Abstracts Summary for presentations done during E-IAPSCON 2021 held on a virtual platform (22-24 October 2021 with 18th to 21st as extended program days)

Title: Thoracoscopic repair (TR) versus conventional open repair (COR) for Esophageal Atresia-Tracheoesophageal Fistula (EA-TEF): A pilot randomized controlled trial
Authors: Manasa Reddy, Nitin J Peters, Muneer A Malik, Ram Samujh, Preethy J Mathews
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Abstract:
Aims
To compare the surgical outcomes, the combined incidence of postoperative complications of anastomotic leak and stricture during a period of 6-month follow-up after surgery of Thoracoscopic Repair (TR) and Conventional Open Repair (COR) for TEF-EA and also to compare the two groups with respect to intraoperative, postoperative and long-term outcomes.

Materials and methods:
A single-center, pilot, parallel-arm randomized controlled trial (RCT) was conducted over a period of 15 months. 28 neonates were assessed for eligibility, sixteen were enrolled and were randomized into the two intervention arms. All the patients were followed at 1, 3 and 6 months after surgery. Summary statistics are presented as frequencies and proportions for categorical variables, and as median and interquartile range for continuous variables. Inter-group comparisons were performed using Chi-square test or Fisher’s exact test for qualitative data and Mann-Whitney U test for continuous data. All tests of significance were two-tailed and a ‘p’ value of less than 0.05 was considered to be statistically significant.

Results:
The median age and median birth weight was 2 days and 2.6 kg respectively with male: female ratio of 2:1. There was no significant difference in the combined incidence of anastomotic leak and stricture. The median operating time and intraoperative ETCO2 was significantly higher in the thoracoscopic group (p< 0.001). Both the groups were comparable in regard to age at surgery, gap length,intraoperative blood loss and injuries, median duration of sedoanalgesia, inotropic support, mechanical ventilation. Full oral feeds could be established significantly earlier in the thoracoscopic group (p=0.048) and also had a significantly shorter duration of hospital stay (p=0.029).

Conclusions:
Thoracoscopic repair is a safe, effective, minimal invasive surgical technique with comparable outcomes between the two groups. Long-term follow-up studies are required to examine the rate of musculoskeletal deformities, chronic pain. We believe that the steep learning curve, of the TR will eventually plateau with time.

Mode of presentation: IAPS-KK Sharma award session

Title: Dean Warren shunt for portal hypertension in children: clinical efficacy and hepatic perfusion index
Authors: Chandramouli Goswami, Prabudh Goel, Minu Bajpai
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Abstract:
Aim: To assess success of Dean Warren Shunt in improving Hepatic Perfusion in Extra Hepatic Portal Venous Obstruction (EHPVO) by measuring its clinical efficacy and Hepatic Perfusion Index (HPI).
Method: Prospective study was conducted upon consecutive (n=50) patients of EHPVO undergoing Dean Warren shunt done in our department. Eighteen patients of EHPVO including pre-operative (Group I; n=9) and post spleen-
preserving distal lienorenal shunt (Group II; n=9) were subjected to radionuclide angiography evaluation with Tc99m-mebrofenin, bromo-2,4,6-trimethyl acetonilide imidodiaceic acid. Region of interest (ROI) curves were drawn and time-activity curves generated to calculate the hepatic and portal flow.

Results: There was a decrease in splenic size with a mean of 12.4 cm and 90% reversal of hypersplenism over 1 year. Ten studies were included in the meta-analysis to evaluate the clinical efficacy of DSRS in EHPVO. The decrease in spleen size (p<0.0001 at 95% CI, -0.46 to -2.14) and increase in platelet and total leucocyte count post shunt surgery p=0.0005(95% CI, 0.46 to 2.14) respectively were significant. Mean age of patients was 7.6 years. Prior to inclusion, patency of shunt in all patients in the children was demonstrated by a doppler study or CT Portography (where doppler was unable to confirm the patency). Hepatic perfusion index was significantly higher in pre-operative cases of EHPVO (median of 53.9) as compared to cases post DSRS (median 27.6).

Conclusion: Dean Warren shunt is an effective means to address the portal hypertension due to EHPVO while preserving the spleen. HPI is raised in cases with EHPVO which is reduced after the spleen-preserving distal lienorenal shunt.

Mode of presentation: IAPS-KK Sharma award session

Title: Laparoscopic versus open hepatico-jejunoostomy for choledochal cysts in children: a comparative study from a tertiary care teaching institute in North India

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Abstract:

Aims

To compare the safety and efficacy between laparoscopic and open cyst excision with hepatico-jejunoostomy (HJ) for children with choledochal cysts.

Methods

The electronic medical records of all children who had undergone choledochal cyst excision with HJ between January 2018 and April 2021 at our centre were reviewed retrospectively. Demographic features, clinical presentation, anatomical features, operative time, estimated blood loss, need for conversion, complications, time to oral feeds, requirement for analgesia and length of stay were recorded. Data for children undergoing laparoscopic cyst excision with hepatico-jejunoostomy (LHJ) was compared with those undergoing open surgery (OHJ).

Results

During the study period, 20 children underwent OHJ and 14 children underwent LHJ. The mean age at surgery in LHJ and OHJ group was 6.7 and 7.9 years, respectively. Recurrent cholangitis was the most common presentation in both the groups. Operating time was longer in the LHJ group (410±60.7 mins vs. 225±36.3 mins; P<0.05); however, blood loss and complication rates were similar. Two (14.3%) conversions were necessary in LHJ group, primarily due to dense inflammatory adhesions. Children undergoing LHJ had a shorter length of stay (6.4±1.2 vs. 9.5±2.7 days; P<0.05), shorter time to full feeds (76.2±8.5 vs. 112.1±14.4 hours; P<0.05), and a lesser requirement for analgesia. At a mean follow-up of 8.0 (LHJ) and 32.2 (OHJ) months, all patients are asymptomatic with normal liver function tests, ultrasonography and hepatobiliary scintigraphy.

Conclusion

LHJ is a feasible, safe and effective treatment for choledochal cysts in children with lesser post-operative morbidity, shorter length of stay and similar outcomes when compared with the open approach. The longer operating time associated with the laparoscopic approach at the start of the learning curve gradually improves with more experience and refinement in surgical skill. LHJ may be adopted as the procedure of choice when technical expertise is available.

Mode of presentation: IAPS-KK Sharma award session
Title: Variations in the level of termination of tracheoesophageal fistula and characteristics of lower esophagus in patients of Type C Esophageal Atresia

Authors: Charu Yadav, Subhasis Roy Choudhary, Rajiv Chadha, Partap S Yadav, Vikram Khanna

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Abstract:
AIM: To study the level of termination of the tracheoesophageal fistula and the characteristics of lower esophagus in cases of esophageal atresia (EA) type C.

MATERIALS AND METHOD: This was a prospective observational study of type C EA who underwent thoracotomy over a 2-year period. The distance between the arch of Azygos vein and tracheoesophageal (TE) fistula was measured by a Vernier callipers. Similarly, the gap between the azygous vein and upper pouch and the total gap between the ends were measured. The patients were divided into 3 groups based on total gap length; group A (≤ 1 cm), B (1.1-2 cm), C (≥2.1 cm). The characteristics of the lower esophagus (thin/thick wall and narrow/wide lumen) were also noted.

RESULTS: Out of a total number of 40 patients, group A, B, and C were 15 (37.5%), 14 (35%), and 11 (27.5%) respectively. TE fistula terminated above, at and below the azygous vein in 11 (27.5%), 4 (10.5%) and 25 (62.5%) patients respectively with a range from 15 mm above to 11 mm below the azygous vein. Majority 17 (42.5%) of patients had termination at 5 mm below the azygous vein. The patients with TE fistula above and at the level of azygous vein were predominantly in group A (n = 13; 86.6%) and those below were predominantly in group B and C (n = 23; 92%). Narrow lumen and thin wall of lower esophagus was significantly higher (10, p = 0.001; 7; p = 0.003) in the group C patients. Primary anastomosis was successful in only 6 (54.5%) of group C patients.

CONCLUSION: The level of termination of the TE fistula is inconsistent, majority terminating below the azygous arch; commonest site being 5 mm below the azygous. Lower the termination of the TE fistula from the azygous, thinner and narrower the lower esophagus with wider total gap length; which carries significant surgical implications.

Mode of presentation: IAPS-KK Sharma award session

Title: Modified Duhamel Pull-through Versus Trans-anal Endorectal Pull-through in children with Hirschsprung Disease: Outcome Comparison from a Single Center

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Abstract:
Aim & Objectives: To determine short-term complications and long-term outcomes in patients with Hirschsprung disease following Modified Duhamel Pull-through (MDPT) procedure compared with Trans-anal Endorectal Pull-through procedure (TERP) at a Single Institution.

Methods: Comparative analysis of children with Hirschsprung disease who underwent either Modified Duhamel (Two-stage) or Primary Trans-anal Endorectal pull-through, between 2007 and 2021, at tertiary care hospital. Data on demographics, clinical findings, histopathology, surgery and post-operative complications compiled from medical records. Follow-up data collected at 3 months, 6 months, 1 year post-operatively and analyzed with recent follow-up by telephonic conversation. Long-term bowel function assessed by the Rintala Bowel Function Score (BFS).

Results: 103 children were included (MDPT=71; TERP=32); 97 males and 16 females. 79 of them were assessed for bowel function outcome. Age at pull through procedure ranged from 4 months to 9 years for MDPT, and 1 month to 3 years for TERP. Immediate post-operative complications requiring intervention was seen in 6/71 cases (8.4%) and 0/32 cases following MDPT and TERP respectively. Incidence of enterocolitis requiring hospitalization was seen in 14/71 (19.7%) and 5/32 (15.6%) in MDPT and TERP groups, respectively. Increased stooling frequency was noted in early post-operative period in 16/71 (22.5%) cases of MDPT and 23/32 (71.8%) cases after TERP with majority showing improvement overtime. Impaired bowel function (Rintala BFS < 17) was seen in 9 (16.9%) in MDPT group and 16 (61.5%) in TERP group.
Conclusion: In our study, both MDPT and TERP had similar immediate post-operative enterocolitis rates with higher incidence of increased stool frequency following TERP. We observed a higher incidence of bowel impairment in TERP group medium term follow-up. However, long term bowel function assessment requires follow-up up to adulthood.

Mode of presentation: IAPS-KK Sharma award session

Title: Are children under 10kg who undergo Liver transplantation at higher risk?

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Abstract:
Objective: To study the outcome of children under 10kg who underwent liver transplantation in our center.

Material and Methods: This is a retrospective analytical study. All children who underwent liver transplantation at our center from January 2005 to May 2021 were included in the study. Data was collected from medical records. Children were divided into two groups – Group 1 (children weighing less than 10kgs) and Group 2 (children weighing more than or equal to 10kgs). Parameters compared included - (1) Early mortality (within 28 days of transplantation); (2) Prolonged ventilation (more than 48 hours); (3) Sepsis; (4) Vascular complications (involving Portal vein, Hepatic artery, Hepatic vein and IVC); (5) Biliary complications; (6) Rejection (Acute and Chronic) and (7) Overall mortality.

Observations: Total transplantation done in our center were 93 (3 of which were re-transplanted due to rejection). There were 61 boys and 29 girls. Age ranged from 5 months to 144 months (Median age - 25 months). Observations are as follows:

<table>
<thead>
<tr>
<th>Parameters assessed</th>
<th>Group 1 (&lt;10kg)</th>
<th>Group 2 (&gt;=10kg)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Early mortality</td>
<td>12 (23%)</td>
<td>9 (23.6%)</td>
<td>0.73</td>
</tr>
<tr>
<td>2. Prolonged ventilation</td>
<td>27 (52%)</td>
<td>21 (55%)</td>
<td>0.83</td>
</tr>
<tr>
<td>3. Sepsis</td>
<td>23 (44%)</td>
<td>15 (39%)</td>
<td>0.67</td>
</tr>
<tr>
<td>4. Vascular complications</td>
<td>14 (27%)</td>
<td>8 (21%)</td>
<td>0.62</td>
</tr>
<tr>
<td>5. Biliary complications</td>
<td>8 (15%)</td>
<td>3 (7.8%)</td>
<td>0.34</td>
</tr>
<tr>
<td>6. Rejection (Acute and chronic)</td>
<td>9 (17%)</td>
<td>10 (26%)</td>
<td>0.31</td>
</tr>
<tr>
<td>7. Final outcome (Alive)</td>
<td>34 (65%)</td>
<td>23 (60.5%)</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Conclusion: Liver transplantation in children is a complex surgery. In children who way less it becomes technically more challenging due to various risk factors. In our study, the outcomes in children weighing less than 10 kg were almost similar to those weighing more than or equal to 10kg and were statistically insignificant (p value > 0.05). According to our study, weight <10kg does not affect the outcome post liver transplantation.

Mode of presentation: IAPS-KK Sharma award session

Title: Safety & Efficacy of Mirabegron in Children with Early Valve bladder – a pilot study

Authors: Sugandh Chadha, Ramesh Babu

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Abstract:
Background/Aims: Valve bladder is an important cause of persistent hydronephrosis after successful treatment of posterior urethral valves (PUV) and in this pilot study we have assessed the efficacy of Mirabegron in valve bladder.

Materials and methods: Twenty-five patients with early valve bladder (no residual PUV; persistent hydronephrosis, wetting episodes and urodynamic evidence of detrusor instability) were included.
Three subjective parameters: frequency, wetting episodes; patient perception of bladder condition score (PPBC) and four objective parameter: uroflow index (UI= Qave/Qmax), voided volume ratio (VVR= voided volume/ expected bladder capacity), maximum filling pressure (P det-max) and society of fetal urology (SFU) hydronephrosis grading were analysed pre and post 3 months treatment with Mirabegron (0.5-1 mg/kg/day). All patients were observed for heart rate, BP, ECG changes during therapy.

Results: Twenty-two patients completed the study (3 dropouts); median age: 6.5 years (4-10 years). There was significant reduction (p=0.01) in mean frequency (pre 15; post 8), wetting episodes (pre 5; post 2) and PPBC (pre 4; post 2). There was significant reduction (p=0.01) in mean UI (pre 0.4; post 0.8), VVR (pre 0.5; post 0.8), Pdet-max (pre 42; post 21) and hydronephrosis grade (pre 3; post 1). None of the patient developed any side effects or heart rate, BP/rhythm changes.

Conclusion: This pilot study supports use of Mirabegron as a safe and effective option in children with early valve bladder. It is devoid of the side effects of oxybutynin. In late stages of bladder decompensation, it may not be useful.

Mode of presentation: IAPS-Swapna Dutta Award session

Title: Dorsal onlay substitution urethroplasty with buccal graft in Paediatric urethral strictures
Authors: Neehar Patil, Tarun.D.Javali
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Abstract:
AIM: To review our experience in the management of long segment pediatric urethral strictures, with buccal mucosal graft urethroplasty, and analyse the associated complications and follow up outcomes over a period of ten years.

METHODS: This is a retrospective analysis of a prospectively maintained data base between 2009-2019. All circumcised children with long segment urethral strictures were included. They were localized either into peno-bulbar strictures “PBS” or isolated urethral strictures “IBS” based on a standardized protocol. All children underwent a single stage dorsal on lay buccal mucosal graft urethroplasty i.e., the Kulkarni technique (PBS) and the Barbagli technique (IBS). Pre- and post-operative Q max (ml/sec) by uroflowmetry and redo surgeries performed were the criteria for prediction of success of the urethral reconstruction. The demographic, clinical profile, operative, post-operative complications and follow up data were collated and analyzed.

RESULTS: 78 children were diagnosed with urethral strictures, amongst whom 28 underwent the single stage buccal mucosal graft urethroplasty.16 children were diagnosed with PBS & 12 children with IBS. The average age was 8 years (PBS) and 5.4 years (IBS), with a 100 % male predominance. Poor stream of micturition was the commonest symptom & the commonest aetiology was catheterisation (62%) among PBS and instrumentation (58 %) among the IBS. The average length of stricture was 4 CMS in PBS and 2.8 CMS in IBS. Pre-operative uroflowmetry documented an average Q max of 6.5 ml/s (PBS) and 6 ml/s (IBS). The commonest post-operative complication was urinary fistula (7%) and re stenosis (7%). The median follow up period was 64 months (PBS) and 72 months (IBS). At follow up, an average Q max of 15.3 ml/s (PBS) & 14.2 ml/s (IBS), with an overall success rate of 85.7% of the reconstruction was documented.

CONCLUSION: The single stage dorsal on lay buccal mucosal graft urethroplasty, i.e., Kulkarni and Barbagli techniques are safe and feasible in children with long segment urethral strictures with good long-term outcomes.
Key words: Non hypospadias, long segment urethral strictures, buccal mucosal graft, single stage

Mode of presentation: IAPS-Swapna Dutta Award session

Title: Use of limited scrotoperineal approach with novel skin management for bladder closure with epispadias repair and external sphincter approximation without BNR
Authors: Archika Gupta, SN Kureel, Nitin Pant, Gurmeet Singh Rahul Kumar Rai, Nirpex Tyagi
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Abstract:
To study the feasibility of Limited Scrotoperineal approach for bladder closure and epispadias repair with external sphincter approximation without bladder neck repair to provide safe level of resistance to aid in increase in bladder capacity without upper tract back pressure

Methods
From Jan 2014-Dec 2020, bladder closure combined with epispadias repair without bladder neck repair was undertaken in 45 male classic bladder exstrophy (Age range 2 months- 16 years) with small to moderate size bladder plate. For this, limited scrotoperineal approach combined with novel skin management was used for exposure of urogenital diaphragm to provide access to external sphincter and ischiopubic ramus for radical corporal detachment. After mobilisation of bladder, urogenital diaphragm was exposed. Intersymphysisal bands were divided under vision. Corpora were detached off the ischiopubic ramus upto ischial tuberosity, corporourethral separation was performed in anatomical plane and, external sphincter was identified. Bladder closure in continuity with urethral tubulisation keeping bladder neck wide was performed. External sphincter was anchored over the tubularised urethra. Corporoplasty, glansplasty with ventral translocation ventral translocation of urethra were performed. Abdominal wall defect was repaired. Skin cover was provided with novel skin management scheme. Outcome measurement included; 1) intraoperative problem, 2) postoperative complications, 3) increase in bladder capacity and, 4) upper tract status.

Result
Intraoperative problem occurred in none of the patient. In postoperative period, penoscrotal angle anchorage suture broken in one. In follow-up, increase in bladder capacity occurred in all. Upper tracts remain preserved in all.

Conclusion
Technique of limited scrotoperineal exposure with novel skin management enables bladder closure and epispadias repair with external sphincter reconstruction. It contributes to increased resistance with safety of upper tract preservation yet increasing bladder capacity.
Title: Association of Bladder wall thickness with renal functions in children with Posterior urethral valve.

Authors: Anju Verma, Simmi K Ratan, Mukta Mantan, Jyoti Kumar, Rakesh Kumar, Shansaka Shekhar Panda, Sujoy Neogi.

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Abstract:
Thick bladder wall is known to be a poor prognostic factor in children with obstructive uropathy due to Posterior urethral valves (PUV). However no cut off for bladder wall thickness (BWT) have been defined above which renal function are observed to deteriorate. The study was aimed to correlate the BWT to renal function.

Methods:
Fifty patients of PUV undergoing treatment at our centre between December 2017 to July 2019 were evaluated. All patients underwent blood (haemogram, renal function test) and radiological (urinary tract sonography, micturating cystourethrogram and renal scan) investigations. BWT measured in full bladder at transverse and longitudinal view. Glomerular filtration rate (GFR) was calculated using Modified Schwartz formula. All variables were compared between subject having BWT <3 mm and >3 mm. Using Receiver operating curve (ROC) and eGFR, a cut off value of BWT giving significant difference for maximum parameters was calculated.

Results:
The mean age of presentation was 30.5 months. Commonest symptom was voiding dysfunction (n= 39, 78%). Serum creatinine > 1 mg% was found in 16 (32%), culture proven urinary tract infection in 21(42%) and Vesicoureteric reflux (VUR) was found in 25 (50%) patients. It was found that when cutoff was taken BWT <3mm, significant difference was found only for albuminuria between study subjects.

On the other hand, when cutoff was taken <4.1mm, significant difference was found for serum creatinine level >1mg% (19% vs 48%), albuminuria (34% vs 83%), presence of VUR (26% vs 70%) and mean GFR value (45.41 vs 34.43).

Conclusion:
Contrary to the earlier literary work in adults that BWT of >3mm dictates unfavorable outcome, we have identified that in children BWT cut off may be more and was identified as 4.1mm in our study, hinting at a higher adaptability of bladder muscles in younger children.

Mode of presentation: IAPS-Swapna Dutta Award session

Title: The use of bowel tubes as a urethral substitute in complex urethral recon-structions

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Abstract:
Aim:
Reconstruction of a long segment urethral abnormality is difficult. Small and large bowel tubes can be used for urethral reconstruction, either in addition to the preputial tube or as a substitute in cases where the prepuce is deficient or has already been used up.

Materials and Methods:
Here we present 25 cases (three females) who underwent bowel tube replacement of the urethra in two institutes in South India from 2005 to 2021. It was done for a variety of reasons with Y-duplication urethra and aphallia being the most common. Ten children had other associated geni-to-urinary anomalies. Three had anorectal malformation with one having partial sacral agenesis and neurogenic bladder. All patients underwent a transpubic urethroplasty, with 16 having a sig-moid colon tube and nine, an ileal tube. All had an additional appendicular Mitrofanoff as a safety procedure.

Results:
At a mean follow up of 34 months (range 2-102 months) all are asymptomatic, with no urinary tract infections and normal investigations. Two children had a minor redo surgery and is well and two child are awaiting a buccal mucosal
graft urethroplasty for penile urethra reconstruction. The child with a suspected neurogenic bladder, though he voids through the penis, has a significant post void residual and is on clean intermittent catheterisation via the Mitrofanoff.

Conclusion:
Sigmoid/i ileal tubes are an effective urethral substitute with good long term results especially in those with very long segment urethral narrowing due to congenital anomalies or trauma/instrumentation.

Mode of presentation: IAPS-Swapna Dutta Award session

Title: Taking Care of Aganglionosis: Modified Kimura’s Colonic Patch Graft Technique
Authors: Vikram Khanna, Abhay Joglekar, Sehaj Prajapati, Partap Singh Yadav, Amit Gupta, Rajiv Chadha, Subhashish Roy Choudhury, YK Sarin
Department Institution: Lady Hardinge Medical College & Kalawati Saran Children’s Hospital
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Abstract:
Aim: To review the technical details and short-term results, of a novel modified Kimura’s colonic patch graft technique (CPG) in patients with Total Colonic Aganglionosis (TCA).

Methods: Records of patients with TCA who underwent this modified Kimura’s CPG technique were reviewed and analysed. All patients underwent divided ileostomy in 1st stage. In the 2nd surgery, 10-15cms long ileocolostomy was fashioned using the aganglionic-ascending colon along with the cecum and creation of Hartmann pouch with resection of the redundant aganglionic colon up to the peritoneal reflection. A 10cms segment of normal ileum distal to the ileo-colonic anastomosis is left and brought out as terminal ileostomy and is used to complete the Duhamel operation in the third stage avoiding the need to sever the mesocolon.

Results: Six patients (4M;2F) were included in this study. Mean follow-up after definitive surgery was 11 months. Three patients had intermittent abdominal distension but required no active intervention. One patient had an episode of enterocolitis requiring hospital admission. Four patients have stool frequency of 6-7 times/day with semi-formed to formed stools. Two patients with more than 2-year follow-up have stool frequency of 2-3 times/day. None of the patients have soiling. All patients are below their 50th centile for height and weight. Four patients have iron-deficiency anemia and are on iron supplements. On barium enema, the ileo-colostomy looks normal with no abnormal dilatation.

Conclusions: This novel modified Kimura’s CPG operation is technically easy and feasible in TCA patients. The short-term outcomes are comparable to other operations for TCA.

Mode of presentation: Long oral presentation (5+2)

Title: Scoring System For Perforated Appendicitis – Effective Usage Of Health Care Resources In COVID Pandemic
Authors: Seshadri LN, Vinay Jadhav, AB Jagadeesh, Gowrishankar
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Abstract:
AIMS : COVID pandemic has severely strained health care resources. Operating on suspected perforated appendicitis while managing simple appendicitis conservatively was followed in our institution to reduce the burden, specially on Operating Room (OR). The aim of this study was to determine the predictive value of clinical features and investigations for discriminating between perforated and non perforated appendicitis in children and devise a scoring system.
METHODS : A retrospective study of all consecutive children who underwent appendectomy for acute appendicitis at Indira Gandhi Institute of Child Health, Bengaluru between 1st June, 2020 to 31st May, 2021 (period – one year)
was carried out. Suspected perforated appendicitis were operated while simple appendicitis managed conservatively in our institution. Patient demographics details, symptomatology, physical examination, laboratory and radiological data were collected and univariate and multivariate analysis carried out.

RESULTS: Total 58 patients were included in the study. Duration of complaints, fever, rebound tenderness, leucocytosis, radiological features suggestive of perforation are good predictors of perforated appendicitis. We have evolved a reliable scoring system to identify perforated appendicitis.

CONCLUSION: Accurate Identification perforated appendicitis with our scoring system is possible and result in effective usage of health care resources.

Mode of presentation: Long oral presentation (5+2)

Title: Covid-19 associated surgical abdomen in pandemic era

Authors: Nirkhi Shah, Jaishri Ramji, Mahesh Vaghela, Rakesh Joshi

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Abstract:
Aim:
Surgical abdomen in children is often a diagnostic challenge. Gastrointestinal manifestations of Covid-19 and Post-covid MIS-C widen the spectrum of dilemmas. We present cases of surgical acute abdomen associated with Covid-19 or Post-Covid surgical abdomen managed at our institute.

Method:
This is a retrospective study of 17 patients admitted in our institute between March-2020 and May-2021. Inclusion criteria were features of surgical abdomen with positive Covid-19 RTPCR report or raised IgG-antibody titres. Decision for surgery was done on basis of clinical condition and supportive investigations.

Result:
Out of 17 patients, 13 patients tested positive for Covid-19 and 4 for Covid-19 IgG-antibody. There were 4 neonates (3 intestinal atresia, 1 NEC). 12 patients underwent surgery of which 11 had surgical pathology like liver abscess, peritonitis, intussusception. One patient had tested negative for Covid-19 and underwent exploratory laparotomy in view of clinicoradiological features. But there was revealed no surgical pathology other than severely inflamed intestines. With persisting symptoms, positive contact history and raised he was tested for IgG-antibody titre and inflammatory markers, a diagnosis of MIS-C was considered. He responded well to methyl prednisolone. Of 4 patients of categorized under MIS-C, 3 had other system involvement with either pneumonia or myocarditis. abdominal symptoms resolved with conservative management. Medical management for Covid-19 infection [methylprednisolone (9) /Oxygen support with Airw (6) /Immunoglobulin (1)] was instituted in 11 patients. This included 6 operated patients, three treated as MIS-C, two with enterocolitis. Overall, 11 patients had a good outcome albeit with prolonged recovery time, while 2 patients expired.

Discussion and conclusion:
Acute abdomen can either be purely surgical, a manifestation of Covid-19 or of MIS-C. Infection by SARS-CoV-2 virus may increase intestinal wall permeability to foreign pathogens, triggering inflammatory reaction. Clinical intuition and appropriate timely investigations ensures optimal management and may avoid unnecessary surgical intervention.

Mode of presentation: Long oral presentation (5+2)

Title: Challenges and Changes in Pediatric Surgical Practice during the Covid-19 Pandemic Era

Authors: Nirkhi Shah, Jaishri Ramji, Mahesh Vaghela, Arif Vohra, Charul Mehta, Rakesh Joshi

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Abstract:
Aim:
Working practices in Pediatric Surgery underwent enormous changes during the era of the Covid-19 pandemic. While certain surgical conditions in children can be managed temporarily with non-surgical options, most neonates with congenital surgical malformations require emergent operations. We discuss the challenges faced, measures adopted in dealing with surgical emergencies, and analyse the diagnoses and outcomes of patients with Covid-19 infection in our institute during the pandemic era.

Materials and methods:
When the lockdown was imposed, it was mandated that all elective procedures should be put on hold. We formulated criteria for triaging procedures as Emergent, Urgent and elective. A Standard Operating Protocol was devised regarding admission, pre and postoperative management. protocols for surgical procedures were established in a separate Covid-designated operation room, including a specified sequence of donning and doffing Personal protective equipment.

Results:
In the Covid era, from 23rd March 2020 to mid-July 2021, 1282 surgeries have been done in our department; 344 emergencies and 461 planned procedures, which include 31 Covid-19 positive cases, with overall good outcomes. 103 emergency surgeries were done during the first wave (March-end to June 2020), and 103 during the second wave (April to mid-June 2021). Moreover not a single healthcare worker in the department has been infected.

Conclusion:
Pediatric Surgeons are adapting to the new guidelines to continue to provide emergency services with safe and effective care to their patients during the COVID-19 pandemic. Simultaneously, focus on personal and staff protection is ensured to keep the healthcare workers healthy and able to discharge their duties adequately.

Mode of presentation: Long oral presentation (5+2)

Title: Pediatric Surgical Emergencies and Covid 19: An Overview

Authors: Prasanna Kumar A R, Shalini G H, Rajkiran S, Kiran M, Shubha A M

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Abstract:

Introduction
COVID 19 pandemic has resulted in several modifications in the management of surgical patients; primarily aimed to overcome risks involved with aerosol generation and inflammatory cascade induced per and postoperative complications. Here we present our experience in managing covid suspect and positive, pediatric surgical emergencies

Methodology
A retrospective study from April 2020 - April 2021 in a tertiary care hospital with an established Pediatric Surgery specialty service The data was accessed from inpatient files, discharge summaries and OPD records. Demographics, primary diagnosis, surgery/intervention, Covid test results, inflammatory markers, days of hospital stay, complications and follow up were collated. The review excluded covid positive children requiring elective surgeries in whom it was postponed by at-least 3 months and, children with semi-elective emergencies wherein surgery was done after 2 weeks of illness following a repeat covid negative report

Results
71 (30+21+20) children underwent emergency surgical procedures/ interventions over 1year. Average age was 4.2 years (0-17 years), (22+10+11) 43 were males and (8+11+9) 28 females. All children underwent RAT for admission and RTPCR (reported within 12-24hrs) or Gene expert (reported by 4 hrs) before intervention as per institution protocol. Children were operated in designated, isolated covid OT/ICU using PPE and appropriate barrier precautions Eventually, 20/71 were covid positive. 8 underwent laparotomy, CAPD insertion and VP shunt revision in one each. 10 had isolated central line insertions (malignancy, sepsis, covid pneumonia and MODS). Two children had complications attributable to covid. 12year old girl with bowel gangrene secondary to vascular thrombosis and an infant with pyloric stenosis with severe SSI and burst abdomen on the second first postop day requiring exploration and suturing. Excluding those who had CVAD insertions 5 had deranged inflammatory markers (Ferritin, CRP and D-dimer). Average hospital stay was 9.5days
and in complicated children 14.5 days. All are well in follow up. Outcomes of children who had CVAD inserted was dependent on their primary pathology. Remaining 51, 12 underwent laparotomy, 10 CVAD, 21 GI endoscopy and 6 Bronchoscopy, 1 torsion testis and 1 leg lacerated wound suturing

CONCLUSION
Pediatric Surgical patients though few are a vulnerable group for covid infection. Surgical pathology dictates outcome in positive patients. Vascular thrombosis induced complications may be of concern but are amenable to timely intervention Routine screening and following universal barrier protocols ensures collateral protection

Mode of presentation: Long oral presentation (5+2)

Title: The impact of Covid-19 pandemic on training of Pediatric surgeons in a tertiary: An appraisal.
Authors: Deepak Kumar, B Satya Sree, Rajat Piplani, Manish K Gupta, Enono Yhoshu
Department Institution: Department of Pediatric surgery, All India Institute of Medical Sciences, Rishikesh
Email: drdeepak6683@gmail.com
Abstract:
The covid-19 pandemic has caused significant disruption of medical training particularly so the surgeons. Pediatric surgery training and residency has also faced unprecedented challenges due to the COVID-19 pandemic. Literature search showed no such study has yet been published about the problems faced by the young residents of Pediatric surgery.
Aims:
This study aims to assess the impact of covid-19 pandemic on post graduate teaching amongst candidates pursuing higher qualification in Pediatric surgery in AIIMS Rishikesh.
Method:
We retrieved data between October 2019 and April 2021 regarding OPD attendance, number of elective surgeries performed, number of emergencies performed, academic sessions. We compared the data between pre-pandemic and post-pandemic period. An online cross-sectional survey (questionnaire) was circulated amongst junior residents, senior residents and faculties of Pediatric surgery department to evaluate (i) Impact on post graduate teaching (ii) impact on surgical training (iii) Impact on thesis and dissertation (iv) Mental wellbeing (v) Future implications on PG training program.
Results:
Majority of the participants have confirmed that COVID-19 has affected their surgical and clinical training. It also stated mental impact in view of physical and mental stress of working in PPE’s, fear of contracting infection or transmitting it to family members. About 50% residents got infected by the infection and were isolated. Residents had problems in completing their dissertations due to lesser number of OPD attendance. Some had apprehensions about future job prospects.
Conclusion:
COVID-19 pandemic has severely disrupted the training along with affecting the mental health of the Pediatric surgery residents in AIIMS, Rishikesh and perhaps elsewhere similarly too. This discussion in this platform may provide insights about this problem and encourage discussion, and finding meaningful solutions to these havoc caused by the ongoing pandemic.

Mode of presentation: Long oral presentation (5+2)

Title: Covid-19 Pandemic and its effect on Paediatric surgical training and care
Authors: Geetesh Ratre, B Jindal, S Kumaravel, B K Naredi, G Krishnakumar
Department Institution: Department of Pediatric Surgery, Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry
Email: dr.geeteshratre@gmail.com
Abstract:
Introduction and Aim: The coronavirus disease 2019 (COVID-19) pandemic has had a major impact on Paediatric Surgery care and training. The infection is often asymptomatic and atypical in children, while overlapping presentations with other infectious diseases generate additional diagnostic challenges. We aim to compare our institutions paediatric surgical experience during the pandemic to the corresponding previous year, overall COVID-19 positivity rate and observe the affect of COVID-19 positivity on the outcomes of the surgical care and training.

Method: We retrospectively analysed data regarding the number of paediatric surgical emergencies and elective surgeries performed by our department between March 2020 to March 2021 during COVID-19 pandemic, to the corresponding period one year earlier. We have studied the change in the number of patients treated as OPD &IPD as emergency and semi-elective basis and their indications, the overall COVID-19 positivity rate, observed the affect of COVID-19 positivity on the outcomes of the surgery, indications for emergency and semi-elective surgeries during the pandemic, rates of patients with malignancy and other conditions lost to follow up.

Results: Due to the strict government lockdown regulations, cessation of public transport, parent apprehension to bring their children to the hospital amidst the pandemic and due to diversion of manpower being used to run elective operation theatres. During COVID-19 pandemic 89.96%, fewer patients were seen by our department, through OPD or emergency, in comparison to the previous corresponding year. The number of emergency cases also was strongly affected by COVID-19, it decreased to 60.76% of previous. In our department, total of 9 (2.2%) patients who were confirmed Positive for COVID were treated during the time period and out of that 3 (0.7%) patient underwent emergency surgery rest were managed conservatively. Two cases of malignancy were loss to follow up due to transport issue/fear of visiting the hospital due to covid-19. Almost all patients who got positive for covid infection had no COVID-19 related symptoms, had no Preoperative chest CT imaging and none of them had requirement for postop oxygen support. All the patients were operated had favourable outcomes, and no additional morbidity.

Conclusion: The outbreak of COVID-19 has affected not only the individuals with COVID-19, but also the patients seeking emergency and elective surgeries for non-covid cases. Apart from the covid related death that has come to record there are many unreported non-covid mortality might have not reported. The postoperative outcomes of COVID-19 positive children undergoing emergency paediatric surgeries remain unchanged due to associated covid illness.

Mode of presentation: Long oral presentation (5+2)
Title: Abdominal manifestations of MIS-C - Surgical Conundrum
Authors: Ashitha K Unny, Rajashree P, Lakshmi Sundararajan, Janani Sankar
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Abstract:
AIM: Gastrointestinal symptoms are common in pediatric multisystem inflammatory syndrome (MIS-C). However, children with non-COVID surgical conditions may be confused with COVID and/or MIS-C. This is a retrospective study to identify MIS-C mimicking surgical emergencies and conversely those children who got delayed surgical treatment due to possibility of MIS-C.

METHODS: Data of children managed for possible MIS- C between March 2020 and May 2021 were collected retrospectively. Details of clinical presentation, covid-19/Covid IgG/IgM status, blood and radiological investigations and management were collected. Need for surgical interventions and outcome were noted.

RESULTS: A total of 83 children treated for MIS-C. 28 of them had abdominal symptoms - 15 had mild (abdominal pain and non-bilious vomiting) while 13 children had severe symptoms/signs (guarding and rigidity, bilious vomiting or acute scrotum like presentation). Within the second group, initial ultrasound abdomen showed features of appendicitis in 9 children, bowel wall edema in 3 children and ultrasound scrotum showed only scrotal wall edema in the child with
acute Scrotum. 4 of these children worsened under conservative treatment for MIS-C and turned out to have perforated appendicitis. Of the remaining 8 children who improved with conservative treatment initially, 2 children presented with recurrent appendicitis 1-2 months later and needed surgical management. On the contrary, one child initially thought to have appendicitis and underwent laparoscopic appendicectomy later manifested with MIS-C and was managed successfully.

CONCLUSION:
In the Era of Covid-19 pandemic, careful clinical, hematology and radiological investigations and proper guidelines are needed for appropriate treatment of children. Some of the suspected MIS-C children turned out to be acute complicated appendicitis. And surgery in children with MIS-C may have stormy post-operative period. Hence a good understanding between medical, surgical and radiology team is needed for appropriate management of these children.

Mode of presentation: Long oral presentation (5+2)

Title: MIS-C a great mimicker of acute abdomen

Authors: Niyaz A khan, Mamta Sengar, Chhabi Gupta, Vivek Manchanda, Parveen kumar, Rishabh Jain, Gaurav Saxena, Geetika Mathur

Department Institution: Department of Pediatric Surgery, Chacha Nehru Bal Chikitsalya, New Delhi

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Abstract:
Background: COVID 19 infection in children manifests with varied symptoms. Differentiating peritonism secondary to intestinal affection due to covid and the surgical situations of intestine is a complex endeavour. Coexistence of situations like surgical illnesses, malignancies, widal positivity and free peritoneal fluid in many cases further aggravates the dilemma. We undertook this study in order to highlight the various clinical presentation of MIS-C in surgical children.

Material and Method: We performed a retrospective review of the medical records of patients with SARS CoV-2 infection treated at our centre from September 2020 to June 2021. Detailed demographic, clinical, laboratory parameters and outcome were recorded. The definition of MIS-C was based on WHO criteria.

Results: A total of 14 children with SARS CoV-2 infections were managed. 8 patients (57.14%) were diagnosed with MIS-C. The mean age of children with MIS-C was 7.38±5.39 yrs. Most common symptom was fever seen in 98% patients, followed by diarrhoea and pain abdomen. Abdominal tenderness was the most common sign on examination. CRP was markedly raised in all patients and d-dimer levels were raised in 7 patients. Only one patient required surgery.

Conclusions: Our findings support that MIS-C is a great mimicker of acute abdomen and it is prudent to keep it as a differential during management of acute abdomen in children.

Mode of presentation: Long oral presentation (5+2)

Title: Low maternal Vitamin A status as a risk factor for the development of Hirschsprungs disease in the child

Authors: Shalini G Hegde, Shalini Hegde, AM Shubha, Anura Kurpad

Department Institution: St John’s Medical College, Bangalore

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Abstract:
Aim: To correlate low Maternal Vitamin A liver stores with increase in risk of Hirschsprungs Disease in the child

Methodology: This was a case-control study conducted over 1 year. Cases were mothers of infants with histopathologically proven HSCR; controls were age, socioeconomic and dietetically matched mothers of infants with no developmental anomalies. The gold standard currently available for Vitamin A status measurement is the assessment of Vitamin A liver stores using stable isotope dilution technique. This was done by administering an accurate oral dose of stable isotope labelled Vitamin A to the subject, followed by the assessment of the dilution of
this dose in the body pools of vitamin A. Maternal vitamin A pool size was measured using the plasma stable isotopic ratio of labelled to non-labelled retinol on Day 0, 1, 3, and Day 21, as determined by mass spectrometry. Pool size was calculated using standard equations.

Results: 6 cases and 6 matched controls were recruited. All subjects were found to have normal liver stores i.e., within the range of 0.07 – 1.05 µmol/g. However, cases were found to have almost half of the pool size than the control participants (0.0022 vs 0.0011). Assessment of liver stores expressed as mmole/kg body weight in the cases was nearly half than that for controls. (11.68 vs 20.33)

Conclusion: Our study shows a significant trend of low maternal Vitamin A stores to the development of HSCR in the child. Extended research on Vitamin A metabolomics, and it’s correlation with RET gene expression in the affected child is warranted. Prenatal vitamin supplementation, or the fortification of edible oil with Vitamin A, may help reduce HSCR risk akin to how supplementation of periconceptual folate reduces the risk of neural tube defects.

Mode of presentation: Long oral presentation (5+2)

Title: FcγRIIA genotyping as a marker of genetic susceptibility to sepsis in neonates.

Authors: Sarita Chowdhary, Akash Mishra, Pranay Panigrahi, Manoj Yadav, Kanika Sharma, S P Sharma

Department Institution: Institute of medical sciences BHU Varanasi

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Abstract:
Aim: The purpose of this study was to know Fc gamma receptor as genetic variant in a cohort of neonatal septic patients compared with healthy subjects to determine their potential as early biomarkers for sepsis.
Methods: A total of 102 samples were collected from septic neonates and 84 samples from healthy individuals. Genomic DNA was extracted from leukocytes by using a standard PureLinkTM Genomic DNA Mini Kit - Thermo Fisher Scientific Cat No. K1820-01, LOT No. 1947948 and manual salting out manual method. DNA was diluted in water to a final concentration of 10 ng/μL per reaction. Genotyping Assay C9077561-20 for the polymorphism rs1801274, which detects the FcγRIIAR/ H131 allele. The rtPCR was performed using the real-time PCR (RT-PCR) CFX96 Touch Real-Time PCR Detection System - Bio-Rad (USA).
Results: The comparison of genotypic and allelic CD32A frequencies did not show any Significant among the study groups or between different degrees of sepsis. Our mortality results, however, indicated that although allele A did not appear to interfere with the development of sepsis, the presence of allele G appears to increase the risk of Evolution to this picture (p=0.050).
Conclusions: the role of FcγRIIA-R131 as a susceptibility factor and indicator of a poor prognosis of neonatal sepsis.

Mode of presentation: Long oral presentation (5+2)

Title: Peri-operative fall in serum albumin levels correlates well with outcomes in children undergoing emergency abdominal surgery: A prospective study from a resource limited setting

Authors: Rafey Abdul Rahman, Muniba Alim, Sachit Anand

Department Institution: Uttar Pradesh University of Medical Sciences

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Abstract:
Aim
We aim to investigate the correlation between the degree of peri-operative fall in serum albumin levels and the outcomes in children undergoing emergent abdominal surgeries.
Materials and Methods
This prospective study included all children aged 2-15 years undergoing emergent abdominal surgeries between January 2019 to June 2020 at our center. Preoperative serum albumin level (A1) was recorded for all children.
Postoperative day 0 serum albumin level (A2) was sent 4 - 6 hours following the surgery. The degree of peri-operative fall in serum albumin level (∆A) was calculated by subtracting A2 from A1. Patients were then grouped on the basis of ∆ A, i.e. groups 1 and 2 with ∆ A < 0.5 and ≥ 0.5 gm/dl respectively. Additional data like diagnosis, surgical procedure, duration of surgery, complications, and length of hospital stay were also recorded. Recorded parameters in group 1 were then compared to group 2 statistically.

Results
Fifty-six children (M:F= 1.5:1), who met the inclusion criteria during the study period, were included in the study. Groups 1 and 2 comprised 38 and 18 children respectively. The postoperative serum albumin levels were significantly lower in group 2 (P = 0.0005). Duration of surgery was significantly higher in group 2 (P = 0.0474). Complications and length of hospital stay were significantly higher in group 2 [P = 0.0107 and P = 0.0375 respectively]

Conclusion
The present study evaluated fall in peri-operative serum albumin level (∆A) in children undergoing emergent abdominal surgery as a marker of stress. Higher values of ∆A (≥ 0.5 gm/dl) depicted a significant correlation with complications requiring re-laparotomy and a longer length of hospital stay.

Mode of presentation: Long oral presentation (5+2)

Title: Influence of genetic polymorphism in renin-angiotensin system-candidate genes on urinary trefoil family factor-3 levels in children with congenital anomalies of kidney and urinary tract
Authors: Sachit Anand, Minu Bajpai, Prabudh Goel, Tripti Khanna, Alok Kumar
Department Institution: Department of Pediatric Surgery All India Institute of Medical Sciences New Delhi
Email: kanu.sachit@gmail.com

Abstract:
Aim
This cross sectional study was designed to determine the influence of genetic polymorphisms in two RAS-candidate genes on urinary trefoil family factor 3 (TFF3) levels in children with congenital anomalies of kidney and urinary tract (CAKUT).

