMPARATIVE EVALUATION OF ENDOSCOPIC BALLOON DILATATION AND OPEN PYELOPLASTY FOR TREATMENT OF URETEROPELVIC JUNCTION OBSTRUCTION IN CHILDREN

Author: Dmitry Shakhnovsky

Aim of the study Today an anderson-hynes pyeloplasty is considered the gold standard treatment for hydronephrosis. The aim of our study was a comparison of high-pressure endoscopic balloon dilatation and an open pyeloplasty for treatment of ureteropelvic junction obstruction in children.**Methods**
From 2015 to 2017 a total of 83 children with a median age of 10 months were treated with endoscopic high-pressure balloon dilatation and 92 children with a median age of 14 months underwent an open pyeloplasty. In the study were included grade 2 and 3 hydronephrosis patients. Results were evaluated using ultrasonography and MAG-3 renogram in 6 months. Positive outcome we considered to be a decrease in pelvic anteroposterior diameter and an improvement of drainage according to renogram.**Results**At follow up for patients with grade 2 hydronephrosis ultrasound pelvic diameter was lower for both pyeloplasty and balloon dilatation patient groups ($p<0.0001$). Washout percentage and differential renal function (DRF) showed an increase for both techniques ($p<0.0001$).We found no statistically significant differences in postoperative ultrasound pelvic diameter ($p=0,7464$), washout percentage ($p=0,0448$) and DRF ($p=0,1604$) for evaluated procedures in patients with grade 2 hydronephrosis.At the same follow up time we compared three indicators for patients with grade 3 hydronephrosis. Ultrasound pelvic diameter was also lower for pyeloplasty and balloon dilatation groups ($p<0.0001$). Washout percentage and DRF showed an increase for pyeloplasty and balloon dilatation ($p<0.0001$). In this patient cohort we found pyeloplasty more effective than balloon dilatation according to postoperative ultrasound pelvic diameter ($p=0,0007$) and washout percentage ($p=0,0017$) indicators.**Conclusions**Results of this study confirm that balloon dilatation can be preferred for treatment of mild hydronephrosis. Also this technique proved its effectiveness for cases of moderate hydronephrosis. Further studies are needed to prove the stability of good outcome over longer period of time

[UP 29] Title: TEMPORARY URINE DERIVATION IN INFANTS WITH SEVERE HYDRONEPHROSIS
Author: VASILIY SHUMIKHIN
Aim of the Study To score the rehabilitation of kidney function after temporary urine derivation in infants with severe hydronephrosis.**Methods**Prenatal and postnatal sonography, Doppler scan, DMSA.**Main results**
We followed history of 62 infants, who underwent temporary urine derivation soon after birth (age 2-60 days). Derivation was achieved by percutaneous nephrostomy under ultrasound navigation control. Indications for procedure was parenchyma loss (2-3 mm) and severe decrease of blood supply. PA diameter of pelvis was 38,6+/-5,63.We observed no restoration of parenchyma thickness and blood supply in 5 children (8,7%) and good restoration in 57 cases (91,3%) in 30 days after procedure, all of them underwent laparoscopic nephrectomy in first group and pyeloplasty in second. Kidney sonography in 1 year showed total restoration of parenchyma thickness in all cases and blood supply in 15 cases (26,3%), in other 42 children (73,7%) we observed loss of blood supply. DMSA scan showed value of 95% in 31 cases (54,3%), 70-80% - 26 cases (45,7%).**Conclusions**Temporary derivation of urine in infants with severe hydronephrosis can show the real kidney function and prevent of unnecessary nephrectomies.

[UP 30] Title: RETROPERITONEOSCOPIC NEPHRECTOMY IN PRONE POSITION: A SIMPLE AND SAFE TECNIQUE
Author: MOLINA VAZQUEZ, MARIA ELENA,ALONSO ARROYO, VERONICA,GOMEZ BELTRAN, OSCAR,MIGUEZ, LORENA ,AGUILAR CUESTA, RAQUEL,SANCHEZ ABUIN, ALBERTO
Introduction: Nephrectomy is a common technique in pediatric urology with numerous technical options available. We present our series of minimal invasive nephrectomies performed between 2010 and 2018: 18 of them were done retroperitoneoscopically in a prone position and 4 were laparoscopic nephrectomies. We describe our surgical steps, our guidelines indicating one or another technique, details learned and patient results.**Methods**: 22 children underwent nephrectomy in 8 years. At the beginning we opted for a retroperitoneoscopic prone technique in children older than 2.5-3 years because of the bigger space to work, in smaller children with associated symptomatology we performed a laparoscopic approach, now we are making restroperitoneoscopic procedures in younger children (until 1,5 years old). The main clue steps are described during the presentation. **Results**: Diagnoses were: Reflux nephropathy in 7 children, multicystic dysplastic kidney in 6 patients, heminephrectomy in double system in 3 cases, massive hydronephrosis in 2 cases and neonatal sepsis with renal damage in another. 3 other children had a congenital hypodisplastic kidney without other associated urological pathology. 10 of the nephrectomies were right, 12 left. Mean age in the laparoscopic group was 1.5 years, 5.8-years in the retroperitoneoscopy group. There were no intraoperative complications, the mean duration of surgery and hospital stay was similar in both procedures. 3 patients presented associated complications: 2 postoperative hematuria in the retroperitoneoscopic group and a symptomatic refluxing ureteral remnant in the laparoscopic one.**Conclusions**: The retroperitoneoscopic prone nephrectomy is a simple technique, easy to learn, safe and with few complications. Laparoscopic alternative in smaller children has as the disadvantage of being a peritoneal approach, but by time our prone nephrectomies are being done in smaller children.

[UP 31] itle: MINIMAL INVASIVE SURGERY IN PEDIATRIC UROLOGY REVIEW OF 700 CASES
Author: Najeh Alomari
Objectives: To present our experience in minimal invasive surgery in pediatric urology. We review the safety, efficacy, outcome parameters of operative time, analgesic requirement, and hospital stay. We present the follow up protocol and complications.**Methods**: A retrospective study of 700 cases of minimal invasive surgery in pediatric urology performed at Queen Rania Hospital for Children / KHMC & private sector over 9 years (April 2009-May 2019) Results: Patients included were 320 females and 380 males, age group ranged from 2 months to 14 years. Transperitoneal laparoscopic & laparoscopic assisted pyeloplasty performed over 200 patients, 12 patients underwent simultaneous bilateral laparoscopic assisted pyeloplasty, 185 repairs performed over DJ catheter which removed after 8 weeks as day case cystoscopy, perinephric drain left in 20 cases. Laparoscopic transperitoneal extravesical ureteric reimplantation performed over 150 patients, bilateral reimplantation in 20 patients. Laparoscopic nephroureterectomy performed over 180 patients. Simultaneous

combined different laparoscopic urological procedures or other laparoscopic procedures (2-4) were performed in 20 patients (except the bilateral urological cases).Indications for surgery were deterioration of renal function proved by US and nuclear scans as well as repeated UTIs. Laparoscopic nephroureterectomy was performed for end stage renal damage due to VUR, PUJ obstruction or dysplasia.Laparoscopic surgery for varicocele and impalpable testis performed in 170 patients. The operative time ranged from 35 to 240 minutes.
All patients were followed in the clinic with satisfactory results and improvement of renal function proved clinically as well as by MCUG, US, urine cultures and nuclear scans.Other surgical conditions were followed as well.
Three patients needed ureteric dilatation and DJ catheter.Four patients needed redo ureter reimplantation.
Conclusion: Minimal invasive surgery in pediatric urology is safe, effective with minimal complications.
Hospital stay is less, minimal use of narcotics and analgesics, early return to full activity with excellent cosmetic results as well as patients and family satisfaction.It should be practiced in pediatric surgical units under the supervision of expert pediatric laparoscopic surgeons with high experience in pediatric urology to achieve the high standards of outcome and learning curve.By experience the operation time can be equal to open surgery