Methods
The study included fifty children with congenital uropathies (PUV, VUR and PUJO) and twenty age-matched controls. All children underwent measurement of urinary TFF3 levels. DNA isolation and detection of genetic polymorphisms in two RAS-candidate genes i.e. angiotensin-converting enzyme (ACE) gene and angiotensin II receptor type-2 (AT2R) gene was performed by polymerase chain reaction. The presence of D allele in I/D polymorphism of ACE and polymorphism in the AT2R gene due to point mutation (A to T transition) at rs3736556 site yielded different allelic genotypes. Progressive deterioration in kidney function was defined as a fall in GFR to < 60 ml/min/1.73 m2 on serial DTPA scans; and/or new-onset cortical scar/scars or increase in the size of previous scar/scars on serial DMSA scans

Results
When compared to controls, no difference was observed in the genotype distribution of patients. Progressive deterioration in the kidney function was significantly associated with the presence of D allele (p=0.0004), A allele (p=0.005), and both (p<0.0001) in patients. Significantly raised TFF3 levels were detected in the urine of children having D allele (p<0.0001) and/or A allele (p<0.0001).

Conclusion
In children with CAKUT, genetic polymorphisms in ACE and AT2R are associated with variable extents of kidney injury and variations in urinary TFF3 levels. The presence of D allele of ACE or/and A allele of AT2R is significantly associated with progressive deterioration in kidney function and elevated urinary TFF3 levels. Thus, the present study supports the role of angiotensin II- AT2R -NF-κB interaction in progressive functional deterioration and subsequent TFF3 expression in CAKUT.

Mode of presentation: Long oral presentation (5+2)

Title: A retrospective study to determine the factors that lead to poor outcome in survival of trachea-esophageal fistula and esophageal atresia.
Authors: Akshay Kalavant B, Venkatesh Annigeri, Anil Halgeri, Prashant Zulpi, Vijay Kulkarni

Department Institution: SDM College of Medical Sciences, Dharwad

Email: abkalavant2000@yahoo.co.in

Abstract:
To determine the preoperative, intraoperative and postoperative factors leading to poor prognosis and high mortality rate in operated case of trachea-esophageal fistula (TEF)

Material and Methods
This is retrospective non randomized control study. All the patients who presented with TEF to our institution between June 2015 to May 2019 were included in the study. The patients who were not operated and patient who were discharged against the advice were not included in study. Patients were followed up at least till 2 years. Patients were divided in to two groups.

Group A: Those who have survived after the surgery 39 and Group B those who expired after the surgery 37

Various parameters were considered in relation to pre-operative, intra-operative and post-operative factors. To name few antenatal findings, maternal hemoglobin, gestational age, gap between both the end, duration of procedure, need for mechanical ventilation, early start of NG feed, need for blood products and postoperative complications.

Results:
Preoperative factor which had significant negative impact on survival were antenatally diagnosed polyhydramnios, maternal anemia, gestational age and associated severe cardiac anomalies. Large gap TEF who were initially attempted for primary anastomosis, prolonged the operative time and faired poor. Whenever surgeons or anesthesiologists decided to continue postoperative ventilation the outcome was poor: 34 needed post-operative ventilation out of 38 in group B versus 12 out of 39 in group A. Need for PRBC transfusion did not show significant difference in the two groups but the need for FFP transfusion (altered coagulation) and need for platelets transfusion(thrombocytopenia) had poor survival. SIRS/ sepsis played important determining factor in survival of trachea-esophageal fistula. Patients who were able to be fed early had better survival. Pneumothorax and pneumonia had poorer survival.

Conclusion:
Different factors before, during and after the surgery have impact on outcome of tracheoesophageal fistula and we should be able to formulate prognostic score which is based our local needs and available resources.

Mode of presentation: Long oral presentation (5+2)

Title: Preoperative tracheobronchoscopy in newborns with oesophageal atresia: Ten-year outcomes at one tertiary referral unit

Authors: Asha Isse Ali, P Modayil, CK Sinha

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Abstract:
Aims: Variability exists in incorporating preoperative tracheobronchoscopy (TBS) during surgical repair of oesophageal atresia (OA) with or without tracheoesophageal fistula (TOF).

This retrospective study evaluates preoperative TBS as part of OA/TOF surgery over a ten-year period.

Methods:
The study includes all OA/TOF diagnoses, (type I-V), April 2010 - April 2020. Data related to patient demographics, treatment, and disease factors were analysed.

Results:
Sixty-four cases were reviewed. Fifty-nine (92%) underwent surgery (gap assessment and/or OA/TOF repair). Five patients (8%) were diagnosed prenatally. The average birthweight was 2453g (1235 – 3770g) and surgery was typically performed on day two of life.
The incidence of OA/TOF types was as follows: type I (7%), type II (2%), type III (85%), type IV (3%) and type V (3%). TBS was performed in 26/59 patients, (44%). ENT surgeons performed microlaryngobronchoscopy (MLB) on 15 patients across all OA/TOF types. The remaining 11/26 patients underwent MLB or flexi TBS by Paediatric Surgeons.

Upper-pouch fistulas (OA/TOF types II, IV) were detected via MLB in three patients. Therapeutic MLB with cauterisation of TOF was performed in two patients (upper pouch OA/TOF type-IV and recurrent type-III).

Respiratory anomalies (tracheomalacia, Laryngeal cleft) were identified in 8/15 (53%) patients undergoing MLB. Twenty percent required onward referral for definitive surgery. During MLB, the use of a size 2 French catheter to obstruct TOF prevented aspiration and aided ventilation during OA/TOF surgery.

Conclusion:
Preoperative TBS, specifically MLB has four-fold benefits in OA/TOF patients:  
a: Upper-pouch fistula detection.
b: Combining diagnosis and therapeutic intervention in recurrent and upper-pouch fistulas.  
c: Detecting respiratory anomalies with potentially catastrophic outcomes.  
d: Aiding ventilation during OA/TOF surgery.

Preoperative TBS in OA/TOF surgery is encouraged as part of quality improvement and patient safety. The lack of ENT operative assistance was identified as a barrier.

Mode of presentation: Long oral presentation (5+2)

Title: Follow up study of operated cases of oesophageal atresia with tracheoesophageal fistula-  
with special reference to postoperative oesophageal stricture at our institute  
Authors: Tarun Gupta, Sudhakar S. Jadhav, Santosh V. Patil, Dinesh H. Kittur, Ravindra M. Vora  
Sushrut Jadhav  
Department Institution: Jadhav Kinderchirurgie charitable trust's Paediatric surgery centre & P.G. Institute, Sangli, Maharashtra  
Email: tarun.gupta245@gmail.com  
Abstract:
Study of stricture oesophagus in operated cases of OA-TOF in last three years at our institute
Methods- In this study, 30 patients operated for OA-TOF were included to know occurrence of stricture oesophagus at our institute. Postoperative contrast swallow was done as a routine in each case and ratio of diameter of upper pouch to that of lower pouch(UPW:LPW) was calculated. Each case was followed up for two years and was investigated accordingly in which symptomatic stricture oesophagus was found in 13 patients. It was found that these cases had UPW:LPW > 1.5 and required intervention. 
Results: Cases with UPW:LPW >1.5 on postoperative contrast swallow developed symptomatic stricture oesophagus in future.
Conclusion: All cases with UPW:LPW >1.5 on postoperative contrast swallow should be followed up regularly keeping in view their proneness to stricture oesophagus which may require intervention.

Mode of presentation: Long oral presentation (5+2)

Title: Thoracoscopy-Based Protocol to Esophageal Atresia with Unfavourable Anatomy: A novel approach to Long-gap Esophageal Atresia
Authors: Mehak Sehgal, Prabudh Goel, Minu Bajpai, Rahul Anand
Department Institution: All India Institute of Medical Sciences, New Delhi
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Abstract:
To present our protocol of management and results with our indigenous, native esophagus-preserving thoracoscopy-based approach to cases with long-gap esophageal atresia.

Material and Methods: Prospective study over four years on thirteen patients of long-gap esophageal-atresia (male:female=5:8; mean birth weight=2.02 kg). Neonates with long-gap esophageal-atresia and fit for thoracoscopy were included in this study. The protocol of management will be discussed in detail.

Results: With this protocol, a delayed primary anastomosis over a #6 infant feeding tube was possible in 8/13 (61.5%) neonates after a mean waiting period of 9 weeks (8.5-10.5 weeks). Per-oral dye study performed ten days after repair excluded any leak in each of these patients with no hold-up of contrast. Two patients presented with anastomotic narrowing at three and five months, post-repair and responded to antegrade dilatation. Four patients expired, three in the immediate post-operative period and one after four months of surgery. All the remaining nine patients are doing well in follow-up (24 months – 42 months).

Conclusions: The authors continue to evaluate this protocol based on encouraging results to preserve the native esophagus.

Mode of presentation: Long oral presentation (5+2)

Title: H- TYPE . why no HYPE ?
Authors: RAAM RATISH G, Velmurugan, C. Saravanan, A. Aniruthan, V . Rohit Gopinath
Department Institution: MADRAS MEDICAL COLLEGE, INSTITUTE OF CHILD HEALTH, CHENNAI
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Abstract:
Highlight the importance of clinical suspicion, early diagnosis and prompt management of an uncommon cause (H type TEF) of common symptoms (recurrent respiratory infections).

MATERIALS AND METHODS:
H type Tracheoesophageal fistula is a rare congenital condition posing diagnostic and management problems. Accounting for 4-5% of TEF anomalies, patients with H-type fistula may present in the newborn period, infancy, childhood or even adulthood. Surgery involving the identification of the fistula tract, division of the same with the repair of the oesophagus and trachea is curative.

Cases of H-type TEF admitted during 2015-2021 till date in our institute (4 cases) were studied.

RESULTS:
We present 4 cases in the age group of 8 months.

Mode of presentation: Long oral presentation (5+2)

Title: Evaluation of pediatric appendicitis risk calculator (pARC) for diagnosis of acute appendicitis in children
Authors: Vasu Gautam, Rashmi D, Chetna Khanna, Arnab K Saha, Pinaki R Debnath, Atul K Meena, Vijay Kundal, Shalu Shah, Amita Sen
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Abstract:
INTRODUCTION
Early diagnosis and prompt surgical intervention, if required, is the key step in successful management of acute appendicitis. We are evaluating a new score i.e. Pediatric Appendicitis Risk Calculator that has been recently derived and validated in western population and has shown promising results, even better than Paediatric appendicitis score.

OBJECTIVE
To evaluate Pediatric Appendicitis Risk Calculator as a complimentary tool for diagnosis of acute appendicitis in children.
MATERIAL AND METHODS
This study has been conducted in Department of pediatric surgery, ABVIMS and Dr RML Hospital, New Delhi from December 2019 to June 2021. A total of 40 cases aged 2-12 years were included, who presented to OPD/Emergency with clinical features of acute appendicitis with onset of symptoms within 96 hours and were subsequently taken up for appendectomy. pARC risk score was calculated for these patients in preoperative period and postoperatively histopathological examination was done to confirm appendicitis.

RESULTS
All 40 cases were histopathologically proven cases of appendiceal inflammation in form of either acute appendicitis or appendicular perforation. pARC score showed 0 patient in ultra low and low risk groups, 2 in low-moderate risk group, 12 in moderate risk group, 22 in moderate high risk group and 4 in high risk group. Our study shows that 95% of the patients operated for acute appendicitis that were also histologically proven to be a case of appendiceal inflammation lied in moderate, moderate high- and high-risk groups.

CONCLUSION
pARC is an effective and easy tool to guide the management of patients presenting with clinical features of acute appendicitis. It can easily be used by any medical personnel at triage to immediately refer moderate high and high risk cases for surgical intervention and patients with low risk can be observed in the emergency room or can be discharged.

Mode of presentation: Long oral presentation (5+2)

Title: Comparison of clinical diagnosis with intraoperative findings for severity of appendicitis in children

Authors: Somya Bhatt, Rahul Saxena, Arvind Sinha, Manish Pathak, Kirtikumar Rathod, Avinash Jadhav

Department Institution: Department of Pediatric Surgery, All Institute of Medical Sciences, Jodhpur

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Abstract:
Aim:
To determine surgeon’s accuracy in predicting severity of appendicitis in pediatric population compared to intraoperative findings and to evaluate the clinical, biochemical and radiological predictors of complicated appendicitis in pediatric age group.

Methods:
The prospective observational study is ongoing and being conducted in the Department of Paediatric surgery, AIIMS Jodhpur for a duration of 18 months since November 2019. Strict inclusion and exclusion criteria were established so as to improve the efficacy of the study. All patients have been investigated as per departmental protocol including thorough clinical examination and routine investigations. For the radiological investigation USG, a scoring system has been placed to decrease the bias. To ensure the validity and the efficacy of the study standardized disease severity classification is being followed by all the surgeons. The operating surgeon is asked to fill out a survey for each case preoperatively along with a 5-point Likert scale to specify how sure they are of the diagnosis made.

Results:
The results include a descriptive analysis of patient demographics and clinical variability. A p value of <0.001 was seen suggesting that surgeon’s prediction is accurate in predicting severity of appendicitis. In addition to this the Alvarado and Appendicitis Inflammatory response (AIR) scores have been calculated in all patients undergoing surgery for appendicitis. On comparison of AIR and Alvarado scores in complicated and uncomplicated a statistically significance (p value of <0.001) was observed suggestive of their role in accurately predicting the severity of appendicitis as well. ROC (Receiver operating characteristic) curves were constructed to determine the AUC and optimal cutoff points for various parameters which aid in diagnosing uncomplicated and complicated appendicitis.

Conclusion:
The ability to distinguish pediatric patients with simple and complex appendicitis is necessary for appropriate patient management. Accuracy of surgeon in predicting severity can help decrease rates of negative appendectomies and
avoid exposure to radiation of CT scan. Clinical examination by an experienced surgeon is sensitive in accurate diagnosis of severity of appendicitis. Thus, a pediatric surgeon’s physical examination supplementing history, imaging and laboratory parameters can accurately predict the severity of appendicitis prior to appendectomy.

Mode of presentation: Long oral presentation (5+2)

Title: Pediatric appendicitis score – Usefulness in Indian Population and correlation with ultrasonography

Authors: Ruchira Nandan, Devendra Kumar Yadav, Amat-ul-Samie, Samir Kant Acharya, Prabudh Goel, Minu Bajpai

Department Institution: Department of Pediatric Surgery, Benaras Hindu University, Varanasi and All Institute of Medical Sciences, New Delhi

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Abstract: Performance of Pediatric appendicitis score (PAS) was assessed in the diagnosis of acute appendicitis in the Indian population prospectively and correlated with ultrasound findings. The impact of the PAS on clinical outcome (missed appendicitis and negative appendectomy) was assessed.

Methodology: Appendectomy was done for PAS ≥6 and histopathology was used for diagnosis confirmation. A receiver operator characteristic (ROC) curve was created to assess the overall performance of the PAS score. The sensitivity, specificity, and accuracy of ultrasonography in diagnosing appendicitis were assessed, and analysis of agreement between ultrasonography and PAS score was done by kappa statistics.

Results: Out of 205 patients, 159 had PAS ≥6. There were 2 (1.26%) cases of negative appendectomies and 2 (4.34%) cases of missed appendicitis. The mean PAS of patients with and without appendicitis was 8.33 ±1.2 and 4.58 ± 0.77 (p <0.001). The area under the ROC curve was 0.9925. The best cut-off point was 6, at which PAS had sensitivity and specificity of 98.74% and 95.65%, respectively. The positive predictive value and negative predictive value of PAS were 95.7% and 95.65%, respectively. The sensitivity and specificity of ultrasonography were 86.79% and 17.39%, respectively. Agreement between ultrasonography proven appendicitis and PAS score dependent appendicitis was week (kappa value-0.048).

Conclusion: PAS has high efficacy in diagnosing acute appendicitis in Indian children. Clinical outcome was more favourable with the use of PAS. Ultrasonography should be used judiciously and in combination with clinical judgment.

Mode of presentation: Long oral presentation (5+2)

Title: Feasibility and success of nonoperative management of acute appendicitis- a retrospective analysis

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Abstract:

Introduction

Although appendicectomy has been the mainstay of management of acute appendicitis, non-operative management (NOMA) of these patients has been increasingly practiced in the recent years. For the medical management to be successful it is important to differentiate between a complicated from a non-complicated appendicitis. We compared the immediate and short term outcome of operated patients with those managed non-operatively.

Aim

To assess the feasibility of non operative management of acute appendicitis

Materials and method

This study comprises of all the consecutive patients of acute appendicitis both simple and complicated managed
over a period of 4 years (2017 to 2021) in a single unit of Paediatric Surgery. Outcome analysis compared the criteria for diagnosis, hospital stay, selection of patients for surgery or NOM, post-operative complications, need for hospitalization in non-operatively managed patients.

Results
Fifty consecutive patients of acute appendicitis were analysed retrospectively. Twenty-two (44%) patients were diagnosed to have simple appendicitis while 28 (56%) had complicated appendicitis. Fifteen (30%) patients were managed conservatively and 35 (70%) required surgery. Out of 35, 13 patients underwent appendectomy, 16 required open surgery. In 6 patients of complicated appendicitis conversion to open appendectomy was needed. NOM was carried out in 54.4% patients (12/22) of the non-complicated appendicitis while only 10.7% patients (3/28) of the complicated appendicitis could be managed conservatively. None of the patients undergoing non-operative management required any surgery after discharge. All the patients were asymptomatic at follow up (1 month–4 years).

Conclusion
Patients of acute appendicitis especially non-complicated ones can be safely managed non-operative treatment. Conservative management lessens the operative costs and post-operative morbidity and its complications. Results of non-operative management of acute appendicitis are comparable to operative management.

Mode of presentation: Long oral presentation (5+2)

Title: Corollary of Primary Posterior sagittal anorectoplasty for Anorectal malformations

Author: Shilpa Sharma

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Abstract:
Aim: Pena’s Posterior sagittal anorectoplasty (PSARP) has revolutionized anorectal malformation surgery. We aimed to analyze our experience with primary PSARP in anorectal malformations and share the lessons learnt.

Method: To retrospectively analyze the perioperative management and outcome of primary PSARP without a colostomy from 2004-2018. Cases in whom colostomy had been done and low anorectal malformations like perineal fistula were excluded.

Results: 136 cases (114 girls; 22 boys) were subjected to Primary PSARP. The median age was 5 months (3 months to 14 years) in girls and 5 days (1 day-10 days) in 21 boys. One boy with male cloaca was exceptionally operated at 5 months age. Colostomy was done in two boys on non-location of the rectal pouch through the posterior sagittal route. Of 20 boys, 5;8;4;3 had rectobulbar-urethral fistula; rectoprostatic-urethral fistula; bladder-neck fistula and male cloaca. Anomalies in girls included rectovestibular; anovestibular; rectovaginal fistula, vulval anus, anterior ectopic anus, pouch perineal fistulae and posterior anus with H-type fistula in 68; 26; 7; 6; 5; 1 and 1. Complications included wound infection; excoriation; edema; mucosal prolapse; anal stricture and anal retraction in 6;4;5;4;4;1 respectively. One newborn patient with associated tracheoesophageal fistula died due to sepsis. All cases were calibrated 3 weeks post-surgery. 36 cases (including 12 neonates) required dilatations in postoperative period for 3-12 months. 40 patients had constipation in the post-operative period that was treated with diet and laxatives.

Conclusion: Primary PSARP, a delicate one-time surgery, is feasible, subject to proper selection of cases and good perioperative care, once the learning curve is reached. It avoids the potential morbidity of a colostomy and laparotomy.

Mode of presentation: Long oral presentation (5+2)

Title: Feasibility of Primary Limited posterior sagittal anorectoplasty (PSARP) in children with Vestibular fistula without a covering colostomy.

Authors: PRAVEENA DL, SUHASINI GAZULA

Department Institution: State Insurance Corporation (ESIC) Medical College & Superspeciality Hospital, Sanathnagar, Hyderabad
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Abstract:
Aim: To assess the feasibility of Primary limited posterior sagittal anorectoplasty (PSARP) in babies with Vestibular fistula without a covering colostomy.
Methods: A retrospective review of records of girls presenting with Vestibular fistula was done. Those girls presenting late with dilated rectosigmoid were initiated on a daily rectal wash program and surgery taken up after 8-12 weeks. All underwent primary limited PSARP after total gut irrigation with polyethylene glycol. They were kept nil per oral until the fifth to 7th postoperative day and proper hygiene of operative site maintained throughout the post-operative period. Patients were assessed for immediate and delayed complications as well as voluntary bowel movements and continence.
Results: A total of 19 patients with an age range of 2 months to 10 years (median, 7 months) were studied. Follow-up ranged from 9 months to 9 years. No wound dehiscence or recurrence of fistula was noted. Three children had mild wound infection which subsided on conservative management. At 1 month postoperative follow up, all patients had 2 to 5 stools per day with no episodes of soiling and no constipation. No child required proximal diversion for wound issues. Routine postoperative anal calibrations were followed in all patients till 3 months. No patients required anal dilatations.
Conclusions: Primary posterior sagittal anorectoplasty in vestibular fistula can be performed without a covering colostomy provided careful tissue handling is ensured and fecal contamination of the wound can be kept to the minimum in the first postoperative week.

Mode of presentation: Long oral presentation (5+2)
Title: Assessment of functional outcome in post- surgical children with ANO RECTAL MALFORMATION
Authors: ROHIT SAIJA, Dr NARENDRA BABU /DR Gowri Shankar
Department Institution: INDIRA GANDHI INSTITUTE OF CHILD HEALTH
Email: sajjarojith3@gmail.com
Abstract:
AIM: - To Assess The Functional Outcome In Patients Operated For ARM Based On Standard Questionnaire.

Methods: - This is a retrospective study, based on Rintala scoring system, which is a questionnaire given to patients underwent definitive surgery for ARM in IGICH from Jan 2014 –Dec 2017 were included in the study

Results: - A total 91 patients were included in the study, 39 male and 51 females. Median age group included in the study is 5.3 years. Male-low(n-2),intermediate(n=27),high(n=7) cloacal(n=3)and female-low(n=47),high(n=4) and cloaca(n=1). Good continence is seen in 52 patients (female- low -40 and male low-1 and intermediate-11). All high ARM have poor control with some have been kept on enema and n-3 had socially accepted continence following MACE procedure.

Conclusion- From the outcomes observed we would like to bring that Functional outcomes depends on type of ARM ,sphincter dysplasia and technical aspects of surgery and most of ARM will have some amount of incontinence which is managed with Bowel management programe. (dietary,laxatives/enema,Biofeedback and MACE)

Mode of presentation: Long oral presentation (5+2)
Title: Assessment of functional outcome in post- surgical children with ANO RECTAL MALFORMATION
Authors: Syeda Siddiqua Banu, Anand Alladi
Department Institution: BMCRi Bangalore
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Abstract:
AIMS: To compare the results of MR cologram and Distal cologram in the management of High ARM.

METHODS: A prospective study was done on 33 patients of High ARM status post colostomy, at BMCR between November 2016 to April 2018. All children underwent pressure augmented distal cologram with water soluble contrast injected through Foley’s catheter placed in the distal stoma and hitched to create occlusion and hence enough pressure. Child was then immediately shifted to MRI console and MR images obtained.

RESULTS: MR-C identification of the level/type of fistula was consistent with DC & intra operative findings in 30 cases & inconsistent in 2 cases. In 1 case MR-C finding differed from DC but couldn’t be correlated with intra operative findings as child expired before surgery. In all the 33 cases MRI provided additional information about the development of SMC & associated anomalies.

CONCLUSION: Though, we had a smaller number of patients it can safely be concluded that: 1. MR-C is comparable to DC in defining the level and type of fistula/ARM. 2. It can give information about developmental state of the sphincter muscle complex(SMC) in addition to identification of genitourinary/spinal anomalies without any radiation exposure. 3. Use of a single MRI can obviate the need for multiple tests with no added radiation exposure, especially because of its multiplanar imaging capability and excellent tissue characterization. However, we need larger number to give validation

Mode of presentation: Long oral presentation (5+2)

Title: Analysis of constipation after Anterior Sagittal Ano Recto Plasty
Authors: Akhilesh Kumar, SN Kureel, Archika Gupta, JD Rawat, Nitin Pant, Nirpex Tyagi, Survesh Kumar Gupta
Department Institution: Department of Pediatric Surgery, KGMU , Lucknow
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Abstract:
Aim
To analyze the factors responsible for constipation after Anterior Sagittal Ano Recto Plasty (ASARP)
Methods
Patients of vestibular fistula repaired by ASARP between February 2016 to February 2021 were included in this study. Patients were analyzed for constipation after four months of procedure. Perineal examination finding, Type of fistula (Recto/ Ano vestibular) and operative notes studied to analyse constipation. Colonic transit time study and lower GI study with 24 hour delayed film was done in those patients, where no anatomical factor was detected to cause constipation.
Results
In the total 154 patients analysed, 72 (46.7%) had constipation. Thirty-five (23.3%) patients had normal location and caliber of neoanus and prolonged colonic transit time. Fourteen (9.0%) patients had a normal anal caliber but anteriorly migrated neoanus noted as cause of constipation. Seventeen (11.0%) patients had anal stenosis. Six (3.8%) patients had adequate anal orifice and normal position but high posterior ledge (due to inadequate mid-line splitting of muscle complex) contributing to constipation.
Conclusion
Identification of anatomical factors like anal stenosis, anteriorly migrated neoanus, the high posterior ledge due to inadequate posterior splitting of muscle complex was noted to contribute to constipation in addition to absent anatomical factors and prolonged colonic transit time. Correction of these factors can prevent and correct constipation.

Mode of presentation: Long oral presentation (5+2)
Title: Anterior saggital anorectoplasty for Vestibular anus (Anovestibular fistula) without opening the fourchette
Authors: Anju Verma, Vijai D Upadhyaya, Shyamendra P Sharma, R Kapoor, Pujna K, Kumar Basant
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Abstract:
Background: Anorectal malformations are one of the most common congenital defects. This study is conducted to demonstrate new technique for treatment for vestibular anus (ano-vestibular fistula without disturbing the fourchette through anterior sagittal approach.
Method: All the patients of vestibular anus (anovestibular fistula) admitted after the neonatal age were treated with anterior sagittal anorectoplasty without opening the fourchette. The results were evaluated for cosmetic appearance and anal continence.
Result: A total of 16 patients were included in our study. All patients were more than 1 month old. Operative time ranges from 70 to 150 minutes. The cosmetic appearance was good. Anal continence was good in 75% cases and fair in 12.5% cases. Around 18.5% percent of patients had minimal constipation and 12.5% patients had minor mucosal prolapse.
Conclusion: Single-stage repair for vestibular anus through anterior sagittal anorectoplasty without opening fourchette has a good cosmetic appearance and good anal continence.

Mode of presentation: Long oral presentation (5+2)

Title: What could be the management approach for delayed presenting cases of High ARM
Authors: Nitin Sharma, Shipra Sharma, M A Memon
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Abstract:
Aims: To analyze the outcome in High ARM cases presenting after 72 hours of birth.
Methods: This is a retrospective analysis of the cases operated between june 2014 to May 2021. Those presenting after 3 days of life were included. Those with incomplete data or follow up and pouch colon were excluded. Group I included cases managed with Primary PSARP, group II with sigmoid colostomy and group III with transverse colostomy. Outcome was analyzed in terms of duration of surgery, duration of post operative stay; infection, dehiscence and local excoriation.
Result: 147 of 169 cases were included. 47, 78 and 22 cases were in group I, II and III respectively. Mean duration of surgery was 64, 62 and 50 minutes in group 1, II and III respectively (P = 0.09). Mean duration of hospital stay was 7, 8 and 7 days in group 1, II and III respectively. Wound infection was seen in 7(14.9%), 48(61.5%) and 3(13%) cases in group 1, II and III respectively(p=0.03). Dehiscence of the wound was seen in 7(14.9%), 48(61.5%) and 0(0%) cases in group 1, II and III respectively(p=0.01). Local excoriation was seen in 6(12.7%), 18(23%) and 3(13.6%) cases in group 1, II and III respectively(p=0.06). Rectourethral fistula was present in 40 cases of group I while it could not be assessed in others. Dilated sigmoid colon mimicking type 4 pouch colon was seen in 32(68%), 56(71.8%) and 14(63.6%) cases in group 1, II and III respectively (P = 0.09). Mortality was seen in 4(8.5%), 8(10.2%) and 1(4.5%) case in group 1, II and III respectively (p=0.06).
Conclusion: Management of HARM presenting late is a challenge. It is difficult to decide the type of surgery to be done. Primary PSARP can be offered if possible while transverse colostomy is better when colostomy is planned.

Mode of presentation: Long oral presentation (5+2)

Title: Gastric Transposition : A reliable method for Esophageal Replacement
Authors: Rahul Deo Sharma, Shruti Tewari, A Sushma, Surendra Singh, Anant Bangar, Santosh Karmarkar, Rajeev Redkar
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Abstract:
To evaluate single centre experience of gastric transposition as a technique of esophageal replacement in patients with long gap esophageal atresia and corrosive esophageal stricture.

Esophageal replacement in pediatric age group is mostly done for benign diseases. The organ most commonly used previously was colon. But because of more complication rate of colon, gastric transpositions is been done now days for esophageal replacement in children. We reviewed the records of 8 patients with the diagnoses of long gap esophageal atresia (n = 7), corrosive stricture (n = 1), who underwent gastric transposition. Mean age at the time of gastric transposition was 11.92 months. All transpositions were performed through the posterior mediastinum with mortality of 2. Complications included esophagogastric anastomotic leak (n = 2, ), which uniformly resolved without intervention; stricture formation (n = 3, ), all of which no longer require dilation, GERD(n=3) no longer required PPI. No redo anastomoses were required. Gastric transposition establishes effective gastrointestinal continuity with very few complications as compared to other method of esophageal replacement. Oral feeding and appropriate weight gain are achieved in most children. Therefore, gastric transposition is a good alternative for esophageal replacement in pediatric population.

Conclusion - Gastric transposition is a reliable method of esophageal replacement with good prognosis on long term basis.

Mode of presentation: Long oral presentation (5+2)

Title: Esophageal replacement in Esophageal Atresias: A single center experience

Authors: Abhishek Reddy, Nabeel, Zameer MM, Vinay C , Sanjay Rao, Ashley D.cruz

Department Institution: Narayana Health, Bengaluru

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Abstract:
To study the outcomes of esophageal replacement in Esophageal Atresia.

METHODOLOGY: This is a retrospective study of children who have undergone esophageal replacement. Data was collected from Jan 2012- March 2021. Outcomes analyzed

RESULTS: Eighteen Children were included in the study. Thirteen were boys. Median age was -12m (Range 8m- 66m). Median weight was - 8.5 kg (Range- 6.2-17kg).Twelve had long gap EA with TEF. Remaining Six patients had pure esophageal atresia. Various esophageal replacements carried out were reverse gastric tube esophageal replacement in 8 , gastric pull up in 7 and isoperistaltic gastric tube in 3 .Posterior mediastinal route was used in seventeen patients while one patient had retrosternal route.

Outcomes: The Follow-up period ranged from 3m -9yrs . Most patients required 48hrs of ventilation- range( 1 day - 8 days). In view of severe tracheomalacia 2 underwent tracheostomy. Anastomotic leak at cervical anastomosis was observed in 3 patients (17%), All leaks resolved on conservative management.

FJ was done in four patients, indications were swallowing in-coordination in three, and anastomotic stricture in one child. Two Patients who were on tracheostomy were decannulated after3 & 6 m. There was no perioperative mortality. However there were 3 late deaths relating to (1)delayed leak /NG tube perforation, (2) Jejunostomy leak,(3)Unknown at home. Among those on follow up 60%of the patients had failure to thrive(<3rd centile for weight ). While 40% had good weight gain. Esophageal stricture was seen in 4 patients , all of whom responded to endoscopic dilatations.

Mode of presentation: Long oral presentation (5+2)
**Title:** Long-term outcomes of Esophageal Replacement in children: Experience from a tertiary care center

**Authors:** Kanika Sharma¹,², Shilpa Sharma, Devendra¹ Kumar Gupta¹

**Department Institution:** All India Institute of Medical Sciences New Delhi¹, Institute of Medical Sciences- Banaras Hindu University Varanasi²

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**Abstract:**
To study and compare the long-term outcomes of two different methods (Gastric transposition and colonic interposition) of esophageal replacement (ER) in children.

**Methods:** All children who had undergone ER from January 1997 to December 2017 with minimum of two-year post-ER follow-up were included in the study. All children were evaluated by anthropometry, oral contrast study, Hepatobiliary scintigraphy, Gastroesophageal reflux study, gastric emptying test, pulmonary function tests and blood test.

**Results:** Twenty-six (Male:Female=17:9) children were included in the study. Median age at ER was 13 months (interquartile range 9–40 months) and mean follow-up post-ER was 116.7±76.4 months (range 24–247 months). Out of 26 children, seventeen (65.4%) belonged to congenital esophageal atresia group while eight (30.8%) belonged to corrosive esophageal injury group and one (3.8%) patient had acquired traumatic Tracheoesophageal fistula. Gastric transposition was done in fifteen (57.7%) while colonic interposition was done in eleven (42.3%) cases. Complications including leak, stricture, reflux etc. were observed. No significant (p>0.05) difference in the nutritional, developmental and functional outcomes of both the methods of ER in our cohort.

**Conclusion:** Assessment of nutritional, developmental and functional parameters in children after ER reveals good long-term results. There was no significant difference in the two methods of ER.

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**Title:** Oesophageal Replacement, Practical issues and short-term outcome

**Authors:** BIJU I G, Sivakumar.K, Sam Varkey, Ujjwal Singh, Varun Sabari

**Department Institution:** Dept of Pediatric Surgery, SAT HOSPITAL, GOVT.MEDICAL COLLEGE, THIRUVANANTHAPURAM

**Email:** drbijunair19@rediffmail.com

**Abstract:**
Practical issues with Oesophageal replacement and short-term outcome.

**Materials & Methods:** Analysis of patients operated in our institute during last 8 years.

**Results:**
- 4 patients had Oesophageal replacement for Oesophageal atresia
- All of them underwent Right colonic Oesophageal replacement through substernal route
- All cases were done in two stages
- Indication was pure Oesophageal atresia in 3 cases and leak after primary procedure in one case (for Type III atresias)
- Practical issues during pull through and anastomosis will be presented and immediate short-term outcome.

**Discussion:** Oesophageal replacement is the Surgery of choice in pure Oesophageal atresia. Though there are various procedure using various tissues for replacement; we find it that use of colon will give relatively good functional result without much long-term issues during the period of follow-up.

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**Title:** Gastric pull up for pure esophageal atresia - an institutional experience

**Authors:** Nitin Vyas, Sudhakar S. Jadhav, Santosh V. Patil, Dinesh K. Kittur, Ravindra M. Vora

**Department Institution:** SJKC Trusts’s paediatric surgery centre & P.G. institute

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Abstract:
Gastric pull up for pure esophageal atresia - an institutional experience

Methods: This is a study of 6 cases of esophageal atresia (type 1). Esophagostomy and feeding gastrostomy was done at birth. Gastric pull up procedure was done at less than 1 years age after adequate weight gain. 2 out of 6 patients succumbed in early post-operative period, one due to arrhythmia, and another due to sepsis. Rest of the patients had stormy early post operative period in first 48 hours and did well and are on regular follow ups.
Results: 3 out of 4 patients have mild dysphagia for solid food bolus but are thriving well with good weight gain and are on regular follow ups.
Conclusion: After performing multiple colonic transpositions for pure esophageal atresia, we switched to gastric pull up as the preferred procedure as this had better results in our institution

Mode of presentation: Long oral presentation (5+2)

Title: Lesser curve gastroplasty with gastric pull up: Our customised approach for oesophageal substitution
Authors: Muni Varma, SATISH KUMAR AGGARWAL, GAURAV SINGH, RUPA BANERJEE, CHANDRIKA KALAGOTLA, GARVITA SINGH
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Abstract:
Many different pathologies involving the oesophagus may require it to be replaced. Over the years, multiple techniques have evolved to help a surgeon in deciding the best form of treatment for a patient with their own set of advantages and disadvantages. We would like to present our experience of oesophageal substitution using lesser curve gastroplasty with gastric pull up in different clinical settings.
METHOD: Data of oesophageal substitution using the stomach from February 2016 to March 2021 was retrieved. Age range was 7 months to 4 years.
RESULTS: Twelve children underwent oesophageal substitution. Ten had EA with TEF and 2 had corrosive oesophageal stricture. All underwent gastric pull up with lesser curve gastroplasty. Surgery was successful in all 12 patients with an uneventful post op period.
CONCLUSION: Lesser curve gastroplasty with gastric pull up presents its own advantages. It avoids pulling up the widest portion of the stomach across the narrow thoracic inlet leading to lesser instances of cardiac arrhythmias especially when combined with pre op beta blockers. Chances of mediastinal compression and respiratory distress are reduced leading to lesser requirement of prolonged ventilatory support. Therefore it remains our preferred technique for oesophageal substitution.

Mode of presentation: Long oral presentation (5+2)

Title: Interval Appendicectomy in Paediatric Appendicitis
Authors: Ankur Bhardwaj, Prabudh Goel, Anjan Kumar Dhua, Devendra Kumar Yadav, Minu Bajpai
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Abstract:
Aim: To review the role of interval appendicectomy in acute appendicitis in paediatric age-groups
Material & methods: Prospective analysis upon consecutive children (n=32, mean age 9.2 years) over six years (2015-20 ensuring a minimum follow-up of one year after acute appendicitis) who were managed with Ochsner Sherren regime (OSR) following an attack of acute appendicitis. Observation parameters included a) at presentation: clinical features, total leukocyte counts, radiological findings, treatment received and duration of hospital stay, and b) during
follow-up: recurrence of pain/appendicitis, duration since discharge after OSR and need for appendectomy were documented.

Results: Clinical features included fever (n=24), anorexia (n=27), border-line to raised leucocyte count (n=32), tenderness at peri-umbilical or Mc Burney’s point (n=32), history of constipation (n=28), palpable lump in right iliac fossa (n=26) and iron-deficiency anaemia (n=24). Ultrasonography was suggestive of appendicitis (n=27) with pus-formation (n=0). Previous episodes of right lower quadrant pain which could be related to acute appendicitis were present in four. All were started on OSR.

Surgical intervention was required for acute abdomen (n=1) and local pus formation (n=2) [excluded-3/remain 29 of 32]. Mean hospitalization (n=29) was 6.3 days. All patients were started on high-fibre diets and fluid intake monitoring (to ensure optimal intake) two weeks after discharge. Mean follow-up after acute appendicitis was 14.6 months (range 12 months – 3.5 years). Second episode of appendicitis documented in 2 patients, after 3.5 & 11 months respectively. Interval appendectomy at 6-12 weeks performed upon n=3 (reasons other than second episode of acute appendicitis). Not contactable (n=2)

With appropriate dietary management, second episode of acute appendicitis was not observed in 22 of 24 (91.7%) patients.

Conclusion: There is a need to relook into the role of interval appendectomy in paediatric patients in an attempt to avoid surgery and reduce the associated morbidity

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Mode of presentation: Long oral presentation (5+2)

Title: Sphincteroplasty along with full thickness rectal biopsy in evaluation and management of chronic constipation – our experience

Authors: Ajay Abraham, MOHAN ABRAHAM, NAVEEN VISWANATH, BINDU S, ASWIN PRABHAKARAN, RITA KM, DONY DEVASIA

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Abstract:
AIM: To evaluate the role of doing a sphincteroplasty along with a full thickness rectal biopsy in the management of chronic constipation.

METHOD:
A full thickness rectal biopsy is the gold standard in evaluation and deciding upon treatment strategies in a child presenting with chronic constipation. Presence or absence of ganglion cells in a full thickness rectal biopsy categorizes the disease and decides the further management.

In our institution, as part of full thickness rectal biopsy, a sphincteroplasty is done as originally proposed by Hata.

Outcome of the procedure is measured in terms of relief of constipation and incontinence to flatus and faeces.

RESULTS:
68 patients underwent full thickness rectal biopsy with sphincteroplasty. Out of this, 18 did not have ganglion cells, 6 had abnormalities like immature ganglion cells and hypertrophic nerve fibres and 44 patients had ganglion cells. Upon follow up, 15 patients with absent ganglion cells were symptomatically better in 3 months and 1 improved in 6 months. 2 were lost on follow up. All 6 patients with abnormal ganglion cells improved following the procedure. Out of the 44 patients who had ganglion cells, 39 improved symptomatically.

Added advantages of this procedure is that the suture line comes close and parallel to the dentate line, decreasing the risk of retro rectal leak. A Duhamel pull through if needed later will also be easier due to a shorter area of fibrosis.

CONCLUSION:
A sphincteroplasty along with a full thickness rectal biopsy proved helpful in children with chronic constipation irrespective of presence or absence of ganglion cells.
Title: Hydrostatic saline enema reduction of pediatric intussusception: Our experience in a resource limited high volume tertiary care center

Authors: BHAIRU LAL GURJAR, RAHUL GUPTA

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Abstract:
Aims: To evaluate the efficacy of hydrostatic saline enema reduction in treatment of pediatric intussusception; the secondary aim was to identify patient subset in which it is more useful.

Methods: A retrospective study was conducted from January 2019 to May 2021 in all children with ultrasound confirmed intussusception at our center. All children were considered for non-operative bedside reduction with saline enema excluding those with signs of peritonitis and shock. We allowed a maximum of three attempts of saline enema reduction.

Results: There were 375 patients admitted with diagnosis of intussusception in our institute. Out of these 42 patients were subjected to bedside hydrostatic saline enema reduction. The age range was 5 months to 14 years. The success rate of bedside hydrostatic reduction with saline enema was 90.47% (38 out of 42 cases). No perforations occurred during the procedure. The duration of symptoms, age and sex of patients did not influence successful reduction (p > 0.05). The duration of admission between those who had successful non-operative reduction and those who subsequently had operative reduction and or resection attained statistical significant difference, p = 0.001. There was no mortality.

Conclusions: Bedside hydrostatic normal saline enema reduction of intussusception is a suitable non-operative technique of managing childhood intussusception. The approach is simple safe and cost effective in a resource constraint environment.

Mode of presentation: Long oral presentation (5+2)

Title: A case of Caudal duplication with Lipomyelomeningocele

Authors: Dubey Shashank Narendra, Saket Jha, Apurv Kulkarni, Shahaji Deshmukh Abhaya Gupta, Paras Kothari, Shalika Jaiswal

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Abstract:
Aim – To highlight a rare case of Caudal duplication with Lipomyelomeningocele

Introduction –
Caudal duplication syndrome is a rare entity first described by Dominguez et al. in 1993; that includes a wide spectrum of anomalies of the gastrointestinal, genitourinary, neurological, and vertebroskeletal systems.

Discussion –
Various theories have been suggested. Incomplete separation of monozygotic twin has been postulated as the etiologic factor. Abnormal adherence between ectoderm and endoderm has been indicated as the cause, by Pang et al. In view of Dominguez et al. damage to caudal cell mass to the 23–25-day embryo is the causative factor. Bremer has proposed that pinching of the vesicle cavitating the solid intestinal tract at 6–7 weeks gives duplicate intestinal, genitourinary, and distal neural elements. Treatment consists of staged correction of duplication anomalies. Any spinal anomaly is also corrected suitably.

Conclusion – Although rare and complex many authors have reported near-normal cosmetic and functional result for these complicated anomalies.

Mode of presentation: Long oral presentation (5+2)
Title: Operating within the Neonatal Intensive Care Unit: A retrospective analysis of the bedside neonatal surgeries at a tertiary-care center

Authors: Sachit Anand, Bhushanrao Jadhav, Gursev Sandlas

Department Institution: Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute

Email: kanu.sachit@gmail.com

Abstract:
Aims
Despite ongoing advances in the field of neonatology, the survival outcomes among critically ill preterm surgical neonates remain unfavorable. Intra-hospital transport is one of the major risk factors associated with early mortality (within 30 days) in these newborns. To overcome this, the approach of performing bedside surgeries is being followed. We aim to assess the safety and feasibility of performing bedside neonatal surgeries by analyzing our archives.

Methods
The study focused on retrospective evaluation of all the newborns who have undergone surgical procedures in the neonatal intensive care unit (NICU) at our center w.e.f August 2015 through February 2021. Newborns were operated within the NICU if they had very low birth weight or other risk factors making their transport to the operation room risky. The outcomes of surgeries were assessed in terms of postoperative complications, one-month survival, and overall survival.

Results
Thirteen children (M:F=9:4) underwent twenty-two surgical procedures. The median (range) gestational age and birth weight of our cohort were 30 (26-36) weeks and 1200 (500-2860) grams. One-month and overall survival rates in our cohort were 84% (11/13) and 77% (10/13) respectively. No major postoperative complications were observed. The requirement of multiple inotropes and/or high-frequency oscillatory ventilation (HFOV) was the only factor having a significant association with unfavorable survival outcomes.

Conclusions
Bedside surgery is a safe and feasible alternative to surgeries within the operation room for at-risk newborns. In the present study, the requirement of multiple inotropes and/or HFOV was the only factor significantly associated with early mortality.

Mode of presentation: Long oral presentation (5+2)

Title: Study of the factors contributing to mortality and morbidity in neonates treated for congenital diaphragmatic hernia/eventration : our institutional experience

Authors: Vidya M Saravagol, Raghunath B V, Anand Alladi

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Abstract:
Introduction: Congenital diaphragmatic hernia (CDH) is one of the important cause of respiratory distress in new born. Inspite of all the advances in diagnosis and treatment, the mortality rates are high ranging from 30% - 60% for isolated problem and as high as 89% when they are associated with additional structural or chromosomal anomalies.

In this study, we would like to evaluate the factors contributing to the mortality and morbidity of neonates treated for CDH or eventration of diaphragm in our institute.

Materials and methods: This is a retrospective observational study conducted in the department of paediatric surgery, Bangalore medical college and research institute from march 2013-march 2021(8 years). All neonates admitted in our department with diagnosis of CDH/eventration during the study period were included. Neonates operated for CDH/eventration in other hospitals and being referred to our department for further care were excluded.

Results: A total of 123 neonates were included in the study, out of which 107(87%) were having CDH and 16 (13%) were having eventration. Out of 123 neonates, 79(64%) neonates were taken up for surgery after pre-operative
stabilization (65 neonates with CDH and 14 neonates with eventration). Remaining 44 (36%) neonates died preoperatively. Prematurity, weight <2kg, cyanosis at presentation, antenatally detected CDH/eventration, liver herniation in left CDH were independently associated with poor prognosis. The presence/absence of the sac and associated anomalies did not influence the overall mortality and morbidity. Survival rates can be improved with use of better ventilation strategies, early and appropriate treatment for pulmonary hypertension and a good team work.

Mode of presentation: Long oral presentation (5+2)

Title: Comparison of the outcome in neonates with congenital diaphragmatic hernia with and without abdominal wall muscle closure

Authors: Sravanthi Vutukuru, Prema Menon, Shailesh Solanki, Ram Samujh

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Abstract:
Introduction: In Congenital diaphragmatic hernia (CDH), abdominal wall closure may lead to increased abdominal pressure and abdominal compartment syndrome (ACS). This can cause worsening of Primary Pulmonary Hypertension (PPHN), and rapid deterioration of the patient into multi-organ dysfunction syndrome (MODS) which are difficult to treat. To overcome this problem, we started doing simple skin closure without muscle approximation of laparotomy wound after repairing diaphragmatic defect over the past few years.

Aim: To compare the outcome of neonatal left CDH repair through open abdominal approach with and without abdominal muscle closure

Material and methods: Retrospective and prospective study was conducted on neonates with left-sided CDH (Bochdalek type) operated between January 2012 and May 2021 in a single unit of a tertiary care hospital. Demographic details, preoperative management 2D-echo, intraoperative findings, postoperative course, and follow-up data were collected and analyzed

Results: The study group comprised of 50 neonates, of whom 52% (26/50) underwent simple skin closure, and 48% (24/50) underwent and abdominal muscle closure after repair of defect. Mean (SD) age at admission: 4.44 (5.12) days, male: female ratio:- 3:2, mean (SD) weight :-2.73 (0.51) kg. Mortality was 8 (32%) in skin closure group, and 14(61%) in muscle closure group. The two groups significantly differed in haematological, renal, ventilatory and blood gas parameters in the post-operative period. There was significant fall in the value of platelets (63%), increase in pressure support by at least 4-5 cm H2O, increase in the blood urea and creatinine by 50%. There was significant increase in lactate and acidosis. There was fall in the urine output, systolic and diastolic blood pressures, although not statistically significant. There was no significant difference in the duration of inotropes.

Conclusion: Neonates undergoing left CDH repair through abdominal route with skin closure alone, had better survival, haematological, renal and ventilatory parameters than those who underwent muscle closure. Incisional hernia is an expected outcome of not doing a muscle closure, which can be repaired at a later stage.

Mode of presentation: Long oral presentation (5+2)

Title: Short term audit of surgical neonates at a tertiary care centre

Authors: Lianne DMello, Archana Mardi, Chiranjiv Kumar, Simmi Ratan, Shashanka Shekar Panda

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Abstract:
AIM: The aim of this study is to determine the spectrum and outcome of the different neonatal surgical conditions admitted, operated and managed in a pediatric surgical unit.

METHODS: The data was collected retrospectively from hospital admission registers and case files of our tertiary centre for surgical neonates during the period from January 2019 to April 2021. (Gap period from April 2020 to January 2021 due to covid-19). Details such as age at presentation, birth weight, gestation, diagnosis, surgical procedures, complications and other relevant data was collected and carefully analyzed.
RESULTS: During our study period, a total of 171 neonates were admitted (120 males, 51 females). The mean birth weight was 2.58 kg. Sixty-eight neonates (39.76%) were low birth weight. Thirty-one neonates were born preterm. The commonest surgical conditions were Esophageal atresia and/or Tracheoesophageal fistula (EA+TEF) (n=31) followed by anorectal malformations (ARM) (n=27). The less frequent were gastroschisis (12), jejunoileal atresia (15) and myelomeningocele (17). A total of 161 surgical procedures was performed. Postoperative complications were noted in 76 patients (47.2%). The mortality in our study was 42.69% (73/171). The most common causes were sepsis in 58 neonates accounting for 79.45% of the total mortality and E.coli was the commonest organism grown. Fungal sepsis was present in 3 neonates. The highest anomaly wise mortality was found in patients with gastroschisis (83.33%) followed by jejunoileal atresia (60%) whereas mortality noted with EA+TEF and ARM was 48.38% and 38.46% respectively. A high mortality was seen in low birth weight (LBW) neonates (65% of total deaths) as well as preterm neonates (31.5% of total deaths).

CONCLUSION: Sepsis (79.45%), LBW (65%) and preterm (31.5%) were the leading cause of mortality for surgical neonates. This compares favorably with reported literature and needs appropriate attention.
Materials and Methods: We evaluated consecutive cases of hernia of the umbilical cord and omphalocele minor for presentation, diagnostic criteria, operative procedure, associated anomalies, and outcome.

Results - Eight (08) cases were identified as HUC. HUC had a strip of skin covering the umbilical ring, and proximal cord and the size of the defect was <4cm. All the HUC had an external covering of a thin or thick amniotic membrane except one with the prolapsed patent vitellointestinal duct (PVID). All the cases had only small bowel as a content. Rectus had approximation in the midline in all cases of HUC. Six (06) cases were identified as OM. All OM had a smaller defect (<4cm). All OM had liver and small bowel as content, and rectus had lateral insertion, creating a depression superiorly. 02 cases of OM had small VSD, and one had large PDA. No cases of HUC had associated cardiac anomalies. 04 cases of OM were managed by primary closure, while 02 managed conservatively. All the cases of HUC were managed by primary closure with umbilical ring formation.

Conclusion - HUC and OM had similar presentation but differed in many ways. Differentiation needed for the proper management of associated anatomical and cardiac anomalies.

Mode of presentation: Long oral presentation (5+2)

Title: Pattern of congenital malformations in babies born after assisted reproductive technology and their surgical outcome

Authors: Waseem Jan Shah, Simmi K Ratan, Siddarth Ramji, Sudha Prasad, Satish Aggarwal

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Abstract:
Background: There are variable reports of higher or comparable incidence of congenital malformations in babies born after assisted reproductive technology (ART).
Aim: To study pattern of congenital malformations in babies born after assisted reproductive technology and the outcome of surgically correctable congenital malformations in these babies.
Methods: The study was conducted in the Department of Pediatric Surgery, in a tertiary care hospital. It was a cross sectional study of two years duration. The primary outcome of malformations was compared between the ART and spontaneous conception groups and analyzed by Chi-square/Fischer exact test. Results: The average maternal age (31.7yrs versus 25.8 yrs) and average paternal age (35.7yrs versus 27.5 yrs) in ART group was significantly higher compared to the non-ART group. The mean gestational age was 35.34 weeks in ART group and 37.8 weeks in non-ART group. The rate of malformation between ART and non-ART groups (8.5% vs. 2.85%) did not reach statistical significance (p=0.087). There was a significantly higher incidence of preterm births (<37 weeks) in the ART group (80%) in comparison to non-ART group (23.5%). Majority of babies (57.1%) in the ART group were low birth weight whereas in non-ART group, the incidence was 32.1%.
Conclusion: An increased risk of prematurity, multiple births and low birth weight in babies born after ART in comparison to non-ART group was observed. The rates of congenital malformations after ART were slightly higher but not statistically significant compared to non-ART group.
Keywords: Assisted reproductive technology, congenital malformation, In-vitro fertilisation

Key Messages: Incidence of congenital malformations after ART is slightly higher but not statistically significant compared to spontaneous conception. Larger studies which include intrauterine deaths due to severe congenital anomaly, still births and first trimester abortion due to chromosomal anomaly are needed to know the true pattern of congenital malformations after ART.

Mode of presentation: Long oral presentation (5+2)

Title: Outcome of Robotic Assisted Laparoscopic Pyeloplasty (RALP): A review of 20 cases

Authors: Rajat Piplani, Enono Yhoshu

Department Institution: Department of Pediatric Surgery All India Institute of Medical Sciences, Rishikesh

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Abstract:
Aims: To study the outcomes of Robotic Assisted Laparoscopic Pyeloplasty (RALP)
Introduction: Minimally invasive surgery in children has been the cornerstone of Paediatric surgery. Use of Robots in paediatric MIS has been an advantage for not only the patient but also for the surgeons. We report our experience and results of the first 20 Robotic Assisted Laparoscopic Paediatric Pyeloplasties performed by a single surgeon.
Methods: Prospective two-year observational study including all pediatric Pelvi-ureteric Junction Obstruction (PUJO) cases aged between (5 months-17 years) underwent Robotic Assisted Laparoscopic Pyeloplasty using DaVinci Xi Robotic system. All cases were operated by single surgeon (First Author). Preoperative ultrasound and DTPA renogram was done for each patient. Intraoperative details and postoperative follow up (1 year) were recorded and results were derived.
Results: Around 20 Robotic Assisted Laparoscopic Pyeloplasty cases were operated by the first Author in 19 patients (12 males and 7 females). One patient had bilateral PUJO and underwent bilateral RALP one at a time separately. DJ stenting was done in all patients and stents were removed at 6 weeks follow up. All patients were followed up with post-operative ultrasound atleast at 3 months and DTPA renogram at 6 months. Only one child had post-operative pyonephrosis for which Percutaneous Nephrostomy was done, however in the follow up nephrostogram the child had patent PUJ. On further follow up, all patients showed improvement in hydronephrosis on ultrasound along with functional improvement on DTPA renogram.
Conclusion: Robotic Assisted Laparoscopic Pyeloplasty is a safe and effective alternative for paediatric PUJO. It is not only advantageous for the patient but also for the surgeon in view of better control of the camera and other instruments during laparoscopy along with other ergonomic advantages.

Mode of presentation: Long oral presentation (5+2)
Title: Assessment of the ergonomic risk to the surgeon during vesicoscopic cross-trigonal ureteric reimplantation: A preliminary comparison between the laparoscopic and robotic approaches
Authors: Sachit Anand, Bhushanrao Jadhav, Gursev Sandlas
Department Institution: Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute
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Abstract:
The present study was conducted to evaluate the ergonomic risk of musculoskeletal disorders (MSDs) to a single surgeon while performing vesicoscopic ureteric reimplantation. We also compared the ergonomic risk associated with two different approaches of vesicoscopic reimplantation, i.e. laparoscopic (Group A) versus robotic (Group B).
Materials and Methods
The authors prospectively included all children with primary vesicoureteric reflux (VUR) who have undergone ureteric reimplantation via the vesicoscopic approach at their center w.e.f July 2015 through October 2019. Data including age at the time of surgery, gender, the severity of VUR (grade), number of ureters involved (unilateral or bilateral), and procedural details were retrieved. Rapid Entire Body Assessment (REBA) tool was used for the ergonomic risk assessment of each procedure. The REBA score was graded as negligible (1), low (2-3), medium (4-7), high (8-10), and very high (11 or more). The risk index was considered as normal (1 or less) and high (>1).
Results
A total of sixteen patients (M: F= 9:7) with grade IV-V reflux were included in the present study. Of these, groups A and B had eleven and five patients respectively. The average (range) age of the children belonging to groups A and B were 3 (1-4) and 7.5 (3-11) years respectively, demonstrating a statistically significant difference (p=0.0004). Other variables showed no significant difference among the two groups (Table). The average REBA scores while performing vesicoscopic reimplantation via laparoscopic and robotic approaches were 13 and 5 respectively. The risk index in both approaches were 3.25 and 1.25 respectively.
Conclusion
In a limited cohort of patients, the ergonomic risk to the surgeon while performing pneumovesicoscopic ureteric reimplantation was higher than the set cutoff (REBA score <4 and risk index < 1). Comparative assessments of the risk depict the robotic approach to be ergonomically superior.
**Mode of presentation:** Long oral presentation (5+2)

**Title:** Robot assisted laparoscopic pyeloplasty in children- A single centre experience

**Authors:** Vidhya Tamizhvanan, Swetha K, Rajiv P, Sripathi V

**Department Institution:** Apollo Children's Hospital

**Abstract:**
To describe the outcome of Robot Assisted Laparoscopic Pyeloplasty (RALP) in 145 infants and children over a 6 year period.

**METHODS:**
This is a retrospective review of 145 children who underwent RALP in the pediatric urology unit at Apollo Children’s hospital, Chennai between June 2013 and September 2019. After surgery children were followed up for at least 2 years with serial ultrasounds and EC renogram. Success was defined as improved drainage / function in EC renogram and or resolution of hydronephrosis on ultrasound scans.

**RESULTS:**
Mean age was 4.8yrs (1mon-17yrs), average console time was 76min (40-180min). Four children underwent redo pyeloplasties and 8 children were noted to have crossing vessels. There was a PUJ obstruction in one horn of a horseshoe kidney and two children had PUJ obstruction of the lower moiety of an incomplete duplex.

Average length of hospital stay was 3 days. 105 children were evaluated with EC Scans. Of these 74 showed improvement in function, 28 were stable and one child with superfunction preop became normal postop. In 2 children there was more than 10% drop in function but no obstruction to drainage. 38 children who were evaluated only with ultrasound showed excellent reduction in pelvi-calyceal dilatation.

Two children had persistent gross calyceal dilatation and were restented after confirming patency and dependancy of the PUJ. Complications were Clavien 2 in 3 children and 3b in two children.

**CONCLUSION:**
Based on our experience RALP is safe and gives results similar to open pyeloplasty. RALP is our procedure of choice for Pelvi-Ureteric Junction Obstruction in children.

**Mode of presentation:** Long oral presentation (5+2)

**Title:** An audit of robot-assisted laparoscopic surgeries in children: Early experience from a tertiary-care center in India

**Authors:** Sachit Anand, Bhushanrao Jadhav, Gursev Sandlas

**Department Institution:** Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute

**Email:** kanu.sachit@gmail.com

**Abstract:**

**Aims**
Over the last decade, a significant rise in pediatric robot-assisted laparoscopic surgeries has been observed. Apart from the urological surgeries in children, robot assistance for complex non-urologic reconstructions is being explored increasingly. This study highlights our preliminary experience of robot-assisted laparoscopic surgeries in children.

**Materials**
A retrospective analysis was done to include all the pediatric robot-assisted laparoscopic surgeries performed at our hospital over a four-year period (January 2017-January 2021). The surgeries were categorized based on the involved organ-system and the total study duration was divided into four 12-month time-periods. A comparison of the total number of surgeries done in each time-period was also done. A log of the surgeon’s console duration for each surgery was also kept.

**Methods**
A total of sixty-five patients, with the majority (50/65; 77%) undergoing reconstructive surgeries for anomalies within the genitourinary system, were included. Almost two-thirds of the total surgeries were technically complex. The average (range) surgeon’s console time was 95 minutes (45 minutes-327 minutes) and showed a progressive improvement with the
passage of time. Only one patient required conversion to an open approach, and none had major complications during the postoperative period.

Conclusion

Our early experience of robot-assisted laparoscopic surgeries in children reaffirms its safety and feasibility in complex reconstructive surgeries. It also highlights the advantages of robot-assistance in smaller children with non-urologic anomalies.

Mode of presentation: Long oral presentation (5+2)

Title: Outcome of robot assisted extravesical reimplantation (RALEUR) in unilateral VUR

Authors: Vidhya Tamizhvanan, Rajiv P, Sripathi V

Department Institution: Apollo Children's hospital

Email: vidhyatvanan@gmail.com

Abstract:

To evaluate the outcome of extravesical reimplantation using the Da Vinci robot in children with unilateral VUR.

MATERIALS:

This is a retrospective study to evaluate the outcome of unilateral Robotic extravesical reimplantation in 18 children over a 7-year period. Indication for surgery were unresolved high grade VUR, recurrent/breakthrough UTI (with or without dysfunctional elimination syndrome - DES), renal scarring, paraureteric diverticulum. All the children underwent MCUG and DMSA preoperatively.

RALEUR was done using four ports, a tunnel of 3-5 cms was created and reimplant done using polyglactin sutures. In those with diverticulum ureter was completely detached, diverticulum excised, ureter reattached and then reimplanted. These ureters were stented and subjected to Day Care removal 8 weeks later.

Followup was for 2 years with serial ultrasounds and urine evaluation. Before final review MCUG/DRCG and DMSA were done. Success was defined as complete reflux resolution or reduction in reflux grade. Resolution of ureterohydronephrosis (UHN) was also taken as success.

RESULTS:

The mean age of reimplant was 5.5yrs (2.5-12yrs). Mean console time was 97min (40-200) and hospital stay was 2.8 days (2-4days). Post operatively 3 children had UTI (stent related). One child was lost to followup and was discounted from analysis. Complete resolution of VUR was shown in 13 children (7 with grade 5 VUR, 6 with grade 4), downgrading of reflux was seen in 3 children (2 with grade 4, 1 with grade 3)

One refractory DES showed persistent UHN with a large postvoid residue, 2 other children (with unresolved DES) had persistent postvoid on follow up. There was no correlation between tunnel length and surgical success.

CONCLUSION:

Our limited series of 18 children has shown a complete reflux abolition rate of 76.4% following unilateral RALEUR. If downgrading is also included as success then RALEUR in this small series shows 94% success keeping in line with international publications. Tunnel length did not correlate with success. RALEUR is a simple procedure with no bladder opening and no stenting. It can be easily taught with reproducible results.

Mode of presentation: Long oral presentation (5+2)

Title: Robot assisted laparoscopic management of suprarenal and renal tumors in children

Authors: Vidhya Tamizhvanan, Rajiv P, Sripathi V

Department Institution: Apollo Children's hospital

Email: vidhyatvanan@gmail.com

Abstract:

To present a case series on robot assisted laparoscopic management of benign and malignant adrenal and renal tumors in children.

MATERIALS AND METHODS:

Six children underwent Robot assisted surgery for various suprarenal and renal tumors between November 2015 and March 2020 in our Pediatric Urology unit. All cases were discussed in the tumor board, operative feasibility considered and parental consent obtained. Surgery related morbidity and oncologic outcomes were analysed.

RESULTS:
Out of 6 children, 4 underwent adrenalectomy (2 malignant, 1 functioning tumour, 1 benign), 2 underwent partial nephrectomy (1 malignant and 1 vascular lesion). Mean age was 9.2yrs (1.5 – 13 years), the youngest being 15months old with weight of 7.4kg. The average tumor size was 3.4cm (0.4 – 9.2). Mean console time was 125minutes and average blood loss was 100ml.

Four children had mild respiratory distress in the post operative period requiring nasal oxygen for 24-72hrs due to mild pleural effusion in 3 and transient diaphragmatic paresis in one child. All of them recovered with conservative management. Oral feeds could be started as early as 4 hours postop (4 – 40 hours), hospital stay averaged 5.5 days and was skewed by one Cushing’s Syndrome child who had a prolonged stay due to adrenal crisis.

HPE revealed Neuroblastoma in 2 children (Stage 4 poorly differentiated neuroblastoma and N MYC+, and stromal poor with opsomyoclonus). The other two adrenal lesions were micronodular hyperplasia and vascular cyst. Renal pathology was Renal Cell Carcinoma (RCC) in one and Angiomyolipoma (AML) in the other.

Follow up was between 3 months and 6 years and showed no recurrence of RCC or AML. Among the Neuroblastoma group, one child with stage 4 disease underwent stem cell rescue and is alive 2 years later with stable liver mets. The child with opsomyoclonus has shown marginal improvement with steroids and has no recurrence of the Neuroblastoma six years later. The Child with Cushings has shown excellent weight loss, hypertension and diabetes control and is due for followup.

CONCLUSION:
Robotic assistance offers favourable outcomes in excision of adrenal and renal tumors in selected cases. All cases should receive tumor board review and approval and oncological principles should meticulously followed.

Mode of presentation: Long oral presentation (5+2)
Title: Surgical Etiquettes of Paediatric Ovarian tumors
**Authors:** Dyan DSouza, Shalini.H, Rajkiran Raju, Kiran M, Prasanna Kumar A.R, Shubha. A.M, Suravi Mohanty

**Department Institution:** Department of Pediatric Surgery, St John’s Medical College Hospital, Bangalore

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**Abstract:**

Aim: Ovarian tumors are uncommon in children. Their presentation, course, histopathology, and management are way different from that in adults. We present our series on pediatric ovarian tumors and discuss the observed divergence in their behaviour, management and outcomes.

Methods: It is a retrospective, analytical review of girls from 0-18 years with ovarian tumors over 10 years (2010-2020). Information was sourced from case records, operative notes, and histopathology reports.

Results: Among 51 patients, there were 12 neonates, 10 (1 month - 5 years) and 29 (>5 years). Predominantly right sided (30) and bilateral in 2. 8/12 neonates had antenatally detected pelvic mass. In older children pain abdomen (acute/chronic) or mass was the common presentation. Across the age groups, torsion was common followed by benign cysts and malignancy (12). 1 girl had bilateral tubercular tubo-ovarian mass. 13 were conservatively managed whereas 38 underwent surgery – oophorectomy (u/l-23, b/l-1), with Contralateral oophoropexy (9) and marsupialization (5). Among malignancies, Germ cell tumors were frequent with bilateral gonadoblastoma in a neonate not so far reported in the literature.

Conclusion: Paediatric Ovarian tumors though uncommon are a cause of concern. Routine antenatal ultrasound has increased the incidence of detection. Torsion is commoner in benign tumors. Minimally invasive surgery involving ovarian salvage and preservation of fertility ensures favourable outcome.
**Abstract:**

**Aim**

This study aims to review ovarian masses in children and adolescents treated at our institute with emphasis on presentation, diagnosis, treatment, and outcome.

**Methods**

We retrospectively reviewed the electronic medical records of all patients below 18 years of age who underwent surgical treatment for ovarian masses at our institute between 2009 and 2021. Study variables included age at presentation, clinical symptoms, physical findings, tumor markers, radiologic features, operative notes, pathology results, follow-up status and overall survival.

**Results**

During the study period, 27 patients with mean age 10.5 years (range: 15 days-18 years) underwent surgical treatment for ovarian masses. Non-neoplastic ovarian masses were seen in 5 (18.5%) patients while 22 (81.5%) patients had benign [8 (29.6%)], borderline [3 (11.1%)] or malignant [11 (40.74%)] ovarian neoplasms. The commonest clinical presentation in benign group was abdominal pain (n=4) whereas painless abdominal mass (n=6) was the predominant complaint in children with malignant tumors. A functional ovarian mass presenting with precocious puberty or virilisation was seen in 5 (18.5%) patients. On imaging, non-neoplastic and benign lesions had a mean size of 4.33 (range: 3.1-6) cm and 14.65 (range: 2.8-32) cm, respectively; while borderline and malignant masses had mean tumor size of 22.5 (range: 6.5-32) cm and 12.89 (range: 3.5-18.7) cm, respectively (p<0.05). Cystic component was identified in all non-neoplastic and benign tumors; whereas, solid component was present in all borderline and malignant lesions (p<0.05). Tumor markers such as serum AFP, beta-HCG were raised in all malignant tumors, whereas markers were normal in all benign lesions (p<0.05). In 4 (14.8%) patients with non-neoplastic and benign masses with maximum tumor size < 6 cm, laparoscopic approach was adopted, while open surgery was preferred in rest of the patients. At a mean follow up of 53.5 (range: 4-117) months, all patients are alive and disease free.

**Conclusion**

Pre-operative imaging characteristic (tumor size, solid component) and raised tumor markers may help us to differentiate between benign and malignant ovarian pathologies. The overall prognosis of the pediatric ovarian tumors seems to be favourable.

**Mode of presentation:** Long oral presentation (5+2)

**Title:** Extracranial Malignant Rhabdoid Tumors in Children: Management Perspective in eight cases—Single Unit Experience

**Authors:** Saswati Behera, Nitin James Peters, Ram Samujh, Subhalaxmi Ramdas Nayak, Amita Trehan, Pulkit Arora

**Department Institution:** Department of Pediatric Surgery PGIMER Chandigarh

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**Abstract:**

Aim: Management perspective of extra cranial malignant Rhabdoid tumours

Patients and methods: A retrospective review of medical records of eight patients with pathologically confirmed malignant rhabdoid tumours affecting extracranial sites (both renal and extracranial origin).

Results: Eight patients (6 males and 2 females) at a median age of 18 months were diagnosed with MRT (renal MRT-4 patients, thoracic MRT- 3 patients (2 arising from thoracic cavity and 1 arising from soft tissue of upper back) and ovarian MRT- 1 patient). 3 out of 4 patients (median age group 59 months) with renal MRT, were diagnosed with bilateral pulmonary metastatic lesions and mediastinal lymphadenopathy pre-operatively. Contrast enhanced computed tomography (CECT) abdomen and pelvis depicted heterogeneous renal mass with multiple enlarged necrotic conglomerated retroperitoneal lymph nodes in all the three patients. 2 out of 4 patients with renal MRT
under nephroureterectomy with retroperitoneal lymph node dissection (LND), whereas only tumor biopsy was feasible in one patient. Intraoperatively, thoracic MRT patients had very friable mass originating from thoracic wall with infiltration into adjoining muscles and ribs. Only one out of three children with chest wall MRT is under follow up with recurrence free period of 2 years after advent chemoradiotherapy. Among the 8 patients, only two children survived (posterior chest wall MRT and ovarian MRT), one of them (metastatic renal MRT with pulmonary lesions) did not consent for surgery and two children with thoracic MRT left against medical advice due to poor prognostication.

Conclusion: Most of the MRT are highly aggressive and metastatic right in their initial presentation. Younger patients suffering from metastatic disease frequently have dismal outcome due to rapid progression and recurrence of disease. Diagnosis of MRT as a distinct entity is a challenge and often demands multimodal approach.

Mode of presentation: Long oral presentation (5+2)

Title: Management and outcomes of pheochromocytoma- a single centre experience.
Authors: Naveen Kumar M, Susan Jehangir Homi, Jiju Jacob Kurian, Jeniffer prabhu
Department Institution: Department of Pediatric Surgery, Christian Medical College, Vellore
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Abstract:
Aim: Our objective was to analyse the presentation, diagnostic localization, operative management, histology, and long-term outcome of a single centre’s experience with Pheochromocytoma’s in children.
Methods: A chart review was done to identify all operatively managed pheochromocytomas in patients age 16 years or younger. Open and laparoscopic cases were included. We reviewed the presentation, diagnostic imaging, localization, operative management, pathology, and postoperative outcome of these patients.
Results: From 2009 through 2021, there were 7 children (five boys and two girls) with 7 pheochromocytomas. One patients had extra-adrenal lesion (Organ of Zucerkandl). The average age at presentation was 12.1 years (range 8-15 years). All patients presented with nausea and vomiting and were found to be hypertensive. Three children presented in hypertensive crisis and required ICU admission. Urine normetanephrines were elevated in all patients. CT was used to localize the tumour to the adrenal in all children. Two children had associated von Hippel-Lindau syndrome. Five patients underwent an open operation and one had a laparoscopic and one retroperitoneoscopic resection. The average patient follow-up was 4.5 years (range 3 months to 7 years). There were no operative complications and all patients were alive and well at the time of last follow-up. No tumours recurred or had evidence for metastatic spread.
Conclusion: Children with pheochromocytoma present in adolescence with vomiting and hypertension. The best current management of this entity includes establishing a biochemical diagnosis, adequate preoperative blockade, appropriate imaging, and an individualised surgical approach based on tumour location and size. Resection can be performed safely and with little morbidity and mortality. The tumour carries a good long term prognosis.

Mode of presentation: Long oral presentation (5+2)

Title: Extra-gonadal germ cell tumor in children: Perioperative problems
Authors: Anju Verma, Basant Kumar, Vijai D Upadhya, Ankur Mandelia, Pujana K, Rohit Kapoor, Shyamendra Pratap Sharma.
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Abstract:
Background: Primary extra-gonadal germ cell tumors (GCTs) are rare. Retroperitoneal and abdominal germ cell tumors account for approximately 4% of all germ cell tumors in children. Prognosis is usually excellent after complete excision. Various perioperative problems reported during and after excision of retroperitoneal GCTs. Here, we present our experience with extra gonadal abdominal GCTs and reported the perioperative problems and morbidity associated with management of these tumors.
Methods: From July 2012 to January 2020, all patients with primary abdominal GCTs were retrospectively reviewed. Demographic features, clinical, laboratory, radiographic, intraoperative findings along with perioperative complications and histopathology results were assessed.

Results: A total of 23 patients with abdominal GCTs were managed. Diagnosis were teratoma in 17 (Mature- 10, Immature- 7) and yolk sac tumor (YST) in 6 patients. Out of 23 patients, 8 were female. Age ranged from 2 months to 6 years. Presentations were abdominal distention, palpable lump, fever, pain, respiratory distress, vomiting and sub-acute bowel obstruction. Serum alfa-feto protein (AFP) was raised in all patients. Complete excision was achieved in 17 patients. 6 patients were managed by chemotherapy with surgery while in 11 patients, only surgery was performed. Perioperative problems include excessive blood loss (2), excision of adjacent organ (2), incomplete resection (3), hypothermia (1), respiratory problems (3), and adhesive bowel obstructions (6). Re-intervention needed in 5 patients [Re-exploration for adhesive bowel obstruction-4; and radiological drainage of retroperitoneal collection-1] within 3 months of first surgery. One patient was died while 3 patients were lost in follow-up. Follow-up ranged from 6 – 60 months.

Conclusion: The management of retroperitoneal or abdominal GCT is challenging. Various surgical difficulties and morbidity associated with resection of these tumors depend on its nature, size and site of tumor and on the age of the patient.

Mode of presentation: Long oral presentation (5+2)
Title: Spectrum of Sacrococcygeal Teratoma-Importance of Individualized approach
Authors: Manasa A, Pooja Gujjal Chebbi, Ramesh S
Department Institution: Department of Pediatric Surgery, Indira Gandhi Institute Of Child Health, Bangalore
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Abstract:
Aim: To study spectrum of clinical presentation, management and outcome of children with Sacrococcygeal Teratoma (SCT), with emphasis on individualized management.
Methods and Materials: Retrospective study from 2013 to 2020 (7 years) at a tertiary referral centre. We collected data on demography, clinical presentation, radiological/ biochemical and histopathological reports, management and complications and followed up the present status.
Results: We treated 18 children from 2013-2020, with a female ratio of 3.5:1. Of these, one antenatally diagnosed and presented at birth, 5 children in neonatal period (with swelling), 5 children within 1 year (3 with urinary disturbance/ constipation; 2 with swelling), 7 presented after 1 year (6-swelling, 1-constipation). Grouped as per Altman classification- I, II (n=9), III (n=6), IV(n=3) based of imaging. Alfa-feto protein levels were raised in 13. Five children with Altman grade III, IV underwent neoadjuvant chemotherapy (NAC), based on immature elements on FNAC. Surgical excision was performed in 17 out of 18 (1 child expired during NAC). Histopathology showed immature elements in 9 out of 17, 6 of whom received adjuvant chemotherapy. Surgical complications were noted in 3 (SSI-2; spillage -1), recurrence in 1 child with spillage and 4 have succumbed to the disease (NAC-1; adjuvant phase -3). Follow up period is 1-7 years, 14 out of 18 children (77.7%) followed are well.
Conclusion: The spectrum of presentation of SCT is highly varied, making the approach and management of each patient highly individualized. This is influenced by radiology and histopathology. Multimodal approach (neoadjuvant/ adjuvant chemotherapy and surgery) is effective in management of this pathology, with more than 70% of the children doing well in the follow up period. Further, a high index of suspicion is essential with emphasis on antenatal diagnosis, ensuring safe delivery and management of the condition at the earliest.

Mode of presentation: Long oral presentation (5+2)
Title: Outcomes Of Benign Retroperitoneal Germ Cell Tumors – Experiences from North India

41
Authors: Apoorv Singh, V Jain, A Dhua, P Goel, DK Yadav, M Jana, D Kandasamy, S Bakhshi, S Agarwala
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Abstract:
Aim: To report the epidemiological aspects and outcomes of children with benign retroperitoneal germ cell tumours (GCT) presenting to our centre.

Methods: A retrospective study was conducted, and all patients with retroperitoneal GCTs, managed from January 1998 to December 2018 were enrolled. Patients with increased alpha-fetoprotein (AFP) or with malignancy on histopathology were excluded. Prospectively maintained data of the included patients were evaluated for patient demographics, presenting symptoms, their duration, radiologic and histologic findings, surgical procedures, postoperative complications, and recurrence.

Results: Of the total extracranial GCTs operated in our centre in the abovesaid duration, a total of 24 patients were of retroperitoneal GCTs comprising of 9 males and 15 females. The median age at presentation was 10.5 months (10 days – 14.8 years). The most common presentation was a palpable abdominal mass in 19/24 patients. A few patients had an unusual presentation, such as hypertensive emergency (n=1) and polymenorrhagia (n=1). All the patients underwent operative intervention, with 23/24 of them undergoing complete excision. Intraoperatively, 6/24 (25%) patients had a close relationship of the tumour with major vessels (3/24), close relation with duodenum (2/24) and diaphragmatic infiltration (1/24). These patients required fine intraoperative dissection, and, in a few cases, additional procedures such as bowel resection (1/24) and diaphragmatic repair (1/24) were also required. Immature teratoma was present in 4/24 of the patients. The median follow-up was 24 months (1 month – 168 months), and one patient had a significant complication (adhesive obstruction). There were no recurrences in the cohort.

Conclusion: The current study highlights the need for adequate intraoperative visualization of the vital structures and the importance of complete excision in these patients leading to a survival. The study also emphasizes that regular follow up is necessary for these patients for surveillance of complications or recurrence.

Mode of presentation: Long oral presentation (5+2)

Title: Ovarian tumors: A 5 year audit
Authors: Deepti Pai, Nitin. J. Peters, Ram Samujh, Shubhalaxmi. R. Nayak, Amita Trehan, S. Radhika
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Abstract:
Aim: To analyse the various presentations, types and management of ovarian tumours in children and adolescents. Methodology: Retrospective analysis of records of patients with ovarian tumours between 2016 to 2021.

Results: Sixteen girls between 7 months and 14 years were found to have ovarian tumours. Right laterality was seen in 8 girls. There were 4 benign and 12 malignant tumours with 1 recurrence. Commonest presenting symptom was abdominal mass, (n=9). Others included, abdominal pain, vomiting and distension. One patient presented with precocious puberty. CECT abdomen was the commonest imaging modality (n=15). AFP and B HCG were done for 14 patients. One patient was pre-operatively misdiagnosed as rhabdomyosarcoma of urinary bladder and was found to have malignant small cell carcinoma of ovary. Nine patients had pre-operative tissue diagnosis. 15 out of the 16 patients underwent salpingo-oophorectomy, where as one patient underwent ovarian preserving cystectomy. Most common diagnosis was germ cell tumour. One patient was treated for recurrence of immature teratoma. Neo-adjuvant and adjuvant therapy was given as per protocol in all patients. There was 1 mortality in this cohort and rest are doing well with no recurrence.
Conclusion: Ovarian tumours can be managed satisfactorily with surgical intervention and carry good prognosis. CECT abdomen and pelvis and tumor markers guide the management strategies. Malignant ovarian tumours should be treated aggressively with surgical and medical management.

Mode of presentation: Long oral presentation (5+2)

Title: Solid pseudo papillary tumor of pancreas (SPT) in children: a single institution 12-year experience

Authors: Ashish S Samuel, Sreekanth K T, Susan Jehangir Homi, Jujju J Kurian, Sampath Karl

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Abstract:
Aim: The aim of this study is to review our institution's experience and provide an update on current management of solid pseudo papillary tumor of pancreas (SPT) in the pediatric population.
Methods: The data was collected from the hospital charts of all patients with SPT admitted to pediatric surgery department between 2009 and 2021. They were reviewed for demographic characteristics, presenting symptoms, diagnostic interventions, physical examination findings, radiological data, extent of disease, diagnostic and management strategies and outcome.
Results: 14 cases of SPT were admitted during this period. Majority (n=12) of cases were female. Abdominal pain (n=10) was most common presenting complaint. A mass was palpable in 8 cases. CT was the preferred mode of imaging modality (n=10) cases. 2 children underwent percutaneous biopsy. Whipple procedure was done in 7, distal pancreatectomy in 5 and wide local excision was done in 2 patients. Mean post-operative follow up was 2 years. All patients had a follow up with MRI at 1 year followed by ultrasound screening. 1 patient who had recurrence required re-exploration, chemotherapy, and radiation. Chronic pancreatitis and pancreatic were observed as complications post-surgery. Beta Catenin and Synaptophysin were the IHC markers which were positive in majority of the tumors.
Conclusion: SPT is a rare tumor in children. Although it behaves as benign tumor, some can recur. A complete resection of the tumor provides cure in most. If recurrence is noted further surgical clearance and adjuvant chemotherapy becomes necessary. Further research into immunohistochemistry is required to predict the behavior of these tumors.

Mode of presentation: Long oral presentation (5+2)

Title: Technical Aspects Of Liver Resection In Hepatoblastoma – Single Unit Experience

Authors: Sriram Christopher, Vivek, Karpagavinayagam, Jeevarathy, R. Senthilnathan, R . Velmurugan

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Abstract:
Background : Liver tumors are the third most common solid abdominal organ tumor in children representing 0.5–2% of pediatric neoplasm. About half hepatic neoplasms in paediatric age group are malignant with hepatoblastoma being the most common. The diagnosis and treatment of hepatoblastoma is well established with surgery of this major organ is always challenging. The aim of this study is to report our experience in surgical management of liver tumors and highlighting surgical techniques.
Methods: This analysis is a retrospective study of children admitted with the diagnosis of hepatoblastoma in two hospitals by same author for the last 6 years between June 2015 to June 2021. Results: Total of 8 children underwent hepatic resection out of which 6 children are alive. One developed recurrence after 1 year for which child was reoperated and died 1 year later. Another child had associated portal hypertension and died on the day of surgery. In this study, Techniques employed in the liver resection is analyzed and discussed.
Discussion: Hepatic resection in children is a challenging procedure. Appropriate case selection based on imaging modality is prerequisite for successful outcome.
**Title:** Indications, feasibility and outcomes of Non anatomical liver resection in children

**Authors:** Krishna Rao, Nitin J Peters, Ram Samujh, Shubhalaxmi R Nayak, Sandhya Yaddanapudi, Akshay Saxena

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**Abstract:**

Background: Non-anatomic Liver resection (NAR) offers better preservation of liver parenchyma, that in turn, may be associated with lower perioperative morbidity, and a lower incidence of an inadequate future liver remnant (FLR) and liver insufficiency.

Aim: To study the indications, feasibility and outcomes for NAR in paediatric liver tumours.

Patients and Methods: Over the last 5 years, 16 patients underwent anatomical liver resection and 3 patients underwent non-anatomic liver resection. In NAR group all were boys. 1st patient was 2 years old, with Hepatoblastoma. PRETEXT 3 with portal vein thrombosis. A large portal cavernoma made portal dissection and thereby anatomical resection impossible and NAR was resorted to. The 2nd patient was also 2 years old and a mesenchymal Hamartoma arose from segment VI and VII. This patient underwent NAR. The 3rd patient was an operated case of left hepatectomy who had a recurrence with a satellite (3x3 cm) nodule on segment 7 of liver. He was treated with NAR with an adequate margin.

Results: Non anatomic resection was achieved in all 3 patients, without significant bleeding, none of the patients had bile leak and uneventful post operative recovery. None of the patients showed recurrence in our follow up.

Conclusion: NAR of liver is feasible in selected patients of liver tumours and cases with difficult portal dissections such as portal cavernoma, and satellite lesions.

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**Title:** Management and outcome of Wilms tumor with intracaval thrombus: Seventeen-Year experience from a tertiary care centre

**Authors:** Nellai Krishnan, V Jain, A Dhua, S Agarwala, S Bakhshi, M Srinivas, A Biswas, S Thulkar, M Jana, D Kandasamy, AK Bishoi, V Bhatnagar, M Bajpai

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**Abstract:**

Aim: To present our experience in the management and outcome of Wilms tumor with intracaval thrombus.

Methods: All children with Wilms tumor with intracaval thrombus who presented to us from July 2000 to December 2017 were reviewed retrospectively. We evaluated the tumor stage, management and outcomes in these patients.

Results: Thirty-four patients were included in the study. The median age of presentation was 48 months (11-84 months). Fifteen (44%) of these patients had Stage IV disease. Preoperative chemotherapy was given in 32 (94%), with a median duration of 8 weeks. Intracaval thrombus completely resolved in 9 (26%) after neoadjuvant chemotherapy. Surgical intervention for residual IVC thrombus was performed in 32 patients; of which cavotomy in 17 (50%), excision of part of the wall of the IVC and patch repair in 1 (3%) and cavectomy in 5 (15%). The median follow-up was 30 months (5 –150 months). At the last follow-up, 25 patients (73%) were alive and disease-free. The 5-year overall survival and event-free survival were 67% (95 CI, 50%-84%) and 54% (95 CI, 35%-75%). The overall survival in children with non-metastatic disease (94%) was significantly higher than those with metastases (29%; p<0.01). The event-free survival was also higher in the non-metastatic group (88% vs 22%; p<0.01). The overall survival in children with complete resolution of IVC thrombus (100%) was significantly higher than those with persistent thrombus (48%; p=0.025).

Conclusion: The management of Wilms tumor can be complicated by the presence of caval thrombus. Patients with metastasis have a significantly poor outcome. Patients in whom, there is complete resolution of intracaval thrombus on neoadjuvant chemotherapy have a significantly higher overall survival.
Title: Outcome of high risk neuroblastoma at a tertiary pediatric oncology centre
Authors: Pallav Kumar, Nabeel Q, MM Zameer, Vinay C, Sanjay Rao, Ashley D’Cruz
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Abstract:
Aim: To present the outcome of high risk Neuroblastoma
Material and methods: Children with high risk neuroblastoma (as per INRG risk stratification), who presented to us from January 2015 to January 2021 were included in study. They received treatment as per COG protocol (induction chemotherapy, surgery and then high dose chemotherapy followed by autologous stem cell transplant (ASCT) and radiotherapy). Outcome parameter assessed was overall survival. Minimum follow up period was for 6 months.
Result: Of twenty two children that were included in the study, fourteen were boys. Mean age of presentation was 54 months (4 months - 154 months). The site of primary disease was retroperitoneum in nineteen and mediastinum in the remaining three. While twenty children had stage 4 disease at presentation, two had stage 3 disease. Commonest metastatic site was bone marrow, seven had multiple site metastasis. N Myc amplification was noted in eight children.
Out of twenty two children with high risk neuroblastoma, five children were lost to follow-up, remaining seventeen children were followed up, longest follow up period is 58 months (6m - 58m), average follow up is 20 months. Out of seventeen who were on follow up, six children are disease free and doing well till the last follow up. Ten children died either during treatment or post treatment due to relapse. One child has progressive disease and is on palliative therapy.
Overall survival in high risk neuroblastoma is approximately 30-40% at the end of 5 years.
Conclusion: Majority of the children with high risk neuroblastoma presented after 18 months of age, the most common site of the primary was retroperitoneum. Most common site of metastasis was bone marrow and about 1/3rd had more than one organ involvement. Overall survival in high risk neuroblastoma despite treatment is approximately 30-40%.

Mode of presentation: Long oral presentation (5+2)
Title: Dancing eye dancing feet!! Lessons learnt from 18 consecutive patients of OMAS
Authors: Nitin James Peters, Ram Samujh, , Lokesh Saini, Jitendra Sahu, Amita Trehan
Department Institution: Department of Pediatric Surgery, PGIMER, Chandigarh
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Abstract:
Introduction/Aims: Opsoclonus-myoclonus ataxia syndrome (OMAS) is a rare entity characterized by irregular and abnormal jerky eye and limb movements with gait imbalance and extreme irritability and behavioral changes. It is commonly seen in children diagnosed with neuroblastoma.
Materials and Methods: This was a retrospective analysis of cases managed in the department over 5 years from January 2017-June 2021. The data was analyzed in terms of clinical features, radiology, neurological symptoms, surgical findings, histopathology and outcomes.
Results: A total of 18 patients with a diagnosis of opsoclonus-myoclonus were admitted over a period of 5 years. The median age at presentation was 21 months. Male to female ratio was 2:1. The duration of symptoms at the time of presentation was in the range of 1-6 months. Opsoclonus and myoclonus were present in all 18 patients, irritability was present in 7 and sleep disturbances were present in 5 of them. On evaluation with imaging (CECT abdomen, PET CT and MRI), they were found to have abdominal and thoracic neuroblastoma. After receiving medical management in the form of IVIG, ACTH therapy and chemotherapy, all underwent laparotomy or thoracoscopy or thoracotomy and excision of tumor. 8 patients received injection ACTH alone, 6 received IVIG along with ACTH and one received only chemotherapy prior to surgery. One patient received advanced neuromodulation with rituximab, without significant resolution of symptoms. Post operatively the symptoms improved and they were discharged in satisfactory condition. surgery, they were discharged in good health. On a 5
year follow up two patients died due to pneumonia and acute diarrheal disease. Rest are surviving and doing well. Conclusions : OMAS syndrome is a complex clinical entity and require a multimodality treatment approach. High suspension is required for diagnosis. Medical management followed by surgical excision is adequate in most patients for resolution of symptoms.