[UP 32] Title: LAPAROSCOPIC URETER REIMPLANTATION FOR DUPLEX KIDNEY
Author: Kulaev A.V., Sharkov S.M., Shmyrov O.S., Lazishvili M.N., Surov R.V
AimThe aim was to demonstrate surgical techniques used in pediatric laparoscopic ureteral reimplantation in patients with duplex renal collecting systems and to assess the efficacy of this technique by reviewing operative outcomes in a single-institution case series.**Methods**We retrospectively reviewed a consecutive series of patients with duplicated collecting systems and vesicoureteral reflux, ureterocele and obstructive megaureter who underwent laparoscopic extravesical transverse ureteral reimplantation (LETUR) at a single medical center from 2011 to 2018. We included all duplex ureters requiring surgery. Laparoscopic extravesical transverse reimplantation was used in each case. Moreover, we used additional tips: wide detrusorotomy with deep detrusor flap elevation from the mucosa and careful ureteral mobilizationAll patients had an intraoperatively placed ureteral stent.Patient demographics, perioperative data, and follow-up imaging were reviewed. **Results**A total of 30 patients and 36 duplicated ureters underwent LETUR. Mean age at surgery was 23± 7 months. Mean operative time was 101.1 ± 30.73 min. Complete resolution of VUR or ureterovesical junction obstruction was achieved in 27 patients (90.0%). There were no high-grade complications (IV-V on the Clavien-Dindo scale). There were three grade III complications in our cohort, with a mean follow-up of 12 ± 6 months.**Conclusion**We report a success rate of 90.0% for laparoscopic extravesical transverse ureteral reimplantation in children with duplicated ureters with several additional tips and tricks. Our experience suggests the procedure is safe and feasible for pediatric patients with symptomatic VUR and obstructive megaureter.

[UP 33] Title: SYMPTOMATIC PROSTATIC UTRICLE: VARIOUS APPROACHES TO TREATMENT
Author: Kush Kumar Luthra
Aim: To highlight various clinical presentations and surgical approaches to treat a symptomatic Prostatic utricle.
Material and Methods: Our study includes a series of 6 cases over a period of 5 years. They were diagnosed with Prostatic utricle during evaluation of recurrent urinary tract infection or during evaluation of proximal hypospadias. All cases were managed with various surgical approaches like Laparoscopic excision, transperineal excision and cystoscopy and cauterization.**Results**: Except one child who initially had recurrent epididymoorchitis, other patients have remained well on regular follow up.**Conclusion**: Prostatic Utricle is a vestigial remnant of the Mullerian Duct with an incidence of 6% in the pediatric age group; most commonly associated with Posterior Hypospadias. Micturating cystourethrogram/ascending urethrogram can help in diagnosis but Cystoscopy remains the gold standard for diagnosis. Various surgical approaches have been described for excision in symptomatic cases.**Ethics**: Ethical clearance has been obtained from the institute. Informed valid consent has been obtained from all the patients/ guardians.

[UP 34] Title: A SIMPLE AND INEXPENSIVE TECHNIQUE FOR BLADDER FIXATION IN PNEUMOVESICOSCOPIC SURGERY: HOME MADE T-HOOK

Author: Beytullah YaÄŸÄ±z

Although amazing development is achieved in the field of minimally invasive surgery, pneumovesicoscopic procedures didn't get widespread acceptance. Main reasons are complex nature of these procedures, requirement of advanced laparoscopic skill and lack of long term results. Fixation of bladder wall is a major component of these procedures. Although commecially available devices, like ports with umbrella, locking trocars and lifting apparatuses are produced, they aren't commonly available due to commercial reasons and their cost. We intend to present our experience on bladder fixation during pneumovesicoscopic surgery and introduce our home-made fixation device, T-hook.Twenty three patients (37 ureters) who underwent pneumovesicoscopic surgery between January 2017 and July 2019 were retrospectively evaluated. Indications for surgery were VUR (n=15), megaureter(n=3), bladder diverticula(n=3), bladder diverticula with VUR(n=2). For bladder fixation, transabdominal suture (TS)(n=3), needle asisted percutaneous fixation (NAPF)(n=3) and T-hook(n=17) techniques were performed under cystoscopic guidance. Mean cystoscopy duration was 26 minutes (22-34 minutes) in T-hook group and 29 minutes (23-36 minutes) in the rest. Bladder tear was encountered in 4 patients (2 in TS and 2 in NAPF) but none was with T-hook technique. Although no conversion to open is required due to bladder tear, additional maneuvers were required and unnecessary time was wasted. Dislocation of ports was encountered in 2 patients (1 in TS and 1 in NAPF), but none was with the T-hook technique. Three conversion to open surgery were necessary in the T-hook group but only 1 was related with the T-hook technique. Epigastric artery was injured during transabdominal puncture and poor vision due to bleeding resulted in conversion in this patient. No other complication related to T-hook technique was observed.T-hook is an inexpensive and reliable technique for bladder fixation during pneumovesicoscopic surgery. It provides reliable fixation for the bladder and for the ports.

[UP 35] Title: PNEUMOVESICOSCOPIC CORRECTION OF PRIMARY VESICOURETERAL REFLUX (VUR) IN CHILDREN. - INITIAL EXPERIENCE

Author: BENAIRED AMINE MOUL

Purpose: Vesicoureteral reflux is a common urological abnormality predisposing risk of childhood hypertension and chronic renal failure. It is called primitive when it is due to an abnormality of the vesicoureteral junction. Different treatment approaches have been proposed a long time. Two main trends can be identified, conservative and operative approach. The main objective of our prospective study is to demonstrate the feasibility of vesicoscopic crosstrigonal ureteral reimplantation under CO2 pneumovesicum in treatment on primary vesicoureteral reflux and analyze results of this approach.**Methods**: A total of 60 patients underwent transvesicoscopic ureteral reimplantation (33 boys, 27 girls) by the same surgeon from Mai 2011 to Mai 2015. All patients had primary vesicoureteral reflux, and surgery was performed because of breakthrough urinary tract infection despite antibiotic prophylaxis, persistent high grade of vesicoureteral reflux especially in association with significant renal scarring, mean age at operation was 47.47 month (5 month - 12 years). Of the 60 patients, 34 had bilateral reflux and 26 had unilateral reflux. The reflux grade in the total of 94 ureters was grade IV, V in 59.57%, grade III in 35.11% and grade II in 5.32% in association with contralateral high grade vesicoureteral reflux. Our surgical methods followed those reported by Valla et al. **Results**: The transvesicoscopic procedure was successfully completed in all patients without perioperative complication except one case of pneumoperitoneum that required exsufflation by open laparoscopy. The mean overall operative time decreased significantly with an average of 58.43 +/- 11.26 minutes for unilateral reimplantation and 101.18+/- 26.5 minutes for bilateral reimplantation. The postoperative hospital stay was 3 days for all patients. The mean follow-up period was 03 years. Cystography was performed 3 month after surgery in all patients and showed the disappearance of vesicoureteral reflux in 57/60 patients (95%) or 91/94 of ureters (97%). Persistent vesicoureteral reflux was documented in 3 of 94 ureters and had resolved spontaneously at 12 month after reimplantation.**Conclusion**: Our preliminary results indicate that vesicoscopic ureteral reimplantation is safe and effective procedure with minimal morbidity when compared to traditional open method. It can be apply in children under 12 months. **Key words**: Primary vesicoureteral reflux,

surgical treatment of primary vesicoureteral reflux, vesicoscopic CrossTrigonal Ureteral Reimplantation, diagnostic and therapeutic recommendations of primary vesicoureteral reflux in children.