Mode of presentation: Long oral presentation (5+2)
Title: Complications of therapy in survivors of hepatoblastoma
Authors: Mehak Sehgal, Vishesh Jain, Anjan Dhua, Sandeep Agarwala
Department Institution: Department of Pediatric Surgery, AIIMS, New Delhi
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Abstract:
Introduction: Hepatoblastoma is a rare pediatric malignancy accounting for more than 90% of the liver tumors in less than 5 years of age. Surgery and chemotherapy, although, are the primary modality of treatment, but are not without side effects which are evident in survivors and are important considerations for their long term rehabilitation.

Materials and Methods: Retrospective analysis of from 1991-2021 of hepatoblastoma survivors to analyze effects of chemotherapy.

Results: A total 59 patients were deemed as survivors, 11 were excluded due to no follow up or non-availability of records, therefore the study group consisted of 47 patients. Mean age at presentation was 20.6months, ranging from 4 - 108 months. The male to female ratio was 3:1. Majority of the patients had PRETEXT 2,3 at presentation (89%) with 66% being high risk. Chemotherapy according to standard treatment guidelines was given to all patients, 10 patients received Cisplatin monotherapy and 34 patients received PLADO regime exclusively, others received a combination regime due to poor response with 7 patients being eventually shifted to Irinotecan salvage regime. Mean duration of follow up was 7.7years, 9% were survivors post recurrence. On evaluating side effects of chemotherapy, 10/32 patients (31%) had hearing loss on evaluation, with 4 patients having a Brock’s grading of 3 and 4. As a marker for renal function, GFR was available for 33 patients, of which 27% had a GFR less than 90, belonging to CKD stage 2, none had a GFR less than 60. None of the 10 children who underwent echocardiography had any abnormality. Among these survivors, 62% were working/studying at follow up.

Conclusion: Hepatoblastoma survivors require continued follow up for evaluation of complications of therapy, in order to improve their long term quality of life.

Mode of presentation: Long oral presentation (5+2)
Title: A profile of solid tumors in children at a tertiary care hospital
Authors: Rashmi D, Vijay Kumar Kundal, Pinaki Ranjan Debnath, Arnab Kumar Saha, Vasu Gautam, Chetna Khanna, Gali Divya
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Abstract:
AIMS: Pediatric solid tumors are a group of non-hematologic, extracranial cancers that occur during childhood. Annually, the incidence of cancer in children and adolescents is about 400 000. The study of demographic profile of pediatric solid tumours may help gain an insight into any regional or environmental factors that contribute to the causation of such tumors. This study therefore aims to analyse and summarize the demographic profile of various solid tumors encountered routinely in pediatric surgical practice.
METHODS: A retrospective observational study was conducted between July 2015 to December 2020 at ABVIMS, Dr. Ram Manohar Lohia Hospital. All children <12years of age with solid tumors were evaluated with respect to the age and clinical presentation, stage of the disease, line of management and outcomes.
RESULTS: Out of a total of 103 patients with solid tumors, 77 (74.57%) were male and 26 (25.24%) were female with a Male: Female ratio of about 3:1. Renal tumors were most accounted for with 44 (42.7%) patients, out of which 22.3% (n=23) patients had Wilms tumor and the rest included CCSK (1.94%), CMN (2.9%), RMS (1.94%) and others. 7.76% (n=8) had Neuroblastoma. 16.5% (n=17) patients were diagnosed with Germ cell tumors and 14.56% (n=15) with Sacrococcygeal teratomas. Most patients belonged to the age group of 3-12 years (n=44), followed by 1-3 years (n=30). Wilms tumor patients were staged and treated according to COG protocol. Other tumors were treated according to standard treatment guidelines. Overall survival rate is 73.78%.

CONCLUSION: A zoomed-out image of the current tumor burden is essential to address the finer issues facing their management. Long duration of treatment, poor follow-up, advanced stage at presentation are among the many contributing factors for the dismal outcomes in pediatric solid tumors.

Mode of presentation: Long oral presentation (5+2)

Title: Lessons learnt, neurogenic tumors of posterior mediastinum: our experience

Authors: Preethi K Mohan, Gowrishankar, S Ramesh, N Babu, V Jada, J Deepak

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Abstract:
Introduction: Neurogenic tumors in children are relatively rare and have varied presentation. Most commonly involving the posterior mediastinum, they range from benign to highly malignant neuroblastoma. We present our series of successful management of such lesions, discussing clinical features, disease management and outcomes.

Material and methods: Retrospective analysis of 8 children from period 2014 to 2021 at Pediatric tertiary care Centre. Records reviewed and data collected included age, sex, clinical presentation, laterality, type of neoplasm, chemotherapy, surgery details, and outcomes.

Results: A total of 8 children analysed. Age ranged from 1 month to 8 years. 4/8 were ganglioneuroma and 4/8 were diagnosed as neuroblastoma. They mainly presented with symptoms of hurried breathing, cough and those with intraspinal extension presented with difficulty in walking. One child presented initially with opsomyoclonus. Contrast enhanced CT Scan was the main modality of evaluation. 6/8 patients underwent thoracoscopic biopsy since USG guided FNAC was inconclusive. 5 out of 8 patients underwent primary surgery. Combined surgery with the neurosurgery team was done in 2 children for lesions extending into the spinal canal. Upfront chemotherapy was done in 3 children. Thoracoscopic resection was successful in 3 children undergoing primary surgery. There was minimal morbidity and no mortality. On follow up (6months to 7 years) most of the children are asymptomatic.

Conclusion: As the neurogenic tumors are rare in children, formulating management guidelines is difficult and controversial. A multidisciplinary approach is needed to manage these lesions successfully as described in our series. Surgical resections are safe with good long-term outcomes. Thoracoscopic excision can safely be done for smaller lesions.

Mode of presentation: Long oral presentation (5+2)

Title: Non-Wilms Renal Tumors: Difficulties in the diagnosis and management.

Authors: Anju Verma, Basant Kumar, Vijai D Upadhyaya, Ankur Mandelia, Pujana K, Rohit Kapoor, Shyamendra Pratap Sharma.

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Abstract:
Background: Non-Wilms renal tumors are infrequent in childhood and account for less than 1% of all pediatric tumors. Differentiation in their types is important for better outcome. Lack of awareness, limited resources and characteristic similarities made diagnosis difficult which lead to poor outcome. The aim of this study is to present our management experience with non-Wilms renal tumors.
Method: We retrospectively reviewed all patients (n = 10) treated for non-Wilms' renal tumor from January 2013 to July 2020. Data collected regarding presentations, management and follow-up with special attention on diagnostic difficulties.

Result: Ten patients were included in the study with histological diagnosis of Clear Cell Sarcoma (CCSK n=4), Rhabdoid Tumor (RTK n=2), Ewing's/PNET Tumor (n=1) and Congenital Mesoblastic Nephroma (CMN n=3). Age ranged from 7-96 months (median 36 months). Out of ten, 2 patients were female. 4 patients had left sided tumor. Four patients were already evaluated and received chemotherapy (DD4A regime) before referral (2 CCSK; 1 RTK and 1 CMN) to our centre. Out of these 4, 3 patients had pathology report of Wilm's Tumor but no response to chemotherapy. All patients were evaluated and biopsy performed in 6 patients (Trucut-5; open-1). One patient (CCSK) had radiological evidence of metastasis (bone and lung) and died during treatment. One CMN patient was operated and managed well but lost in follow-up after 3 months. Rest 8 patients were operated, received chemoradiation and are on regular follow-up without any evidence of recurrence. Follow-up period ranged 12-56 months (median 38 months).

Conclusion: It is almost impossible to differentiate Non-Wilms' renal tumor from Wilms' Tumor on the basis of clinical presentation. Differentiation in various types is mandatory because of separate treatment protocols. Proper diagnosis and multimodal treatment may result in favorable outcome.
**Department Institution:** Employees State Insurance Corporation (ESIC) Medical College & Superspeciality Hospital, Sanathnagar, Hyderabad  
**Email:** drgazula9@gmail.com  
**Abstract:**  
Aim: To assess the epidemiological characteristics, management & outcomes of pediatric burns managed by our pediatric surgery department  
Methods: This is a retrospective observational study of pediatric patients with burns (n = 101) admitted in the department of pediatric surgery. We have retrospectively reviewed the data like age, gender, type of burn injury, percentage of burns, management and followup.  
Results: Total of 101 children were included. Majority were males (n= 62). Age was ranging from 1 month to 14 years (mean 4.13 years). Most common mode of burn injury was scalds (n= 80, 80.8%) followed by flame burns (n=14, 14.5%) and electrical (n=7). Average percentage of burns was 25.3% (range 5% to 98%). 7.07% (n=7) of children required debridement and 5.05 % (n=5) required skin grafting. Three children (2.9%) died.  
Conclusions: Scalds are most common mode of burn injury in children. Majority of children can be managed by pediatric surgeons only. Good initial management, preventing infection has good outcomes with respect to cosmesis and functionality.  

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**Mode of presentation:** Long oral presentation (5+2)  
**Title:** Retrospective analysis of Pediatric Trauma in a tertiary Pediatric surgical centre over last two decades  
**Authors:** Pranay Panigrahi, Deepak Kumar, Akash Mishra, Sunil Kumar Gaur Singh  
**Department Institution:** Department of Pediatric Surgery, Banaras Hindu University  
**Email:** docpranaya@gmail.com  
**Abstract:**  
Aims- Abdominal trauma in children is one of the emergencies to be addressed in all paediatric surgical care. This study is a retrospective analysis of paediatric cases admitted with trauma to a dedicated trauma center. Methods & results- Total admissions of patient less than 14 years of age were 784. Out of which, 306 children had possible abdominal inflicted injuries. Head injuries, burns, electric injuries and fracture of long bones cases were excluded from this analysis. Majority (85.6%) of males of age range 6-10 years suffered injuries. Mode of injury was due to fall from height in 2000-2010 but change in trend was noticed in present decade. Road traffic accidents resulted in 48.5% of total cases and 27.4% cases were due to fall from height. Alleged cases of female sexual assault and bullet injuries were other causes summatting to nearly 10% of total. Conveyor belt entrapment, animal bites, bull goring injuries were also enlisted. Out of 306, nearly 234 got admitted in first 24 hours of accident. Blunt trauma abdomen amounted to 86.7% of cases and penetrating trauma in rest of cases. Perineal injuries due to fall from height or sexual assault with grading of Ill-IV were present in 40% of cases and rest 60% cases had grade I-II injuries. Solid organ injuries were more commonly found with splenic trauma in majority. Diaphragmatic hernia, spigelian hernia & Intraperitoneal bladder rupture were noted. Computed Tomography was more feasible and sensitive (91%) abdomen as compared to FAST. Mortality of 2% was found in this analysis. Conclusion- Paediatric Traumatology is challenging subspecialty. Semi-aggressive management protocols increased the outcome in contrast to adults.  

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**Mode of presentation:** Long oral presentation (5+2)  
**Title:** Pediatric age adjusted shock index(SIPA): From Injury to Outcome in Blunt Abdominal Trauma  
**Authors:** Meghna Kinjalk, Shansanka Shekhar Panda, Sujoy Neogi, Simmi K. Ratan  
**Department Institution:** Department of Paediatric Surgery, MAMC New Delhi
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Abstract:
Abstract body: AIM: In pediatric trauma, Shock Index Pediatric Adjusted (SIPA) has been found to be an effective in effectively triaging the injury and directing the resources effectively in a resource limited area. We herein present our experience of applying SIPA in injured children admitted to our centre. METHODS: Retrospective review of all blunt abdominal trauma patients of <=12 years admitted to our centre, from January 2017 to April 2021 was undertaken. Shock Index Pediatric Adjusted was determined using vital signs (BP, HR) recorded upon arrival to the initial level of care. Patients were classified into two groups (normal vs. elevated SIPA) using age-specific threshold values. Primary outcome of need for emergency surgery and blood product transfusion within 24 hours, was compared between the two groups. Need for Intensive care unit, mortality, length of hospital stays and need for CT scan were secondary outcomes which were also studied in relation to SIPA. RESULTS: Of 58 patients with blunt abdominal trauma, 27 had elevated SIPA and 31 patients had normal SIPA. Elevated SIPA was mainly found in 55.6% cases of road traffic accidents among all other modes of injury like assault, fall from height, bicycle handle trauma. Patients with elevated SIPA (27%) had a significantly greater need for Blood Product Transfusion (40.7% vs 16.1%) and longer duration of hospital stay (10.48 vs 5.77). However, no association with need for ICU or CT scan was noted. CONCLUSION: Elevated SIPA was associated with significantly increased need for blood product transfusion and longer hospital stay. These findings may, therefore serve as a valuable tool to guide further treatment in the injured children.

Mode of presentation: Long oral presentation (5+2)

Title: Diagnostic Role of Calretinin in Suspicious Cases of Hirschsprung’s Disease

Authors: Umesh kr Gupta, Dr. Rafey A. Rahman

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Abstract:
Background
• HD is a developmental disorder of the intrinsic component of the enteric nervous system
• Absence of ganglion cells
  - Myenteric plexus
  - Submucosal plexus
• Histopathological diagnosis becomes difficult due to submucosal ganglionic cells are not easily identifiable.

Aims and objective
• Examination of the clinical and histopathological features of HD
• Utility of calretinin staining in suspicious case of HD.

Materials and methods
• Informed consent
• Clinical suspicion 41 cases of HD
• Study duration- of three years (July 2017-June 2020) • Open biopsies
  - Spastic segment
  - Transition zone
  - Dilated segment
• Histopathological three categories:
  - Hirschsprung’s disease
  - No Hirschsprung’s disease (NHD) – HPE no abnormality
  - Suspicion of HD
• Post histopathological diagnosis calretinin immunohistochemistry (IHC) was applied to all cases and interpretations were noted.

Result
• HPE findings (41 Pt’s) –
  - HD-25
  - Suspicion for HD - 9
Calretinin IHC
HD-30
NHD-11

Conclusion

- Calretinin immunostaining - Useful modality in diagnosing suspicious cases of HD. Results easy to interpret by less experienced pathologist with accuracy

Mode of presentation: Long oral presentation (5+2)

Unfit format for publication

Title: Evaluation and management of congenital rectovaginal fistula-a rare variant in anorectal malformation

Authors: Survesh K Gupta, Anand Pandey, Piyush Kumar, Sudhir Singh, Saurabh Srivastav, Jiledar Rawat Shiv Narain Kureel

Department Institution: Department of Pediatric Surgery, KGMU, Lucknow

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Abstract:

Aims: The rectovaginal fistula (RVF) is a type of female ARM in which the rectum terminates in the vagina. In such a scenario, there are two openings in the vestibule, and the anal opening is absent. Due to its rarity, there are limited reports on its presentation, management, and follow up. This paper deals with the clinical presentation, management, and outcome of this rare anomaly.

Methods: It was a retrospective cohort study from January 2010 to January 2020. The patients were evaluated for age at presentation, the clinical presentation, associated anomalies, any prior surgical interventions performed elsewhere and complications. All patients underwent ultrasonography of kidney, bladder, and ureter and a 2D echocardiogram and distal colostogram. The patients underwent three stages of surgery. They were followed as per the protocol made.

Results: Fifty six patients were of RVF were managed. The median age of the patients was 13.48 months. The associated anomalies were present in 37 (66%) patients. Posterosagittal anorectoplasty (PSARP) was performed in 29 patients and anterosagittal anorectoplasty (ASARP) in six patients. Abdominoperineal pull through (APPT) was performed in 16 patients. The complications of the first stage included stomal stenosis and stomal prolapse. Constipation was present in 39 patients two years after third surgery. Five year follow up was present for 29 patients. Of these, grade 1 constipation was present in 14 patients and grade 2 constipation was present in 6 patients.

Conclusions: RVF is a distinct entity, which needs careful clinical examination for true diagnosis. With proper planning for diagnosis and treatment, it can be managed at specialized centers. Care may be needed for the associated anomalies. The follow up is an integral part in its management.

Mode of presentation: Long oral presentation (5+2)

Title: Thoracoscopic-Based Protocol to Esophageal Atresia with Unfavorable Anatomy: A novel approach to Long-gap Esophageal Atresia

Authors: Mehak Sehgal, Prabudh Goel, Minu Bajpai, Rahul Anand

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Abstract:

Mode of presentation: Oral presentation (4+2)
Title: A new clinical algorithm scoring for management of suspected foreign body aspiration in children

Authors: Arun Kumar L, Tarun Jacob, Susan Jehangir, John Mathai

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Abstract:

Aims:
Foreign Body Aspiration (FBA) is a serious problem in children and delays in diagnosis and management can be devastating. This study aims to determine the key clinical and statistically significant predictors of FBA, based on the patients’ historical, physical and radiological findings.

Methods:
This is a retrospective observational study over a period of 8 years (2013-2020) of children who underwent bronchoscopy for suspected FBA. A new proposed FBA scoring including statements about history, physical and radiological findings were applied to all patients to define a total score, after determining the weight of each parameter, based on adjusted odds ratio.

Results:
Totally 274 patients consisting of 70% boys and a mean age of 2.13 years were included in the study. FBA was noted in 66% (n=181) of cases. Seven parameters - four from clinical history, two from physical examination and one radiological finding - were found to be statistically significant of FBA. A clinical algorithm was formulated based on these parameters. The discriminative ability of the model was found to be good; the area under the ROC curve value was 0.79 (95% CI 0.74, 0.84). The cut-off value of 10 out of a total score of 17 had the highest diagnostic performance with sensitivity and specificity of 83% and 74% to predict FBA in children.

Conclusion:
A high index of suspicion is required in diagnosing FBA. Our proposed clinical algorithm and scoring system hopes to empower physicians to accurately predict patients with a high likelihood of FBA.

Mode of presentation: Oral presentation (4+2)

Title: Study of short term surgical outcomes of Malone Antegrade Colonic Enema in children

Authors: Raghav Narang, Shasanka Shekhar Panda, Simmi K Ratan, Yogesh Kumar Sarin, Sujoy Neogi

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Abstract:

Aim: To evaluate the complications and efficacy of Malone Antegrade Colonic Enema (MACE) with regards to quality of life in patients of fecal incontinence (FI)

Methodology: All eligible consecutive patients with Fecal Incontinence were counselled as regards the present standard of care, i.e., Transanal Irrigation (TAI) and the MACE procedure and as per the parental and patient’s wishes where applicable, they were recruited in the study or control group. QOL scoring was done pre and post procedure and the complications noted.

Results: The study subjects in both the TAI and MACE were age-matched (p=0.17). The major cause of FI in our study was ARM (57.1 % in MACE and 37.5 % in TAI) The pre treatment Bai et al QOL scores in both the study groups were comparable (Mean total score in MACE group was 5.57±1.27 and 7.12±2.85 in TAI group) (p=0.20) At 3-month follow-up, all the patients in both the groups reported improvement in Bai et al total scores. The mean change in Bai et al scoring in TAI & MACE group were 2.50±2.77 (p=0.03) & 8.14±1.57 (p=0.0001) respectively. There was significant difference in the mean change of Total Bai et al scoring between the two groups (TAI and MACE) (p=0.0001) Two complications were reported in the MACE group. One patient had stomal incontinence and another had surgical site infection. Both the complications resolved without any long term sequelae. Conclusion: MACE is an effective procedure for treating FI which improves quality of life. Also it is associated with acceptable level
of complications. In comparison to TAI, MACE is a more effective procedure in improving quality of life of children with FI.

Mode of presentation: Oral presentation (4+2)

Title: Gastrointestinal duplications and its diverse presentations: a tertiary care center experience

Authors: Ajay Kumar, Rahul Gupta, Praveen Mathur

Department Institution: Department of Pediatric Surgery, SMS Medical College, Jaipur

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Abstract:

Aim: Gastrointestinal duplications are rare congenital malformations. We are presenting our 5 years’ experience with duplication cysts in pediatric age group at our tertiary care center.

Methods : It is a retrospective study undertaken in the department of pediatric surgery between 2015 and 2021 for GIT duplications. Patients were analyzed for their age, sex, presentation, radiological evaluation, operative management and outcomes.

Results: Twenty-five patients were diagnosed with gastrointestinal duplication in the last 5 years. Ten patients presented in neonatal period. Double duplication cysts at different location was present in one case. The most common location was ileum (n=15) followed by gall bladder (n=4), gastric (n=2), jejunum (n=1), duodenum (n=1), esophagus (n=1), sigmoid (n=1) and anal canal (n=1). Majority cases presented with acute abdomen. Multiple other anomalies were associated, viz intussusception (n=6), intestinal atresia (n=3), abdominal wall defect (n=3), Meckel’s diverticulum (n=1) and sacrococcygeal teratoma (n=1).

Conclusion: Gastrointestinal tract duplications have varied presentations depending on site, size and associated complications. Importance of clinical suspicion and radiology cannot be underrated.

Mode of presentation: Oral presentation (4+2)

Title: Management of Enterocutaneous fistula in children

Authors: Pujana Kanneganti, Basant kumar, Vijai dutta upadhyay Ankur mandelia Rohit kapoor, Shyamendra Pratap Shrama, Anju verma

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Abstract:

Introduction: Enterocutaneous (EC) fistulas are dreadful complication and nightmare for surgeons after surgery. It leads to mortality and morbidity of patients. Most EC fistulas occur following abdominal surgeries and only 15-25% of spontaneous EC fistulas are the result of underlying diseases such as Crohn’s disease, radiation enteritis or diverticular disease.

Methods: We retrospectively reviewed the electronic and operation theater data/records of all patients with EC fistula managed from December 2013 to December 2020. Clinical, radiological and operative finding/procedures, outcome and morbidity were evaluated. Patients with insufficient records or with incomplete management were excluded from study.

Result: 17 patients were included in the study, age ranged from 2 month to 16 years (median 8 years). 8 patients have high output fistula, 6 with moderate output fistula and remaining with low output fistula. One child had died before surgery because of uncontrolled sepsis and electrolyte imbalance while rest 16 patients were operated and managed successfully. 5 patients underwent staged surgery while in 11 patients with single stage. All patients have small bowel fistula and histopathology showed tubercular etiology in 8 patients. 6 patients developed adhesive bowel obstruction in postoperative period in which 2 patient needs re-exploration and adhesiolysis. Hospital stay ranged from 18-126 days.

Conclusion: Adequate stabilization of the patient, a thorough investigation of the fistula anatomy, and non-operative management should initially be attempted. If surgery is required, careful planning, meticulous dissection, resection of the bowel, reanastomosis and reconstruction of the abdominal wall are critical.
Mode of presentation: Oral presentation (4+2)

Title: Impacted Esophageal Foreign bodies in children

Authors: Rajkiran Raju S, Rajkiran Raju S, Shalini GH, Kiran M, Prasanna Kumar AR, Shubha AM

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Abstract:

Aim: Foreign body (FB) ingestion is a serious concern in children and is sought with variable outcomes. Most are unwitnessed and hence pose diagnostic and therapeutic challenges. We aim to analyze the clinical course, management and outcome of children with impacted esophageal FBs.

Methods: A Retrospective chart review from 2000 - 2018, recruiting children with impacted esophageal FBs. Primary treatment and investigations were as per set protocol. Definitive management was categorized depending on the type of foreign body, duration of impaction and underlying anatomical pathology. FBs impacted in the cricopharynx and those that passed into stomach were excluded. Clinical details, management and outcomes were analyzed.

Results: Of the 86 children, N1=31 had a pre-existing organic pathology and N2=55 had difficult impactions. The N1 group presented early (average 42 months), had recurrent impactions (1-6), needed multiple dilatations (0-8) and longer follow-up (Avg 35 months). Organic matter being the common impacted material, few continue to remain symptomatic on follow-up. N2 group presented at mean age of 52 months, upper esophagus was commonest site of impaction, and most were metallic FBs. Had an uneventful post retrieval follow up except those with button battery impaction (3/7 patients developing strictures needing 1-6 dilatations), most remain asymptomatic on follow-up.

Conclusion: Esophageal FBs are a matter of concern in children. Although endoscopic retrieval is successful and uneventful in most, those with an underlying organic abnormality are prone for recurrent impactions, require multiple dilatations or surgical intervention and need prolonged follow up.

Mode of presentation: Oral presentation (4+2)

Title: Enteric Duplication- Experience from a tertiary care center in North India

Authors: Rohit Kapoor, V D Upadhaya, Basant Kumar, Shyamendra, Pujana, Ankur Mandeliya

Department Institution: Department of Pediatric Surgery, SGPGIMS, Lucknow

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Abstract:

Aims: Enteric duplication Cysts (EDCs) are rare tubular or spherical cystic lesions in continuation or adjacent to Gastrointestinal tract which may or may not communicate with native bowel. About 70% of EDCs are diagnosed before age of 1 year and almost 85% till second year of life. We aim to describe various small bowel duplication cyst presenting in older children (>2 years age) in our center.

Methods: A retrospective observational study was conducted that included 11 patients of a single unit in our institute between January 2011 and Dec 2020. Hospital outpatient records, operation notes, radiological investigations, pathology reports, and discharge summaries were reviewed.

Result: M:F ratio was 1.75:1 with median age of presentation was 7 years. Most common presentation was abdominal pain with or without lump in 8/11(73%) cases followed by blood in stools with or without anaemia in 7/11(63%) cases. All the duplications in our series were present in midgut with 9/11(90.9%) present in ileum, 1/11(9.09%) in jejunum and 1/11(9.09%) in caecum. Communication with lumen of adjacent bowel was present in 6/11(55%) of patients. Laparoscopic assisted excision of cyst with or without resection anastomosis of adjacent bowel was done in 5/11(45%) cases while rest 6/11 (55%) cases were managed with conventional open surgery. Ulceration in duplicated bowel/cyst was seen in 3/11(27%) cases. Histopathology revealed ectopic mucosa in 63% cases in form of gastric mucosa. Conclusion: Enteric duplications are rare congenital anomalies that may present with non specific symptoms and signs such as blood in stools with or without anaemia and should be considered in differential diagnosis of such presentation. Laparoscopic assisted technique is a good adjunct to open and should be used wherever possible.

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Title: Congenital duodenal obstruction: A single institution experience.

Authors: Deepak Kumar Garnaik, Rajat Piplani, Enono Yhoshu, Manish Kumar Gupta, B Satya Sree

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Abstract:
Congenital duodenal obstruction is one of the relatively common surgical conditions in infants and children. Over the years, the prognosis has improved markedly, which is attributed to several factors such as early diagnosis, improved surgical techniques and improved peri-operative management including availability of total parenteral nutrition. This report is an analysis of our experience of 14 cases of duodenal obstruction over a period of 3 years with an emphasis of factors affecting final outcome.

Objective: This study aims to highlight the for age at diagnosis, sex, gestation, and birth weight, history of polyhydramnios, symptomatology, associated anomalies, and method of diagnosis, treatment and outcome of congenital intrinsic duodenal obstruction in infants and children along with review of literature.

Patients and methods: Infants with congenital duodenal obstruction operated between 2018 and 2021 are included in this study and all the details are retrospectively reviewed.

Results: Of the 14 cases of duodenal obstruction operated at our hospital, 7 were males and 6 were females. Their birth weight ranged from 1.5kg to 2.4kg (mean ,1.9kg). Eight (57%) were premature. All our patients presented to us or were referred to us within 30 days of life except for one patient who presented at 8 months of age. All patients presented with features of upper abdominal distension and bile stained vomiting. There was history of polyhydramnios in 8 patients (57%). Associated anomalies were seen in 10 patients (70%). 3 (21%) patients had Down syndrome and 4 (28%) patients had congenital heart disease. One of the patient had tracheo-esophageal atresia type D. All our patients were operated and in almost all cases the site of obstruction was seen in second part of duodenum. The cause of obstruction was found to be duodenal atresia (64%) and annular pancreas (36%). All patients underwent diamond shaped Kimura procedure with trans gastric trans-anastomotic feeding jejunostomy in 85% of cases. Postoperatively patients were given TPN however a few had complications including anastomotic leak and feeding intolerance. Four out of 14 patients died giving a overall mortality of 28%.

Conclusion: Congenital duodenal obstruction is a complex entity often associated with multiple congenital anomalies. Timely diagnosis, aggressive surgery and good peri and post-operative care are key to improve prognosis.

Title: The role of Non-invasive vagal stimulation therapy in post-operative paralytic ileus in children

Authors: Sagar Jawale, none

Department Institution: Department of Pediatric Surgery , Jawale Institute of Pediatric Surgery, Jalgaon

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Abstract:
Introduction: Postoperative paralytic ileus is very common in children with a lot of morbidity and occasionally even mortality. The therapy stimulates Vagus nerve in the neck non-invasively and it increases intestinal mobility to treat paralytic ileus. This therapy and its device are reported for the first time in medical literature for this indication.

Aims and Objectives: To study the role of Non-invasive vagal stimulation therapy in post-operative paralytic ileus in children.

Materials and methods: Last 3 years, I used the therapy on 26 patients of postoperative paralytic ileus in various diseases such as Hirschsprung’s disease, Ano-rectal malformation last stage, perforative peritonitis etc. 36 patients
in the same period with similar diseases and significantly longer paralytic ileus were kept as control. Dynamic intestinal obstruction was ruled out clinically and by investigations. All patients in therapy group were given a fair trial of conservative treatment before subjecting to the therapy. The device used in the therapy produces electrical impulses of 50 Hz and 1 Amp with voltage of 12 Volt. One terminal is placed on left Vagus and another as control left shoulder. The left Vagus nerve in the neck is used for stimulation as it has far less fibers to the heart than right Vagus nerve. Therapy duration is 4 hours. Results: All patients responded to the therapy well. No patient had any side effects. The therapy group had average recovery period of 28.6 hours compared to 168.7 hour for the control group and the difference came as statistically very significant. The morbidity in therapy group was far less than control group. Discussion: Vagus nerve is secretomotor to the intestines, hence its stimulation leads to increased intestinal motility. The device stimulates left Vagus nerve in the neck just below angle of the mandible through disposable ECG electrode which reduce skin resistance from 100000 Ohm to 100 Ohm. Prolonged paralytic ileus leads to lot of morbidity such as electrolyte imbalance, respiratory distress, longer hospital stay, longer RT duration, abdominal distention, infection etc. Prolonged ileus reduces surgeon’s confidence and puts him in a dilemma whether to conserve or re-operate unnecessarily. It also makes patient’s relatives anxious. The device is safe as it used 12 Volt DC current and actual current flowing through body is 0.5 Mili Amp which is 10 times less than FDA approved limit of electricity on human body. The device is commercialized at a reasonable cost of Rs. 10,000.

Conclusion: The therapy group had significantly faster recovery and far less morbidity compared to control group. Non-invasive vagal stimulation therapy and its device are cheap, effective and safe treatment options in postoperative paralytic ileus in children.

Mode of presentation: Oral presentation (4+2)

Title: Management of Acute Presentation of Koch’s Abdomen in Children

Authors: Pujana Kanneganti, Basant Kumar, Vijai Dutta Upadhyay, Ankur mandelia, Shyamendra Pratap Sharma, Anju Verma

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Abstract:
Aims : To analyse our experience with acute presentations of abdominal tuberculosis (TB) in children for early diagnosis and management.

Materials and Methods: From December 2010 to April 2020, available electronic and operation theatre (OT) records of 17 patients with confirmed diagnosis of abdominal TB were analysed retrospectively. Parameters reviewed were age, sex, presentations, diagnostic investigations, surgery/intervention performed, final outcome and follow-up.

Results: Out of 17 patients, 6 (35.3%) were already operated elsewhere. The duration of symptoms ranged from 4 to 58 weeks. Abdominal pain was present in all cases whereas 11 (64.7%) had abdominal distension, 16 (94.1%) fever, 14 (82.3%) ascites, 9 (52.9%) vomiting, 14 (82.3%) weight loss, 6 (35.3%) anorexia and 4 (23.5%) night sweat. All patients needed surgical intervention for definitive diagnosis. Thirteen (76.5%) out of 17 patients managed by staged surgery and primary anastomosis/repair/adhesiolysis were done in 4 (23.5%) patients. The main post-operative problems were wound infections (8; 47.1%), subacute bowel obstruction (6; 35.3%) and chest infections (12; 70.6%). Follow-up period ranged from 3 months to 5 years.

Conclusion: Abdominal TB should always be considered in differential diagnosis in children presenting with abdominal pain/distension, fever and ascites or with abdominopelvic mass. Recurrent bowel obstruction or anastomotic disruptions also give clues of its diagnosis. A careful history of illness, high index of suspicion, ascitic fluid adenosine deaminase or polymerase chain reaction for Mycobacterium needed for early diagnosis. Prompt minimal surgical interventions, preferred diversion over primary anastomosis, algorithmic vigilant post-operative care and early antitubercular treatment required for success in acute crisis.

Mode of presentation: Oral presentation (4+2)

Title: Caudal Block in Hypospadias Repair : A bliss or a miss

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Authors: Delona Treesa, Prabudh Goel, Devendra Kumar Yadav, Purnima Naasimhan, Puneet Khanna, Rahul Anand, M Bajpai

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Abstract:

Abstract body: Background: There are controversial and conflicting reports in literature incriminating caudal block as a risk factor for urethra-cutaneous fistula (UCF) formation after hypospadias repair. The proposed mechanism of action is by vasodilation leading to penile engorgement and local edema, resulting in local oozing and suture cut-through, followed by UCF formation.

Aims: To study the vasodilatory effect of caudal block analgesia in children.

Methods: Single centre prospective analysis of consecutive paediatric patients (n=63, median age: 5.9 years) undergoing elective infraumbilical surgeries under general anaesthesia with caudal block. The variables noted were (1) Stretched and resting penile length (2) Penile girth at 3 locations (3) Scrotal temperature (4) Capillary filling time in nail-bed and sole. All these parameters were measured before caudal administration, 10 minutes post-caudal and 20 minutes post-caudal analgesia.

Results: Vasodilatation in response to caudal block was reflected by a significant elevation in resting penile length (mean: 3.76 to 4.35) at ten-minutes with a tendency to ameliorate at twenty-minutes (mean 4.12). Similar pattern was observed in penile volume (26.59@pre, 33.15@post-10 & 30.30@post-20) and scrotal temperature (96.15-vs-95.70°F). The capillary filling times were reduced significantly at 10-minutes (0.58-sec vs-0.79-sec) with a normalising trend at 20-minutes (0.63-sec).

Conclusion: The overall vasodilatory effect of caudal block seemed to be transient with a trend towards normalization at 20 minutes. It is unlikely that caudal block will lead to pooling of venous blood, penile engorgement and local edema which contributes to the UCF formation.

Mode of presentation: Oral presentation (4+2)

Title: Problem of glans dehiscence and subcoronal Urethrocutaneous fistula in hypospadias repair resolved with the application of Mathieu Flap

Authors: Archika Gupta, SN Kureel, Nitin Pant, Gurmeet Singh, Rahul Kumar Rai, Nirpex Tyagi

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Abstract:

Abstract body: Aims To report the outcome of Mathieu Flip-flap repair for glans dehiscence and subcoronal urethrocrotaneous fistula (UCF) occurring after hypospadias repair

Methods From Jan 2015-Dec 2019, Mathieu repair was performed in 15 patients of hypopadias (Age range 3-16 years) and presenting with glans dehiscence and subcoronal UCF. Out of 15 patients, 13 patients had undergone primary repair somewhere else with no record of previous surgery available. Two patients had undergone primary TIP repair at our center. The Mathieu repair for the glans dehiscence and subcoronal UCF was done 6 months after primary repair. Stay suture was placed at tip of the glans. Bridge between urethral meatus at the glans and subcoronal UCF was divided along ventral midline. Mathieu flap was raised as in standard Mathieu repair with length of flap kept equal to distance between the UCF and ventral limit of glanular meatus. While harvesting the flap, dartos was kept towards the flap that was used to cover the urethroplasty suture lines on both sides. The Glans wings were raised working in the subfascial plane. On the flipped Mathieu flap, glansplasty was done. While doing glansplasty, distal most suture was taken 2 mm proximal to ventral limit of glanular meatus. Tip of Mathieu flap reversed and anchored to distal limit of glans closure to prevent meatal stenosis. Outcome measurement included: 1. Recurrence of glans dehiscence and fistula in follow up; 2. Elimination of meatal stenosis, 3. Aesthetic appearance

Results There was no recurrence of glans dehiscence and subcoronal fistula in any of the patients. None of the patients had meatal stenosis in follow-up. Aesthetic appearance was satisfactory in all.
Conclusion
The technique of Mathieu flap with radical glans wing mobilisation and glansplasty over the flipped Mathieu flap is effective to address the problem of subcoronal fistula and glans dehiscence.

Mode of presentation: Oral presentation (4+2)
Title: Exploring an ideal solution to Hypospadias Repair in boys with a shallow navicular fossa; adopting synergistic Mathieu and Snodgrass principles.
Authors: Shilpa Sharma
Department Institution: All India Institute of Medical Sciences, New Delhi
Email: drshilpas@gmail.com
Abstract:
Aim: The outcome of Hypospadias repair depends on the anatomy of the defect. A shallow navicular fossa may compromise the neo urethral calibre. We aimed to evaluate outcome of combining Mathieu's and Snodgrass urethroplasty in distal hypospadias repair.
Method: Consecutive patients of distal hypospadias with a narrow or moderate navicular fossa/ Urethral plate were repaired with a modified approach incorporating incisions of Mathieu (parameatal U-shaped flap) and Snodgrass (Urethral plate incision) urethroplasty from October 2008 to December 2018. The native urethra was lifted with the U-shaped flap in the Mathieus manner. The meatus was carefully elevated from the underlying spongiosum so as to lift the proximal end of the urethra to the distal side. A Snodgrass incision was given in the distal urethral pate at the shallow region. Glanular incisions were made and the flap was approximated over an adequately sized infant feeding tube. Glanular wings were approximated over neourethra after a second layer dartos covering.
Results: The median age of 86 boys was 5.6 (1.5-12) years. The deficient Urethral length was 1.2-2.9 cm. Minimal skin chordee (n= 12) was released by degloving. Operating time was 30-70 mins. Darkening of skin in 3 cases resolved spontaneously. At follow up of 30-142 months, 83 cases healed well with meatus at tip and no stenosis or urethral stricture. One case had delayed infective dehiscence, requiring redo urethroplasty. Two patients had fistulae, one healed spontaneously. All patients passed urine in good stream.
Conclusions: This urethroplasty technique provides a deeper navicular fossa, good calibre urethral tube and deeply placed urethra resulting in good cosmetic and functional outcome.

Mode of presentation: Oral presentation (4+2)
Title: Pattern of preoperative uroflowmetry study in hypospadias patients and age matched control patients
Authors: Rupesh Suresh Sikchi, Arvind Sinha, Manish Pathak, Kirtikumar Rathod, Rahul Saxena
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Abstract:
Aim: To compare the pattern of preoperative uroflowmetry study in hypospadias patients and age matched control patients
Material and methods:
A total of 90 Pediatric patients underwent preoperative uroflowmetry in Department of Pediatric Surgery at our institute between January 2019 and December 2020. Out of 90 patients, 30 patients were of hypospadias and 60 were the age matched controls who presented to pediatric surgery OPD. Uroflowmetry parameters like maximum urine flow rate (Qmax), average urine flow rate (Qavg), voided volume (VV), urination duration, duration of reaching maximum speed and urine flow curves of the cases and the control group were measured and compared.
Results:
The median age of patients at the time of uroflowmetry in Hypospadias group was 7 years, and that of control group was 7.5 years. Median Qmax (10.7 vs 14.45 ml/s), Qavg (6.5 vs 8.5 ml/s), Qmax /VV (0.043 vs 0.053) was found to be
significantly lower in hypospadias group (p value <0.05), and voiding time (43.5 vs 30 sec, p value = 0.0285 was significantly higher) and no difference in the VV per micturition (219.5 vs 270.0 ml) and time to maximum flow rate (10 vs 10 seconds). Flow curve pattern analysis revealed plateau-shaped curves in 60 % of hypospadias group compared to 27% in control group, while bell shaped curve in 37 % of hypospadias group as compared to 65% in control group. No statistically significant association was found between meatus localization and the uroflowmetry parameters.

Conclusion: Hypospadias patients have abnormal uroflowmetry even before surgical correction and have significantly low maximum urine flow rate. Thus, we postulate that pre-operative abnormal uroflow pattern in hypospadias patients may contribute to voiding difficulties in repaired hypospadias cases.

Mode of presentation: Oral presentation (4+2)

Title: A study of post-operative complications following primary repair of mid penile and distal penile hypospadias- A single-centre experience

Authors: Avinash S R, Jiju Jacob Kurian, Arun Kumar

Department Institution: Christian Medical College, Vellore

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Abstract:

AIM & OBJECTIVES:
Multiple techniques have been described for surgical correction of mid penile and distal hypospadias. In this study we compare the post-operative complications associated with various operative procedures performed, with emphasis on meatal stenosis, fistula formation and glans dehiscence.

METHODS:
Retrospective review of 253 children who underwent primary repair of mid and distal penile hypospadias between 2016 to 2020 was collected. The type of procedure done and incidence of post-operative complications were analyzed.

RESULTS:
The mean age of the children was 2 years. Snodgrass urethroplasty and preputial island flap were the two most commonly performed procedures done in 115 (45%) and 81 (32%) respectively. Other procedures done, include, MAGPI, snodgraft and advancement urethroplasty. 86 children (34%) had complications with 28 (11%) of them requiring redo urethroplasty. Urethrocutaneous (UC) fistula was the most common complication followed by glans dehiscence, seen in 51 (20%) and 22 (9%) patients, respectively. Both of these complications were seen more in patients who underwent Snodgrass repair compared to preputial island flap, which was statistically significant (30% vs 11%, p <0.01; 14% vs 4%, p<0.01). Meatal stenosis was seen in ten (4%) patients and urethral stricture in two patients.

CONCLUSION:
Preputial island flap urethroplasty was found to have significantly lower rates of complication compared to snodgrass repair in patients with midpenile or distal hypospadias.

Mode of presentation: Oral presentation (4+2)

Title: Crush and Cut Meatotomy for Meatal Stenosis under Topical Anesthesia

Authors: Reyaz Ahmad Wani, Kumar Abdul Rashid, Amat us Samie, Mudasir Ahmad Magray, Omar Masood

Department Institution: Superspeciality Hospital Government Medical College Srinagar

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Abstract:

Aim
To study a cohort of symptomatic circumcised children of meatal stenosis and the results of our sutureless meatotomy technique under topical anesthesia.
Method
We present our experience with a modified sutureless technique of meatotomy done as office procedure under topical anesthesia. The results were assessed by comparing grading of meatal stenosis and urinary stream pre and postoperatively.

Results
All the 48 patients were symptomatic with deviated and thin urinary stream being the predominant symptoms present in 36 and 25 cases, respectively. Painful micturition was seen in 10 patients. All the cases underwent meatotomy under topical anesthesia by crush and cut (sutureless) technique with complete relief of symptoms as well as improved appearance. There were no major complications.

Conclusion
Sutureless meatotomy by crush and cut technique under topical anesthesia is quick, painless and easy method without any major complications.

Mode of presentation: Oral presentation (4+2)

Title: Effect of Preoperative Estrogen on Complications after Proximal Hypospadias Repair. A randomized controlled trial
Authors: Akash Bihari Pati, Santosh Kumar Mahalik, Pritinanda Mishra, Kanishka Das
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Abstract:
AIM: The study is based on the presumed tissue healing property of topical estrogen and seeks to determine whether it can limit the complications of hypospadias repair.
METHODS: Patients with proximal hypospadias requiring two staged repairs (chordee correction followed by urethral tubularization) were randomly allocated to estrogen and control groups before the second stage of surgery. In the former, oestrogen cream (0.5mg of estriol) was applied to the ventral penis for a month; the urethroplasty was carried out thereafter in all. Patients were followed up for one year for occurrence of complications - fistula, glans dehiscence and urethral stricture.
RESULTS: Sixty patients were included in the study (29 in the estrogen group, 31 in the standard treatment group). There was no significant difference with respect to age, severity of hypospadias, glans diameter between both the groups. Eleven (37.9%) patients in the estrogen group developed postoperative fistula whereas 16 (51.6%) patients developed fistula in the other group. Glans dehiscence was present in 12 (41.4%) patients in the estrogen group and in 14 (45.2%) patients in the standard treatment group. The difference between the two groups with respect to fistula and glans dehiscence were not statistically significant. However, a significant number of patients (13.8% VS 0%) in the estrogen group developed stricture of the neourethra.
CONCLUSION: The preoperative application of topical estrogen cream to the ventral penis failed to demonstrate any significant effect on wound healing and complications. Instead, a significant number of patients in the oestrogen arm developed stricture of the neourethra.

Mode of presentation: Oral presentation (4+2)

Title: Role of preputioplasty in hypospadias repair: Our experience in 29 cases.
Authors: Rupa Banerjee, Sangamitra Bhattacharya, Debasish Mitra
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Abstract:
Objectives: Repair of hypospadias usually gives a circumcised appearance which is not much preferred by parents. In distal and mid-penile hypospadias with no or minimal chordee, recently prepuce is being saved for preputioplasty. We present our experience of preputioplasty in 29 cases of hypospadias.

Material and methods:
Records from 29 boys who underwent distal and mid penile repair between January 2017 and January 2021 were analyzed retrospectively. Patient demography, type of hypospadias, presence of chordee were recorded. Surgical details were analyzed with respect to position of meatus, availability of skin, outcomes and complications.

Results:
Total of 29 cases were analyzed. Age range was 1 years to 8 years (mean – 2.8 years). Twenty one cases were distal penile and 8 cases of mid penile. Chordee was present in 13 cases; rest cases did not have significant chordee. Chordee was corrected after ventral and lateral dissection. In all these cases TIP repair was done and dartos was used to cover the suture line. Prepuccial skin was used for preputioplasty. In 3 cases prepuce was very tight and dorsal slit was done in these cases. No other complications were reported. The urine stream was good and penis looked like normal penis. Parents were satisfied with the result.

Conclusion:
Prepucciplasty with urethroplasty and spongioplasty reconstructs a cosmetically normal penis. This procedure is feasible in selective cases and is more satisfying to the parents.

Mode of presentation: Oral presentation (4+2)

Title: Role of uroflowmetry in the functional evaluation of Snodgrass urethroplasty
Authors: Rashmi D, Vijay Kumar Kundal, Pinaki Ranjan Debnath, Atul Kumar Meena, Shalu Shah, Amita Sen
Department Institution: Dr. Ram Manohar Lohia Hospital, New Delhi
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Abstract:
Aims:
Snodgrass’ Tubularised incised plate(TIP) urethroplasty repair has simplified the approach to distal penile hypospadias being a single-stage procedure with excellent functional results and cosmesis. But the assessment of the results of hypospadias repair remains problematic, as there exists a significant difference between the judgement of patients and operating surgeons. In order to eliminate the observer bias, we aim to establish the role of uroflowmetry as an objective tool for the functional assessment.

Methods:
A prospective observational study was conducted during the period of November 2019 to February 2021 of all cases of Snodgrass hypospadias surgery. A total of 22 patients were included in the study and were subjected to Uroflowmetry in the pre-op and post-op (6 weeks and 12 weeks) period. Parameters studied included: Maximum flow rate (Qmax), Average flow rate (Qmean), Total voided volume, Voiding time and Type of curve. The Pre-op uroflowmetry rates were compared with those of post-op.

Results: Out of a total of 22 children, 13 patients had coronal hypospadias while 9 had sub-coronal hypospadias. The mean age at presentation was 6yrs. Although some of the patients (n=10) presented with plateau shaped curve, at 12-weeks post urethroplasty, all the patients (n=22) were noted to have a bell-shaped curve during micturition, indicating a normal voiding pattern. Qmax at 6 weeks was noted to be reduced in 6 patients as compared with pre-op rates by an average of 20.1% (9.3%-27.7%) but at 12-weeks post-op, all the patients (n=22) were noted to have an overall increase in Qmax as compared to baseline Uroflowmetry rates. The mean increase was 23.9%(4.2%-43.1%). 2 patients were diagnosed with subclinical urethral stenosis.

Conclusions:
Uroflowmetry is a tool in the functional assessment of hypospadias surgery, objectively analysing the changes in pattern and rates. This optimizes follow up in the long-term.

Mode of presentation: Oral presentation (4+2)

Title: Clinico-etiological profile of children with liver abscess
Authors: Hiramani Pathak, S Roy Choudhury, Ashitosh Pokharkar, Charu Yadav
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Abstract:
Aim: This study was aimed at analyzing the clinic-etiologica profile, complications, treatment and follow-up of liver abscess in children.
Methods: All children with liver abscess admitted in our tertiary hospital over a 18-months period were recruited. Laboratory parameters included hematological, biochemical and microbiological cultures of aspirated pus and blood. No specific test for amoebic etiology was done. Several parameters relating to clinical presentation, etiology, risk factors, complications and follow-up up to one month from discharge were analyzed.
Results: Out of total 102 patients, Fontan triad was observed in 66 (64.7%), anemia 86 (84.3%), jaundice 21 (20.6%), coagulopathy 63 (61.7%), malnutrition 90 (89.2%), and hemat-oncological problems in 16 (15.6%) cases. Blood/pus culture positivity was n=19 (18.6%), among which Staph. aureus constituted 4 (21.0%), MRSA 4 (21.0%), Klebsiella (31.5%), Acinetobacter 3 (15.7%), E.Coli 2 (10.5%), Pseudomonas 1 (5.3%) cases. 5 (4.9%) were tested positive for SARS-CoV-19. All patients were diagnosed with ultrasound scan (USG). Right, Left and both lobe was involved in 56 (55%), 17 (16.6%), and 23 (22.5%) cases respectively. Pleural effusion, intrapleural extension of abscess and intraperitoneal rupture were noted in 47 (46%), 28 (27.4%) and 16 (15.6%) cases respectively. Management with intravenous antibiotics and antimicrobials only, needle aspirations, catheter (pigtail) drainage and open surgical drainage were done in 20 (19.6%), 37 (36.2%), 34 (33.3%) and 11 (10.7%) patients respectively. Interventions were based on serial USG showing the characteristics of the abscess (size, site, liquefaction, spread) and clinical conditions. Mortality was n=9, 8.8%. Residual lesions on USG was common (n=41, 40.1%) at follow up; 6 required re-admission with re-aspiration done in three patients.
Conclusion: The bacterial culture positivity rate was only 17.6%. Deranged hepatic enzymes, anemia, coagulopathy, hypoalbuminemia, MRSA and rupture were associated with higher Mode of presentation: Oral presentation (4+2)
Title: Extrahepatic Portal Vein Obstruction in children: Radiological profile from a Tertiary-care centre
Authors: Nellai Krishnan, Prabudh Goel, Vivek Verma, Richa Yadav, Devasenathipathy Kandasamy, Manisha Jana, Minu Bajpai
Department Institution: Department of Pediatric Surgery, All India Institute of Medical Sciences, New Delhi
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Abstract:
Aim: To generate a comprehensive source of information on the radiological profile and blood vessel status in children with Extrahepatic Portal Vein Obstruction (EHPVO).
Methods: Consecutive cases of EHPVO attending the Department of Paediatric Surgery at our tertiary care centre in northern India were included in the study. Contrast-enhanced computed tomography (CT) portography was done in all patients. We evaluated the presence of collaterals, portal biliopathy, chronic liver disease (CLD), status of left portal vein (LPV), right portal vein (RPV), splenic vein (SV), superior mesenteric vein (SMV), inferior mesenteric vein (IMV) and spleen size in these patients.
Results: Out of total 207 EHPVO patients, males were predominantly affected (n=134; 65%). Median age at diagnosis was 12 years (5-18 years). Collaterals were present in peri-cholecystic (n=207; 100%), peri-gastric (n=206; 99%), peri-splenic (n=207; 100%), peri-rectal (n=201; 97%), peri-esophageal (n=151; 73%) and intra-hepatic (n=181; 87%) regions. Portal biliopathy (n=191; 81%) and signs of chronic liver disease (n=202; 97%) were also present. Patency of LPV was present in 24 (11%) and RPV in 19 (9%). SMV and IMV were replaced by collaterals in 2 patients each. Spontaneous lienorenal collaterals were seen in 124 (60%). Mean splenic index was 1863. A significant positive correlation was present between SMV and LPV size (r=0.04), SMV and LRV (p<0.0001), IMV and LRV (r<0.0001), Spleen size and SMV (p=0.0003), Spleen size and IMV (p=0.0006). A significant association between presence of CLD and SMV size (p=0.002) and IMV size (p=0.01) was found. Gender did not significantly influence any parameters.
Conclusion: The presence of collaterals, portal biliopathy and CLD seen in a large proportion of patients can complicate the management of EHPVO. Left Portal Vein was detected to be patent in only 11% of the patients thereby questioning the feasibility of meso-portal bypass.
**Title:** Spontaneous bile duct perforation - management lessons in seven cases over two decades

**Authors:** Original presenter- Bijay K Suman. Presented by-Santosh K Mahalik, Biswajit Sahoo, Kanhaiyalal Agarwal, Akash Bihari Pati, Kanishka Das

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**Abstract:**

**AIMS** - To review the clinical presentation, management and outcome of patients with spontaneous bile duct perforation (SBP).

**METHODS** - This is a retrospective study from two tertiary teaching institutes over two decades (2001-2021). Clinical presentation, biochemical parameters, imaging, management and outcomes were studied.

**RESULTS** - Seven patients (4 males, 3 females) aged 3 weeks to 3 years are described. Five had jaundice, abdominal distension (ascites) and clay stool. Other symptoms (non-bilious vomiting - 3, respiratory embarrassment - 3, seizures - 1) and signs (pallor – 6, tender abdomen – 2, high grade fever – 2) reflected systemic manifestations. All had hepatomegaly and ascites. Associated pathology included A1AT deficiency (1), liver abscess (1), hydronephrosis (1), umbilical - inguinal hernia (1) and meningitis (2). The clinical suspicion was confirmed with ultrasonography and diagnostic paracentesis.

Laboratory findings showed obstructive jaundice. Imaging (HIDA scan, perop cholangiogram, serial postoperative cholecystograms) helped identify and track the leak and rule out congenital biliary dilatation. Three needed therapeutic paracentesis for respiratory embarrassment, one was managed peritoneal tube drainage only. Six were surgically managed with tube cholecystostomy and sub hepatic drainage. Ancillary management included partial / total parenteral nutrition, bile refeeding till resolution of leak and normal biloenteric drainage. The site of perforation was adjacent to the junction between cystic duct and CBD in all. The period from diagnosis to resolution of leak ranged from 2 - 8 weeks. All children have survived; at follow (2 months - 19 years) up, 6/7 are asymptomatic while one with A1AT deficiency has stable chronic liver disease.

**CONCLUSIONS** - Early laparotomy with tube cholecystostomy and sub hepatic drainage was successful treatment in spontaneous bile duct perforation. The tube cholecystostomy was retained till resolution of bile ascites and obstructive jaundice and removed after a normal cholangiogram. Our long-term follow-up indicates healing without major sequelae.

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**Title:** Profile of Quality of life in patients of EHPVO: a cross-sectional study

**Authors:** Shreya Tomar, Dr.Anjan Dhua, Dr.Prabudh Goel, Dr.Sujata Satapathy, Dr.Rohan Malik, Dr.S.Aggarwala, Dr.M.Bajpai

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**Abstract:**

**Aim of the Study:**
To assess the Quality of life (QOL) in patients of Extrahepatic portal vein obstruction (EHPVO).

**Methods:**
A cross-sectional, observational study was conducted in a tertiary care teaching hospital of North India. The study population included patients with EHPVO ≤ 18 years on endoscopic surveillance or awaiting for shunt surgery or
those who had already undergone shunt surgery and were on follow-up. Patients were categorised into (a) group 1- endoscopy group (including those awaiting shunt surgery) and (b) group 2- postoperative group for analysis. The Pediatric Quality of Life Inventory (PedsQLTM) was used to assess the QOL. QOL scores were obtained in various individual parameters of the questionnaire and then summed up to get the total score. Healthy siblings or children visiting Pediatric surgery OPD not suffering from any hepatobiliary disease condition were taken as controls-group 3. Statistical comparisons were performed by Mann-Whitney test.

Results:
Fifty patients were enrolled in the study group, out of which 68% (n=34) were males and 32% (n=16) were females. Mean age was 11.8 years (range 4-18 years). The child’s score in the control group, endoscopy and postoperative group ranged from 1825-2300, 1050-2200 and 475-2200, respectively. The QOL scores were statistically significantly better (p<0.00001) in the control group than the endoscopic group and the post-operative group.

Mode of presentation: Oral presentation (4+2)

Title: Triangular Cord Sign in Extra-hepatic Biliary Atresia: A Prognostic Marker?

Authors: Teg R Singh, Prabudh Goel, Anjan Kumar Dhua, Vishesh Jain, Devendra Kumar Yadav, Ajay Verma, Rajni Yadav, Devasenathipathy Kandasamy, Sandeep Agarwala, Minu Bajpai, Vivek Verma

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Abstract:
Aim: Triangular Cord (TC) sign on ultrasonography (USG) is routinely used in diagnostic workup in Extra-Hepatic Biliary Atresia (EHBA). This study is aimed at assessing the utility of TC sign as a prognostic marker in biliary atresia by predicting the severity of liver disease.

Methods: Prospective study based upon 32 consecutive patients of EHBA. TC sign was measured in all patients (mm) as echogenicity anterior to right portal vein. Aspartate to Platelet Ratio Index (APRI) and FIB-4 scores were calculated from collected data as per standard formulas. Wedge liver biopsy taken at the time of portoenterostomy procedure were graded for necro-inflammatory activity and fibrosis using Ishak’s modification of Knodell’s Histological activity Index.

Results: The TC sign was found to correlate (median 3.4 mm, range 1.2- 5.3 mm) with liver fibrosis on Ishak staging (p=0.02). A correlation was also observed with age of the patient (p=0.36, p=0.042) and other indicators of liver fibrosis APRI (p=0.39, p=0.036), and FIB-4 (p=0.39, p=0.043). However, TC sign did not correlate with necro-inflammatory activity score (p=0.288, p=0.11).

Conclusion: TC sign on USG, in addition to its diagnostic utility, may have a role in predicting severity of liver damage in patients with EHBA at presentation.

Mode of presentation: Oral presentation (4+2)

Title: Changing Trends In Management Of Choledochal Cyst In Pediatric Age Group

Authors: Nehal Shah, Soundhrya S., M Kobragade, R Shah, D Makhija, K Mudkhedkar, R Gupta, B Sanghvi, S Parelkar

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Abstract:
INTRODUCTION-Choledochal cyst excision and bilo-enteric reconstruction is the treatment of choice for choledochal cysts. Excision of choledochal cyst with biliary reconstruction is done with open or laparoscopic approach. The two most popular procedures are Roux-en-Y hepaticejunostomy and hepatico-duodenostomy. Both techniques have their merits and drawbacks. We share our institutional experience of changing trends in management of choledochal
METHOD—We studied the data of patients admitted in our institute from Jan -2012 to May-2021 with choledochal cyst under 12 years of age. Patient’s demographics, pathology, presentation, investigations, surgery, complications and outcome were statistically analysed.

RESULTS: Total 46 patients were considered in the study over a period of 10 years. Median age at presentation was 4.5 years (range: 6 months to 12 years). Female-to-male ratio was 3.6:1. All patients were symptomatic, and abdominal pain was the most common symptom. Most of them were Todani type1 choledochal cyst. Open (n=20) approach which was done in initial years was shifted to laparoscopic(2D n=1/3D n=25) approach with better adaptation over these years. Laparoscopy added advantage of minimal blood loss, early orals and shorter hospital stay. Surgical technique shifted from complete cyst excision with Roux en Y hepaticojejunostomy to hepatico-duodenostomy avoiding intestinal anastomosis and allowing more physiological pathway for bile. Initially 4 ports were inserted for repair, gradually over years with better experience and optics(3D), number of ports were reduced to 2 with 1 direct instrument. Size of ports were reduced from 5mm to 3mm and drain insertion was omitted. Complications and post operative outcome were analysed.

CONCLUSION: Hepatico-duodenostomy is more physiological for re-establishing bilio-enteric continuity in choledochal cyst with lesser operative time and better visualization. Laparoscopy is safe, efficacious method for choledochal cyst excision due to decreased morbidity and early recovery with superior vision and depth perception provided by laparoscopy.

Mode of presentation: Oral presentation (4+2)

Title: Surgical management of Extrahepatic portal hypertension: Initial outcome from a single institute

Authors: Naseera Koya, Bikash Kumar Naredi, Bibekanand Jindal, Bharat Jagdeesan, Prathibha B Naik, Apurva Arora

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Abstract:

Background and aim:

Management of Extrahepatic Portal Hypertension (PHT) in children has undergone considerable evolution in the past decade, but sparse literature availability on the topic is vexing. The type and urgency of intervention offered depends on the clinical presentation, imaging finding, the etiology of PHT, the condition of the liver, and the status of the varices. In this study we have evaluated the co-relation and accuracy of preoperative CT (computer tomography) with the intraoperative findings, and our initial follow up experience.

Materials and method:

We have retrospectively studied prospectively collected data for this study. There were 40 patients referred from pediatric department for surgical management, who were under their conservative management. Of the 40 cases on follow-up, 13 children underwent surgical treatment for EPHT between December 2017 to January 2020 and have been on follow up. All patients underwent CT portogram as a part of their preoperative evaluation and postoperative doppler for shunt patency.

Results:

Thirteen patients underwent surgical intervention in our institution for HT in the last 3 years. The most common indication was presence of hypersplenism (11/13 i.e.- 84%) and two had duodenal varices (2/13 i.e.- 15%). Mean age at diagnosis was 10.2yrs with mean duration of follow up was 36 months (12-42 months). Preoperatively banding had been done in 8 cases for recurrent hematemesis. Of the 13, 11 (11/13) cases underwent a proximal splenorenal shunt surgery, 1/13 Mitra shunt and 2/13 Devascularization procedure. CT portogram vessel diameters correlated 100% with intraoperative findings of venous caliber. We had zero 30-day re-explorations and mortality in our series. On follow up shunt patency in 10/13 (80%) and no rebleeds so far. In all the patient hematological parameter improved.
Title: Surgical intervention in pancreatitis
Authors: Sugandh Chadha, Lakshmi Sundararajan, Srinivas
Department Institution: Department of Pediatric Surgery, Kanchi Kamakoti Childs Trust Hospital, Chennai
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Abstract:
Aim: Pancreatitis has a varied etiology in children and usually requires a tailor made management protocol according to the clinical picture. This study was conducted to describe the role and spectrum of surgical/endoscopic intervention in children with pancreatitis at our institution.

Methods:
All children with acute or chronic pancreatitis who subsequently underwent a surgical/endoscopic intervention were included in the study. We retrospectively evaluated the data through our hospital records including demographics, clinical history, management details and outcome.

Results:
600 patients presented with pancreatitis between 2011-2021. Out of these 600 patients, 50 patients subsequently underwent intervention. These surgeries included 29 towards the underlying etiology like Choledochal cyst (15), annular pancreas (2), pancreatic divisum (10) and duodenal duplication (1), pancreatic tumor (1), whereas 21 were directed towards complications of pancreatitis like pancreatic necrosis (2), MPD stricture (11) or calculi (3), and pancreatic pseudocyst (3) and pancreatic ascites (2). In the form of pancreatic necrosectomy (2), endoscopic stenting or stone removal (10), Puestow (2), pancreaticojejunostomy (2) cystogastrostomy (3) and pigtail insertion (2). There was one mortality, other children had good long term outcome following intervention. Some children needed multiple procedures.

Conclusion:
Pancreatitis in children may be associated with an underlying anatomical abnormality amenable to surgical correction with excellent results. Interventions either surgical or endoscopic in selected children with complications of pancreatitis also give excellent long term results.

Title: Prevalence of pancreatico-biliary maljunction in choledochal cysts – A prospective observational study
Authors: Aditya A Manekar, Bikasha Bihary Tripathy, Subrat Kumar Sahoo, Narahari Janjala, Manoj Kumar Mohanty

Department Institution: Department of Pediatric Surgery, All India Institute of Medical Sciences, Bhubaneswar
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Abstract:
Background: Pancreatico-biliary maljunction (PBM) is a congenital anomaly, often found to be associated with choledochal cysts. Reflux of pancreatic juices into common bile duct causes damage to its mucosa, as well as its musculature leading to its dilatation and hence the cyst formation which is evident from the presence of PBM being associated with a raised amylase and lipase levels in the cyst fluid. According to a European multicentre study, the prevalence of PBM in cases of CC is found to be 72.2%. However, there is no Indian study depicting the prevalence of PBM in Indian children with CCs, which is one of the main postulated factors in the aetiopathogenesis of CC. In this study, we have attempted to observe prospectively the prevalence of PBM in children with CC and correlate this to its morphological and biochemical parameters. The association between the presence of PBM and histopathological findings like epithelial changes of the mucosa of the CC, inflammation, metaplasia or dysplasia and histopathology of the liver has also been evaluated.
Methods: We carried out a single center, prospective observational study with a single arm study group. We prospectively selected all patients of choledochal cyst admitted for surgery from November 2018 to October 2020. Data on biochemical, radiological and histopathological parameters were collected and analysed.

Results: We included a total of 20 patients in our study. The mean age of the participants was 6.22 ± 4.32 years. Amongst them, 11 (55.0%) were males and 9 (45%) were females. Abdominal pain was the most common presenting complaint among our patients (75.0%) and had a significant association with the presence of a PBM (p= 0.001). In symptomatic children, the mean duration of symptoms was 4.50 ± 2.26 months for jaundice, 4.50 ± 1.98 months for abdominal distension, 5.07 ± 2.02 months for abdominal pain. Among the 3 children with cholangitis, the mean number of episodes was 3.33 ± 2.08, with a median of 4 episodes. 14 (70.0%) of the children had type I a choledochal cyst, 1 (5.0%) participant each for types I b, I c, II and IV a and 2 (10.0%) of them had type IV b cyst. The mean size of the cyst (cm) was 7.41 ± 3.03 with a median of 6.85 cm. Amongst the children, 9 (45%) showed the presence of pancreatico-biliary maljunction on MRCP, with 7 (77.8%) showing Komi’s C-P type and 2 (22.2%) showing Komi’s P-C type. The mean Common Channel Length (mm) on MRCP was 8.11 ± 2.47, with a median length of 8.00 mm. Histopathological examination showed the presence of ulceration in the walls of the choledochal cyst in 10 (50.0%) of the specimens. There was a significant association of the presence of PBM and ulceration in the mucosa of the CC (p=<0.001). No dysplasia was seen amongst all excised specimens. There was a significant difference between the 2 groups in terms of bile amylase and bile lipase levels (p = <0.001), with the median levels being highest in the PBM present group.

Conclusion: Abdominal pain is the most common complaint in a child with choledochal cyst, and when present, it is significantly associated with presence of a PBM. MRCP is the gold standard tool to detect CCs and find out the morphology of PBM. The prevalence of PBM in children with CC of 45% with a mean common channel length of 8.11 mm. The biochemical analysis of a bile amylase and lipase is the functional indicator of the presence of a PBM and there is a significant association of their higher levels and presence of PBM. Presence of chronic inflammation and microscopic ulcers are significant histologic parameters depicting the presence of a PBM.

Mode of presentation: Oral presentation (4+2)

Title: Management of Choledochal cyst in Infants: 5year experience
Authors: Shyamendra P Sharma, Vijai D Upadhyay, Basant Kumar, Rohit Kapoor, Pujana K
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Abstract:
Background: Choledochal cyst (CDC) is a rare and benign congenital cystic malformation of biliary tree. Presentation of CDC in infants is different from its presentation in older children. CDC in infants usually present with jaundice, acholic stool and abdominal lump or abdominal distension. Delay in management may lead to hepatic fibrosis which may progress to irreversible changes.

Objective: The study was conducted to analyze the difference between infantile CDC and CDC presenting in older children on the basis of clinical features, liver histology and the outcome after surgery in infants with choledochal cysts (CDCs).

Material and Methods: Medical records of all CDCs patients treated before 1 year of age between January 2015 and December 2020 were reviewed. Initial clinical presentation, positive findings on physical examination, diagnostic imaging modalities, laboratory values for liver function test, coagulation profile, cyst fluid amylase and liver histology were analyzed.

Results: Total 13 patients included in the study mean age of presentation 4.5 months (ranges from 1- 12 month). All patients presented with abdominal lump, jaundice, S(38%) patients had clay colored stool. 3 patients presented with biliary peritonitis. 2 cases PTBD done, 5 cases open cholecystostomy done before definitive correction (Cyst excision and Hepaticojejunostomy). Cyst fluid amylase raise in 2 patients. Liver biopsy taken in 9 patients out of which 4 patients had evidence of fibrosis and 5 patients have normal liver biopsy.

Conclusion: Infants with CDC were more likely to present with jaundice and acholic stool. Serum Amylase level in CDC content was not raised in the infantile CDCs. Early surgical treatment advised as delay results in progression of liver fibrosis to end stage liver disease.
**Mode of presentation:** Oral presentation (4+2)

**Title:** Does port technique influence cosmetic outcomes of laparoscopic pediatric urology procedures?

**Authors:** Abhinav Sihag, Ramesh Babu

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**Abstract:**

Introduction & Aims: With majority of parents choosing laparoscopic approach due to the cosmetic benefit it is essential to provide them the best scar. In this study we hypothesized that using a smooth trocar without screws and subcuticular/adhesive closure provides a superior cosmetic appearance.

Methods: Scars of patients who underwent laparoscopic pediatric urology procedures were analysed based on:
group 1 screw type trocar and trans cuticular closure and group 2 smooth trocar and subcuticular/sealant closure. Junior doctors were asked to rate the overall cosmetic result of scar photographs on a Likert scale of 1 to 5, where 1 = poor, 2 = prominent, 3 = acceptable, 4 = good, and 5 = excellent.

Results: In group 1, 89/112 (79%) scar could be identified while in group 2, only 32/122 (26%) scars could be identified (p=0.001). Among all the scars analysed (n=234), the umbilical scars were least noticeable (8/234; 3%), followed by right/left lower quadrant scars (42/234; 18%). Among the scars correctly identified, the cosmetic result was rated poor/prominent in 53/89 (60%) of group 1 versus none in group 2; acceptable in 34/89 (38%) of group 1 versus 6% of group 2 and good/excellent in 2/89 (2%) of group 1 versus 30/32 (94%). The cosmetic outcomes were significantly superior in group 2 compared to group 1 (p=0.001).

Conclusions: Subcuticular closure of 5mm ports and adhesive glue closure for 3mm ports were superior forms of getting an inconspicuous scar during MIS procedures in children.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Trans-vesicoscopic excision of para-ureteral (Hutch) diverticulum with bilateral cross-triagonal ureteric reimplantation: video demonstration of technique

**Authors:** Rohit Kapoor, Ankur Mandelia, Shyamendra Pratap Sharma, Pujana K

**Department Institution:** SGPGIMS, Lucknow

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**Abstract:**

Aims

We aim to demonstrate our surgical technique for trans-vesicoscopic excision of para-ureteral (Hutch) diverticulum with bilateral cross-triagonal ureteric reimplantation.

Methods

A 2 year old boy presented to us with history of recurrent episodes of febrile UTIs since birth. USG showed bilateral moderate hydroureteronephrosis (HDUN). VCUG revealed right grade 4 and left grade 5 vesico-ureteric reflux (VUR) with para-ureteral (Hutch) diverticulum. DMSA scan showed bilateral preserved cortical function with right mid polar scar.

Results

Patient was placed in a supine position with thighs abducted. Cystoscopy confirmed a left Hutch diverticulum and dilated ureteric orifices. The bladder was filled to its maximum capacity, and a 5 mm camera port was introduced just below the bladder dome by railroading it over a urethral dilator as previously described by Abraham MK et al. [Pediatr Surg Int.2011;27(11):1223-6]. Two 3 mm working ports were introduced at the level of anterior superior iliac spine on bilateral mid-clavicular lines. The bladder wall was anchored to the abdominal wall and skin at two points. Pneumovesiculium was established at a pressure of 8 mmHg. The left Hutch diverticulum was gradually inverted into the bladder and the mucosa around the neck was incised and freed completely by creating a plane between the detrusor and the mucosa. Bilateral Cohen’s cross-triagonal ureteric reimplantation was then performed as described by Jayanthi et al. [Adv Urol2008:973616]. Anchoring sutures on the bladder wall were removed and port sites closed. Operating time was 220 minutes. Post-op recovery was uneventful with early resumption of feeds
and minimal analgesia requirement. Urethral catheter was removed after 72 hours and DJ stents after 3 weeks. At 3 months follow up, patient is asymptomatic with resolution of VUR on VCUG and minimal residual HDUN on USG.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Vesicoscopic Cohen’s reimplantation for reflux resolution in Primary vesicoureteric reflux: comparative assessment of outcome with Open Cohen’s reimplantation

**Authors:** Amit Pandey, Monika Bawa, Ravi Prakash Kanojia, Ram Samujh

**Department Institution:** Department of Pediatric Surgery, PGIMER, Chandigarh

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**Abstract:**

Introduction and Objective

Cohen’s Reimplantation (CR) for primary vesicoureteric reflux (VUR) is an established method for treatment of VUR with success of >90% in terms of reflux resolution. Replication of this technique by minimally invasive vesicoscopic method is technically challenging and requires a learning curve. The objective of our study was to compare our results of Open Cohen’s reimplantation (OCR) with Vesicoscopic Cohen’s reimplantation (VCR).

Methods: This was a retrospective comparative study done for patients operated between 2012-19. The study included all patients with primary VUR below 12 years of age with reflux grade II-V, either unilateral or bilateral. Refluxing units with failed Deflux treatment were also included. The exclusion criteria were defined as patients with bladder diverticula, ectopic ureter locations and VUR with neurogenic bladder dysfunction. The patients underwent OCR and VCR. The allocation of surgical procedure was based on the surgeon’s preference in the unit. Standard preoperative protocol of assessment included an Ultrasound, Voiding cysto-uretherogram (VCUG) and DMSA scan for both groups. The follow up protocol was clinical assessment at 3 months with a VCUG. DMSA was done 12 months after surgery. The end point of study was complete resolution of reflux with 1 year follow up scan. The two patient groups were compared in terms of demographic, clinical and investigational parameters.

Results: A total of 33 refluxing units were treated (10 females). OCR with 14 patients (4 females) and VCR group had 19 patients (6 females). Mean age (in years) at presentation was 2.57+2.27 and 3.4 + 3.25 in OCR and VCR respectively. Pre-operative grade of VUR was high grade (grade 4 to 5 and bilateral grade 3) all but one patient in OCR group. There was reflux resolution after surgery in 12 patients in OCR and 17 patients in VCR group. Complete resolution of pyelonephritic changes was seen in 5 patients in OCR with no change in rest of 9 patients. 12/19 patients showed similar resolution on the 12-month DMSA scan. Duration of hospital stay was significantly shorter in VCR patients with 3.5 days compared to OCR patients with 6.2 days. There was symptomatic relief in all patients except 1 in OCR group who continued to have problems due to deteriorating renal function.

Conclusions: VCR produces similar results to OCR. The reflux resolution with VCR is 98% and is comparable to the gold standard of OCR. The hospital stay is significantly shorter with VCR reducing patient morbidity and costs.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Laparoscopic-assisted extracorporeal appendectomy for uncomplicated appendicitis in children

**Authors:** Rahul Krishnan, Satish Kumar, Anil Kumar N, Sujay C

**Department Institution:** Department of General Surgery, Bangalore Baptist Hospital

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**Abstract:**

Aims: Laparoscopic appendectomy can be performed using one to four ports. We present our experience of two-port laparoscopic-assisted extracorporeal appendectomy for uncomplicated appendicitis in children.
Methods:
Between 2018-2021, 108 appendectomies were performed in children under the age of 16 in our institution. Of those 60 were cases of uncomplicated / non-perforated appendicitis; two-port laparoscopic-assisted extracorporeal appendectomy was attempted in 10 such patients. Obese patients, or those with a perforated appendix, appendicular mass, abscess or phlegmon, or localized or generalized peritonitis were excluded. The appendectomies were performed via a two-port method using 5 mm umbilical Hassan port and a 3 mm port in the right iliac fossa. All patients underwent the procedure within 24 hours of admission.

Results: Two-port laparoscopic assisted appendicectomy was successful in 100% of the cases. No additional (suprapubic) ports were required in any patients to complete the appendectomy and the conversion rate to open was 0%. The mean operation time was 30 minutes and the mean hospital stay was 1.5 days. No port site infections, bleeding, parietal wall abscess or intra-abdominal abscesses were noted in any patients.

Conclusions: This simple approach can be converted to conventional intracorporeal or to open appendicectomy when required and has advantage of full laparoscopy of abdomen. Its limitations include non feasibility in cases of obesity, thick mesentery, gangrenous or perforated appendicitis, haemostasis, adhesiolysis. There were no specific complications related to this technique. The extracorporeal step of the procedure could be safely performed by surgical residents providing them first-hand experience in paediatric surgery.

Mode of presentation: Oral presentation (4+2)
Title: Outcomes of infants undergoing laparoscopic pyeloplasty
Authors: Abirami Krithiga, Harish Jayaram, Mainak Deb
Department Institution: Department of Pediatric Surgery, Rainbow Childrens Hospital
Email: drabiramikrithiga@gmail.com
Abstract:
Aim: The aim of this study was to determine the course and outcome of infants undergoing laparoscopic pyeloplasty.
Methods: This was a study conducted from January 2017 to June 2020 of Infants who underwent laparoscopic pyeloplasty. The results of pre and postoperative imaging (ultrasound and diuretic renogram), operative details and complications were noted.
Results: 107 infants underwent laparoscopic pyeloplasty. The mean age of patients was 3.715 months with the range of 23 days - 11 months. 103 infants had antenatal diagnosis and 4 presented with palpable mass. Mean APD preop – 34.182mm, postop – 10.954mm. Mean preoperative and postoperative parenchymal thickness was 3.993mm and 7.554mm. 95 infants had both preoperative and postoperative renograms for comparison. 76 had reduced perfusion in preop EC scan which became normal in 73 patients, preop mean SRF – 40.013, post op SRF – 43.896. The drainage curve grading showed 5(6.5%), 71(74.73%), 18(19%) infants had normal, mildly prolonged, moderately prolonged drainage curve and 1 infant had poor function post operatively but follow up USG showed reduction in APD. Mean surgical time was 102.5 ± 26.0359 minutes from port insertion to closure. The average length of the stay was 2.95 days. There were 15 postoperative complications, 9 children developed UTI. 1 developed adhesive obstruction, 3 developed DJ stent migration. One child had a re-obstruction underwent redo LP on follow up. Pre and postoperative parameters were compared.
Conclusion: Laparoscopy offers good result and acceptable complication, With shorter hospital stay, less postoperative pain and better cosmetic results.

Mode of presentation: Oral presentation (4+2)
Title: Our experience of Laparoscopic Pyeloplasty in pediatric surgery
Department Institution: Department of Pediatric Surgery, SETH GS Medical College and KEM Hospital, Mumbai
Email: aditir90@gmail.com
Abstract:
Aim:
To study the safety, efficacy, feasibility and success of laparoscopic pyeloplasty in pediatric patients.

Materials & Methods:
This is a retrospective study of pediatric patients who presented with pelviureteric junction (PUJ) obstruction at a single tertiary care institute and were managed laparoscopically. Before surgery, patients underwent a renal ultrasound and isotope renogram. From October 2017 to April 2021, 29 children aged 4 months to 11 years of age (mean age 5.3 yrs) underwent laparoscopic Anderson-Hynes pyeloplasty after appropriate investigations. Out of these, 26 were operated by 3D and 3 using 2D laparoscopic techniques. A double J catheter was left in place and subsequently removed. Patients were followed up by ultrasound and renography. Parameters such as preoperative anteroposterior diameter of the renal pelvis (APD), duration of surgery, intraoperative blood loss, need for conversion to open, length of hospital stay and postoperative complications were assessed.

Results:
No intraoperative mortality or complications occurred. All cases except one were completed laparoscopically. One had to be converted to open procedure due to difficulty in DJ stent placement. There have been no postoperative complications.

Conclusion:
Laparoscopic pyeloplasty for PUJ obstruction is a safe, efficacious and feasible approach with excellent cosmetic outcomes, even in infants. Difficulty in DJ stent insertion is same as that encountered in open surgery.

Mode of presentation: Oral presentation (4+2)

Title: Umbilicoscopy: Revolutionizing future of Paediatric Laparoscopy
Authors: Chandramouli Goswami, Prabudh Goel, Minu Bajpai
Department Institution: Department of Pediatric Surgery, All India Institute of Medical Sciences, New Delhi
Email: chandramouligoswami1234@gmail.com

Abstract:
Aim: To share the departmental experience with the using umbilicus as a single port of access in Pediatric laparoscopy with the use of co-axial scope.
Material and Methods: A prospective study on seventy-six (n=76) cases using co-axial scope facilitated by the presence of an additional working channel by a single surgeon. Observation parameters included were demographic details, diagnosis, operative procedure, operative time, complications, results and final outcome.
Results: Mean age of patients was 6.5 years (range 1-14 years). Patients diagnosed with gall-stone disease (n=30), acalculous cholecystitis (n=1), acute appendicitis (n=17), undesceded testis (n=18), and others (n= 10; foreign body ingestion, ovarian cyst, pancreatic pseudocyst) underwent laparoscopic cholecystectomy (n=31), appendicectomy (n=17), orchidopexy (n=18), or other (n=10) procedures respectively. The use of co-axial scope, pick-n-fix stitches will be demonstrated. Mean operating time was 1.6 hours (25min-2.5hrs). Recorded complications included conversion to conventional laparoscopy (n=1), post-operative bile leak requiring CBD stenting (n=1) and umbilical erythema (n=1). Umbilicoscopy using single port and co-axial scope was successfully used in rest of the cases.
Conclusions: Improved cosmesis, shorter hospital stay, lesser postoperative pain and early return to activities justify the future trend towards this innovative single site surgery. Surgeon’s experience suggests a swift learning curve for a surgeon comfortable with conventional laparoscopy.

Mode of presentation: Oral presentation (4+2)

Title: Laparoscopic trans-peritoneal adrenalectomy for adrenal tumors in children: surgical experience and technical considerations
Authors: Shyamendra Pratap Sharma, Ankur Mandelia, M Sabaretnam, Pujana K, Rohit Kapoor
Department Institution: Department of Pediatric Surgery, SGPGIMS, Lucknow
Email: shyambrd07@gmail.com

Abstract:
Aims
Aims
We aimed to review our experience of laparoscopic adrenalectomy (LA) in children with adrenal tumors.

Methods
This was a retrospective chart review of all children who underwent LA between January 2016 and April 2021 by the primary authors. Localised adrenal tumors without signs of vascular encasement or adjacent organ involvement on pre-operative imaging were considered for LA. Patients with a confirmed pre-operative diagnosis of malignancy were excluded and managed with an open adrenalectomy. Data was collected regarding demographic information, clinical features, diagnostic workup (hormonal profile, imaging features), surgical technique, operating time, blood loss, rate of conversion, time to full feeds, requirement of analgesia, hospital stay, complications, histopathological diagnosis and follow-up status.

Results
During the study period, 9 children (5 girls and 4 boys) with a mean age of 52 (8-120) months underwent LA. 5 (55.6%) children presented with a hormonally active tumor, manifesting clinically as Cushing’s syndrome (2), Conn’s syndrome (1), virilisation (1) or feminization (1). Tumor localisation was 6 (66.7%) on the right and 3 (33.3%) on the left. The mean tumor size and weight was 5.8 (3.1-8) cms and 50.3 (10-80) gms, respectively. The final pathological diagnosis included adenoma (4), ganglioneuroma (2), ganglioneuroblastoma (1), intermediate adrenocortical tumor (1) and myelolipoma (1). The mean operating time was 190.3 (120-265) mins with 2 (22.2%) patients requiring blood transfusion. None of the patients required conversion to an open procedure. All patients resumed full oral feeding at 40.2 (24-60) hours. Intra-venous analgesia was required for 50.7 (36-72) hours and patients were discharged home after 5.1 (3-8) days. At a mean follow up of 37.7 (4-60) months, all children are asymptomatic with no evidence of recurrence.

Conclusion
The laparoscopic approach for resection of adrenal tumors is feasible, safe and effective in children with good outcomes, but should be reserved for patients with localised, well-circumscribed adrenal lesions without invasive disease. In these selected patients, LA may be adopted as the first line operative approach at centres experienced with advanced laparoscopy techniques.

Mode of presentation: Oral presentation (4+2)

Title: Splenectomy in pediatric age group: Our experience

Authors: Kamal Kant Sharma, Sonali Kelkar, Thavendra Dihare, Nilesh Nagdeve, Rajendra Saoji

Department Institution: Government Medical College, Nagpur

Email: kmlknt.shrm@gmail.com

Abstract:
Aim: To analyse selection criteria, efficacy, intraoperative complications, postoperative complications and follow up of splenectomy in pediatric age group.

Material & Methods:
Study design: Retrospective observational study
Duration: Feb 1996 to Feb 2021
Sample Size: n = 271

Inclusion Criteria: All patients upto 18 years of age reffered for splenectomy from department of pediatrics, hematology and gastroenterology for various disorders, medically optimally treated and with presplenectomy vaccination completed status (atleast 1 month prior to surgery). Splenectomy plus cholecystectomy/shunt done where deemed necessary.

Exclusion criteria: Splenectomy for trauma.

Records were studied for indications of splenectomy, vaccination status, intraoperative and postoperative complications, long term follow up. patients were followed up at 3months, 6 months and yearly in outpatient department.
Results: In the twenty five years study period, 271 patients underwent splenectomy. Male to female ratio was 1.2:1, with an age range of 0 to 18 years (mean age = 7.5 years). Indications of elective splenectomy were Portal hypertension (n=88), Thalassemia (n=84), Sickle cell disease (n=39), Idiopathic Thrombocytopenic purpura (n=38), Hereditary Spherocytosis (n=10), Autoimmune hemolytic anaemia (n=3), Storage disorders (n=3), Splenic hydatid cysts (n=2), Splenic abscess (n=1), as a part of oncologic surgery (n=2), as a part of nesidioblastosis surgery (n=2). Most patients underwent open splenectomy (n=229) while laparoscopic splenectomy (n=42) with accessory spleens (7.74%). Conversions of laparoscopic to open (n=4) with intraoperative bleeding as a cause. No major postoperative complications except ileus (12%) and pneumonia (3.6%). Follow up of patients from 6 months upto 25 years with 3 patients of suspected overwhelming postsplenectomy infections (OPSI) and one death immediate postoperative period, while wound infection (8.6%), fever (4.8%) were common minor symptoms.

Conclusion: In our set up most common indication turned out to be portal hypertension while postoperative course was comparable to literature. Extrahepatic portal hypertension, Idiopathic thrombocytopenic purpura, Hereditary Spherocytosis results are very satisfactory (physical growth) as opposed to Thalassemia. Less major sepsis and death in our patients which emphasises on role of presplenectomy vaccination.

Mode of presentation: Oral presentation (4+2)

Title: Profile of central venous access catheters in an exclusive pediatric surgical setting

Authors: MANASA REDDY, Suhasini Gazula
**Department Institution:** Employees State Insurance Corporation (ESIC) Medical College & Superspeciality Hospital, Sanathnagar, Hyderabad  
**Email:** drgazula9@gmail.com

**Abstract:**
Abstract body: AIM: To review the profile of central venous access catheters in an exclusive pediatric surgical setting  
STUDY DESIGN: Retrospective  
SETTING: Exclusive Pediatric & Neonatal Surgical ICU and Ward  
RESULTS: 100 central venous access catheters which were inserted in neonates, infants and children undergoing major surgeries and who were nursed in an exclusive pediatric surgical ICU were reviewed. Age range 0 to 144 months (Median = 6 months) with 40 (74%) neonate + infants. Indications were difficult venous access, parenteral nutrition and/or major surgery/ventilation. Most common catheter used was 3Fr, 10cm double lumen or 4.5 Fr 6cm triple lumen line. Most common sites of insertion were antecubital and jugular veins. Nearly 50% were inserted by the pediatric surgeon and rest by anaesthetist. USG guidance was used in about 30 cases. Average catheter duration in vivo was 8 days. No major complications encountered. Minor complications were noted in 10 patients. No infections complications seen.  
CONCLUSION: Central venous access catheters seems to be a fairly safe even in neonatal and pediatric surgical patients with no increase in infectious complications despite undergoing concomitant major invasive surgeries.

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**Mode of presentation:** Oral presentation (4+2)

**Title:** Role of various vascular flaps in reconstructive paediatric surgery: Experience with 57 cases  
**Authors:** VINAYKUMAR TERADAL, Vinay Jadhav  
**Department Institution:** IndiraGandhi Institute of Child Health Bangalore  
**Email:** vinay.teradal@gmail.com

**Abstract:**
Aims: To study the effectiveness of various flaps in reconstructive Paediatric surgery  
Methods: Retrospective study of Paediatric cases who underwent various reconstructive procedures at our Institution from January 2016 to December 2020  
Results: Various vascularized flaps like Anterolateral thigh flap in redo cloacal exstrophy repair, Pectoralis major myocutaneous flap for long oesophageal stricture, Temporalis rotation flap with Pectoralis myofascial flap with multiple free rib grafts for facial reconstruction post facial tumour excision, Intercostal flaps for bronchopleural fistula and bronchial stump closures in necrotizing pneumonitis, Transposition and Rotation flaps in Large MMC repair, Rectus abdominis muscle flap in EEC repair and Autologous anterior perichondrial with pectoralis advancement flap in complete sternal cleft were used. These helped us in reconstructing major defects which were created after excision of tumour or to replace tissue loss and to close fistulas and to support underlying structures.  
Conclusion: Vascular flaps are workhorse for major reconstructive procedures, reliable in providing adequate bulk of tissue to cover the defect without tension and also help in good post-operative wound healing with good long-term outcome in Paediatric surgical cases.

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**Mode of presentation:** Oral presentation (4+2)

**Title:** Management of vascular malformations in pediatric patients: Institutional experience  
**Authors:** Manika Boipai, Rahul Gupta  
**Department Institution:** Department of Pediatric surgery SMS Medical College Jaipur  
**Email:** manika.212@gmail.com

**Abstract:**
AIM: To analyze different modalities of treatment for vascular malformations in terms of therapeutic efficacy.  
METHOD: A prospective observational study was done on patients with vascular malformation over duration of 10 years at a tertiary referral center. Oral propranolol, oral prednisolone, different topical steroid preparations, antibiotics and surgery were undertaken. Clinical data and response to therapy were recorded.  
RESULTS: A total of 300 patients (267 infantile haemangioma (89%), 9 lympho-vascular malformation (3%) and 24 AV malformation (8%)) between 1 month to 12yr were included. Majority of patients were between 3months to 1
year of age (60%). Female (57%) preponderance was noted. Mostly the lesion involved head, face and nose (61%). Drugs were given for mean period of 8 months. Oral propranolol at a dose of 0.5-1 mg /Kg was given to all patients (100%). Oral prednisolone was added to treatment in 15(5%) and topical steroid in 261patients (87%). Overall clinical response was seen in 296 (98%) patients. It was graded as excellent (>75% improvement) in 227 (75%) and good (50-75% improvement) in 69 (23%) patients. 4 Non responders (2%) underwent surgical excision. Adverse effects were hypersensitivity reaction in 2 (0.6%) and diarrhea, nausea, vomiting in 5(1%).