Urology Oral Day 3: Session 5
Moderator - P. Reddy

[UOA 17] Title COMPARISON OF THE INGUINAL AND SCROTAL APPROACHES FOR THE TREATMENT OF CRYPTORCHIDISM IN CHILDREN

Author: Takwa Mili

Aim of the study Transscrotal orchidopexy is emerging as an alternative approach for palpable low-lying undescended testes. In this study, we aimed to evaluate and compare the outcomes of the conventional inguinal approach and the scrotal approach for the treatment of palpable undescended testes in children.**Methods**We retrospectively reviewed all patients who were treated for cryptorchidism in our department with palpable low-lying testis during a 10-year period.From January 2009 to December 2018, a total of 520 children (670 testes) with palpable undescended testes were operated. One hundred and seventy children (260 testes) underwent single scrotal incision orchiopexy (group I) and 350 children (410 testes) underwent traditional inguinal incision orchiopexy (group II). Post-operative complications, testicular location, and testicular trophicity were reviewed at the follow-up evaluation.**Results**The patients' mean age was 53.9 ± 13 months in group 1 and 45.8 ± 9 months in group 2. There was no statistically significant difference between the two groups in terms of patient age (p = 0.8) and location of the undescended testis (p = 0.359). All testes drop in the scrotum under anesthesia. A patent processus vaginalis was found in 62 cases (55%). Operative time was statistically, significantly lower in the scrotal group (p = 0.008). There was a significant difference regarding postoperative complications according to the surgical technique (p = 0.01). Indeed, patients operated by the classical technique presented more complications than those who underwent scrotal orchidopexy in the short and medium term.**Conclusion**The single scrotal incision orchidopexy is safe and effective for palpable low-lying testes. Its shorter operating time and lower complication rate make it an attractive alternative to the traditional inguinal approach.

[UOA 18] Title COMPARISON BETWEEN DETORSION WITH ORCHIOPEXY AND DETORSION PLUS TUNICA VAGINALIS FLAP COVERAGE IN THE MANAGEMENT OF ISCHEMIC TESTIS FOLLOWING TORSION

Author: Md. Abdul Aziz

Background:Testicular torsion leads to devastating consequences in young boys, about 42% undergo an Orchiectomy resulting in -Reduced fertility, testicular hormonal dysfunction and psychological trauma. The aim was to compare the testicular salvage rate between detorsion plus tunica albuginea incision with tunica vaginalis flap coverage with orchiopexy and detorsion with simple orchiopexy.**Materials and methods**: This was a prospective comparative study conducted from January 2016 to December 2017. Patients with ischemic testis were allocated randomly in two groups by lottery. Group A: 15 patients with detorsion plus tunica albuginea incision with tunica vaginalis flap coverage with orchiopexy. Group B: 15 patients with detorsion with orchiopexy. Patients were followed up 6 months. Data were collected in a pre-designed, semi-structured questionnaire and analyzed using SPSS version 20 statistical software. P-value of <0.05 was considered significant. Ethical clearance was taken from ethical committee of Bangladesh Institute of Child Health & Dhaka Shishu (Children) Hospital. **Results**: Total number of patients was 30. Demographic data showed no statistical difference between two groups. Most of the patients presented after 24 hours in both group. Rate of atrophy of testis after orchiopexy was higher in patients presented after 24 hours in both group. Only 4 patients in group A had recognizable testicular atrophy whereas 12 patients in group B had testicular atrophy. Surgical site infection was present in only 1 patient in group B.**Conclusion**: Tunica albuginea incision with tunica vaginalis flap coverage with orchiopexy provides more salvage rate than detorsion with orchiopexy in the management of ischemic testis following torsion.**Key words:** Torsion testis, Compartment syndrome, Fasciotomy, testicular atrophy.

[UOA 19] Title TESTIS-SPARING SURGERY FOR TESTICULAR TUMORS IN A PEDIATRIC POPULATION

Author: Juan Bois

Aim of the Study: Testicular tumors (TT) account for 2% of solid childhood tumors, 75% are benign. Although radical orchiectomy with high ligation of the spermatic cord is the procedure of choice, testis-sparing surgery (TSS) with preservation of non affected parenchyma has been proposed. There are few pediatric cohorts with long term follow-up. Our aim is to report our experience in TSS for more than 18 years.**Methods**: Retrospective study. Clinical records of all children (aged 0-18 years) operated for a TT were analyzed. Inclusion criteria: patients who underwent TSS. Period: 1997- 2018. Patients with intratesticular tumors with evidence of non affected surrounding parenchyma and negative serum tumor markers were selected for TTS. Histology, postoperative complications, clinical follow up, testicular size measured by ultrasound were evaluated.**Results** : 76 cases were analyzed; 12 met the inclusion criteria. Age (median): 10.5 years. (R: 0.3-17). 10/12 were prepubertal patients at the time of diagnosis. 58,3% left side. Histology: dermoid cyst (5), mature teratoma (3); stromal tumors 3 (1 giant Sertoli cells calcifying tumor [GSCCT], 1 Tumor of the granulose (juvenile type), 1 Leydig cell tumor), and a fibrous epididymis nodule (1). 1 patient (GSCCT) suffered an early recurrence, a radical orchiectomy was performed. Follow-up: 67.5 months (r= 8-264). Neither recurrence nor testicular atrophy were registered. A mean of 35% (r: 5-56) reduction of testicular volume against contralateral found. However, proper sexual maturation (Tanner stages) was observed, according to patient age. **Conclusions**: The majority of TT were benign, in accordance with reported in the literature. 1 case had to be converted to orchiectomy, after confirmation of malignancy, with no consequences. Despite of the significant reduction of testicular size in some patients, no clinical impact was observed.TSS is a safe technique, and technically feasible, in a selected population.

[UOA 20] Title: REMOVAL OF THE DOUBLE J STENT WITHOUT ENDOSCOPY AFTER HENDERSON HYNES PYELOPLASTY: ABOUT 2 CASES

Author: Ines Ben chouchene

Aim of the study: The ureteropelvic junction syndrome is a common condition in daily practice of pediatric urology.The postoperative pelvic drainage method presents a controversy according to the authors and remains dependent on the habits of the different surgical teams but especially with the means available to them.**Methods**: A prospective study was conducted at the B surgery department of Tunis Children's Hospital.A technical device allowing the placement of a double J stent in intraoperative was performed in 2 patients. **Main results**:The evolution was good in both cases, with an output of the child at Day2 post-operative and the absence of recourse injectable analgesics after Day1. Removal was performed without incident in the outpatient clinic at day10 The drainage by double j stent seems to be the method of choice because it is associated with a shortest duration of hospitalization and corresponding to less use of analgesics. In developing countries, the main difficulty that remains is removal, which requires an adequate technical platform and financial means to perform endoscopy under general anesthesia. However, our method avoided this difficulty and seemed to have adapted to the conditions performed in the exercise.**Conclusion**:The drainage by double J stent after a Henderson Hynes pyeloplasty is possible even in the absence of availability of vesical endoscopy under GA in children.

Urology Oral Day 3: Session 6
Moderator - D. Wood

[UOA 21] Title: HORMONE THERAPY BASED APPROACH IMPROVING OUTCOMES OF MICROPENIS IN HYPOSPADIC CHILDREN

Author: Serena Crucianell

Aim of the study: This study is aimed at evaluating objective outcomes of a hormonal approach to hypospadic children affected by micropenis.**Methods**: Since January 2017, hypospadic children aged > 3 months, < 36 months, , suspected of being affected by micropenis are addressed to a multidisciplinary team (genetist, endocrinologist, andrologist, sonographer). The Diagnosis is confirmed by an US-scan of longitudinal and transverse diameters of the corpora cavernosa, sizing < 2,5 SD for age, performed with a 15 MHz hockey-stick probe. Genetic and hormonal screening evaluate if micropenis is an isolated pathology or part of a syndromic context and if hormonal treatment can be safely prescribed. Topic hormonal gel is applied once a day for 1-2 months. Intramuscular 2

mg/Kg of enanthate testosteron is administered once a week for 3-5 weeks. Some children require a combined administration, *never contemporarily. One week after treatment suspension, a second US-scan is performed and diameters of corpora cavernosa recorded; Treatment anticipates of 1 month surgical correction for bleeding prevention. Outcomes in terms of surgical results and the most frequent characteristics are reported.**Main results** In 2 years study, 34 children out of 35 affected by hypospadic true micropenis are treated with hormonal administration: 21 topic, 4 i. m. , 9 combination of both. Other results are reported in table 1. The delta of diameters recorded at 1st and 2nd US-scan, shows an increase of 0,8 mm ;1,5 mm; 1,9 mm respectively/ each treatment. The highest responsivity to hormonal administration is from 5 to 14 months of life. No adverse events but a transient aggressivity and down is encountered.**Conclusions**A multidisciplinary and early approach of hypospadic children presenting micropenis, together with hormonal therapy provide stable amelioration of diameters and volume of corpora cavernosa and extrinsecation of the shaft thus allowing an easier surgical correction.

• Hypospadic children Jan 2017/ June 2019	**261**
• Hypospadic micropenis	**35**
- distal	25
- proximal	10
-Average	
• Associated comorbidities	**29**
-cryptorchidism	8 (22,85%)
-Inguinal hernia	4 (11,42%)
-Syndromic diseases	8 (23%)
-Severe prematurity	5 (14,28%)
- Born by assisted fertilization	6 (17,14%)
-In utero exposition to progestinics	12(34,28%)
• Hormonal Treatment	**34**
Topic	21
Intra-muscular	4
Combination treatment (topic+ i. m. *)	9
• N° US scan (1^{st} , 2^{nd})	**69**
▲ delta diameters of corpora cavernosa (scan 2-1) topic treatment	+ 0,8 mm
▲ delta diameters of corpora cavernosa (scan 2-1) i.m. treatment	+ 1,5 mm
▲ delta diameters of corpora cavernosa (scan 2-1) combination tratment	+1,9 mm

[UOA 22] Title: USING AUTOLOGOUS KERATINOCYTES ON BIODEGRADBLE MATRIX FOR URETHROPLASTY IN PATIENTS WITH PROXIMAL HYPOSPADIAS

Author: Artem Burkin

Aim of the study: to implement the alternative method of urethra's substitution, to improve the cosmetic results and to decrease the rate of complication.**Methods**: 98 male children with scrotal and perineal hypospadias were included to group of interest, who underwent surgical treatment from 2004 till 2016. Patient's age ranges from 6 months to 17 years. All patients were divided in to two groups: patients with perineal hypospadias (n=58) and patients with scrotal hypospadias (n=40). Surgical procedures were performed at the age from 6 months to 1,5 years. Reconstruction of scrotal-perineal portion of urethra was performed with autologous keratinocytes on biodegradable matrix. The patient's skin was the main source of autologous keratinocytes. The dissociation of cells was performed with enzyme-containing solutions. Received cells were inseminated in growth substrate (concentration 2x105/ml). Thin gelatin sponge (Spongostan 0,3 mm) was used to transport the cell's culture to the operating field. Penile urethra was created with "onlay-tube" technique. We estimated short- and long-term results.**Results**: in 2,6% cases we observed forming of fistula, closed during 2nd stage of reconstruction. 1 patient (1,1%) had a meatal stenosis in 3 months after catheter removing. In 1 patient we observed disruption of distal part of suture line with saved proximal portion. **Conclusion**: urethroplasty with autologous keratinocytes on biodegradable matrix in patients with proximal hypospadias permits to create the plastic material deprived of hair

follicles and prevent forming of “hairy urethra” and to save local tissues for the next stage of reconstruction. Also using of described method excludes the appearing of cicatrix in operative field and decrease the rate of postoperative stenosis.

[UOA 23] Title: MORPHOMETRIC AND HISTOLOGIC EFFECTS OF TESTOSTERONE THERAPY ON HYPOSPADIATIC PENIS AND PREPUCE.

Author: Reza shojaeian

Background: Hormone stimulation therapy (HST) is suggested as a preoperative intervention in Hypospadias reconstructive surgery to obtain more developed gross anatomy of glans and penis and subsequent superior postoperative results.Several studies have been discussed the pros and cons of hormone replacement therapy which is still a place of discussion and controversy. In this study we assessed morphometric and histologic effects of testosterone therapy on hypospadiatic penis and prepuce.**Method and materials**: 18 patients with hypospadias who had received 3 doses of 25mg of testosterone monthly were compared with 23 patients with hypospadias who managed without HST.Penile morphometry and hormone side effects were assessed in monthly pre-operative visits. Intra operative observations and preputial histology were also compared between groups.
Results: hormone side effects were detected in 83.3% of cases in HST group that were mild mostly. Penile glance diameter was enlarged significantly after the first dose of testosterone. ($P<0.05$) while morphologic changes were not significant thereafter. Intraoperative observation showed corporal bodies significant enlargement but less glance tissue growth and significant neovascularization in HST group compare to controls. These findings beside more intraoperative hemorrhage provided more complex glansoplasty in HST group. Inflammatory changes were not significantly different among HST patients compare to controls.**Conclusion**: The first dose of testosterone is the most effective one and as side effects are appeared mostly by several doses, we recommend single dose HST if needed for hypospadias reconstructive surgery.