CONCLUSIONS: Percentage of regression of size and color clearance was sufficient to justify the use of propranolol as the first line option for all forms of vascular malformations. Topical and oral steroids have an additive therapeutic role in shortening natural course of disease. Starting treatment early after birth was more advantageous for size reduction.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Neonatal severe hyperparathyroidism- Case series

**Authors:** Ann Rhoda Abraham, R Velmurugan, R Senthilnathan, Hariharan, Shankarrabarathi

**Department Institution:** Institute of Child Health and Hospital for Children Egmore Chennai

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**Abstract:**

**AIM:** Neonatal severe hyperparathyroidism (NSPHPT) is an extremely rare autosomal recessive disorder. It requires high index of suspicion. Infants affected with this disorder present with severe life-threatening hypercalcemia early in life requiring adequate preoperative medical management followed by surgery.

**METHODS:** In the last 5 years, infants with severe hypercalcemia who were diagnosed as Neonatal Severe Primary Hyperparathyroidism were studied. Their clinical presentation and management were retrospectively analysed. Postoperative follow-up with measurement of calcium, phosphate and other hormone levels were studied. Genetic testing was performed and analysed in one such patient.

**RESULTS:** We had four infants presenting with lethargy, failure to thrive, hyperopia. They were found to have Elevated serum calcium and parathormone levels. 1 case lost follow up the other 3 were treated medically followed by surgery. Surgery included total parathyroidectomy with transcervical thymectomy in two and total thyroidectomy with parathyroidectomy in the other child. Postoperative period calcium was found to normalize in one case with hypocalcemia in the other two. Genetic testing for CASR mutation was done for one Child and found to be positive.

**CONCLUSION:** Diagnosing NSPHPT needs expert clinical acumen. It requires emergency medical management to control calcium levels. Sestamibi scan which is an important component of Parathyroid function assessment in adults is of limited value in neonates. Surgery offers a cure for this unusual lethal hypercalcemia. Sound knowledge in pediatric endocrinology with parathyroid embryology and anatomy is of paramount importance. Our case series management might add a few insights into managing this unusual and rare disorder.
Congenital diaphragmatic hernia is a malady of the newborns with severe consequences due to respiratory system involvement. Presentation beyond the neonatal period or delayed presenting congenital diaphragmatic hernias are relatively rare, causing late diagnosis, misdiagnosis and delayed treatment.

**Aim**

To analyze in detail the occurrence, clinical profile, management and prognosis of CDH presenting beyond 1 month of age

**Materials and methods**

Retrospective study of clinical records of patients who were admitted with CDH beyond 1 month of age between June 2016 and May 2021

**Results**

Over a period of 5 years, from June 2016 to May 2021, total 207 cases of congenital diaphragmatic hernia were admitted in our institution and treated; of which 40 were with delayed presentation. We classified them on basis of factors like pick-up in antenatal scans, pattern of presentation whether with respiratory or gastrointestinal symptoms, average age at presentation, whether patients presented as an emergency or was incidentally diagnosed and taken up for surgery, grade of the diaphragmatic defect at operation, side and location of hernia, association with other anomalies, mode of repair- primary vs artificial or autograft prosthesis, need for intensive care and ventilatory support pre and post operatively, outcome following surgery and the long term follow up and sequale. Reflecting on all these factors we tried to draw a meaningful relation of these factors to the delayed presentation.

**Conclusion**

The large percentage of patients are misdiagnosed as other medical/ surgical conditions due to the atypical time of presentation and strong awareness has to be generated among the first attending clinicians regarding the same.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Mullerian duct remnants in disorders of sex development: An experience from a pediatric gender clinic

**Authors:** Purnendu Bhardwaj, Rajkiran Raju S, Shalini GH, Kiran M, Prasanna Kumar AR, Shubha AM, Kanishka Das

**Department Institution:** St. John’s National Academy of Health Sciences, Bangalore

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**Abstract:**

Aim: Mullerian duct remnants in children with disorders of sex development (DSD) are rare; around 200 were published between 1964 and 2012 with 50 more cases described in the last few years. We aim to analyze the clinical course and management of Mullerian remnants in children with DSD

Methods: A Retrospective chart review from 2000-2020, recruiting DSD patients with mullerian remnants treated at a specialty clinic. Clinical features, phenotypic and genetic sex with sex of rearing, operative findings (Cystogenitoscopy/laparoscopy/open) and histopathology were collated

Results:

16 patients were analyzed. Age at presentation was bimodal (< 2 years and pre pubertal). Persistant mullerian duct syndrome (7), ovotesticular DSD (6) and gonadal dysgenesis (3) were the genetic sex. 13 were reared as males. Common presentation was cryptorchidism, proximal hypospadias and inguinal hernia. Ultrasound detected mullerian remnant in 13/16, the other 3 were incidentally detected during orchidopexy / herniotomy. Excision was laparoscopic/assisted in 11 and by laparotomy in 3. Cystoscopy was corroborative in 7 cases. 10 patients required additional surgical procedures (gonadectomy, orchidopexy, herniotomy, urethroplasty)

Conclusion:

Mullerian remnants in children with DSD are rare and usually present early in childhood. Cryptorchidism, inguinal hernia and severe hypospadias are commonly associated. Ultrasonography often aids in the diagnosis. Cystogenitoscopy guides the need for excision. Most are amenable for laparoscopic excision. Injury to vas at surgery is an anticipated risk. Future fertility is of course decided by the genetic sex at diagnosis.
Title: Predictors of cystobiliary communication in hydatid disease of liver, intra-operative and post-operative management in children a multiinstitutional study

Authors: Mudasir Ahmad Magray, Mufti, Gowhar, Bhat, Nisar A, Abdul Rashid Kumar, Omar Masood, Riyaz AQ Wani, Riyaz A Wani, Amat U Sami

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Abstract:
Hydatid disease in children is highly prevalent in this part of world due to lack of proper hygiene. Cystobiliary communication with hepatic hydatid disease is responsible for postoperative bile leakage and morbidity. Our study aimed to predict the communication, intraoperatively diagnose it and manage it postoperatively in case not diagnosed previously.

MATERIAL AND METHODS
This is a prospective, cohort study of all children with hydatid disease of the liver. Patient data were recorded on an internal web-based registry system supplemented by paper records. All the patients who underwent surgery for hydatid disease from 2013 to 2019 were assessed for presence of CBC and only patients with CBC were included in the study and studied.

RESULTS
A total of 97 patients presented with hydatid disease of liver during the said period. There were a total of 20 (20.6%) CBC among these diagnosed and treated. Males had more CBC than females (m:f=2:1). Cyst size >10cms, jaundice, right lobe cyst preoperatively were the most important predictors of CBC. It was found that on-table suturing of CBC with deposition of pedicled omentum was the most effective way of preventing post-operative bile-leak. Management depends on the size of the fistula, the site of the cyst, and the experience of the hepatobiliary surgeon. No patient in our study required post-operative cystogastrostomy or other such procedure.

CONCLUSION
Cyst size >10cms, jaundice, right lobe cyst preoperatively were the most important predictors of CBC.

Title: Effect of perioperative albendazole therapy in echinococcosis- A retrospective analysis

Authors: Saswati Behera, Monika Bawa, Ravi P Kanojia, Ram Samujh

Department Institution: Department of Pediatric Surgery PGIMER Chandigarh

Email: drshaswati67@gmail.com

Abstract:
AIMS: To study the effect of duration and dosage of perioperative antihelminthic drug (albendazole) on dimensions, symptomatology, viability, intraoperative features of the daughter cysts along with the incidence of post-operative recurrence in patients with multiple hydatid cysts.

Methodology- Retrospective and prospective study on 47 patients of multiple hydatid disease managed in a single surgical unit over a period of five years (Jan 2015- Dec 2020). There were 36 males and 11 females, all received albendazole for at least for 4 weeks preoperatively and for variable duration in the post-operative period. Details of the patients and pre-operative investigations were retrieved from our database and the patients were followed up with liver function tests and radiology in the form of Chest X-ray, ultrasonography and computed tomography whenever indicated.

Results: 13 out of 36 (36.1%) patients were found to harbor hydatid cysts in both liver and lungs. Hydatid serology was reactive in 75%. Of patients (19 out of 36) who received albendazole therapy for a minimum period of 3 months, only two patients had viable cysts with brood capsules aspirated during surgery as compared to rest of the patients. Recurrence rate was found to be 11% (4 out of 36 patients) in patients, out of which one patient had multiorgan hydatidosis (bilateral lungs, liver and left ventricle), two other patients did not receive preoperative albendazole and one patient had multiple viable cysts evacuated from liver and lungs.

Conclusion: Pre-operative albendazole for a minimum of 3 months, wherever feasible, significantly reduces the risks of viable cysts intraoperatively. Post-operative albendazole therapy for a period of 3 months decreases the chances
of recurrences. Other factors like symptomatology, multiorgan involvement, viability of cysts should be kept in mind to further increase the follow up period and albendazole therapy.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Lung hydratid: Challenges in the management and outcome

**Authors:** Nitin Sharma, Shipra Sharma, M A Memon

**Department Institution:** Pt JNM Medical college & associated DKSPGI, Raipur

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**Abstract:**
Background: The management of lung hydrated cyst is associated with challenges due to the presence of bronchocavitary communications.

Aims: to analyze the outcomes in operated cases of hydratid lung.

Material and methods: The data between the period of June 2017 - March 2021 was analyzed. Those with incomplete data or lost to followup were excluded. All the cases underwent open thoracotomy and excision of cyst with closure of the bronchocavitary communications. All the cases were managed by high frequency gentle breaths till the communications were repaired. The number of communications, duration required for closure and fall in saturation after the excision of cyst till the closure of communication was recorded. The outcome parameters considered were number of communications, duration required for the repair, fall in SPO2, Duration of surgery, duration of major air leak, duration of intercostals tube, duration of hospital stay and requirement of ventilator.

Result: A total of 23 cases were operated. Mean age at presentation and surgery was 6 years (range 2-18 years). There were 17 right sided, 5 left sided and 1 bilateral cyst. Bronchocavitary communications were seen in 21 cases. The average number of communications was 3 (Range: 2-8). The average duration required to suture closure was 30 seconds (Range 20-180 seconds). The average fall in the SPO2 was 40% (Range 20-74%). Mean duration of surgery was 2.15 hours (Range 1.45-3.15 hours). Ventilator support was required in 4 cases. Average duration of intercostals drainage required was 7 days (Range: 6-14 days). Persistent air leak in the ICD was seen in 2 cases. The average duration of hospital stay was 14 days (range 12-34 days).

Conclusion: Hydratid cyst lung is generally associated with bronchocavitary communication. The repair should be fast and specific identifying the major leaks first. These cases need to be managed judiciously for better outcome.

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**Mode of presentation:** Oral presentation (4+2)

**Title:** Ventriculoperitoneal shunt complication : A single institutional experience

**Authors:** Raja R, R.Velmurugan, R.Senthilnathan, G.Hariharan, C.Shankarabharathi

**Department Institution:** Institute of child health, Egmore, Chennai.

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**Abstract:**
AIM: To document the various complications associated with VP SHUNT insertion

METHODS: This is a retrospective study in which we have reviewed the epidemiology and management of complication after ventriculoperitoneal shunt placement both in our department as well as cases referred post VP shunt insertion from outside for a period of about 5 years from June 2016 to June 2021 in Institute of child

RESULTS: A total of about 166 children aged less than 13 years were included in the study. Of which 93 case, VP shunt insertion was done in our department and rest 73 cases were referred from outside hospital post VP shunt insertion for post operative care or complications. A total of 53 cases had complications of which 19 had under drainage due to shunt obstruction and disconnection, 15 had shunt infection, 3 had pseudocyst formation, 1 had recurrent pseudocyst formation, 5 had shunt migration, 8 had eroded through the skin in which 3 over the scalp wound site and 5 in the abdominal wound site and 2 cases had rare complication -one the shunt got extruded through the mouth and the other was the extrusion of the shunt per rectum.

CONCLUSION:
Children with shunted hydrocephalus still require multiple shunt revisions throughout their life time. Mortality can be prevented by early detection and appropriate management

**Mode of presentation:** Oral presentation (4+2)

**Title:** Neonatal giant neural tube defects: Challenges and lesions learnt

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**Abstract:**

Abstract body: Background: management of neural tube defects is associated with challenges and outcome is demanding. Large defects are difficult to close and have associated wound related issues. The purpose of this study is to discuss the challenges in wound closure and lesions learnt.

Aims: to analyze the outcomes in operated cases of giant neural tube defects.

Material and methods: The data between the period of June 2017- March 2021 was analyzed. Those with incomplete data or lost to followup were excluded. All the cases underwent closure of defect using primary closure or double Z plasty. Dura closure was achieved with native dura augmented with thoracolumber fascia. All the cases were assessed for associated hydrocephalous and underwent shunt surgery prior to meningo myelocele repair if associated hydrocephalous was present. All the cases operated received mannitol in the post operative period. The outcome was analyzed with respect to duration of surgery, blood loss, requirement of Z Plasty for closure, Wound infection, blackening of the flaps, CSF leak and features of sepsis.

Result: A total of 43 cases were operated. Mean age at presentation and surgery was 4 days (range 0-28days). Mean duration of surgery was 1.15 hours (Range 0.45-3.15 hours). VP shunt was required in 34 cases. Closure with double Z plasty was required in 36 cases. Post operative wound infection and blackening of the flap was seen in 13 and 1 case respectively. These cases were managed with dressings. CSF leak was seen in none of the cases. Sepsis was seen in 28 cases in the preoperative period and all were managed with long term antibiotic therapy. Average duration of stay required was 14 days (Range: 6-24 days).

Conclusion: Management of large defect requires closure with adequate planning. CSF shunting and closure using Z plasty is often required in these cases

**Mode of presentation:** Oral presentation (4+2)

**Title:** Postgraduate trainee-performed fluoroscopic-guided balloon catheter assisted esophageal coin extraction in children: safety, efficacy, and cost-effectiveness in a resource-challenged setting

**Authors:** Ashish Sam Samuel, Vivek Samuel Gaikwad, John K Thomas, Sundeep M C Kisku

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**Abstract:**

Abstract body: Aim: Our study seeks to ascertain the safety, efficacy, training, timeliness, and cost-effectiveness of the retrograde Foley balloon technique in extracting impacted coins of the esophagus.

Material and methods: All children below 16 years who underwent treatment in the Department of Paediatric Surgery for impacted esophageal coin by fluoroscopy guided Foley catheter were included. All retrieval procedures were performed exclusively by Paediatric Surgery residents in training. The outcome of Foley extraction was classified as success, if the coin was extracted or displaced into the stomach, and failure if it remained impacted in the esophagus. The cost of the Foley retrieval procedure was calculated and compared with other methods.

Results:

One hundred and twenty children were included in the study. The median age of the patients was 4 years (range 1-14 years), with a male predominance (3:2). Nearly 82% (n=98) fluoroscopic procedures were performed out-of-office
hours, with over half of these (43%) occurring late at night. Most coins were lodged in the upper esophagus (74%), followed by the mid-esophagus (15%), and lower esophagus (9%). The success rate of disimpaction was 95% (n=114), with 82% (n=98) participants having successful extraction, while the coin was displaced into the stomach in 13% (n=16). All coins which were displaced into the stomach passed out uneventfully via naturalis. There was no post-procedure complication among any of the 120 participants. Comparative economics revealed the cost to patient for fluoroscopic Foley catheter removal to be INR 2,065. Correspondingly, the cost of flexible EGDS retrieval under general anaesthesia was INR 18,040 while the cost of rigid esophagoscopic extraction under general anaesthesia was INR 19,940.

Conclusion:
Coins impacted in the esophagus of children can be safely and effectively removed by paediatric surgical residents using a fluoro-copy guided Foley catheter, even during out-of-office hours. This is cost-effective and logistically easier.

Mode of presentation: Oral presentation (4+2)

Title: Protocol-based management of primary pyogenic abscess of the psoas muscle in children
Authors: Shishir Jadhav, Devendra Kumar Yadav, Sameer Kant Acharya, Prabudh Goel
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Abstract:
Objective- To present the clinical Features, diagnostic protocol, microbiological Profile & management protocol (Protocol based management) of primary pyogenic psoas abscess in children
Materials and methods: Prospective evaluation of psoas abscess was done from 2009-2016. Diagnosis was established by clinical evaluation and USG. Treatment protocol includes Group A-Needle aspiration- small amount of pus (<25 ml), B-Pigtail insertion (posterior approach and ant-lateral approach) > 25 ml pus without lump, C- Extraperitoneal surgical drainage (GA, or LA with sedation) for abscess with lump, D- Psoas fascia opening for bulky psoas and E-Conservative with skin traction in bulky psoas. Outcome was measured in terms of pain improvement, leg straightening, and hospital say.
Results- sixty consecutive pts were included. The age ranges from 4-12 years. The classic triad of pain, fever, and limping was noticed in 56 patients. Pus culture showed growth in 41 pts. Gr A include 6 pts, which showed pain improvement and leg straightening in 48 hrs. Gr B include 20 pts, which showed pain improvement and leg straightening in 36 hrs. Gr C include 23 pts, which showed pain improvement and leg straightening in 18 hrs. Gr D include 5 pts, which showed pain improvement and leg straightening in 52 hrs. Gr E include 6 pts, which showed pain improvement and leg straightening in 72 hrs. Hospital stay ranges from 5- 18 days.
Conclusion- Small quantity psoas abscesses responded well to needle aspiration and pigtail drainage while large abscesses with lump required surgical drainage. Surgical drainage showed more symptomatic improvement and less hospital stay than the conservative management.

Mode of presentation: Oral presentation (4+2)

Title: Chronic pain abdomen in children- could this be an early feature of constipation?
Authors: Akshay Kalavant B, Prashant Zulpri, Anil Halgeri
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Abstract:
Abstract body: Aim : To assess whether constipation is one of the frequent cause of chronic nonspecific abdominal pain in the paediatric age group
Material and methods:
This is a retrospective analytical study of all the children presenting with chronic abdominal pain without an organic cause to pediatric surgery OPD between June 2017 to May 2020. Recurrent pain abdomen was present in these children more than 3-4 months. None of the children had features identified as having constipation which fits into the ROME -3 criteria but had significant stool stasis in abdominal radiograph. Those patients were treated for
constipation based on clinical and radiological evidences. The variables were compared with the diagnosed case of constipation. An attempt was made to verify whether the nonspecific pain abdomen was subset of the constipation group after evaluating thoroughly for any other cause of the symptoms.

Results:
Sixty-four patients presented with chronic abdominal pain, commonest site being central part of abdomen followed by right iliac fossa. Fifty-three of them had positive findings in USG abdomen; very prominent features were mesenteric lymphadenitis in 34, USG features of subacute appendicitis in 16, intussusception in 4, ileal thickening in 1. Only 8 among 64 patients underwent the appendicectomy procedure in later follow up due to recurrent pain. Fecal retention were identified in abdominal radiograph (Blethyn’s grade type 2 and 3) and/or loaded rectum in 66% each respectively. 16 of these patients had urinary calculi which over the follow up of 2 years, four required endourological intervention. Although the pain abdomen patient had loaded rectum in 20.2% less compared to constipation patient, symptoms improved in 78% patient by the treatment, suggesting that pain abdomen patients are subset of constipation group.

Conclusion:
Patient with nonspecific pain abdomen who were not diagnosed to be having any organic disease should be potentially evaluated for constipation.

Mode of presentation: Oral presentation (4+2)
Title: Intralesional steroid in the era of propranolol for infantile hemangioma- Do we need it?
Authors: Anand Pandey, Piyush Kumar, Sudhir Singh, Survesh Kumar Gupta, Saurabh Srivastava, Jiledar Rawat
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Abstract:
Abstract body: Aims- Propranolol is drug of choice for treatment of infantile hemangioma. There may be occasions when patients fail to respond to it. This study evaluated role of intralesional steroid in such scenario. Methods- All patients of infantile hemangioma undergoing treatment received propranolol as primary treatment. They were evaluated for hemangioma and its response to propranolol. Failure to respond was managed by intralesional triamcinolone (2-6 at 1 month interval). The results were evaluated. Results- During study period, 41 patients were evaluated. Of these, 7(17%) patients had poor to no response to propranolol. These patients received intralesional triamcinolone. There was response to treatment in 6 patients. Conclusion- Propranolol may not be effective in all patients of infantile hemangioma. Alternative treatments may be needed in these patients. Intralesional triamcinolone may provide such option in these patients.

Mode of presentation: Oral presentation (4+2)
Title: Knowledge attitude and practice survey on awareness of Health care Provider about beneficial effects of folic acid supplementation in periconceptional period
Authors: Sunita Singh, Anjali Pal, Abhiruchi Galhotra, Suparva, Pushpawati, Sarita Rajbhar
Department Institution: All India Institute of Medical Sciences, Raebareli, U.P.
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Abstract:
Abstract body: Background: Folic Acid (FA) have preventive effect in congenital anomalies, with maternal and offsprings benefits. We conducted Knowledge attitude and practices survey regarding awareness of FA benefits amongst health care provider (HCP), followed by education sessions and distribution of education material. Methods: A cross-sectional study (2018-2019) was done via administration of self-made questionnaire among 206 HCP at a CHC. Results: There were 44.17% (91) ASHA, 27.18% (56) ANM, 16.01% (33), RHO (Rural health officers), 8.25% (17), and 4.36% (9) MBBS Doctors. 50.97% (105/206) of HCP underwent training about beneficial effects of FA organized by national rural health mission.
Knowledge, attitude and Practices of HCP was as follows
1. Preventive effects of FA on foetal anomalies: Neural Tube Defects was 37% (74/200), Congenital Heart Diseases 0% (0/206).
2. Maternal benefits: Prevention of pre-eclampsia 1.9% (4/206), less chances for spontaneous preterm delivery 0% (0/206) and less risk for foetus of small for Gestation age 1.9% (4/206).
3. Beneficial effects of maternal intake of FA on the delivered off springs: 0% (0/206) less chance of anemia, 0% (0/206) better long-term neurological development.
4. FA administration guidelines: 2.4% (5/206) were able to identify high risk mothers. 7.76% (16/206) were aware about the correct dosage in high-risk mothers. FA was always available at CHC.

Conclusion: FA might be known by the HCP but its importance is still unknown to many. Frequent training of HCP by experts about maternal- fetal health benefits of FA might increase better counselling, hence compliance of women for FA.

Mode of presentation: Oral presentation (4+2)

Title: Pancreatic pseudocyst in children: Five-year audit from tertiary care referral centre.
Authors: Anju Verma, Basant Kumar, Vijai D Upadhyaya, Ankur Mandelia, Pujana K, Rohit Kapoor, Shyamendra Pratap Sharma.
Department Institution: Sanjay Gandhi Post Graduate Institute, Lucknow
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Abstract:
Background: Pancreatic pseudocysts (PPC) are rare entity in children. Although it is well-documented as a primary consequence of pancreatitis, the most frequent cause of PPC in children is blunt trauma abdomen with the mechanism being direct compression of the pancreas into the spine. Treatment options range from conservative management to surgical drainage. We aimed to analyze the causes, clinical presentation, management and outcome of pancreatic pseudocysts treated at our centre.
Methods:
From May 2015 to January 2020, all patients with Pancreatic pseudocysts were retrospectively reviewed. Collected data included demographic features, etiology, clinical presentation, radiographic assessment, intraoperative findings along with perioperative complications and final outcome.
Result:
A total of 11 patients with Pancreatic pseudocyst were managed. Their ages ranged from 5 month to 16 years. Eight (72.7%) patients had history of blunt trauma abdomen. Seven (63.63%) had acute presentation, 3 (27.2%) patients had chronic presentation and one patient had congenital pseudocyst. All patients managed with expectant management initially, later on 10 (90.9%) patients needed surgical intervention and CT guided drainage was done in one patient. The surgical intervention included cystogastrostomy for six patients and cystojejunostomy for four patients. Three (27.2%) patients developed wound infection, 2 (18.1%) had chest infection postoperatively. One (10.1%) patient developed external pancreatic fistula which was managed conservatively.
Conclusion:
Though the conservative management of PPC is an effective method of treatment in children with acute presentation and small-sized pseudocyst but surgical treatment is safe, effective, and satisfactory treatment in chronic and complicated PPC as it is associated with less recurrence rate and almost nil mortality.

Mode of presentation: Oral presentation (4+2)

Title: Our experience with chemoports in pediatric malignancies
Authors: Sushma A, Shruti Tewari, Rahul Deo Sharma, Surendra Singh, Rajeev Redkar
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Abstract:
Aim:
Retrospective Analysis of chemoports in pediatric malignancies

Materials and methods:
Between December 2002 to July 2020, we observed 80 patients with various malignancies, with mean age of 5.9 years (2 months to 16 years) in whom 83 chemoports were inserted. The parameters analysed were patient demography, indications, number of ports inserted and removed, size of the port, site of insertion and complications.

Results:
Out of 80 children, 52 males and 28 females, 68 /80 children were diagnosed to have haematological malignancies, 9 children had solid tumours, 2 children had germ cell tumours. Bard Pre connected chemopors of various sizes included were 6.6 Fr in 68 cases, 9.6 Fr in 11 cases, 9 fr in 1 patient, 9.2 Fr in one patient, 7.5 Fr in 1 patient. Right sided IJV was used by default in 59 patients, left IJV in 3 patients, 1 had Subclavian venous insertion. Under fluoroscopy, 1 had incorrect position, so it was corrected on table, rest confirmed as normal. Thirty eight chemoports removed, out of which, 29 were removed after completion of chemotherapy. Overall, complication rate was 8.4% with port related infection in 2 cases, thrombosis at the tip seen in 2 cases, 2 were blocked, 1 had leak from the port site, another unseen complication with faulty port with disc dislocation was noted, other one was removed after 15 days of insertion with cause not clear. Overall, 29 children had a good satisfaction rate with chemopors, 9 children died, 4 had relapse but survived, rest are loss to follow up.

Conclusion:
With strict training and expertise, insertion and care of chemoports is safe in pediatric malignancies without significant complications.

Mode of presentation: Oral presentation (4+2)

Title: Zipper injuries – Clinical characteristics and management
Authors: Pattu Pogula Jagadish, Shilpa Sharma
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Abstract:
Aim: Zipper Injuries are challenging traumatic cases. We aimed to systematically review the literature to summarize the varied clinical characteristics, age at presentation and management.
Method: A PUBMED search was carried out with terms zip injury, “zipper injury” and zipper injuries on 19/05/2021. 719 articles were hit by search. Two independent reviewers selected the articles. Duplicate articles and non penile injury articles were excluded. 25 articles were chosen for inclusion from the 698 abstracts available as they were relevant to the topic. Of these only 14 with details of number of cases, age of cases and method used were filtered . 2 Relevant articles from cross reference were also included. 16 full texts were thus finally included for the study.
Results: 68 children including a large series of 35 cases and 1 girl with labial skin caught between posterior faceplate and closed teeth of zip. Median age in 68 children was 6yrs. Most of the cases were in children. However, there were 5 adults ,2 >=60 years. In ten cases, the mechanism was mentioned; 8 while fastening and 2 while unfastening the zip. 41 were removed without sedation and 12 under anaesthesia. 73 mentioned method of extraction, 2 by using mineral oil, 7 by bone cutter to cut median bar ,36 by moving zipper tooth by tooth, 28 by other methods like a small screw driver, cutting pliers, mini hacksaw. Rarely elliptical incision of entrapped fore skin or emergency circumcision has been described. There were no complications mentioned except only one case with swelling due to lignocaine injection
Conclusion: Zipper injuries are common but infrequently reported. 6yr is median age in children. Most injuries occur while fastening the zip hastily. Most stuck zippers can be removed without anaesthesia. Appropriate method should be planned without hurting the child. The preferred method is moving the zip tooth by tooth.

Mode of presentation: Oral presentation (4+2)

Title: The role of tissue sealant as an adjunct during urethroplasty in children with hypospadias: Can they further advance the healing?
**Authors:** Apoorv Singh, Sachit Anand, Prabudh Goel, Devendra Kumar Yadav, Minu Bajpai  
**Department Institution:** Department of Pediatric Surgery, AIIMS, New Delhi  
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**Abstract:**

**Aim:** A consensus statement regarding the usage of tissue sealants during urethroplasty is lacking. This systematic review and meta-analysis aims to compare the outcomes of hypospadias surgery, with regards to its complications, in pediatric patients with and without tissue sealant application.

**Method:** The authors systematically interrogated the PubMed, Web of Science, EMBASE and Scopus databases through September 2020. The overall complication rate, and specific complication rate (including urethrococutaneous fistula (UCF), wound-related complications, complications of the neo-urethral tube) were the primary and secondary outcomes, respectively. Statistical analysis was performed using a random-effects model, and pooled risk-ratio (RR) and heterogeneity (I²) were calculated. The methodological quality of the studies was assessed using the Downs and Black scale.

**Results:** Four comparative studies were included in the meta-analysis. As compared to without sealant application, hypospadias repair performed with sealant application showed no significant difference in the incidence of overall postoperative complications (RR=0.63; 95% CI=0.34-1.14, p=0.13). However, a significant reduction in some specific complications including UCF (RR=0.37; 95% CI=0.19-0.72, p=0.003), wound-related complications (RR=0.57; 95% CI=0.38-0.86, p=0.008) and complications involving the neo-urethra (RR=0.15; 95% CI=0.04-0.54, p=0.004) was observed with sealant usage. All the studies had a moderate risk of bias.

**Conclusion:** The meta-analysis revealed no additional benefit of hypospadias repair performed with tissue sealants as compared to without seals in terms of reducing overall postoperative complications. However, a significant reduction was observed with sealant application in some specific complications, including UCF, wound-related complications and complications of the neourethra. The level of evidence of the published studies is however limited. Therefore, further studies need to be conducted for optimal comparison between the sealant and non-sealant (or placebo) groups.

**Mode of presentation:** Oral presentation (4+2)

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**Title:** Portosystemic shunts in extrahepatic portal vein obstruction in children: A systematic review and meta-analysis

**Authors:** Nellai Krishnan, Prabudh Goel, Vivek Verma, Devasenathipathy Kandasamy, Minu Bajpai  
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**Abstract:**

**Aim:** To conduct a systematic review and meta-analysis to determine the optimal portosystemic shunt procedure in children with extrahepatic portal vein obstruction (EHPVO).

**Methods:** Study protocol was developed in accordance with PRISMA statement. Literature search was conducted on EMBASE, PubMed, Scopus and Google Scholar databases from 1/1995- 5/2021. English language studies on portosystemic shunts in children were included. The shunt procedures were divided into two groups: Selective porto-systemic shunt (SS) and Non-selective porto-systemic shunt (NSS). Outcomes such as symptoms at presentation, resolution of symptoms post-surgery and shunt patency were compared. The meta-analysis was conducted using RevMan 5.4. Statistical analyses were performed using a fixed-effects model. The methodological quality of the studies was assessed using the Downs and Black scale.

**Results:** Eleven studies comprising of 133 patients was included in the systematic review. Of these, ix studies were included in meta-analysis. 68 patients underwent SS and 65 underwent NSS. There was no significant difference in the age and gender of the patients. The presenting symptoms were variceal bleeding (30/31 (96%) in SS, 21/22 (95%) in NSS; p=0.64) and hypersplenism (13/22 (59%) in SS, 11/14 (78%) in NSS; p=0.60). Etiology was idiopathic in most of the patients. Nearly all patients experienced complete relief of symptoms post-surgery in both groups. Re-bleeding rate (2/25 (8%) in SS, 1/21 (4%) in NSS; p=0.86) and persistence of low platelet count (4/16 (25%) in SS, 0/13 (0%) in NSS; p=0.14) post-surgery did not differ.
significantly between the groups. The rates of shunt patency (32/33 (97%) in SS, 32/38 (84%) in NSS; p=0.50) also did not have differ significantly. There was no significant difference in the rates of hepatic encephalopathy among the groups. All included studies had a moderate risk of bias.

Conclusion: Both selective and non-selective portosystemic shunt procedures for EHPVO lead to satisfactory resolution of symptoms and result in acceptable long term patency rates.

Mode of presentation: Oral presentation (4+2)

Title: Paediatric Surgical Case Reports: Need for Uniformity of Reporting in the Era of Systematic Reviews and Meta-analysis

Authors: Kashish Khanna, Prabudh Goel, Vishesh Jain, Anjan Kumar Dhua, Devendra Kumar Yadav, Minu Bajpai

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Abstract:

Background: In the era of systematic reviews & metaanalysis, case reports have assumed greater importance considering that a lot of conditions (for example sirenomelia) have not been studied or reported to the next level of evidence.

Uniformity in reporting of cases is indispensable to facilitate pooling of data for evidence synthesis.

Methodology: A case-report centered review of literature to study a) the evolution of case reporting guidelines, and b) the need to standardize the reporting of cases in (general and) Paediatric Surgery (in particular) was performed. The evolution of guidelines pertaining to reporting of cases/ case-series of interest including CARE, SCARE-2016, 2018 & 2020 and PROCESS 2016, 2018 & 2020 was studied.

Results: The summary of literature review will be presented highlighting the a) need for evolving guidelines of reporting cases/ case-series, b) importance of uniformity in reporting of cases. The need for disease-specific guidelines will be discussed and exemplified through review of literature. A suggestion to modify the existing SCARE guidelines in favor of congenital malformation and other cases under the ambit of Paediatric Surgery will be presented.

Conclusion: There is a need for the editors, peer-reviewers and subject-experts in the field of Paediatric Surgery to organize themselves and generate guidelines for reporting of cases of interest.

Mode of presentation: Oral presentation (4+2)

Title: Role of Procalcitonin in Paediatric Surgery

Authors: Dhruv Mahajan, Prabudh Goel, Minu Bajpai

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Abstract:

Procalcitonin (PCT) is an acute phase reactant, extensively studied as a marker of sepsis. PCT increases in both infectious as well as inflammatory insult such as surgery. The confounding factor of surgery casts a doubt to the efficacy of PCT to pick up an early complication, infection or sepsis in the post-operative period in a child. Thus, it is paramount to know the natural trend of PCT in the perioperative period in a surgical child to make accurate interpretation of values in the immediate postoperative period. The very few studies give contrasting perioperative trends of PCT

Aim: To study the role of procalcitonin in post non-cardiac surgery in paediatric age-group.

Material and Methods: Systematic literature search was performed using PubMed, PUBMED Central, MEDLINE, and Scopus databases using PRISMA guidelines to identify literature studying the role of PCT in children undergoing non-cardiac surgery. 4 publications were included in the study after removal of duplicate records, and records marked ineligible on full text screening. The demography, patient profile, diagnosis and available PCT trend were analysed.
Results: All neonatal and paediatric surgery resulted in an increase in serum PCT levels as evaluated in the combined study population of 122 children. The peak of serum PCT reaches at 24 hours after surgery, after which a gradual declining trend is seen. Liver transplant leads to a more significant raise in PCT in the post-operative period, persisting till at least day 4 postoperatively. The PCT reaches baseline values at around post-operative day 7. The peak of PCT at 24-36 hours of surgery was significantly higher in the group which manifested with sepsis subsequently.

Conclusions: PCT could serve as an early predictor of sepsis after surgery in the paediatric age-group. PCT could be useful for pre-emptive prediction of complications after surgery in children.

Mode of presentation: Oral presentation (4+2)

Title: Application of 3D Printing for Pre-Operative Assessment of Children with Extra-cranial Solid Tumors: A Qualitative Systematic Review

Authors: Nellai Krishnan, Sachit Anand, Prabudh Goel, Anjan Kumar Dhua, Vishesh Jain, Devendra Kumar Yadav, Minu Bajpai

Department Institution: Department of Pediatric Surgery, AIIMS, New Delhi

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Abstract:
Aim: To generate a comprehensive source of information on the role of three-dimensional printing in pediatric extra-cranial solid tumors.

Methods: PUBMED, PUBMED Central, Google Scholar, Google search engine, Research Gate, Ovid, the Cochrane Library and Preprint archives (BioRxiv, arXiv and PrePubMed) were interrogated with appropriate search criteria. Data was extracted to study the geographic origin of paper, age of the patient, type of tumor, organ of involvement, application of 3-D printing in surgical planning, training and parental education, clinical-outcomes, complications after surgery and details of 3-D printing such as type of imaging, software details, printing-technique, material and cost.

Results: Eight studies were finally included in the systematic review. 3D printing technology was used in children (n=30) with extracranial solid tumors: Wilms tumor (n=13; 43.3%), neuroblastoma (n=7; 23.3%), hepatic tumors (n=8; 26.6%), retroperitoneal tumor (n=1) and synovial sarcoma (n=1). 3D printing was helpful for preoperative surgical planning (n=5 studies), improved understanding of the surgical anatomy of solid organs (n=2) and improving the parental understanding of the tumor & its management (n=1). Computed tomography and magnetic resonance imaging were either performed alone or in combination for radiological evaluation in these children. Different types of printers and printing materials were used in the included studies. The cost of the 3D printed models and time involved (10 hours to 4-5 days) were reported by two studies each.

Conclusion: 3D printed models can be of great assistance for the surgeon, to understand the spatial relationships of the tumor with the anatomic structures. Virtual resections can also be simulated. 3D printed models add the sense of touch to surgical planning. They also facilitate the understanding by the family, improving doctor–patient communication.

Mode of presentation: Oral presentation (4+2)

Title: Systematic review on various aetiologies, diagnosis and management of acquired Tracheoesophageal fistula (TEF) in children.

Authors: Dr Shreyas K, Dr. Rahul Saxena, Dr. Manish Pathak, Dr. Arvind Sinha

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Abstract:
Abstract Title: Systematic review on various aetiologies, diagnosis and management of acquired Tracheoesophageal fistula (TEF) in children.

Abstract body: Aim: To perform a systematic analysis on various etiologies, diagnosis and management of acquired tracheoesophageal fistula (TEF) in children.
Material and methods: A systematic analysis of PUBMED, Google scholar and EMBASE database was performed using the search terms “Acquired TEF”, Acquired Tracheo-esophageal fistula” “Pediatric” and “children”.

Result: We encountered 111 cases of acquired TEF in pediatric population, of whom, case series were selected. Foreign body ingestion was the most commonly reported cause in children like button batteries (50%) followed by iatrogenic (21%), traumatic (2.7%) and malignancy related causes (2.7%). Bronchoscopy and CECT chest were diagnostic. Primary repair was done in 39% cases. The other initial procedures included gastrostomy (32%), esophagostomy (14%), jejunostomy (14%), gastrojejunostomy tubes (3.6%) and Intraluminal stents (7.2%). Spontaneous closure was reported in 19% cases. Definitive surgical management by primary closure was considered if there was no expected outcome by conservative approach. Approaches included transthoracic (19.8%), cervical (13.5%), sternotomy(4.5%) and cervical with extended sternotomy and thoracotomy (3.6%). 28.8% cases reported Soft tissue interposition with primary repair. Esophageal replacement techniques included colonic interposition (7.2%), gastric pull up (4.5%), gastric tube placement and laparoscopic assisted transpositions (2.7%).

Conclusion: The button battery ingestion is the most common cause of acquired TEF in children and standardization of management in acquired TEF is difficult owing to variety of etiology, site and size of fistula, duration and nature of presentation and needs to be individualized.

Keywords: “Acquired”, “TEF”, “Tracheoesophageal fistula”, “pediatric”, “children”, “button battery ingestion”.

Mode of presentation: Oral presentation (4+2)

Title: Congenital sternal cleft deformity-systematic review on epidemiology, management and outcome

Authors: Ruchira Nandan, Shilpa Sharma

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Abstract:
Aim: Sternal cleft is a rare and challenging congenital anomaly. We aimed to systematically review the literature to summarize the varied clinical characteristics and management.

Method: A PUBMED search was carried out with terms “sternal cleft” on 26/02/2021. 190 articles were hit by search and clinical cases were filtered for inclusion. Articles in non-English languages, animal studies and only descriptive studies were excluded. 152 PUBMED articles were included. 9 non-PUBMED indexed articles were also included from cross reference.

Results: 161 papers with 238 patients were included. Mean age mentioned in 217 patients was 6.6 ± 12.9 years (1day-68years). 1 was stillborn. Gender was mentioned in 198 patients (60 male, 138 female). 143 (60.08%) patients had associated anomalies. Sternal cleft was Complete; Upper; Lower; Central in 68 (31%), 118 (53.9%);30 (13.7%);3(1.4%) patients respectively. Type was not mentioned in 19. Surgery done in 183(83.6%) patients was Single-stage; Staged repair in 160;14. Operative details were not mentioned in 9 patients. Autologous tissue, prosthetic and xenograft was used in 63, 35 and 2 cases respectively. 174/183 of those operated survived and 37/55 of those not operated survived.

Overall mortality was 11.3%. Mean follow-up of 117 patients was 2.97 ± 5.5 years (1week-28year).

Conclusion: Sternal cleft has female preponderance. 60% have associated congenital anomalies. Upper sternal cleft is the most common type. Most patients underwent single-staged surgery. Associated anomalies were associated with significantly higher mortality.

Mode of presentation: Oral presentation (4+2)

Title: Documentation of intra-abdominal reproductive organs of female inguinal hernias

Authors: Azita Shahdoost-Rad, Thejasvi Subramanian, Ross Fisher
**Abstract:**

**Aims**

Incidence of complete androgen insensitivity syndrome (CAIS) in females presenting with an inguinal hernia is 1%, therefore many advise that all girls with this presentation should have a diagnosis of CAIS excluded. Our primary objective was to identify how many patients have documentation that intra-abdominal reproductive organs have been seen intra-operatively, with a target standard of 100%.

**Methods**

We performed a retrospective analysis of electronic patient notes, specifically looking at documentation in operation notes, for all female inguinal hernia repairs performed at Sheffield Children’s Hospital from August 2015 to August 2020. Exclusion criteria included femoral hernias and abnormal hernias.

**Results**

Of 227 primary hernia repairs, 157 (69%) were laparoscopic versus 70 (31%) open repairs. Gonads were seen and documented in 179 (79%) cases, however 14 (6%) had documented that they were unable to see the gonads, and 34 (15%) had no documentation about gonads at all. In 19% of open repairs, gonads were not seen, compared with only 1% of laparoscopic repairs. Of 7 patients (3%) that had a recurrence, all had undergone laparoscopic repair. 3 patients with abnormalities were detected, with one case of CAIS.

**Conclusion**

Although there is good adherence with our standard, laparoscopic hernia repairs appear to be better than open repairs when assessing intra-abdominal reproductive organs. This benefit must be balanced out against a higher recurrence rate. Our recommendations are to include this discussion when counselling patients pre-operatively, and consider further investigations in patients for whom we are unable to identify intra-abdominal reproductive organs.

**References:**


**Mode of presentation:** Oral presentation (4+2)
RESULTS:
Among the 4 abdomino-scrotal cases, one child presented as acute scrotum and underwent emergency inguinal exploration, revealing hemorrhagic fluid. Others presented with tense inguinoscrotal swelling, which refills promptly on emptying. Preop USG revealed abdominal component in half, others detected intraoperatively.
All of the cases were approached inguinally, hydrocele sac traced proximally to abdominal component through internal ring. This was drained and partial excision of extraperitoneal sac done. Additional PPV identified, dissected upto deep ring and ligated. Distal sac fluid was drained. On follow up, there was no recurrence.

CONCLUSION:
ASH is an uncommon lesion that should be identified and dealt with appropriately. Physical examination and ultrasonography are usually sufficient for diagnosis. But one has to keep in mind to explore for an additional narrow patent processus vaginalis (PPV) to prevent recurrence of hydrocele.

Mode of presentation: Oral presentation (4+2)
Title: Perineal Ectopic Testis Presentation and Orchidopexy by Single Parascrotal Incision in these Patients.
Authors: Mudasir Ahmaed Magray, Abdul Rashid KUMAR, Omar Masood, Riyaz A Wani, Amat-U-Samie
Department Institution: SUPERSPECIALITY HOSPITAL SRINAGAR
Email: drmudasirmagray@gmail.com

Abstract:
Introduction
The rarest form of testicular ectopia is perineal testis seen in less than 1% of all cases of undescended testis. This form of descended testis is usually mislabelled as a non-palpable testis.
Surgical correction of undescended testes is not warranted below 6 months of age, but there is need to delay surgery in perineal testis, which can easily be diagnosed by physical examination in the neonatal period. Based on the evidence presented in the literature, it is possible to move perineal testis to the scrotum, by a scrotal orchidopexy.

Material and methods
From January 2018 and January 2020, seven patients were diagnosed as perineal testis in the Department of Paediatric Surgery, Government Medical College, Srinager. All the seven cases were operated by parascrotal incision.

Results
The patients mean age at admission was 26 months. All the patients had unilateral perineal testes. Right side perineal testis was more commonly seen in 5 patients. Three patients had a patent processus vaginalis with a hydrocele. Ipsilateral scrotum was not well formed in all the 7 patients. All these patients underwent orchidopexy by a parascrotal incision successfully under general anaesthesia, without any complications.

Conclusion
While examining an undescended testis the diagnosis of perineal ectopic testis should be kept in mind. It is recommended that early surgical repair should be done, as there is no chance of spontaneous correction to the normal location. Parascrotal orchidopexy is a cosmetic procedure and does not raise any particular problems.