[UOA 24] Title: CLINICAL PICTURE AND TREATMENT OF URETHRAL STRICTURE IN PATIENTS WITH PRIOR HYPOSPADIAS REPAIR

Author: .Kunz, R.Baschek2, S.Krege2, A.Vogel2, D.Kröpfl

Aim of study: One of the causes of urethral stricture is prior hypospadias repair. Substitution urethroplasty and a two-stage procedure are often called for.**Methods**: We performed a retrospective analysis based on a prospectively maintained database. All patients with a urethral stricture after hypospadias repair were included. **Results**: Between 02/1996 and 02/2019, 67 patients aged between 3 and 74 years (median 33 years) underwent urethral reconstruction. All patients had had prior hypospadias surgery. The stricture length was between 1 and 18 cm (median 5 cm). In 24 patients a single-stage procedure was performed. Buccal mucosa was used in 20 patients, prepuce in 2 patients and skin in 1 patient. End-to-end anastomosis was performed in 1 patient. The location was penile in 13 patients, bulbar in 6 patients, penobulbar in 4 patients and panurethral in 1 patient. Three of the 24 patients (12.5%) had postoperative complications (Clavien-Dindo III): scrotal haematoma, panurethral haematoma and meatal stenosis, respectively.In 43 patients a two-stage procedure was performed. In 9 of these patients only the first operation was performed. Buccal mucosa was used in 39 patients, prepuce and buccal mucosa in 2 patients, buccal mucosa, bladder mucosa and lip in one patient and buccal mucosa and penile skin in one patient. The location was penile in 30 patients, panurethral in 11 patients, bulbar in 1 patient and penobulbar in 1 patient. Seven of the 43 patients (16.3%) had postoperative complications (Clavien-Dindo III): fistula, scrotal abscess, buccal haematoma in stage 1 and bladder tamponade in stage 2, urethral fistula, two cases of partial graft necrosis and one meatoplasty.**Conclusion**: Urethroplasty after prior hypospadias repair must often be performed in several stages. It is associated with a significant rate of serious early postoperative complications. The complication rates of the two operative approaches do not differ significantly.

Urology Posters Day 3: Group 9
Moderator - P. Reddy

[UP 36] Title: LONG TERM RENAL FUNCTION IN CHILDREN WITH PRENATALLY DIAGNOSED MEGACYSTIS
Author: M. ZEINO S. VIACCOZ , R. SAADEH , M. MILOSEVIC , L. RAIO
Aim of the Study: To evaluate the long-term outcome of the renal function in children with a diagnosis of prenatal megacystis (MC) before 20 weeks.**Materials and methods**: 25 children who survived out of 68 with prenatally diagnosed MC between 1991 and 2017, were evaluated retrospectively. Creatinine during first year of life, nadir creatinine and glomerular filtration rate (GFR) and the corresponding KDIGO stage were reviewed. Ultimate diagnosis, prenatal and postnatal interventions were also documented.**Results**: the most frequent diagnoses were; posterior urethral valves (PUV n= 14), Prune belly syndrome (PBS n= 2 males), other urological diagnosis (4 males, 1 female) and non-urologic diagnosis (2 males, 2 females).
18 patients grew up with normal renal function (CKD1) and 7 with (CKD 2-5). The 7/25 (28%) cases with an impaired renal function were mostly diagnosed with PUV and PBS, and six of them had a Vesicoamniotic shunt VAS inserted prenatally. 17 patients required postnatal subsequent specific urologic interventions related to their pathology and 8 did not need any interventions.**Conclusion** In our study, we found that 18/25 (72%) patients who survive postnatally with a prenatally diagnosed MC had satisfactory renal function at long-term follow-up. The 7/25 (28%) cases with impaired renal function were mostly diagnosed with PUV and PBS and they had prenatally severe renal damage, in six of them VAS was performed prenatally. Although VAS was essential for the fetal survival, it did not improve the renal function considerably in the poor function group who already exhibited oligohydramnios at the time of shunting.

[UP 37] Title: CONGENITAL MESOBLASTIC NEPHROMA PRESENTING WITH HYPERTENSION, HYPERCALCAEMIA AND SEVERE POLYURIA IN A PREMATURE NEONATE: A CASE REPORT
Author: M. ZEINO, M. MILOSEVIC, R. SAADEH, J. N. WALTHER, R. AMMANN, ST. BERGER
Aim of the study: Congenital mesoblastic nephroma (CMN) is a rare tumor that accounts for 3% of all paediatric renal tumours. However, it is the most common renal neoplasm in the first 3 months of life. The most common presentation is an abdominal mass followed by hypertension and haematuria but hypercalcaemia, although recognized, is rare. **Case description**:We report a case of CMN in a 32 week old premature male neonate who was born to a 39-year-old woman by emergency caesarean section due to polyhydramnios. The prenatal ultrasound showed a large renal mass occupying the left hemi-abdomen and flank, which was confirmed as 8x6x5 cm renal tumour in the postnatal MRI. The newborn developed hypertension, severe polyuria, hypercalcaemia and renal failure during the first four days of life. After multidisciplinary management and stabilisation, a radical tumour nephrectomy was performed at the age of 5 days. Histology of the resected tumor revealed cellular CMN. After the operation, serum calcium level, hypertension and renal function had all normalised quickly. He remains well and tumour free at the age of 1 year.**Conclusions**The outcome for children with CMN is usually excellent after radical nephrectomy, with overall survival rate of 95%. The risk of treatment-related mortality is relatively high in the first weeks of life, emphasizing the need for an early specialist input and a multidisciplinary management.

[UP 38] Title: THE MINIATURIZATION OF INSTRUMENTS AND LASER LITHOTRIPSY HAVE IMPROVED UROLITHÄ°ASÄ°S TREATMENT WITHOUT REQUIRING FLUOROSCOPIC CONTROL IN PRESCHOOL CHILDREN
Author: Fazli Polat, Zafer Turkyilmaz, Ramazan Karabulut, Suleyman Yesil, Kaan Sonmez
Aim of study: To present the outcomes of retrograde intrarenal surgery (RIRS) and laser lithotripsy for the treatment of calculi of preschool age children.**Methods**: The records of 28 patients ≤6 years old who underwent endoscopic procedures for treatment of stones at the our hospital from 2013 to 2016 were reviewed retrospectively. In the treatment of renal and upper ureteral stones, laser lithotripsy was used with flexible ureterorenoscope (URS) without ureteral dilatation. The information recorded included patient demographics, stone size and location, operative technique and postoperative outcomes. **Main Results**: A total of 32 lithotripsy procedures to treat 34 stones were performed in 28 children 18 (64%) males and 10 (36 %) females; 22 (78.5%)

single and 6(21.5%) multiple stones; median age, 45,8±9,36 months (10-72). Stones were located in the kidney in 21 cases (75%), the upper ureter in 7(25%). Mean stone size was 12,07-+1,74(9-15) mm. Four (14.2%) of these patients also had bladder stone accompanying it. The stones of these patients were also fragmented using laser with flexible URS. Anesthesia duration was 26-105 min (mean, 59,64±22,39). In fourteen patients with narrow ureteral orifices urethral JJ stents were placed firstly and flexible URS were done easily after 2 weeks.We did not use fluoroscopy; thus radiation free treatment was reached all patients. Follow-up ranged from 2 months to 3 years (mean, 24 months). Complete stone clearance was achieved at the end of the procedure in 26 (92.8%) patients. No major complications were encountered during or after the procedure, although 2 minor complications (7.1%) occurred. The mean duration of hospitalization was 2,21±0,87 days (range, 1-4 days). Recurrence of urolithiasis was a long-term complication in two patients; These cases were subsequently treated smilarly with flexible URS. No other long-term complications were revealed by ultrasonography.**Conclusions**: Our results suggest that flexible URS is a safe and effective minimally invasive treatment modality for renal stones in preschool children.

[UP 39] Title: THE ROLE OF OPEN STONE SURGERY IN PEDIATRIC UROLITHIASIS

Author: Halil Tosun

Purpose:All over the world urinary system stone disease is changing due to diet habits and sedentary lifestyle.It is important to use a minimally invasive technique, especially in children, because of the high likelihood of recurrence.Since January 2009 full endourologic venture opportunities to increase our clinic, our experience with the first four-year learning period (2009-2012) and later in January 2013-September 2018 between patients who attempted to cause urinary stone examined was aimed to avaluate the patients who underwent open stone surgery.**Material-Method**:Patients with urinary stone, who applied to our pediatric urology clinic between January 2009 and May 2018, were evaluated retrospectively. From January 2009 to December 2012, data from January 2013 to May 2018, where endourology has become fully routine, was evaluated separately. In our clinic, the age, sex, stone location, size, metabolic evaluation, radiological evaluation, surgical interventions and complications of the patients were recorded.**Results**:Between January 2009 and December 2012, 97 cases were operated. 21 of patients (21.6%) underwent open surgery. 3 patients underwent ureterolithotomy, 2 underwent systolitotomy, 1 underwent anatrophic nephrolithotomy, and 15 underwent pyelolithotomy. Between January 2013 and September 2018, 317 patients were operated. 9 of patients (2,8%) underwent open surgical intervention. 2 patients underwent systolitotomy and 5 patients underwent pyelolithotomy. Two patients had ureteropelvic junction obstruction with renal stone, and 3 patients had anatomic disturbance (meningomyelocele, kyphoscoliosis).**Conclusions**:Depending on the developing technology, as shown in our study, open surgical procedures are replaced by minimally invasive techniques, but in some conditions it is accepted that stones need to be removed by open surgical intervention. Open surgical techniques should not be forgotten, but over time it has been replaced by minimally invasive techniques. Pediatric urologists should be familiar with open techniques.

[UP 40] Title: CONCOMITANT VESICOURETERAL REFLUX AND STONE DISEASE IN CHILDREN

Author: Deliağa Hasan, Tosun Halil, Karabulut Bilge, Tiryaki H. Tuğrul

Vesicoureteral reflux (VUR) and stone disease (SD) co-occurrence is rarely reported in children. The detected incidence of SD in VUR is 0,5% in children. The male-to-female ratio is 4:1.Concomitant VUR and SD was diagnosed in 7 patients. The mean age of the patients was 3.1 in 4 girls and 3 boys. SD was diagnosed during the follow up of VUR patients. Reflux was bilateral in 6 patients and on the left side in one patient. The grade of reflux was 1-3 in 11 moieties and grade 4 in 2. SD was detected in 10 moieties; on the right side in 3 patients, on the left side in one patient and bilaterally in 3 patients. The stones were staghorn in 3 renal units and metabolic insult was established in 4 patients (cystinuria, hyperuricemia, hypomagnesemia and hyperoxaluria). All patients had multiple episodes of febrile urinary tract infections in spite of antibiotic prophylaxis. The commonest microorganism was E. coli which is detected in 17 urine cultures. Other microorganisms were klebsiella, staphylococcus, proteus, streptococcus and enterococcus respectively. The applied treatment for stone disease was RIRS in 5 renal units and PNL in one renal unit. The stones dissolved spontaneously in 4 renal units. Subureteric injection was performed after SD treatment

in 7 units and 4 units are followed by antibiotic prophylaxis after achieving stone free status.The association of VUR and SD increases the incidence of recurrent and antibiotic resistant febrile urinary tract infections. This situation implies the probability of renal scarring. Managing with the SD is mandatory to diminish the probability of infections and prolonged use of antibiotics. After stone free status, VUR can be managed according to guidelines. Subureteric injection was effective in the treatment of our patients.We suggest to manage with SD with suitable modality for the patient initially in patients with VUR and SD. After gaining stone free status VUR can be managed by subureteric injection. Prolonged antibiotic prophylaxis is necessary to decrease the incidence of renal scarring.

[UP 41] Title: URINARY TRACT INFECTIONS AFTER VOIDING CYSTOURETHROGRAPHY: IS ANTIBIOTIC PROPHYLAXIS NECESSARY?

Author: Manuel Espinoza V

Aim of study: To assess the frequency of urinary tract infection (UTI) in children following voiding cystourethrography (VCUG) in our centre.**Methods**: Retrospective study of patients who underwent VCUG between December 2015 and November 2017. Demographic, clinical, microbiological and radiological data were recorded. Post-VCUG UTI was defined as a clinically compatible case confirmed by positive urine culture within the following 10 days. **Results**: We reviewed 256 patients, 145 females and 111 males, with a mean age of 5 years. The main test indications were febrile UTI in 118 (46%) and vesicoureteral reflux (VUR) in 61 (24%). 177 patients (69%) received antimicrobial prophylaxis; in the remaining 79 patients a urine culture was obtained 6 days before. Among the 99 abnormal VCUG, the most frequent diagnosis was VUR (26.5%), followed by neurogenic bladder (6%).Post-VCUG UTI was diagnosed in six patients (2.34%), 3 males and 3 females, with a median age of 27 months [3-120]. Four of them presented radiological abnormalities (3 VUR and 1 ureterohydronephrosis) and five had received antimicrobial prophylaxis. The isolated germs in urine cultures were Escherichia coli (2/6), Klebsiella (2/6), Enterobacter (1/6) and Pseudomona (1/6). There was no statistically significant difference in UTI frequency between prophylaxis and prior culture (p =0.66).**Conclusions**: The frequency of UTI following VCUG is low, with a higher rate of atypical etiological germs.A prior urine culture might be a useful and safe alternative to prophylaxis for the prevention of post-VCUG UTI.

[UP 42] Title: PENILE ANTHROPOMETRY IN OUTCOME AFTER HYPOSPADIAS REPAIR: AN APPRAISAL

Author: Nitin Sharma

Aims: To compare the outcome in patients operated for hypospadias with respect to preoperative penile anthropometry**Material and Method**: Prospective study between feb2016-sep2017. All underwent TIP urethroplasty. All the stents were kept for 10 days and the final outcome was assessed at the time of stent removal or during first OPD visit. Those not giving consent, stent came out before 10 days, requiring staged repair, where measurements could not be taken or outcome could not be recorded were excluded. The penile measurements used were Maximum Glans width(<14mm and >14mm) and urethral plate width(<10mm and >10mm). The outcome parameters considered were Urethrocutaneous fistula, meatal stenosis/neourethral stricture, skin necrosis, wound dehiscence. P value of <0.05 was considered significant. **Results**: 55 of 60 cases operated formed the study group. Mean age at surgery was 4.69 years Types of hypospadias operated were distal (25/55, 45.5%), mid penile (18/55, 32.7%) and proximal penile hypospadias (12/55, 21.8%) respectively. Urethrocutaneous fistula rates were higher in cases with low gans width(p=0.02) and narrow urethral plate(p=0.03). Meatal stenosis/neourethral stricture was significantly associated in cases with low glans width (p=0.01). Skin necrosis was not associated with the glans width (p=0.9) and urethral plate width(p=0.1). There was no relation between the penile anthropometry and wound dehiscence**Conclusion**: Penile anthropometry could be used as a guiding factor in predicting the outcome. This could be used for preoperative patent counseling. Final verdict however is yet to come.