Mode of presentation: Oral presentation (4+2)
Title: Histo-morphological assessment of testicular remnants in testicular regression syndrome - Is routine excision indicated?
Authors: Chaitanya Kondabolu, Celine Sarah thomas, Arun kumar, L, Tarun John Jacob
Department Institution: Deptartment of Pediatric Surgery, CMC Vellore
Email: Chaitu.sparta@gmail.com
**Abstract:**

**Aims:**
Cryptorchidism is a common condition with 5% having impalpable gonad. However, controversy surrounding inguinal exploration and/or excision of testicular remnants at the time of operative intervention persists. The aim of the study was to ascertain the incidence of the presence of either germ cells (GCs) or seminiferous tubules (SNTS) in the excised testicular remnants.

**Methods:**
A retrospective data analysis of all excised testicular remnants from 2008-20. The testicular remnants were analyzed for age, laterality and histological analysis.

**Results:**
A total of 237 pediatric male patients were identified with median age of 3 years. Left sided remnant was seen in 83.19% of patients. 77.2% boys had an inguinal remnant, 19.4% had a scrotal remnant and 3.4% had an intra-abdominal remnant. SNTs were seen in 9% of the specimens. There was no statistically significant difference in presence of SNTs based on the position, side or age. Germ cells were found only in three specimens (1.3%), all of them in inguinal remnants.

**Conclusion:**
This study contributes to the evidence base for this condition and provides data for the Indian population. Need for routine exploration and excision of testicular remnants has to be questioned as only 1 in 100 specimens have germ cells.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Delayed Diagnosis Of Undescended Testis – Role Of Parental Awareness & Social Factors

**Authors:** Dr Suhasini Gazula, Ruby

**Department Institution:** ESIC Medical College & Superspeciality Hospital, Sanathnagar, Hyderabad

**Email:** drgazula9@gmail.com

**Abstract:**

**AIM:**
To conduct a survey on parental awareness towards undescended testis, its complications and the social factors associated with delayed diagnosis.

**METHODOLOGY:**
In this cross-sectional observational study, a semi-structured questionnaire was distributed to the parents of 110 children, of which 19 were parents of children admitted for undescended testis and data analysed.

**RESULTS:**
Majority of parents had completed secondary education or higher, working as skilled/unskilled labourers. 43% of parents would prefer to wait till more than 18 months of age to acknowledge undescended testis as a problem. Only 70% of parents would initially approach a doctor. 32% parents recognised this as a surgical problem. 41% of parents were aware of complications of undescended testis.

Of those children diagnosed with undescended testis, 58% had presented after 18 months of age. 68% thought or were informed that spontaneous descent was a possibility and hence presented late.

**CONCLUSION:**
Though most parents are aware of undescended testis, hesitancy to present at the time of noticing the problem prevails. There is an urgent need to spread awareness among parents and health care providers, regarding the need for early surgical intervention in undescended testis.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Diagnosis and Management of Transverse Testicular Ectopia with Persistent Mullerian Duct Syndrome – An experience of 12 years
**Authors:** Amat us Samie, Reyaz Ahmad Wani, Kumar Abdul Rashid, Mudasir Ahmad Magray, Omar Masood  
**Department Institution:** Superspeciality Hospital GMC Srinagar  
**Email:** wani.riaz@gmail.com  
**Abstract:**  
**Aim**  
The aim of this study is to present clinical and surgical experience in five cases of transverse testicular ectopia with persistent mullerian duct syndrome at a tertiary care center in a developing country. The importance of abdominal exploration with excision of the mullerian structures has been stressed upon, when two gonads are present in one inguinal canal.  
**Methods**  
A retrospective analysis of all the cases of transverse testicular ectopia with persistent mullerian duct syndrome managed over last 12 years was made, by studying data regarding demographic, clinical, radiological and operative parameters of these patients.  
**Results**  
A total of 6 cases were managed ranging in age from 12 months to 4 years with two of them being siblings. Four were on right side while 2 on left side. Classic presentation was inguinal hernia on the affected side and undescended testis on the contralateral side. Three patients were diagnosed preoperatively; 2 by ultrasonography done for undescended testis and one by clinical examination. Rest 3 were surgical surprises. Mullerian structures were excised in all the 6 cases. Five cases were operated by one surgeon (KAR) and orthotopic orchiopexy was accomplished after dissection via suprapubic skin crease incision. One case was operated by another surgeon (NAB) and orchiopexy was done via trans-septal route in the scrotum.  
**Conclusion**  
TTE with PMDS should be suspected in all cases with inguinal hernia on one side and UDT on another side. Surgical treatment involves careful excision of mullerian structures without injury to vas or testicular vessels followed by orchiopexy.  

**Mode of presentation:** Oral presentation (4+2)  

**Title:** Laparoscopic Hernia Repair in female children: Long term experience from Tertiary care centre  
**Authors:** Naseera Koya, Bikash Kumar Naredi, Bibekanad Jindal  
**Department Institution:** Jawaharlal Institute of Post Graduate Medical Education and Research  
**Email:** naseerakoya@gmail.com  
**Abstract:**  
**Abstract body:** Background and Aim: Laparoscopic inguinal hernia repair in children is not so popular as in adult due to near similar operative times with not much difference in cosmesis, complication and recurrence rate as the standard open surgical repair for unilateral hernia. In addition there are multiple techniques of laparoscopic hernia repair and none is standardised. Laparoscopy allows for easy evaluation of the patency of contralateral processus vaginalis, and takes less operative time although the clinical significance of and need for repair of an identified defect is unclear. Further an additional advantage in female is to rule out DSD. The present study was planned to share our techniques and outcome of laparoscopic hernia repair in female children.  
**Material and Method:** Retrospective descriptive analysis of children who underwent laparoscopic hernia repair in department of paediatric surgery at JIPMER Pondicherry from 2013-21. We have analysed time taken for procedure, identification and repair of contralateral patent processus vaginalis, ruling out DSD in a case of suspected DSD and recurrence on follow up. We also analysed the laparoscopic associated complication.  
**Result:** Seventy-five female children of inguinal hernia operated laparoscopically from 2013 to 2021 with aged 2 month to 12 years. Clinically unilateral in 59 case and bilateral in 16 cases. Of the 59
unilateral cases, 11(18%) had contralateral patent processus vaginalis. Three patient had suspicious DSD gonad, so a gonadal biopsy was taken and DSD ruled out. Average operating time in both bilateral and unilateral is 41 minutes but min operative time for 1st 40 cases in 47 min and next 35 case is 34 minutes. One case had omental prolapse from 5 mm port and there is no recurrence in 7 years follow up.

Conclusion: Laparoscopic hernia repair in female children does not take extra time but gives opportunity to rule out DSD and to detect contralateral patent processus vaginalis which can be tackled in the same sitting, without any recurrence and very minimal complication. The operative times decrease and even become less than open with the experience.

Mode of presentation: Oral presentation (4+2)

Title: Muscle-sparing skin crease incision posterolateral thoracotomy for esophageal atresia: Our experience

Authors: Rahul Gupta, Rahul Gupta

Department Institution: Department of Pediatric Surgery SMS Medical College Jaipur

Email: meetsurgeon007@gmail.com

Abstract:

Aims: Posterolateral muscle cutting thoracotomy is the standard approach to repair esophageal atresia (EA) with distal tracheoesophageal fistula (TEF). We aim to share our experience with muscle-sparing skin crease incision posterolateral thoracotomy for esophageal atresia.

Methods: This prospective observational study was conducted over a period of 3 years and 6 months from January 2016 to June 2019 in two tertiary care teaching institutes.

Results: There were 59 neonates with EA with distal TEF who were subjected to muscle-sparing skin crease incision right posterolateral thoracotomy. There were 23 males and 36 females; low birth weight was seen in 34 neonates. Anorectal malformation (ARM) was the most common (6), out of all associated major malformations (18). Intraoperative findings included long gap EA (6), right aortic arch (RAA, 2), aberrant vessels (1), and long upper pouch (1). Conversion to muscle cutting approach (during early learning curve) was performed in 8 cases i.e. long gap (3), RAA (2), subglottic stenosis (2), others (1). Adequate exposure was possible in 86.4% (51/59) cases. No complication related to the approach was encountered. Most of the patients achieved satisfactory functional and aesthetic outcomes.

Conclusions: Muscle-sparing skin crease incision posterolateral thoracotomy is a viable approach to repair EA with distal TEF. The technique is easy to perform with adequate exposure. This procedure provides satisfactory functional and aesthetic outcomes with relatively minimum morbidity.

Mode of presentation: Oral presentation (4+2)

Title: Congenital lung malformations: Review of cases in a tertiary Centre

Authors: Nirkhi Shah, Rakesh Joshi, Jjaishri Ramji, Mahesh Vaghela

Department Institution: B. J. Medical College

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Abstract:

Aim:
Congenital Pulmonary Malformations (CPMs) are a group of rare lung abnormalities affecting the airways, parenchyma and vasculature. We present our institutional experience of presentation, management and outcomes of congenital bronchopulmonary malformations.

Method:
Between January-2015 and May-2021, 30 patients of congenital lung malformations were managed at our institute. After hemodynamic stabilization, control of infection, pre-operative imaging and routine investigations, excision was done by thoracotomy or thoracoscopy.

Results:
Of the 30 Patients, there were 2 neonates, 16 infants and 12 in the age group 1-7 yrs. There were 8 females and 22 males. 2 neonates were diagnosed antenatally and presented with respiratory distress after birth. 1 patient required preoperative ventilator support for severe distress due to tracheal compression. All other patients had history of pneumonia. Thoracoscopic excision of CPM was done in 3, while thoracoscopy guided surgery done in 4 and others underwent open thoracotomy. Lobectomy was performed in 11, cyst excision in 13, cyst excision with marsupialization in 2 patient, excision of lung sequestration in 4 patients. Preoperative findings and histopathology revealed 13 bronchogenic cyst, 8 congenital lobar emphysema, 3 congenital cystic adenoid malformation, 2 foregut duplication cyst, 4 pulmonary sequestration. Postoperative, 2 patients required ventilatory care and 2 patients developed cardiac complications. 1 patient succumbed and rest all patients recovered well.

Discussion & Conclusion:
CPMs are broad spectrum of lesions and can present at any age. Most of them need excision soon after diagnosis due to possibility of recurrent infection and/or compression. Thoracoscopy is preferre but has high learning curve and difficult to perform many times due to inaccessible location of lesion. However, thorascopic guided open surgery defines anatomy and helps to locate the lesion and plan incision. Surgery is well tolerated, and leads to excellent outcomes without any reoccurrence.

Mode of presentation: Oral presentation (4+2)

Title: Our Experience With VATS In Paediatric Empyema Cases
Authors: Chudar, Velmurugan, Senthilnathan, Harihara, Shankarabharthi
Department Institution: Institute Of Child Health Chennai
Email: chudar.dr@gmail.com

Abstract:
INTRODUCTION
Empyema thoracis has become more common in pediatric population. Antibiotics and thoracostomy have been the corner stones in managing stage 1 whereas stage 2 and 3 mandates surgical intervention.
AIM
To study the age-sex profile, management and the overall treatment outcome of empyema thoracis after VATS in children.
METHODS
A retrospective study where cases with stage 2-3 empyema who underwent VATS decortications in our institute from January 2016 to December 2020 were analysed. The medical records and clinic outcomes were reviewed, highlighting the clinical presentation, delay in referral, operative findings, the response to surgical intervention.
RESULTS
Out of 48 patients, 29 patients (age 2 months–12 years) were operated with VATS during a 5-year period and 19 with open decortication. Among them, 90% patients were referred 2 weeks after the onset of disease. Intercostal chest drainage (ICD) had been inserted in 95% cases. Mean duration of postoperative ICD was 4 days and hospital stay 5 days after VATS. There was no mortality.
CONCLUSIONS
VATS is the primary modality for providing good outcomes and shorter hospital stay. Delayed referrals may result in a more protracted clinical course. VATS decortication provides considerably positive clinical outcomes even in severe and advanced disease
KEY WORDS
Empyema thoracis, decortication, pediatric, VATS
Disclosure - none to declare
Conflict of interest - none
Previous presentation - none
Submitted as manuscript or accepted in any journal - no

Mode of presentation: Oral presentation (4+2)
Title: To study the quality of life and clinical outcome of open decortication in stage III empyema thoracis in pediatric patients
Authors: Chetna Khanna, Atul Meena, Pinaki R. Debanath, Shalu Shah, Vijay Kundal, Sarita Syal, Amita Sen
Department Institution: Department of Pediatric Surgery Dr RML Hospital New Delhi
Email: chetnakhanna10@gmail.com
Abstract:
AIMS AND OBJECTIVES- To determine the quality of life in stage III empyema after open decortication in pediatric population, to assess the effectiveness of open decortication in patients with stage III empyema
METHODS- A prospective observational study during the period of Dec 2019- April 2021. A total 18 cases were included in the study. The study aimed to assess the patient in post op period on the basis of – Hospital stay in days, Days on Ventilator support, Days of oxygen dependency, No. of days for which ICD was kept, Pre and post op xray chest, Weight gain/ Weight loss at discharge and follow up, Post discharge school joined at what day, Reoperation or Readmission required.
Follow up assessment was done on the basis of pedsql 4.0 scale assessing- Physical, Emotional, Social, School functioning to look for the outcome of surgery.
RESULTS- out of 18 patients 10 were discharged on 8th POD and 5 patients on POD 9 and 3 on POD 10. Icd was removed on pod 5 for 9 patients and on pod 6 for 3 patients, on pod 7 for 3 patients and rest on pod 8. Only 10 % required post op ventilator support, and no patient required oxygen support after pod 6, readmission was not done in any patient and no patient was reoperated. Quality of life as assessed by peds ql 4.0 scale was around 90%
CONCLUSION- Stage III needs to be managed surgically with decortication. Decortication helps the lung to expand from organized empyema, fibrosis and fibrocavitary lesions and considered best treatment for chronic empyema. Functional results are also excellent, as all patients returned to the normal activities that they performed before surgery.

Mode of presentation: Oral presentation (4+2)

Title: Congenital lung lesions: Clinical spectrum and management strategies. Lessons learnt over a decade
Authors: Khyati Kiran Janapareddy, Nitin J Peters, Shubhalaxmi R Nayak, Ram Samujh
Department Institution: Department of Pediatric Surgery, Postgraduate Institute of Medical Education and Research, Chandigarh
Email: khyati.kiranj@gmail.com
Abstract:
Introduction and Aims
Congenital lesions of the lung is an umbrella diagnosis used to describe various rare malformations like Congenital Pulmonary Airway Malformation (CPAM), Congenital Alveolar Overdistension (CAO), Pulmonary Sequestration (PS), Bronchogenic Cyst (BC). We review surgically treated congenital lung lesions in our centre over 10years to highlight the importance of early postnatal detection, timely intervention, and optimal postoperative management. To review clinical spectrum and management strategies in congenital lung lesions.
Methods
A 10-year retrospective review of medical records of children diagnosed with congenital lung lesions who were operated at an Indian paediatric tertiary care centre.
Results
40 children were operated from 2011-2021 for congenital lung lesions. Most common diagnosis was CAO (32%) followed by CPAM and Bronchogenic cyst (23%), Pulmonary Sequestration (14%) and 2 hybrid lesions. Lesions were more common in males (4.5:1). Most of the children presented with respiratory distress (50%) and recurrent pneumonia (32%) while 1 asymptomatic antenatally diagnosed CPAM underwent surgery. Most of the patients underwent lobectomy during infancy with a survival of 87.5%. 2 infants succumbed to intra and post-operative cardiac arrest in view of severe pre-operative respiratory distress. 3 patients were treated thoracoscopically but
required conversion to thoracotomy due to bleed from anomalous systemic artery, desaturation and another was reoperated after 1 year for recurrent symptoms.

**Conclusion**

Children presenting with respiratory distress and recurrent pneumonia should be evaluated with high index of suspicion for congenital lung lesions and prompt surgical excision can avoid mortality.

**Mode of presentation:** Oral presentation (4+2)

**Title:** A 10 Year, Single Centre Experience to Assess Role of Negative Suction in Resolution of Persistent Postoperative Air Leak for Empyema Thorax in Paediatric Patients

**Authors:** Lamia Inayath, Natasha Vageriya

**Department Institution:** Grant government medical college and JJ group of hospitals

**Email:** lamiinayath@gmail.com

**Abstract:**

Objectives: To evaluate whether external negative suction is more advantageous than only water seal in pediatric patients developing post-operative persistent air leak undergoing decortication for empyema thorax.

Methods: A retrospective analysis was done for patients admitted for empyema thorax from 2010 – 2019. Of these, total 180 patients with stage 2 and 3 empyema were identified and evaluated closely. Postoperatively patients developing persistent air leak (PAL) were compared with respect to grade of empyema, surgery performed, and postoperative negative suction applied or not. Their time to resolution of air leak after first 4 days post operatively was compared.

Results: 107 Of 180 had grade four persistent air leaks after 4 days of underwater seal drainage. Remaining 87 patients were divided in two comparable groups. From 2010 – 2013 patients were not receiving postoperative negative suction for PAL they were managed on under-water seal drainage only. The time for resolution of air leak was compared with 51 patients who had received negative suction for PAL from 2014-2019. The primary end point was the time elapsed between placement and removal of drains. All the data was analysed, and comparisons done. No significant difference was found in two groups. Whether the negative suction was applied or not the time to stoppage of air leak or recovery was identical.

Conclusion: In Pediatric patients undergoing decortication for empyema thorax; either VATS or Open; applying negative suction to intercostal drainage offers no additional advantage in closure of PAL or recovery.

**Mode of presentation:** Oral presentation (4+2)

**Title:** An online questionnaire-based perception survey on the satisfaction of Pediatric Surgical training in India: High time to address the elephant in the room

**Authors:** Gursev Sandlas, Bhushan Rao Jadhav, Pradeep Shenoy

**Department Institution:** Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute

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**Abstract:**

Aims

Various International organizations have delineated certain domains of competency expected of the exam-going Surgical trainees. The technical skill of the residents is one of major areas of concern. However, to achieve that technical ability, a structured residency program with adequate operative exposure is lacking in major parts of our country. This online survey was conducted to outline the satisfaction of training among the Pediatric Surgery residents and pass-outs from different parts of the country.

Materials and Methods

Ten questions were designed by a senior Pediatric Surgeon on SurveyMonkey platform. Being a brief perception survey, content validation was not done. However, a pilot survey was performed among ten Pediatric surgeons to improve the quality of content and ensure anonymity. The survey was conducted via the iaps-
embers@googlegroups.com from January 29, 2021 till February 7, 2021. Analysis was performed by another senior Pediatric Surgeon, who was not a respondent.

**Results**

121 respondents took this survey. Majority (77%) of them had completed their training. Despite an appropriate faculty strength, 43% felt they had received inadequate inputs from them. More than half of the respondents experienced the overall training was inadequate due to poor surgical exposure.

Although majority (81%) of them were assisted by a faculty during initial surgeries, only 49% had performed major reconstructive surgeries. Only 41% had a laparoscopy setup in their departments and two-thirds received no training in laparoscopy. Regarding training satisfaction, the respondents were very unsatisfied (10%), somewhat satisfied (43%), had a good experience (41%), and very good experience (6%); and suggested for an improvement in the surgical exposure (71%), academics (16%), or both (13%).

**Conclusion**

The present survey highlights major lacunae in the current curriculum of Pediatric Surgery residency in India, e.g. lack of adequate operative exposure. Student-elect members in the IAPS can help in addressing these issues.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Fifty Most Influential Articles on Ano-rectal Malformations: A Tribute through Bibliometric Ranking

**Authors:** Chandramouli Goswami, Dhua AK, Bangar V, Mishra M, Goel P, Jain VK, Yadav DK, Agarwala S, Bajpai M

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**Abstract:**

Background- With the global assimilation of ‘publish and perish’ culture into institutional academics, there has been an exponential rise in the publication numbers. There are ~2500 PUBMED entries related to ‘anorectal malformation’. The young clinician in his pursuit to translate experimental research to bedside, often finds himself lost, ‘in the midst of plenty”. Bibliometric analysis has been conducted to codify the seminal work on ARM for future reference and pay tribute to the most impactful articles.

Methods-Thomson Reuters Web of Science citation indexing database and research platform was used to retrieve the most cited articles in ARM using appropriate search strings. The characteristics (name of authors, the total number of authors, the title of publication, journal of publication, year of publication, etc.) of the 50 top-cited articles were analysed.

Result- A total of 1510 articles were retrieved from Web of Science with a total of 18320 citations (average 11.42 citation/article). The Journal of Paediatric Surgery was leading the choice of journal. While most of the publications originated from the United States of America, Alberto Pena was the most influential author. The top-50 cited articles received a total of 4796 citations (average 47.96 citations/article). The maximum citation count registered was 470, and the minimum noted was 54. These top-50 articles were published between the year 1969 to 2011. The most studied topic was on associated malformations, and the most common study-design was cohort studies.

Conclusion-The approach of citation analysis provided us an opportunity to retrieve the most influential articles on ARM. The trends in research in ARM have also been analysed, spreading over five decades.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Quality assessment of YouTube videos on laparoscopic pyloromyotomy using a validated tool: An appeal to trainees to follow the peer-reviewed videos for learning purposes

**Authors:** Sachit Anand- mentioned Presenter, Anjan Dhua- actual presenter, Dhua AK, Goel P, Jain VK, Yadav DK

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Abstract:
Surgical trainees often resort to operative videos on internet during preparation for surgery. YouTube is the most commonly explored video source by them. However, the quality of these videos is often questioned. Aim
This study was performed to assess the quality of available YouTube videos on laparoscopic pyloromyotomy (LP). Methods
The term ‘laparoscopic pyloromyotomy’ was searched in YouTube on 2nd June 2, 2021 and twenty most-viewed videos on LP were included. A reference video on LP from WebSurg was also selected. The LAP-VEGaS tool was utilized for quality assessment of these videos. Descriptive variables including the surgeon’s details, year of video upload, duration of video, view counts, likes, dislikes, number of ports used, and instrument used for pyloromyotomy were recorded and their relationship with video quality was studied. Results
Majority of the videos were from USA and India; and a surgeon could be identified in 90% of them. The median (range) video duration, view counts, likes, and dislikes were 2.89 (0.68-8.80) minutes, 2308 (1102-23682), 5 (0-59), and 0 (0-11) respectively. LAP-VEGaS score of the reference video was 17. In contrast, the scores of YouTube videos ranged from 1-14. The quality of these videos was poor in 5/9 domains. None of the descriptive variables showed a significant association with high video quality. Conclusion
As compared to the reference video, the overall quality of YouTube videos on LP was poor. Therefore, until a screening tool is available for selection of high-quality YouTube videos, trainees must resort to peer-reviewed video platforms.

Mode of presentation: Oral presentation (4+2)

Title: Study of effect of Multimedia teaching tool on Parental anxiety and comprehension of Informed consent in Pediatric surgical day care procedures
Authors: Dr. Shreyas K, Dr Avinash S Jadhav, Dr Kirtikumar Rathod, Dr Manish Pathak, Dr Rahul Saxena, Dr Arvind Sinha
Department Institution: Department of Pediatric Surgery AIIMS Jodhpur
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Abstract:
Abstract Title: Study of effect of Multimedia teaching tool on Parental anxiety and comprehension of Informed consent in Pediatric surgical day care procedures
Abstract body: Introduction:
Informed consent is an essential component of medical ethics. Multiple adjuncts have been developed in association with the consent process to improve understanding, decrease anxiety, and improve patient satisfaction. The purpose of this study was to measure the impact of a Multimedia tool assisted versus conventional method of taking informed consent on parental anxiety and their comprehension of surgical procedure.
Objectives:
The primary objective of this study was to compare the parental comprehension about their child’s disease and surgery planned through the informed consent obtained either by conventional method or by the use of multimedia tool (MMT). Other objectives were to compare the effect of MMT in alleviating the parental anxiety against the conventional method of informed consent process.
Methods:
A randomized control trial was conducted between December 2018 to September 2020, which included MMT and conventional consent group. A novel Multimedia tool in line with Microsoft PowerPoint presentation which included Educational surgical videos, photographs, animations was created for each disease. A 5-Question knowledge-based test and State-Trait Anxiety Inventory (STAI) tool for adults was used to assess the comprehension and the anxiety of the parents. A Likert based questionnaire was used to assess the overall effectiveness in both groups.
Results: During the study period, 122 patients were recruited and randomized between two groups. The mean value of percentage fall in anxiety STAI score in MMT group was 44.58 ± 10.37 whereas in the Conventional group it was 26.64 ± 12.37 (p<0.05). The mean value of Knowledge Based Test Final Score in MMT group is 4.02 ± 0.64 whereas in the Conventional group its 1.19 ± 0.16 (p<0.05).
Methods: Parents of the patients undergoing surgeries fulfilling the inclusion criteria were surveyed preoperatively using a questionnaire (English or Hindi) having 26 questions related to wound healing, dressings, complications, use of antibiotics and resumption of day-to-day activities postoperatively. A study researcher was available to solve any queries related to the survey. The questions from the survey were also answered by five different pediatric surgeons and their responses were used as standard to compare the responses from the parents.

Results:
30 parents were surveyed in this prospective study for 6 months. 25 (83.3%) parents had no prior surgical wound care experience. The most concerning features of wound infection were identified only by 66.7% of the patients with 13.3% parents having no idea about it. 70% parents expected their child to receive postoperative antibiotics. Almost half of the parents (46.7%) did not expect to send their child to school before 2 weeks and 66.7% of the parents expected their child to resume physical activities on or after 4 weeks. Surprisingly, 63.3% parents felt that antiseptics are needed to clean the wound postoperatively. In sharp contrast to our modern practices, 53.3% and 43.3% parents feel that water or soft diet and full feeds can be started only at postoperative day one to two respectively.

Majority of parents (70% and 83.3%) feel that number of stitches and eating particular type of food can affect wound healing.

Conclusion:
Knowledge about wound healing and its various aspects is lacking among the care givers. This highlights the need for care giver education about wound healing, dressings, complications, use of antibiotics and resumption of day-to-day activities. Standardization of this information can lead to improvement in postoperative wound care.

Mode of presentation: Oral presentation (4+2)

Title: Study of factors causing parental anxiety and depression in primary caregivers during surgical management of a child

Authors: Ayushi Vig, Kirtikumar J Rathod, Avinash Jadhav, Manish Pathak, Rahul Saxena, Arvind Sinha

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Abstract:
Introduction
Healthcare is based on pillars of prompt and accurate diagnosis, effective treatment and quality patient care aiming to give an acceptable hospital experience to patients and their caregivers. Although streaming research gets frequently published on the first two criterion, the third often takes a back seat. Aiming to revive this extremely important aspect of treatment, we conducted a hospital based cross sectional study to determine the prevalence of anxiety and depression among the primary caregivers of hospitalised children and the factors causing it.

Methods
Parents of 228 pediatric surgery patients were interviewed using HADS (Hospital Anxiety and Depression Scale) and Hamilton anxiety Rating Scale (HAM-A) to estimate the prevalence of anxiety and depression among the primary caregivers. The factors causing this burden were identified using a self-made pretested questionnaire. The questionnaire comprised of 52 questions spread over five segments- demographic details, monetary burden, effect on siblings and other family members, practical problems faced and surgery specific concerns.

Results
Significant anxiety (32.89%) and depression (22.8%) was found in parents of patients during hospital admission. Fifty two factors were tested for correlation. Multiple factors such as the age of the patient (r=0.247), duration of hospital stay, number of days of duty missed (r=0.424), total expenditure (0.198), loan taken for treatment (r=0.447), prolonged nil per oral period, significant pain in the post-operative period, prolonged antibiotic administration were noted to contribute to increased anxiety and depression among parents.

Conclusion
Standard questionnaires assessing the prevalence and causes of anxiety in patients and their primary caregivers, must be implemented as a quality improvement measure in all healthcare facilities. Identification and termination of the modifiable factors will bring an empathetic approach among healthcare workers and significantly improve the hospital journey of the patients and their caregivers.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Research landscape in Posterior Urethral valve- A scientometric study

**Authors:** Mehak Sehgal, Dhua AK, Goel P, Yadav DK, Jain V, Verma V, Agarwala S, Bajpai

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**Abstract:**
To explore the global research landscape in the field of Posterior urethral valve (PUV), a scientometric study was conducted to understand the bibliometric characteristics of the research output and to get an insight into the key research areas and pattern of collaboration in the research community.

**Methods**
Primary data was acquired from the SCOPUS database. Bibliometric parameters like research productivity, citations, citations per item, citations per year, citations per item per year in the context of total output, countries, institutions, authors, and journals were assessed. Key research areas were inferred by examining the top-cited articles (citations >150) and evaluating the co-occurrence of “keywords.” Collaborative patterns were generated by calculating co-authorship links amongst countries and authors using VOSviewer software.

**Results**
One thousand seven hundred fourteen results were found published from 1913 to 2019, receiving a total of 27253 citations, authored by a total of 5138 authors from 125 countries. The top 3 countries were the United States of America (USA), India, and the United Kingdom (UK). The leading institutes were the Children’s Hospital Boston (n=48), All India Institute of Medical Sciences (AIIMS), Delhi (n=38), Children’s Hospital Boston (n=36), and Great Ormond Street Hospital, UK (n=27). Leading authors were Canning DA and Bajpai M (n=17, each), Canning DA & Kajbafzadeh, AM (n=16, each), followed by Peters CA with 14 manuscripts. The preferred journals were the Journal of Urology (n=278), Journal of Pediatric Urology (n=121), followed by Urology (n=86). The top-cited documents (n=11) received a total of 2189 citations and were published between 1986 to 2010. The key areas of interest were “long-term outcomes” (n=4) and fetal surgery (n=2).

**Conclusion**
The research landscape of PUV is dominated by the USA, Children’s Hospital Boston, and Bajpai M. The hotspot research areas among the top-cited articles are “long-term outcomes” and “fetal surgery” in PUV.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Outcomes of Management of Unilateral Pelvi-Ureteric Junction Obstruction (U/L PUJO) in Children - A Retrospective Study over a ten year period

**Authors:** Tanvi Goel, Tanvi Goel, Professor Sandeep Agarwala, Dr. Vishesh Jain, Dr Anjan Dhua, Dr Rakesh Kumar and Dr. Devasenathipathy Kandasamy

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**Abstract:**
Aim: To analyse the outcome of management of U/L PUJO treated over a span of ten years.

**Methods:** The outcome of children with a diagnosis of U/L PUJO, from March 2008 through May 2018 were analysed. Included were those with a minimum follow-up of 24 months subsequent to operative intervention. Group-I was early pyeloplasty at diagnosis (symptomatic and/or DRF < 40%), Group II were initial conservative management(asymptomatic with DRF > 40%). Of these, Group IIA were delayed pyeloplasty(performed for symptoms or a fall in DRF of > 5%) and IIB were continued conservative non-operative observation.

**Results:** The mean differential function of the affected kidney (DRF) at initial presentation was around 35%. Amongst
107 patients who had undergone early pyeloplasty (Group I) DRF was <20% at presentation in 20%, 21% – 40% in 45% and was >40% in 35% patients. The DRF at presentation was >40% in all 58 patients of Group II (Conservative management). Among the early pyeloplasty group (Group I), the DRF >40% improved from 35% to 53% at the end point of the study; the incidence of DRF < 20% decreased from 20% to 11% and of DRF 21%–40% decreased from 45% to 35%. Amongst 44 patients who continued to be on non-operative management (Group IIB), only 9% patients showed a deterioration in DRF (fall > 5%), but in all these patients the DRF was still > 40% and they remained asymptomatic. Among the 14 patients who had undergone delayed pyeloplasty (Group IIA), 43% showed a deterioration in DRF (fall > 5%), but in 70% of these, the DRF continued as >40%. DRF had fallen to <20% in only 1 patient.

Conclusions: Overall patients became asymptomatic and experienced a maintained or improved renal function in all groups. Hence, the management protocol used was not prone to any serious or irreversible loss in function.

Mode of presentation: Oral presentation (4+2)

Title: Role of pre-operative Retrograde Pyelogram (RGP) in children undergoing pyeloplasty
Authors: Praveena Dantala, Suhasini Gazula
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Abstract:
Background: Pelvi-ureteric junction obstruction (PUJO) is the most common cause of hydronephrosis in children but rarer causes like congenital midureteric stenosis, Obstructive megaureter, Duplex moieties, malrotated kidneys etc are difficult to diagnosed only on ultrasound especially in neonates and smaller infants in whom the dilated pelvis may obscure a dilated ureter unless specifically looked for.

Aim: To study the role of pre-operative Retrograde Pyelogram (RGP) as an adjunct tool in all children planned for a pyeloplasty done in the same-sitting.

Methods: Study-design: Retrospective. After informed consent, 101 children planned for pyeloplasty with diagnosis of PUJO underwent an RGP in the operation suite just prior to the planned surgery under all aseptic precautions.

Details were reviewed and analysed.

Results: No child developed any complications due to the RGP. RGP completely changed the diagnosis in 10 (10%) cases. It revealed 5 cases of Obstructive megaureter, 3 cases of congenital midureteric stenosis (CMUS), 1 case with a long segment PUJO and 1 case of duplex. RGP also helped in correct placement of the incision especially in CMUS and very hugely dilated renal pelvises. RGP also helped confirm the diagnosis in cases of bilateral PUJO.

Conclusion: Pre-op RGP in cases planned for pyeloplasty is a feasible, simple adjunct procedure which can be an objective tool for the pediatric surgeon and help avoid intraoperative surprises.

Mode of presentation: Oral presentation (4+2)

Title: Correlation between intraoperative anatomical variation with histopathological parameters in cases of ureteropelvic junction obstruction in children: A prospective study
Authors: Shailesh Solanki, Prema Menon, Manasa Reddy, Kirti Gupta, Mayur Parkhi, Pramod Gupta, Ram Samujh
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Abstract:

body: Aims: The intraoperative anatomy of UPJOs is not the same always. There is controversy in the literature regarding histopathological findings in cases of UPJO. The goal of the present study was to evaluate different intraoperative anatomical findings and assess their correlation with specific histopathological parameters.

Material and method: This was a prospective study from 2017 to 2020 and carried out in a tertiary care center. Children with UPJO who underwent reduction pyeloplasty were enrolled. The intraoperative findings were noted: type of pelvis (extrarenal or intrarenal), insertion of ureter (high or normal), presence of lower pole crossing
vessel(CV), negotiation of double J stent (3 Fr) thru UPJ segment, and length of internal narrowing at UPJ. The resected segment of UPJ was sent for histopathological examination (HPE), the parameters were assessed and graded: fibrosis, edema, inflammation (acute and chronic), and smooth muscle hypertrophy. Each parameter was assessed at three different levels i.e. at the pelvis, UPJ segment, and at the ureter. The correlation of each intraoperative finding was assessed with each HPE parameter at all three different areas separately.

Result: A total of 39 children (9 females, 17 < one year old) were included in the study. The intraoperative findings were; intrarenal pelvis in 5 cases, HIU in 9, CV present in 6, 23 cases shows negotiable UPJ and 16 cases showed internal narrowing more than 1 cm. All the cases of UPJO showed edema, smooth muscle hypertrophy, and chronic inflammation at the pelvis, fibrosis at the UPJ, and smooth muscle hypertrophy at the ureteric end. The cases of CV showed more chronic inflammation and less fibrosis. The HIU cases showed more edema and more chronic inflammation. The cases with negotiable UPJ showed less fibrosis at UPJ than their counterparts. The length of internal narrowing had shown a correlation with smooth muscle hypertrophy. The type of renal pelvis (extrarenal or intrarenal) did not show any correlation with any HPE parameter.

Conclusion: All UPJO cases have some common histological changes. The varied intraoperative findings with different combinations along with the wide range of age at the time of presentation

**Mode of presentation:** Oral presentation (4+2)

**Title:** Infant Pyeloplasty and functional Outcome

**Authors:** Heera T, Lakshmi Sundararajan

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**Abstract:**

Aim: To study the renal functional outcome of infants with ureteropelvic junction obstruction (UPJO) undergoing pyeloplasty.

Patient and Methods: Records of all patients less than 1 year of age who underwent Anderson Hynes pyeloplasty between 2011 and 2021 were retrospectively analyzed. Indications for surgery were APD >2cm, split renal function (SRF) < 40% on a diuretic renal scan, increasing hydronephrosis, SFU grade 3,4. APD on USG and SRF on diuretic renal scan was compared before and after surgery. Results were analysed using Wilcoxon Rank sum test with p value <0.05 considered significant.

Results: Our study comprised of 58 patients who underwent infant pyeloplasty, of which 32 patients had pre and post-op diuretic scan available. Of these 22 patients initially had function< 40%. The mean age at pyeloplasty was 2.47 months (SD -1.91) (Range 0.5 to 8 months). All patients underwent open pyeloplasty with DJ stent insertion. All patients showed a successful outcome with good reduction in hydronephrosis post operatively. The APD decreased from a mean (SD) of 3.53(1.38) cm preoperatively to 1.29(0.56) cm which was statistically significant (p<0.001). The SRF improved from a mean (SD) of 32.36(5.92) % preoperatively to a mean of 41.40(9.19)% postoperatively which was statistically significant (p<0.001). Regression analysis showed a negative correlation of SRF with age at surgery , as younger children between 1-3months showed higher functional improvement.

Conclusion: Infant pyeloplasty shows good improvement in Renal function with a trend for better outcome at earlier age (1-3 months).

**Mode of presentation:** Oral presentation (4+2)

**Title:** The role of Cortical Transit Time on Diuretic Renography in determining the need for surgery and evaluating the postoperative outcome in Uretero-Pelvic Junction Obstruction in children- A Prospective observational study
Authors: Bijay Kumar Suman- Mentioned presenter, Aditya actual presenter, Subrat Kumar Sahoo, Bikasha Bihary Tripathy, Kanhaiyalal Agrawal, Sudipta Mohakud, Aditya Arvind Manekar, Manoj Kumar Mohanty

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Abstract:

Background: The prognostic value of delayed cortical transit time on diuretic renography can be a reliable early predictive marker for future deterioration of renal function in children with ureteropelvic junction obstruction.

AIMS: To prospectively assess the impact of delayed cortical transit time (CTT) on diuretic renography (Tc-99mEC scan-ethylene-dicyistine) on the need for surgery and renal functional improvement after surgery in children with ureteropelvic junction obstruction.

Methods: This was a single center, prospective observational study with a single arm study group carried over from July 2019 to May 2021 and included patients diagnosed antenatally or postnatally with unilateral hydronephrosis due to ureteropelvic junction obstruction. Data on biochemical, radiological, and 99mTc-EC scan parameters were collected and analyzed.

Results: We included a total of 36 patients in our study. The mean age of participants was 2.15 + 2.97 years. 28 (77.8%) participants were males, and 8 (22.2%) were females. There was a left sided 23 (63.9%) predominance. Surgery was performed in 21 (58.3%) children while the rest 15 (41.7%) were managed conservatively. 11 (30.6%) of the participants had normal pre-operative Cortical Transit Time and the remaining 25 (69.4%) had a delayed CTT. We found a significant improvement in the differential renal function (DRF) (p<0.05), perfusion (p<0.05) and t1/2 (p<0.05) post intervention amongst patients with a delayed CTT, at 3 and 6 months follow-up.

Discussion & conclusion: We conclude that CTT is an important parameter for early detection of deterioration of renal function and is an important factor to decide for early intervention i.e. either surgery or conservative management.

Mode of presentation: Oral presentation (4+2)

Title: Pelvic Volumetry by Ultrasonography in the contemporary management of Congenital PUJ-type hydronephrosis: "Clues to the missing links"

Authors: Kashish Khanna, Bajpai M, Goel P, Jana M, Kumar R

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Abstract:

Objectives: a) To find out the significance of additional pelvic dimensions, other than anterior-posterior diameter in reflecting the severity of hydronephrosis viz-a-viz across all stages of SFU grading. b) To find out the relationship between renal dimensions & pelvic volumes in disease progression with the aim of risk-stratification viz-a-viz renal function on isotope renography has been studied.

Materials and Methods: Consecutive patients (n=87; mean age: 24 months, follow-up:13-60 months) with PUJ-type hydronephrosis with Split Renal Function(SRF)>40% with delayed clearance over 12-years was collected. Serial ultrasound parameters including AP diameter [both renal and pelvis], pelvis lateral diameter, Craniocaudal length, cortical thickness [at upper and lower pole], renal length, volume of renal pelvis were measured at both initial and follow-up scans and compared with renal dynamic scans, GFR estimation and serum creatinine.

Results: Surgery=41 and Conservatively managed=46. Increase in pelvic volume & increase in renal dimensions[AP diameter & renal length] as well as the reduction in upper and lower pole cortical thickness were synchronous with fall in SRF even when the SRF remained/ was above 40% in the non-operated group. Decline in pelvic volumes from their initial values in patients who developed indications for surgery[p=0.001] was seen in contrast to the rising pelvic volumes in patients who continued to be followed by non-operatively. This reduction in pelvic volume was accompanied by an increase in renal length and renal A.P. diameter & corresponded to fall in SRF to below 40%.
In SFU grade II hydronephrosis patients, progression of disease in the form of increase in the craniocaudal diameter of the pelvis and increase in the pelvic diameter was observed, although their SRF remained static.

Conclusion: A well-documented ultrasound can be an important predictor of disease progression specially if it includes important parameters like craniocaudal diameter, pelvis volume apart from the AP diameter.

Mode of presentation: Oral presentation (4+2)

Title: Changes in urinary bladder morphology and function after valve fulguration in posterior urethral valve patients and its effect on outcome

Authors: Deepti Pai, Prema Menon, Shailesh Solanki, Ram Samujh, Anmol Bhatia

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Abstract:
Aim: To correlate pre-operative urinary bladder morphology with its post fulguration morphology and function in posterior urethral valve (PUV) patients.

Methods: Fulgurated patients from database who could be contacted were followed up between 2019-2020. Pre and post-operative ultrasonography (USG) and micturating cystourethrography (MCUG) were compared. Bladder diary data was collected prospectively.

Results: Hundred patients (mean follow up period: 6.6 years; range: 0.5-15.5 years) were studied. Bladder diary showed that 75/100 (75%) had normal frequency of micturition. Of 39 patients with pre-fulguration bladder thickening on USG, 22 patients had no accidental leaks at last follow up (56.4%, p = 0.031). USG also showed reduction in bladder wall thickening [n=39/98 (39.7%) vs n=20/100 (20%), p<0.001] reduction in trabeculations [n=20/98 (20.4%) vs n=9/100 (9%), p=0.008] and no change in bladder diverticuli [n=4/98 (4.1%) vs n=4/100 (4%), p=1.000] respectively.

Comparison of pre and post-operative MCUG showed decrease in prostatic urethra: bulbar urethra ratio [mean: 5.38±5.80, vs mean: 1.34±0.77, p<0.001] and reduction of bladder trabeculations [n=83/100 (83%) vs n=28/94 (29.8%), p<0.001], diverticuli [n=35/100 (35%) vs n=17/95 (17.9%), p<0.001] and vesico-ureteric reflux (VUR) [n=60 units/200 (30%) vs 19 units/194 (9.7%) p<0.001] with, increase in spherical shaped bladder [n=54/100 (54%) vs n=79/95 (83.2%), p<0.001], and normal capacity bladders [n=58/100 (58%) vs n=72/97 (74.2%), p<0.001]. Pre-fulguration MCUG and bladder diary data showed following associations: spherical bladder shape had lower frequency of micturition [mean: 9.09±4.17/day] compared to elongated shape [mean: 11.31±6.28/day] (p=0.032). Large capacity bladders had lowest frequency of micturition [mean: 8±1.67] compared to normal capacity [mean: 9.40±4.24] and small capacity [mean: 11.22±5.86] bladders.

Conclusion: There was significant reduction in bladder trabeculation, diverticula and VUR as well as improvement in bladder capacity after adequate fulguration. A preoperative elongated bladder shape had an adverse effect on post-operative micturition pattern compared to a spherical shape, but large capacity bladders fared better than normal capacity bladders in terms of frequency of micturition.

Mode of presentation: Oral presentation (4+2)

Title: Congenital Bladder Diverticulum- Single Surgeon Experience with Open Extravesical approach

Authors: Reyaz Ahmad Wani, Kumar Abdul Rashid

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Abstract:
Aim
To present surgical experience with extravesical approach in management of congenital bladder diverticulum.

Methods
A retrospective analysis of 25 patients of congenital bladder diverticulum operated upon by a single surgeon over last 10 years (2010-2020) was done after review of demographic, clinical, operative data and follow up records.
The patients ranged from 3 months to 7 years in age at the time of surgery. All were male with 20 unilateral and 5 bilateral cases. Most of the cases were diagnosed after evaluation for recurrent urinary tract infection or voiding dysfunction. Surprisingly, 5 of the 25 patients were misdiagnosed with 3 labelled as posterior urethral valve. Extravesical approach was done in 23 cases while in 2 patient a combined extra and intravesical approach was opted. Diverticulectomy with ipsilateral ureteric reimplantation was done in all the cases. Follow up records showed clinical and radiological improvement with no recurrence.

Conclusion
Congenital bladder diverticulum is one of the important causes of recurrent urinary tract infection and voiding dysfunction in pediatric age group. Misdiagnosis is not uncommon in such cases. Clinical picture supplemented with Ultrasonography, VCUG and Urethrocystoscopy are sufficient for proper diagnosis. Extravesical diverticulectomy with ipsilateral ureteric reimplantation provides good results.