[UP 43] Title: HOLMIUM-LASER URETEROLITHOTRIPSY IN CHILDREN

Author: Akmal Rakhmatull

Background. To date leading ways in the treatment of urinary stone disease is state-of-the-art technology**,** which significantly reduced the frequency of postoperative complications.**Aim**: to study the effectiveness of transurethral contact holmium-laser ureterolithotripsy (HLU) in children with ureteral stones.**Methods**. 136 patients diagnosed with ureteral stones; aged 2 to 11 years were included in this study. For endoscopic treatment we used rigid and flexible 7Ch uretherorenoscopes of KARL STORZ (Germany) and holmium-laser device ACCU TECH 80W (China). After procedure we placed polyurethane anti-reflux 5Ch stent, for 7 to 10 days. The effectiveness of the intervention in the early postoperative period was assessed by regression of the urinary syndrome and US Doppler of the vesicoureteral ejection of urine.**Results**. Obturating stones of the middle third of the ureter were found in 25% of patients, the lower third of the ureter - in 75% of children; boys predominated (61.1%). Using contact lithotripsy, the stones were crushed into small fragments up to 3 mm, and subsequently removed using stone-grabbing forceps and Dormi loop. Urine ejection according to US Doppler in the early postop period significantly improved, the urine flow was V_{max}0,41±0,03 m/s.Urinary syndrome was observed in 11.1% cases, which was caused by the excretion of tiny fragments of stones in the form of sand, which was cupped by the time of discharge. In the long term, all children were marked by stable elimination of urinary syndrome and the absence of resisting urinary tract stones.**Conclusion**. Endoscopic transurethral holmium-laser contact ureterolithotripsy allows for crushing of stones of different sizes, prevents intraoperative complications (bleeding), reduces the time of drainage and hospital stay.

[UP 44] Title: PNEUMOVESICOSCOPIC CROSS-TRIGONAL URETERAL REIMPLANTATION IN CHILDREN. OUR FIRST EXPERIENCE.

Author: MARIA ELEN MOLINA VAZ

We describe our first experience with pneumovesicoscopic cross-trigonal ureteral reimplantation to correct bilateral vesicoureteral reflux in a three year old child.A three year old boy underwent pneumovesicoscopic Cohen's cross-trigonal reimplantation under cistoscopic help and control. First we performed a conventional cistoscopy and introduce both ureteral catheters that were cut later inside the bladder. We empty the serum and pneumo-bladder was done. Midline 5-mm trocar was introduced at the dome of the bladder, and 2 left and right 5-mm trocars were inserted through the anterolateral wall. Both urethers are disected and released. Submucosal tunnels were prepared with the help of scissors . The detrusor at the site of the ureter mobilization was repaired and ureteroneocystomy was performed using 5 interrupted absorbable sutures. Ports were closed in a percutaneous manner under costoscopic control. Operative time was 298 min. The urethral and suprapubic catheters were removed 3 days after the procedure and patient were discharged 4 days after surgery.
Evidence of reflux resolution was objetivated 3 months later.Our experience seems to confirm that pneumovesicoscopic cross-trigonal ureteral reimplantation can be performed safely and effectively but with longer operative times done other techniques.

Urology Posters Day 3; Group 10
Moderator - D. Wood

[UP 45] Title: PRIMARY BLADDER DIVERTICULUM IN CHILDREN: CLINICO-RADIOLOGICAL PROFILE AND SURGICAL OUTCOMES.

Author: JILEDAR RAWAT

Aim of the Study: To highlight the spectrum of presentation and management of congenital bladder diverticula in children at our center.**Methods:**Records of 12 patients with congenital bladder diverticula managed from 2006-2018 were retrospectively reviewed. Children with secondary diverticula were excluded. Cases were initially managed with catheterization, intravenous fluids and antibiotics started after taking urine for culture sensitivity. Renal function along with routine hematological investigations were done. Radiological evaluation were done initially with ultrasonography of urinary system and latter VCUG was done after urine was sterile. Cases were analyzed with respect to demographic profile, clinico- radiological findings, management and follow-up. **Main results:**Mean age of presentation was 3 years (6 months to 7 years). Presentations were recurrent urinary tract infections (n=3), dysuria and straining during micturition (n=3), urinary retention (n=4), and dribbling of urine

(n=2). Ultrasound KUB, Renal scan and voiding cystourethrography was done in all cases. Seven had diverticulum on right side and five patients on left side. Three had ipsilateral high grade reflux (grade IV-V) on VCUG. Cystoscopic confirmation done before a definitive procedure. Open surgical excision of diverticulum was done in all. Ureteral reimplantation was done simultaneously in three patients. Resolution of symptoms was seen in eleven of twelve patients. Average follow-up period was three and half years. There was no recurrence.**Conclusions:**Diagnosis of bladder diverticula requires a high index of suspicion. Primary bladder diverticulum is an uncommon pathology in children. Ultrasound and voiding cystourethrography are mandatory along with cystourethroscopy. Open surgical approach provides good results.

[UP 46] Title: CONCOMITANT ANTERIOR AND POSTERIOR URETHRAL VALVES: A REPORT OF TWO CASES

Author: Ting ZHANG, Yun ZHOU, Xiangming YAN,Qianwei XIONG

ObjectiveTo report the rare situation of concomitant anterior and posterior urethral valves**Methods**Two cases of concomitant anterior and posterior urethral valves were reviewed retrospectively. One case presented with Urinary ascites and acute renal failure at the 7 days old. The retrograde cystography and urethrography were performed after the improved renal function by catheterization, which suggesting dilatation of posterior urethra and anterior urethra. One case presented with recurrent urinary tract infection at 6 months old and poor urinary stream since born. The retrograde cystography and urethrography were also performed after controlling urinary tract infection, which suggesting bilateral vesicoureteral reflux, and dilatation of posterior urethra and anterior urethra. Then two case underwent cystoscopy and valve ablation of AUV and PUV, and circumcision.**Results**After 6 months of follow-up, no urinary tract infection occurred in two cases. Urodynamic examination showed that the bladder volume was slightly decreased and the bladder compliance was good. Cystoscopy showed no residual valves and the anterior urethral diverticulum was significantly reduced.**Conclusion**Retrograde cystography and urethrography should be performed in cases which highly suspecting bladder outlet obstruction. If dilatation of posterior urethra and anterior urethra are indicated by urethrography, the concomitant of AUV and PUV should be considered. And during cystoscopy, the presence of AUV and PUV should be examined carefully, ablation of both the valves is essential for the outcome.

[UP 47] Title: MODIFIED HEITZ-BOYER-HOVELACQUE RECTAL BLADDER FOR CHILDREN WITH BLADDER EXTROPHY; EVALUATION OF TWO CASES

Author: Halil Tosun

Purpose: Bladder exstrophy is a congenital anomaly associated with defective urethral sphincter.Whatever the method and timing of surgery, most of children with bladder exstrophy will continue to suffer from urinary incontinence.This study included 2 patients who had previously undergone failed surgery and reported early findings with modified Heitz-Boyer-Hovelacque rectal bladder technique for both urinal and fecal control.**Material and method**:Two children,(1boy, 1 girl) 8 and 10 years old,with poor quality of life and low self-esteem because of urinary incontinence and small polypoidal open bladders, after bladder exstrophy surgery, were managed with modified Heitz-Boyer-Hovelacque rectal bladder technique keeping an effective anal sphincter.The patients' age were older, they had an unsuccessful operation and associated bladder capacity and compliance were very poor.An open catheterized conduit or a continent reservoir option was offered to the patients.The final decision was made at the request of the patients and their parents.**Results**:Two children had a 2-3 years follow up, girl has total continance and boy has nocturnal enuresis. There were no postoperative complications. Follow-up revealed no neoplastic changes in the rectal bladder, deterioration in renal function, or major electrolytes disturbance. **Discussion**: In particular, the attainment of normal clothing and continence in children who had previously undergone unsuccessful surgery has significantly increased the quality of life of children and their families.Two children achieved effective urinary continence for daily activities.Two years follow up showed no major complications.We think that the risk of rectal malignancy will be low because the gaita and urine do not stay mixed in the rectum.The rectal bladder created by using the principles of the modified Heitz-Boyer-Hovelacque technique

which is a feasible operation, successful in short term with low complications but rectal neoplastic changes should be considered as a long-term complication and all children should have checked with 'proctoscopy and biopsy' protocol.

[UP 48] Title: A NOVEL APPROACH IN THE INTRAOPERATIVE MANAGEMENT OF OVOTESTICULAR DSD
Author: Karim Khelif
Management of ovotesticular DSD is still a challenge. This case reports a mini invasive approach associated with intraoperative imaging.**Case description**: A neonate was transferred for ambiguous genitalia. Explorations revealed intra-abdominal gonads, presence of a uterus. Karyotype was 46,XX but associated with elevated AMH levels. After multidisciplinary work up, female gender assignment was decided. Gonadal surgery was performed by laparoscopy. The gonads were externalized through the trocars opening. Intraoperative ultrasonography of the ovotestis identified ovarian and testicular tissue. Separation of the components was confirmed by intraoperative frozen section. Testicular tissue was removed.**Conclusion**: The management of ovotesticular DSD requires cautious evaluation of both gonadal components. This report takes advantages of the laparoscopic procedure, and of the intraoperative US of the gonads. Mini-invasive approach should be recommended in these patients undergoing long term treatment with multiple surgical interventions. Laparoscopy, combined with intraoperative gonadal US evaluation, open interesting perspectives in these uncommon situations.

[UP 49] Title: BURIED PENIS IN CHILDREN THE USE OF INNER PREPUTIAL FLAP FOR RECONSTRUCTION OF PENILE COVERAGE EXPERIENCE IN 18 CASES
Author: M Mollaeian, F Eskandari
Purpose: The buried penis is defined as a phallus of normal size concealed in prepubic tissue. The existent penile skin is small and short. This size of skin is insufficient for coverage of corrected and unburied penile shaft. We use the inner prepuce as a vascularized flap for achieving this coverage with acceptable cosmetic and functional results.**Materials and Methods**: Eighteen children with congenital buried penis surgically treated since March 2016 to Dec 2018 using inner prepuce as a vascularized flap for coverage of the ventral surface of the penis.their ages ranged from 2 to 6 yrs. The dartus of penile skin was sutured to the buck's fascia bilaterally in the base for fixation. The compressive dressing was applied for all cases for one week postoperatively.**Results**: Cosmetic improvement was noted in all cases. Appearance of all penises was near normal regarding the length and size and cylindrical coverage around the penile shaft. Surgical complications including infection and hematoma and ischemia and dehiscence were not occurred in these patients. The used inner prepuce become like the skin on long term follow up.**Conclusion**: Use of inner prepuce to achieve cylindrical and sufficient penile coverage in reconstruction of congenital buried penis has fairly excellent results on both cosmetic and functional aspects.

[UP 50] Title: A CASE REPORT OF RUDIMENTARY PENIS
Author: Bilge KARABULUT, Halil TOSUN, Hasan Deliağa, H.Tugrul TİRYAKİ
IntroductionGenitourinary system anomalies constitute the most common group of additional anomalies that accompany anorectal malformations. In this report, we aimed to describe our clinical experience in patients with anterior ectopic anus, left severe hydroureteronephrosis, prepenil scrotum and perineal hypospadias.**Patient** A male patient who in the newborn period due to above mentioned anomalies, had left nephrostomy tube insertion first then left ureterocutanostomy and anorectal anomaly correction in an outer center had admitted to our clinic at two years old.The patient had left lower quadrant ureterocutanostomy, rudimentary penis without urethra and scrotum above the penis and below penis there was the urethral mea above the repaired anus. The testes were in bilateral scrotum. The patient underwent staged operations. First, the penis was released with a circular incision along with the cavernous bodies and transposed above the scrotum. The urethra was released and transformed from perianal hypospadias to perineal hypospadias. Before the second operation, i.m. sustanon was applied to the patient and stretched penis size reached 1.5 cm after 1 month and he was re-operated at the age of 4. The patient underwent nephroureterectomy for the left nonfunctioning kidney, and the penile reconstruction was completed with skin flaps, the penile skin was elongated and his hypospadias was turned into a proximal

hypospadias.**Results**After the operation, a short period he used diaper and now he does not have any urine and fecal incontinence. In the third session, proximal hypospadias repair is planned.**Conclusion** Rudimentary penis is a very rare anomaly. Depending on the presence of cavernous bodies, penile reconstruction is performed by staged operations.

[UP 51] Title: A CASE OF PENILE DUPLICATION WITH ECTOPIC INTESTINAL TISSUE

Author: Hironobu Oiki

Aim of study Penile duplication or diphallia is a very rare congenital anomaly with an estimated incidence of 1 per 5 to 6 million live births. Until today, only about 100 cases are reported worldwide, and it is believed that no two are identical due to significant anatomical variety. We repot a case of penile duplication with a perineal mass that contains ectopic intestinal tissue.**Case description**A newborn boy was referred to our department for a perineal mass. The mass was detected by prenatal ultrasonography. He was born at 38 weeks of gestation, with a birth weight of 3060g, by vaginal delivery. After birth, a pedunculated mass was found between the scrotum and the anus. The mass resection was performed at 1 day after birth. Pathologically, the mass contained the ectopic intestinal tissue, but there was no communication with the normal intestinal tract. Postoperative computed tomography and magnetic resonance imaging scan revealed that the supernumerary cavernous tissue was present between the resection stump and the bulbar urethra. There was no urethral duplication. At the age of 8 months, the surgical resection was performed, and the pathological examination confirmed the diagnosis of penile duplication.**Conclusion**There are various embryological explanations of penile duplication, and this case is embryologically very interesting because of the ectopic intestinal tissue as an associated anomaly.

[UP 52] Title: CONTINUOUS INTERNAL CATHETER URINARY DIVERSION

Author: Ouédraogo Isso, Bara Daouda, Tapsoba W Toussaint, Ouédraogo S Francis, Béré Bernadette, Savadogo Lassané, Bandré Emile, Wandaogo Albert

Introduction Bladder exstrophy is a severe, disabling, rare malformation. Its management in the current neonatal period is centered on the anatomical urogenital reconstruction. However, in developing countries, cases seen later are very common; the derivation techniques then find their indications.**Study objective**To evaluate the contribution of a colonic internal urinary diversion type "recto-sigma pouch" in bladder exstrophy in children **Results** We report the results of internal urinary diversion by the technique of recto-sigma pouch in bladder exstrophy cases in four patients, followed over a period of 23 months.The average age of our patients was 7.32 years; three were male. The socioeconomic level of the patients was low. All patients had a complete form of bladder exstrophy. The treatment consisted of an excision of the bladder plate followed by a urinary diversion by a recto-sigma pouch. During postoperative follow-up, we noted: suppuration in three of the four patients (resulting in suture release in two patients and evisceration); two cases of urinary tract infection with moderate renal impairment.Complete diurnal and nocturnal anal continence was observed in two patients, and in terms of quality of life, all patients gave a satisfactory response after an average follow-up of 7.25 months with extremes of 1 and 22 months. **Conclusion** The derivation by the technique of the recto-sigma pouch presents itself as an interesting alternative for the patients seen late.**Key words**: bladder exstrophy, urinary diversion, recto-sigma pouch, child.