Mode of presentation: Oral presentation (4+2)

Title: Long term outcomes in children with posterior urethral valve undergoing primary valve ablation

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Abstract:
To study the long term outcome of patients treated for posterior urethral valve (PUV) with primary valve ablation

Materials and Methods:
Babies diagnosed as PUV at our hospital underwent primary valve ablation using bugbee electrode as a primary procedure. Hospital records of such babies were reviewed and studied parameters were: Age at presentation, serum creatinine levels, vesicoureteral reflux (VUR) renal cortical scars, estimated glomerular filtration rate (eGFR), growth parameters and blood pressure.

Results:
45 patients undergoing primary valve ablation were included in the study. Age at presentation ranged from 1 day to 11 years (mean 15.8 months). The mean follow-up period was 8.5 years (range: 1-19 years). Primary endoscopic valve ablation using a bugbee electrode was initial procedure done at our hospital. Serum creatinine at presentation, initial eGFR were significant predictors of final renal outcome. Significance of Age at presentation (<1 vs. >1 year), presence/absence of VUR on initial VCUG and renal cortical scars with ultimate renal function will be presented.

Conclusion:
Primary valve ablation is feasible in most cases of PUV. Bugbee electrode fulguration is a safe method. PUV is a chronic condition needing longterm followup into adolescence and adulthood.

Mode of presentation: Oral presentation (4+2)

Title: A preliminary study to determine the role of Urodynamics in lower urinary tract dysfunction

Authors: Akash Mishra, Sarita Chwodhary, S P Sharma, Vaibhav Pandey, Kanika Sharma,Pranay Panigah, Ruchira Deepak Kumar

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Abstract:

INTRODUCTION
Lower urinary tract syndrome is common in children. Incontinence, urinary tract infection, vesicoureteral reflux, and constipation are commonly associated with this syndrome. We perform UDS in Children of all ages of follow up of PUV AND NTD with a variety of comorbidities and understand the causes of incontinence
METHODS

This study was conducted on patients presented in outpatient department in Department of Pediatric Surgery, Institute of Medical Sciences, BHU, over a period of 20 months. Patients with lower urinary tract dysfunction, with symptoms like day time dribbling of urine and incontinence and patients having nocturnal incontinence were included in the study.

RESULTS

Median ages for UDS were 4 years and 6 months. Reduced compliance was seen in 67%, detrusor overactivity in 38.5%, and leak in 15.4% boys, respectively. Median (range) Qmax was 6.85 ml/s and 25% boys had hypo contractile detrusor at voiding. Median Bladder capacity was 405 ml. Median detrusor pressure was 20 cm H2O. Median Post voidal urine was 90 ml. Detrusor sphincter dyssynergia was present in 7 patients.

CONCLUSION

Eighteen patients data were retrieved and UDS has been done and further evaluation and follow up of 6 months has been done. Data like bladder capacity, compliance, pressure flow detrusor muscle activity has been evaluated. Three major categories of bladder dysfunction were evident in patients; bladder hyperreflexia, myogenic bladder failure, bladder hypertonia with small capacity. In a sample size of 18 patients 10 patients have bladder hypertonia. 4 patients have bladder hyperreflexia pharmacological treatment was given in these cases and 4 patient have myogenic bladder failure. Clean intermittent catheterization was used for emptying in these 4 cases. Pharmacological suppression of instability and Pharmacological bladder relaxation showed positive response in treating symptomatic cases by decreasing the frequency of nocturnal urinary incontinence, day time dribbling of urine and incontinency.

Mode of presentation: Oral presentation (4+2)

Title: Does Posterior Anterior Urethra Ratio correlate with effective PUV ablation? A study of 47 children

Authors: Seshadri LN, Vinay Jadhav, Gowrishankar, AB Jagadeesh

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Abstract:

AIMS: The aim of this study was to compare Posterior Anterior Urethra Ratio (PAR) pre and post PUV ablation in children with Posterior Urethral valve.

METHODS: All consecutive children who underwent PUV ablation for posterior urethral valves at Indira Gandhi Institute of Child Health, Bengaluru between 1st January, 2020 to 31st March, 2021 (period – 14 months) were included in the study. PAR (Posterior : Anterior urethra ratio) was calculated by dividing the maximum posterior urethral diameter by anterior urethral diameter measured in oblique voiding phase image of micturating cystourethrogram (MCU). PAR was calculated before and 3 months after PUV ablation. Patient demographics details, symptomatology, reduction in upper tract dilatation and renal functions were collected.

RESULTS: Total 47 patients, neonates and children, were included in the study. Recheck cystoscopy is indicated if the ratio persists to be high in post fulgaration MCU. PAR pre PUV ablation was around 2.8 and post ablation in effective PUV ablation was around 1.9. Reduction in PAR correlated well with improvement in urinary stream, reduced upper tract dilatation and renal function.

CONCLUSION: PAR is a good indicator of effective PUV ablation.

Mode of presentation: Oral presentation (4+2)

Title: Anterior urethral valves: Rare but treatable cause of congenital urethral obstruction
Authors: Sravanthi Vutukuru, Muneer A Malik, Jai Kumar Mahajan, Ram Samujh
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Abstract:
Background: Anterior urethral valve (AUV) is of a rare cause of congenital urethral obstruction in boys. The presentation is similar to posterior urethral valves (PUV) and thus can be missed easily if not known or suspected beforehand. The spectrum of presentation varies from mild urethral dilatation to severe bladder outlet obstruction.
Methods: A retrospective analysis of 12 patients with AUV treated in a single unit from 2016-2021 was done. Details about demographic profile, clinical presentation, investigations, treatment, and follow-up were collected.
Results: The average age of presentation was 1.5yrs, youngest being <1 month (neonate) and oldest child was 7yrs of age. Nine (9) patients were ≤ 1 year whereas three (3) patients were >1 year old at the time of presentation. Most of them presented with dribbling of urine, and poor urinary stream. Two boys presented with pyonephrosis and abdomen distension, while the one neonate had acute urinary retention. MCU showed dilatation of urethra extending distal to the bulb of penis. Two cases were antenatally diagnosed with bilateral HDN and were initially treated for PUV and underwent transurethral fulguration but continued to have recurrent UTIs and poor stream. Postoperative check MCU showed dilatation of distal urethra for which check cystoscopy with fulguration of AUVs was done. Three patients underwent vesicostomy and 9 underwent transurethral fulguration. Three patients had associated posterior urethral valves, 1 underwent simultaneous fulguration of PUV and AUV while other 2 were missed initially but fulgurated later. Out of the 3 patients with Type 2 AUV, 2 underwent vesicostomy due to failed fulguration and 1 patient developed stricture urethra post fulguration, for which repair was done. None of the patients had renal failure. On follow-up, all the patients are doing well, with satisfactory urinary stream.

Conclusion: Anterior urethral valves is a rare cause of congenital urethral obstruction, with similar clinical presentation as PUV and can be missed easily if not suspected. Careful evaluation of MCU for dilation of distal urethra is helpful in early identification and appropriate treatment of AUV to prevent further renal damage.

Mode of presentation: Oral presentation (4+2)

Title: Title: Dysfunctional Voiding in Posterior Urethral Valve: A Missed Diagnosis
Authors: Madhur Anand, MS Ansari, Prabhuk Chakravarty, Shitangsu Kakoti, Aneesh Srivastava
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Abstract:
Dysfunctional voiding (DV) is learned voiding disorder of children characterized by striated sphincter dysynergia without neurological etiology. Posterior urethral valve (PUV) is congenital malformation of urinary tract associated with renal dysplasia and bladder & renal function impairment. There is no literature regarding prevalence of DV in PUV population despite high risk of urinary tract infections and renal function deterioration.

Materials and methods:
Consecutive patients post PUV fulguration in last 8 years were reviewed. Eighty six patients with available complete records were selected and included in study. Dysfunctional Voiding Scoring System (DVSS) Questionnaire was completed for all patients. Uroflowmetry, post void residual urine (PVR), uroflowmetry-Electromyography (UFM-EMG), cystometrogram (CMG)-EMG, Videourodynamics (VUDS) and voiding cystourethrogram (VCUG) were reviewed to find out evidence of detrusor sphincter dyssynergia and dilated posterior urethra (Urethral ratio >3). Functional constipation was graded using ROME IV. Descriptive statistics and correlation analysis was done by SPSS-21.

Results: Mean age of the population was 6±0.5 years and average DVSS score 2.60. Constipation was present in 20/86 (23.25%) patients. Five (25%) patients required daily laxatives and two (10%) patients required laxatives ≥3 times per week. Twenty eight (32.5%) patients with staccato 13(15.1%), intermittent 5 (5.8%) and mixed 10 (11.6%) patterns of UFM underwent UFM-EMG in 22 and VUDS in 6 patients. Eleven (12.8%) patients had EMG activity during voiding. Six (54.4%) of these had constipation, 7 (66.6%) history of recurrent UTI (> 3 per year) and 5 (45.55%) dilated posterior urethra (p <0.05).
Conclusion: The probability of finding DV is more in children with recurrent UTIs, elimination issues and persistent dilated urethra. High risk children should further be evaluated with UF-M-EMG or VUDS.

Mode of presentation: Oral presentation (4+2)

Title: Gastrocystoplasty yields good short term outcomes to improve bladder dynamics and maintains biochemical parameters

Authors: Prakriti Giri, Simmi K Ratan, Shasanka Shekhar Panda, Yogesh Kumar Sarin, Bidhan Chandra Koner, Rakesh Kumar

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Abstract:

Abstract Title: Gastrocystoplasty yields good short term outcomes to improve bladder dynamics and maintains biochemical parameters

Abstract body: Aim: To study the short-term outcomes of gastrocystoplasty in children with respect to its efficacy and complications.

Methodology: Children between 5-18 years undergoing gastrocystoplasty were enrolled. Baseline blood investigations, serum gastrin and bedside cystometry were done and sterile urine ensured; ultrasound, micturating cystourethrogram and DMSA were done. Gastrocystoplasty was performed. The investigations were repeated after 3 months. Tc99-Pertechnetate scintigraphy was done post-operatively at day7 and 3 months to assess gastric patch viability.

Results: Seven children (11.14±3.29 years) underwent gastrocystoplasty (4 neurogenic bladder [NB], 2 posterior urethral valves [PUV] and 1 bladder extrophy. Four patients with CKD stage >3 remained stable till 3-months follow-up. None developed hypochloremic metabolic alkalosis. All patients developed bacteriuria at 3 months and required treatment. Two experienced hematuria dysuria syndrome (HDS). One responded to ranitidine while other required prolonged PPI. Of these, one had elevated gastrin levels. One other patient with elevated gastrin never experienced HDS. Overall, there was significant improvement in median observed bladder capacity from 180 (85-290) ml to 285 (100-450) ml (p=0.006) and median bladder compliance from 6.7 (2.6-9.3) to 16.5 (4.1-50) ml/cm of water (p=0.047). Three patients in particular (2 NB, 1 PUV) with marked improvement in bladder dynamics also had mild improvement in VUR grade and also achieved social continence with CIC. The not so favorable outcomes were partial continence (n=1), vesico-cutaneous fistula (n=1) and incontinence (n=1). Tc99-Pertechnetate-scintigraphy showed a viable patch throughout in 5 while two had equivocal results on POD-7. Of these, one showed viability at 3rd month and one developed patch necrosis (underwent secondary ileocystoplasty, died on POD-30 due to urosepsis).

Conclusion: Gastrocystoplasty significantly improves bladder capacity, compliance and overall dynamics while maintaining stable hematological and biochemical parameters. This was a short-term study and longer follow-up with more subjects is needed to decipher the long-term prognosis and complications.

Mode of presentation: Oral presentation (4+2)

Title: To Evaluate Quality of Life in Urinary Incontinence Children with long term issues – A Single Institutional study

Authors: K B Dheeraj Kumar, Narendra Babu

Department Institution: Indira Gandhi Institute of Child Health, Bangalore

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Abstract:

Abstract body: Background: Urinary incontinence is Major issue in children and may lead to social, emotional, psychological problem to the children and also may have financial Implications for the family. Urinary incontinence is not uncommon and may have various underlying causes like Neurogenic bladder, EEC, MMC, PUV. These patients require comprehensive evaluation and management and select patients may require operative intervention like Augmentation Cystoplasty and CIC stoma to prevent Upper tract damage and to keep them socially continent. Here we with evaluating the Long term issues faced by these patients.
Aims and Objectives: To evaluate the Quality of Life perspective from patient and the family from cohorts of patients referred to tertiary Pediatric Surgery department.

Methods: Retrospective Health records from 2005 to 2020 for patients who presented to us with urinary incontinence were included. All patients who are between 8-18 years and with minimum 6 months follow up data were collected. These patients and their families were communicated with WHO validated Questionnaire PedsQL 4.0 Generic core scales translated in to Native language for evaluating Quality of Life, and their response were received on social media / Telephone with due precautions to maintain the privacy of patient data and data was analysed and conclusions were drawn.

Results and Conclusions: 95 patients were qualified for assessment for Quality of life. Out of these Non Neurogenic Neurogenic bladder constitute 31 children followed by Posterior urethral valve with 21 children, other causes include MMC (17), PUV (10), ARM (10), EEC (16) with Augmentation with Mitrafanoff and followed up. Most patients felt their Quality of life is Improved following surgical intervention and their outlook is more positive with interaction with society.

Mode of presentation: Oral presentation (4+2)

Title: Vaginal Substitution In Children- A Single Centre Experience

Authors: Avilash Gourav Sahu, Nabeel Q, Vinay C, M M Zameer, Sanjay Rao, Ashley L J D’cruz

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Abstract:

body: Aim

To describe the outcomes of vaginal substitution in girls

Methodology

A retrospective descriptive study of all girls <18 years of age, who underwent vaginal substitution between January 2011 to January 2021 was carried out. Data were collected from medical records and telephonic interviews. Outcomes assessed were cosmesis (subjective by parents), structure (calibre of the neovagina) and function (menstruation and sexual activity).

Results

Nine girls between the age of 14 months to 18 years were included. Follow up ranged from 5 month to 10 years. Indications for surgery was long common channel cloaca in 4, isolated vaginal atresia in 4 and Mullerian agenesis in 1. Children with cloacal malformation were operated in infancy during same time of cloaca repair using ileum. Children with atresia were operated in peripubertal age group using colonic conduit.

Cosmesis was reported as satisfactory in 8 children. One child with high cloaca had unsatisfactory cosmesis due to flat perineum and closeness of all three orifices. Good calibre neovagina was observed in 8 girls. Patient with Mullerian agenesis had vaginal stenosis which settled with serial dilation for 6 months. Normal menstruation was seen in 6 girls and 2 girls are still young. One patient is currently 28 years old and married and reports to have normal intercourse with no dyspareunia.

Mode of presentation: Oral presentation (4+2)

Title: Status of upper tract in unoperated classic exstrophy bladder patients.

Authors: Gurmeet Singh, S.N.Kureel, Archika Gupta, Nitin Pant, Nirpex Tyagi

Department Institution: King George’s Medical University, Lucknow, Uttar Pradesh

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Abstract:

Abstract body: Aim

To evaluate the preoperative status of the upper urinary tract in patients with Classic exstrophy bladder.

Methods

From August 2015 to April 2021, preoperative assessment of the upper urinary tract status was done in 104 patients with classic exstrophy bladder. Serum creatinine, ultrasound (KUB), and Nuclear scan (DTPA, GFR, and DMSA) were performed in these patients.
Results
Mean serum Creatinine was 0.65 ± 0.32 mg/dl (0.4-1.34). In ultrasonography, hydronephrosis was present in 5 patients with Unilateral (n=3) and bilateral (n=2) involvement and solitary kidney in 2 patients. Normal drainage, GFR, and absence of renal cortical scarring was noticed in 70 patients while 34 patients had a subnormal GFR (<80ml/min), renal cortical scarring in 5 patients and DTPA scan bilateral hydroureronephrosis (n=5), unilateral (n=3) and PUJO (n=1) were seen.

Conclusion Preoperative renal status is abnormal in 46 % of cases. The most common presentations were subnormal GFR (32.7%) and Hydroureteronephrosis (8.6%). In these patients’ relief of obstruction and anti-reflux procedure may help to protect the upper tract from further damage. The creation of a high-pressure reservoir has to be avoided in these patients. More vigilant post-operative follow-up is required for early detection of renal function deterioration.

Mode of presentation: Oral presentation (4+2)
Title: Ureterocoele: long-term outcomes of children undergoing only endoscopic management
Authors: Ravinder Naik, Rajasekhar A, Suhasini Gazula
Department Institution: Employees State Insurance Corporation (ESIC) Medical College & Superspeciality Hospital, Sanathnagar, Hyderabad
Email: drgazula9@gmail.com
Abstract:
Abstract body: Aim: To study long-term outcomes of children undergoing only endoscopic management.
Material and Methods
Study design: retrospective. Hospital records of children diagnosed with ureterocoele and underwent endoscopic management were reviewed. Studied parameters were: Age at presentation, duplex or single system, serum creatinine levels, vesicoureteral reflux (VUR), renal cortical scars, growth parameters and blood pressure.
Results
Nine patients (with 11 ureteroceles) were included in the study. Male to female ration was 5:4. Four presented as neonates with a median age of presentation 10.5 days and 5 patients were beyond neonatal period (median age 36 months). Two patients had bilateral ureteroceles and 2 patients (22%) had a duplex system with unilateral ureterocele. Intravesical ureteroceles were found in 8 patients and extravesical ureterocele (Cecoureterocele) in 1 patient. 8 patients underwent endoscopic incision of ureterocele and 1 patient who was managed conservatively.

Conclusion
Endoscopic incision of the ureteroceles is a simple and quick procedure to relieve the dilated upper urinary tract and preserve kidney function. Children undergoing endoscopic incision need long term to follow up to identify postoperative problems and intervene at the right time to prevent deterioration of renal function.

Mode of presentation: Oral presentation (4+2)
Title: Congenital long-segment anterior urethral stricture in children
Authors: Vivek Samuel, Jujju Jacob Kurian, Susan Jehangir, Sudipta Sen
Department Institution: Christian Medical College, Vellore
Email: yyekg@yahoo.co.in
Abstract:
Abstract body: Aims: Congenital long-segment anterior urethral stricture in children (CLAUSIC) is a rare paediatric urological entity which has not been adequately described in literature. The aim of our study was to identify and describe this novel entity.
Materials and Methods: All children with CLAUSIC who presented to our institution over the past decade were included in the study. Only those who presented at infancy having voiding problems, with subsequent imaging and cystourethroscopy revealing congenital long segment (>2 cm) strictures involving the anterior urethra were included in the study. Those with posterior urethral valve, prune belly syndrome, previous instrumentation/catheterization, and other posterior urethral anomalies were excluded.

Results: We had a total of four children with CLAUSIC. Initial diversion was in the form of a vesicostomy in three and perineal urethrostomy in one. Two children had a long segment stricture 2-3 cm in length involving the bulbar urethra, while the other two had strictures exceeding 4 cm with both bulbar and penile urethra involvement. Definitive surgery via the perineal route with preputial tube interposition was performed in children with shorter strictures, while a trans-pubic approach with a preputial tube/ileal Monti was required in the ones with longer segment strictures. One child required a revision surgery for anastomotic stricture. At mean follow up of 9 months, all children are voiding per urethra, with improvement in hydroureronephrosis.

Conclusion: Adequate representation in literature has not been given for CLAUSIC, which entails complex reconstructive urological techniques for its optimal correction.

Mode of presentation: Oral presentation (4+2)

Title: Clinico-microbiological profile and outcome of lobar nephronia
Authors: Anis Akhtarkhavari, Lakshmi Sundararajan, S. Namasivayam, C.V Kanimozhi
Department Institution: Kanchi Kamakoti CHILDS Trust Hospital
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Abstract:
Abstract body: Aim: Lobar Nephronia refers to a focal bacterial nephritis which is intermediate in the spectrum between acute pyelonephritis and renal abscess. We reviewed our experience with paediatric lobar nephronia looking at their clinico-microbiological characteristics and their management and outcome.
Methods: A retrospective review of cases of lobar nephronia managed between 2011 and 2021 in our institution was carried out. Details about demographics, clinical presentation, microbiological profile, management and outcome of these children was collected.
Results: 14 children with lobar nephronia were studied. Children presented with urine infection and ultrasound assessment of kidneys showed a mass lesion in the lobar region. Based on their clinico-microbiological profiles they were all managed with prolonged course of antibiotics, though some needed further procedures. Residual scarring was noted on follow up in 5 children (2- VUR grade III, 1- duplex system, 1- abscess and 1- ureteric calculi). Remaining patients showed complete clinico-radiological resolution of the mass lesion. Unusual cases include nephronia of fungal aetiology in immunosuppressed child, multifocal involvement.
Conclusion: For better outcomes with lobar nephronia, a proper clinical assessment, a good quality imaging by Paediatric radiologist and appropriate microbiological analysis is essential. This also helps to rule out other causes of renal masses including malignancy and avoid invasive investigations.

Mode of presentation: Oral presentation (4+2)

Title: Paediatric endourology as a part of training program in paediatric surgery residency
Authors: Kritika Rani, Narendra Babu
Department Institution: Indira Gandhi Institute Of Child Health, Bengaluru
Email: kritika.descent@gmail.com
Abstract:
Abstract body: AIM: 1. To highlight the significant pediatric urolithiasis case load that is not utilized by pediatric surgeons. 2. To present a pediatric surgeon’s experience and perspective of endourological management in pediatric stone disease.
Methods:
50 pediatric patients with renal calculi operated between May 2018- June 2021 were included in the study. Data related to the objectives of the study were collected.

Result:
Total urolithiasis patients in a duration of 3 yrs = 50
41 out of 50 cases were Endourologically managed with better outcomes
9 out of 50 patients underwent open procedure for calculi that was not amenable for endourology.
34/50 belonged to Upper urinary tract,
14/50 belonged to lower urinary tract,
2/50 had combined upper and lower urinary tract calculi,
8/50 cases had staged endourological procedures.
3/50 cases, stone clearance was not achieved endourologically hence required open procedures.

Conclusion:
• Pediatric stone disease accounts for 5-10 % of pediatric surgical cases, management of which is not being offered as a part of pediatric surgical training program, hence many cases are being managed by pediatric/Adult Urologist.
• The recurrence of stone disease has been as high as 50-70%.
• Endourological management is not comprehensively dealt in Paediatric surgery training program
• Steep learning curve in endourological management especially the Upper tract stone needs mentoring and partnering with adult/paediatric urology to establish a successful endourology program.

Mode of presentation: Oral presentation (4+2)

Title: Persistent Mullerian duct syndrome(PMDS)-an experience over two decades
Authors: Md Sohail Ahmad, Akash Bihari Pati, Purnendu Bharadwaj, Rajkiran S Raju, Santosh Kumar Mahalik, Suravi Mohanty, Mukund Namdev Sable, Shubha AM, Kanishka Das
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Abstract:
Aims: To review the clinical spectrum, diagnosis and management of PMDS at two tertiary teaching hospitals.
Methods: A retrospective review and patient recall was conducted. The clinical presentation, investigations, surgical management and outcome were analyzed.

Results: There were nine children with PMDS, one had consanguineous parentage while three had associated anomalies. The median age at presentation was 4.5 years. The primary presentation included undescended testis (5, 2- bilateral), recurrent UTI (4, 2- epididymoorchitis), torsion testis (2), inguinal hernia. The phallus was abnormal in two (microphallus - 1, proximal hypospadias-1). Three had unilateral gonadectomy earlier for various diagnoses, two were mistakenly 'suspect tuberculous'. An anterior uterine prominence was felt perrectally in five and visualised preoperatively on ultrasonography (5), voiding cystourethrography(3) or MRU (3). Cystogenitoscopy showed a cervical dimple leading to a variable length of remnant in all. Surgical management included excision of the Mullerian remnant (laparoscopically - 4, transperitoneal - 6, transtrigonal -2) conserving the vas in its lateral wall; other procedures were orchidopexy (7), orchidectomy (3; 1-torted - gangrenous, 2-nubbin) and urethroplasty. Histological examination confirmed uterine morphology in all. Three had 1-2 episodes of UTI postoperatively. The follow up is 1-19 years; period, thereafter all are asymptomatic. The semen analysis in two post pubertal cases showed oligospermia, we await data on fertility.

Conclusion: PMDS presents variably in a phenotypic male and often missed/ mistaken. A high index of suspicion, meticulous imaging and genitoscopy clinches the diagnosis. The approach to excision of the Mullerian remnant is
individualised. Long term postoperative follow up into puberty and adulthood is important to assess vasal integrity and fertility.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Is diagnosis of 5 alpha reductase deficiency essential in severe hypospadias?

**Authors:** Ashwtha Shenoy, Arbinder Kumar Singal, Rajkumar Gupta, Manish Dubey

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**Abstract:**

Aim: The need to diagnose 5 alpha reductase deficiencies in children with microphallus and severe hypospadias.

Materials and methods:

We conducted a retrospective study over a period of 7 years from 2015 to 2021 of 19 children with severe hypospadias and small phallus. They underwent karyotyping and hCG stimulation test with estimation of T/DHT ratio. They were started on DHT gel local application after the diagnosis of 5 alpha reductase deficiency. SPL (stretched penile length) and GD (glans diameter) was measured at presentation and every month after onset of DHT application.

Results: The mean age of boys in this study was 23 months. All of them were severe hypospadias (perineal, scrotal penoscrotal and proximal penile) with small phallus. T/DHT ratio was found to be more than 16 (normal 8-16) in all patients. Karyotyping was 46XY in all children. The mean SPL (stretched penile length) and GD (glans diameter) at presentation was 20mm and 9.7mm respectively. All of the children showed significant improvement in SPL and GD and met our criteria of SPL 30mm, GD 14mm and staged repair was done in all the children.

Conclusion: Adequate phallus size is essential to achieve a desired outcome after hypospadias surgery. High suspicion of 5 alpha reductase deficiency is necessary in children with small phallus and hypospadias. Pre-operative supplementation of DHT can achieve the desired size in these children.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Modified Transumbilical Laparoscopy Assisted Appendicectomy: Our Institutional Experience

**Authors:** Syamantak Basu, Apoorva Makan, Akriti Tulsian, Vini Joseph, Suraj Gandhi, Neha Sisodiya Shenoy, Hemanshi Shah

**Department Institution:** Topiwala National Medical College and BYL Nair Charitable Hospital

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**Abstract:**

Aims:

Various methods of laparoscopic appendectomy have been described in children. We present the data of 118 children who underwent interval appendectomy by Modified transumbilical laparoscopy-assisted appendectomy.

Methods:

Retrospective analysis of data of 118 patients under 12 years of age who underwent Modified transumbilical laparoscopy assisted appendectomy was done. All patients had presented with clinical features of acute appendicitis of 24-48 hours duration which was confirmed by sonography and laboratory tests. All patients had good response to early management by intravenous antibiotics and fluids. Patients with delayed presentation who had formed an appendicular lump were managed conservatively. All children underwent modified transumbilical laparoscopy assisted appendectomy after six weeks. A 5mm camera port was inserted by Hassan’s technique through the umbilical tube. After visualizing the appendix, another incision was made in the rectus sheath adjacent to the port site on the left and a 5 mm bowel grasper was introduced. The appendix was mobilized and delivered through the umbilical incision followed by extracorporeal appendicectomy.

Results:
The average age at presentation was 8.8 years. There were 46 girls and 72 boys. Mean operating time was 40 minutes. An additional port was required in 7 patients (5.9%). 8 patients (6.7%) underwent conversion to open procedure in view of extensive adhesions or short retrocaecal appendix which was difficult to mobilize and exteriorize through umbilicus. Appendicular lumps were associated with adhesions in the appendicocaecal area, however, most of them could be managed without additional ports. Most patients were fit for discharge within 48 hours of surgery. Two patients with dense adhesions had post-operative ileus and 5 had mild surgical site infection.

Conclusion:
Modified transumbilical laparoscopy assisted appendectomy is feasible, safe and combines the advantages of both laparoscopic and open appendectomy and offers better cosmesis with reduced surgical costs in pediatric age group.

Mode of presentation: Oral presentation (4+2)

Title: Case series of pull through vaginoplasty – alternative solution for complex genitourinary problems
Authors: Udhayasankar V, VIVEK, JEEVARATHY, R. SENTHILNATHAN
Department Institution: Institute of child health
Email: drudhayasankar07@gmail.com
Abstract:
Background: Surgical management of high vaginal atresia is complex. We are presenting series of cases of high vaginal atresia managed with total uterotubovarian vaginoplasty and pull through vaginoplasty.

Methods:
Case 1 – 4yrs/F, K/c of High Vaginal Atresia, Tube Hysterostomy done in 2017 for Pyometrocolpos, presented with Hysterostomy, Pull Through Vaginoplasty done.
Case 2 – 10yrs/F, Cloaca on Transverse Colostomy High Confluence, Abdomino Perineal Pull Through AnoRecto Vaginoplasty done.
Case 3 – 12yrs/F, Presented with haematocolpos, single opening in introitus, diagnosed to have High Vaginal atresia, abdomino perineal pull through vaginoplasty was done.

Conclusion:
Management of patients with genital anomalies is a complex problem, requiring individual surgical approach depending on the anatomical conditions. Goals of vaginoplasty are correction of visible anatomical abnormalities, creation of an appearance which is cosmetically acceptable & restoration of function that will enable to involve normal sexual activity.

Mode of presentation: Oral presentation (4+2)

Title: Anogenital distance in male urogenital malformations
Authors: Keerthika, Prabudh Goel, Vishesh Jain, Anjan Dhua, Devender Kumar Yadav, Minu Bajpai
Department Institution: Department of Pediatric Surgery, AllIMS, New Delhi
Email: keerthi.ka_m@yahoo.com
Abstract:
Anogenital distance is a sensitive biomarker for fetal endocrine disruption and testicular dysgenesis syndrome in animal models with proposed implications in the etiopathogenesis of male urogenital malformations.

Objectives: To assess the severity of endocrine disruption in cryptorchidism or hypospadias using Anogenital distance (AGD) as a marker.

Methods: Meta-analysis of five birth cohort studies and two cross sectional studies was done, with a sample size of 2,119 boys. Standard mean difference (SMD) was calculated using the random effect model.

Results: Boys with hypospadias and cryptorchidism had significantly shorter AGD when compared with normal population. [SMD, -2.63; 95% CI, -4.65 to -0.62] and [SMD, -0.69; 95% CI, -1.36 to -0.02]) respectively.
Conclusions: AGD can be used as a reliable non-invasive marker for androgen exposure in prenatal period and for assessment of testicular dysgenesis syndrome. Additional studies are needed to corroborate these preliminary findings.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Fistula in ano in children, 10-year experience and review

**Authors:** Priyanka Hegde, Arun Kumar L, Tarun John K Jacob

**Department Institution:** Christian Medical College, Vellore

**Email:** priyankahegde811@gmail.com

**Abstract:**

**INTRODUCTION:** Fistula in ano in children is a common presentation of anal sepsis and is frequently preceded by a perianal abscess (20 – 50%). The most common aetiology is crypto-glandular infection followed by inflammatory bowel disease.

**AIM:** The primary objective of the study is to evaluate the clinical characteristics, optimum line of management and outcomes of perianal fistula in children.

**METHOD:** Retrospective study of children (<15 years) who underwent surgery for perianal fistula over a ten year period (2010-2019) was done.

**RESULTS:** Sixty-six children underwent surgery for perianal fistula, with sixty-one of them being boys. The mean age of onset of symptoms was 5.3 years. Forty-two children (63%) had a history of a perineal abscess. The mean time between presentation and definitive surgery was 1.3 years. A predominant number of patients (62, 94%) had infra-levator fistulas. Four children had Crohn’s disease, and the rest were crypto-glandular infections. Fistulotomy was done in 32 patients, fistulectomy in 33 patients and seton in 1 patient. Recurrence was seen in seven patients (10%). 75% of supra-levator fistulas had recurrence compared to only 6% of infra-levator. 50% of Crohn's fistula had a recurrence. Of the seven patients with recurrence, three underwent fistulotomy, three fistulectomies and one seton placement were done.

**CONCLUSION:** Paediatric fistula in ano are predominantly low fistulas due to crypto-glandular infection and respond well to surgical management. However, recurrent fistulae are usually seen in high fistula and associated with Inflammatory bowel disease.

**Mode of presentation:** Oral presentation (4+2)

**Title:** Renal function outcomes after complete primary repair of exstrophy epispadias complex: Preliminary results from a single centre experience

**Authors:** Nirkhi Shah, jaishri ramji, rakesh joshi, mahesh vaghela

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**Abstract:**

**Aim:** The goal of reconstructive surgery in classic bladder exstrophy (BE) is to achieve social continence and provide functional and cosmetic genitalia while preserving renal function and limiting long-term morbidity. We are evaluating renal outcomes on intermediate follow-up after complete primary repair of exstrophy (CPRE).

**Materials and Methods:** Data on patients who were managed at our hospital from January 2009 to January 2020 was collected prospectively. All patients who underwent primary or redo BE repair using CPRE were included. Voiding cystourethrogram and DMSA scan were obtained annually. Serum creatinine and cystatin-C, urinary albumin and creatinine were measured during 2019 and 2020 annual evaluations.
Results:
From 104 patients with BE who underwent CPRE, a total of 61 patients who came for follow-up in 2019 and 2020 with 45 (77%) patients with primary BE and 14 (23%) with redo BE. There were 46 (75%) male and 15 (25%) female patients with a median age of 1.7 years (IQR: 1.1-4.6) at the time of initial surgery. At a median follow-up of 4.16 years (IQR: 3-6), the overall median eGFR was 112 for BE/redo BE. Only 7 (11%) patients had eGFR<90, and 14 (23%) patients had microalbuminuria; among these 2 had both eGFR <90 and microalbuminuria. 16 (26%) patients had renal scarring in DMSA and 17 (28%) had high grade vesicourethral reflux. Multivariate analysis showed that neither renal scarring nor VUR could predict presence of eGFR <90 or microalbuminuria.

Conclusions:
Modern CPRE technique for the repair of BE may increase risk of renal scarring in the intermediate term follow-up and therefore close follow up with serial renal function measurements is warranted and necessary. Longer-term follow up is necessary to assess the ultimate kidney outcomes in this cohort of patients.

Mode of presentation: Oral presentation (4+2)
Aim: To investigate the short and long-term clinical outcomes in patients with Total colonic aganglionosis (TCA).

Methodology: A retrospective review of TCA cases treated between 2009-2020 and followed up with OPD and telephonic interviews from a tertiary Pediatric surgical centre.

Results: We identified 12 children managed for TCA. Mean age at presentation was 3 months (range-age 2 to 1y3m). Mean follow up was for 4 years. 67% cases had history of delayed passage of meconium. Radiological concordance (contrast study) was seen in 5 cases. Level of aganglionosis were till distal ileum (n=8) and proximal ileum (n=3). Seven patients underwent ileal pull through (Duhamel’s) and three underwent Kimura Martin procedure. Five children developed enterocolitis and incidence was more following Kimura’s procedure. Children who underwent Duhamel pull through have an average stool frequency of 3 per day, with good continence, In Kimura-Martin’s group stool frequency was 3-4 per day, 2 children required botox injection during follow up for persistent constipation. Two children have grade 1 and grade 2 soiling respectively in Kimura’s group. One child expired following ileostomy (unrelated to disease) and two children are awaiting definitive pull through. 60% of the children had adequate growth parameters on follow up .

Conclusion: Management of TCA is challenging and some children continue to have bowel and growth related issues. In our series satisfactory bowel function was seen in 80% with better outcomes in modified Duhamel’s group than compared to children who underwent Kimura-Martin’s procedure.

Mode of presentation: Oral presentation (4+2)

Title: Pancreatic hamartoma:A rare differential for Multicystic Retroperitoneal mass
Authors: Rishabh Jain, Mamta Sengar, Iavleen Singh, Chhabi Gupta, Vivek Manchanda, Niyaz Ahmed Khan, Parveen Kumar
Department Institution: Chacha nehru Bal Chikitsalya Delhi
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Abstract:
Aim of presentation– To present a rare case of Pancreatic hamartoma and surgical implications related to it.
Introduction – Pancreatic hamartoma is an extremely rare benign pancreatic tumour accounting for less than 1% of cases with tumour like cystic lesions of the pancreas. There are only 30 cases of pancreatic hamartoma reported in English literature to date.
Case Report:
A six year old female presented with persistent diffuse abdominal pain and progressively increasing abdominal distension for last six months and persistent fever for last one month. Radiological investigations suggested a multilocular cystic retroperitoneal mass with infected fluid in the cysts. Fever improved partially with drainage of infected fluid. Complete remission could only be achieved after removal of cystic mass.
Postoperatively patient is doing well on a follow up of 2years.
Discussion
Pancreatic hamartoma is an extremely rare benign disease of pancreas and it remains a diagnostic challenge despite improvements in imaging techniques. These tumors require surgical resection due to pressure effect and possibility of malignant transformation.

Conclusion
Pancreatic hamartoma is an extremely rare tumour of pancreas. Knowing about this entity can help in avoiding per operative pancreatic duct injury.

Mode of presentation: Short Oral presentation (3+2)

Title: A Rare Case of Multiple Intestinal Perforations due to Multiple Ingested Magnets in a Child: Successful Management by Surgery
AIMS: To study the management of multiple magnets ingestion in a child

METHODS: A two year old male child from neighboring state was referred to Department of Paediatric Surgery with complaints of abdominal pain, distension, vomiting and passing dark coloured stools. Amidst the lockdown due to COVID-19, a highly contagious disease at its peak with permission from other state authorities the child was rushed to our hospital. The child was drowsy and was in shock. Necessary basic investigations and X-ray revealed suspicion of foreign body ingestion by child of which the parents were totally unaware. Emergency laparotomy was performed on the child. On surgery the child had 5 perforations across proximal jejunum and distal jejunum, proximal ileum, mid ileum and one near ileo-cecal junction. One by one 12 small circular strong magnets which were attracted to each other and were attached in straight line were carefully removed. The perforations were repaired at 3 sites and at another 2 sites required resection of ileal segments and anastomosis one of them being near ileocaecal region.

RESULT: The postoperative course was uneventful and the child was started on feeding on fifth postoperative day, and with no complaints the child was discharged home on seventh postoperative day.

CONCLUSION: Children coming with abdominal complaints should have strong degree of suspicion of ingestion of unexpected objects, should point to investigative evaluation and early exploration leading to good results. There is need to caution the parents not to leave the children unattended and observe the movements of the children while playing for swallowing or inhalation of any foreign objects.

Mode of presentation: Short Oral presentation (3+2)
Abstract: AIM- To describe a case of Perforated Meckel’s diverticulum presenting as Ileoileocolic Intussusception in a COVID 19 positive child.
METHODS- Case study of an 8 year old COVID 19 positive child, diagnosed with Intussusception and managed surgically.
RESULTS- An 8 year old girl, presented to emergency with complaints of abdominal pain, constipation and bilious vomiting since 3 days. On examination, abdomen was soft, non tender with no palpable lump. Child had tested positive for SARS CoV 2 infection. A bed side rectal wash in the COVID intensive care unit resulted in anchovy mucous output and raised the suspicion of intussusception that was confirmed with sonographic evaluation revealing an ileocolic intussusception. She was taken up for surgery after a failed attempt at hydrostatic reduction. Intraoperatively, perforated Meckel’s diverticulum was noted as the lead point in an ileoileocolic intussusception. Reduction followed by resection of ileal segment containing meckel’s was done with an end to end anastomosis of ileal segments. Post operative course was uneventful and patient was discharged after starting oral diet. Histopathology revealed marked inflammation and ulcerations.
CONCLUSION-Gastrointestinal symptoms are often the leading manifestations of COVID-19 in children, which can be isolated or as a common sign of a concomitant pathology. Signs of peritonitis may not be marked in presence of COVID infection. Pediatricians should consider the possibility of intussusception when a child with COVID-19 presents with abdominal pain. The postings of residents and faculty of Pediatric Surgery in the COVID Facilities helps to give appropriate peroperative care to the COVID positive pediatric surgical patients.
Conclusion: Elective care in pediatric surgery was the most hit during this pandemic with no significant impact on emergency surgical care. Appropriate steps may have to be taken to handle this elective surgery backlog when full-scale routine services resume.

Mode of presentation: Short Oral presentation (3+2)

Title: Single Center Audit of Impact of COVID 19 on Pediatric Surgical Care: Our Institutional Experience.

Authors: Adnan Sayeed, Mamatha B, Anand Alladi, Adnan Sayeed

Department Institution: BMCRI, Bangalore

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Abstract:

Aim: To compare Pediatric Surgery practices, including the number and types of surgery, either elective or emergency surgeries and outpatient services in our institution - Group 1: before being declared as an exclusive covid hospital (September 2019–March 2020) Group 2: After restarting non covid services (October 2020 – April 2021).

All positive patients treated including newborn of positive mothers needing pediatric surgical care were reviewed as a separate group.

Materials and methods: This is a retrospective observational study conducted in the department of paediatric surgery. Data was obtained from an electronic database, OT, IP register. In group 2 the effect of COVID status of child and guardian on scheduling of surgery and outcome of our protocol was looked at.

Results: There was an apparent fall in elective surgeries (990:460) by 50% and emergency surgeries (180:55) by 70%.

Our out patients and inpatient statistics also decreased by ~50% (8314:4441) and ~40% (941:555) respectively.

5% (22) patients in group 2 were postponed due to COVID related issues (patient+ve/guardian+ve /exposure)

Covid group: Two positive patients were operated and one managed conservatively. 7 newborns of covid positive mothers needed pediatric surgical care. Of these 3 developed NEC on initiation of feeds and one developed multisystemic inflammatory syndrome (MIS-N). One had TEF, and one had rachischisis. One positive baby developed MIS-N and succumbed to internal bleeding and sepsis.

Conclusion: The pediatric surgery practice in our institute was severely affected due to being converted to an exclusive covid hospital during the pandemic. It remains affected even after resuming non covid services. There is an increase in hospital stay and postponement of elective surgeries after the new covid pandemic. A fall in emergency cases as well is something to be worried about. Covid may be one of the contributing factor associated with increased morbidity in certain cases like CDH and NEC.

Mode of presentation: Short Oral presentation (3+2)

Title: COVID-19 induced immunosuppression causing perineal necrotizing fasciitis after anorectoplasty in an infant

Authors: Praney Gupta, Aparajita Mitra, Praney Gupta, Chandrashekhar Singh, Ankur Ohri, Yogesh Arya, Nandani Hazarika, Shandip Kumar Sinha

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Abstract:

Background: Perineal necrotizing fasciitis following anorectoplasty for imperforate anus is an essentially non-existent complication. To encounter such a potentially devastating entity in an otherwise healthy infant signals a more sinister pathology.

Clinical description: A 9 month old boy underwent secondary anorectoplasty after neonatal colonic diversion. The post-operative period was marked by high grade fever, peri-neoanal erythema, purulent discharge and bullae formation. Culture grew E. coli and appropriate
antibiotics were started. Blood work revealed new-onset leukopenia and the absolute neutrophil count responded to filgrastim (G-CSF) administration. Respiratory symptomatology and stomal diarrhoea raised the suspicion of SARS-CoV2 infection. The father tested positive at home and subsequently the RT-PCR of the patient and mother came back positive on POD6. Recovery was satisfactory with supportive management and wound care. The leukocyte counts rebounded over time. He showed strong titres of anti SARS CoV2 IgG antibodies after two months. Both, the surgical site and neoanus are completely healthy.

Conclusion: Infection with the SARS-CoV2 virus has wide ranging effects on the immune system and lympho/leukopenia is well documented in the early stages of viremia. That, along with the unusual dermatological manifestation of Covid-19 associated livedo (discrete necrosis), can provide a plausible conjecture for its etiopathogenesis. The urgent commencement of effective antibiotics and the judicious use of myelopoietic growth factors enabled the successful conservative management of this serious complication in a post-surgical pediatric Covid-19 patient.

Mode of presentation: Short Oral presentation (3+2)

Title: Pandemic lockdown - the potential risk of domestic accidents in children

Authors: Abitami krithiga, Lavanya K, Mainak Deb, Harish Jayaram

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Abstract:
Aim - This study aims to look at the impact of COVID-19 pandemic on unusual domestic injuries.
Methods - A retrospective review of all pediatric patients presented to hospital emergency flagged as domestic injury was done between March 2020 to May 2021 (COVID-19 social isolation period).
Results: A case series of 9 children with unusual domestic trauma during pandemic lock down is included. 3 cases of idli plate stuck to finger, 1 case of toy stuck in scalp, 1 case of incense stick stuck in the nose, 1 case of cyanoscrylate super glue in palate, 1 case of magnetic balls ingestion requiring laparotomy, 1 tongue injury due to tongue stuck in hot water tap. 1 child stuck in pot.
Conclusions: The social isolation due to the pandemic has caused unusual pediatric domestic accidents requiring surgical interventions inspite of parent’s supervision.

Mode of presentation: Short Oral presentation (3+2)

Title: Influence of covid 19 pandemic second wave on pediatric emergency surgeries in a tertiary care centre in new delhi- an observational study

Authors: Chetna Khanna, Pinaki R Debanath, Atul Meena, Shalu Shah, Amita Sen

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Abstract:
AIMS AND OBJECTIVES- To observe the influence of covid-19 pandemic second wave crisis on the performance of emergency pediatric surgeries in a tertiary care hospital.
METHODS- A retrospective observational study was conducted in Dr. Ram Manohar Lohia Hospital, New Delhi during the period of March 2019-august 2019 (pre Covid time) and March 2020-august 2020 (Covid time 1st wave) and feb 2021- june 2021 (covid time 2nd wave). The study aimed to compare emergency pediatric surgery procedures, including their number and proportion of surgeries, before the outbreak and during the COVID-19 pandemic 1st and 2nd wave in our institution.
RESULTS- The frequency of emergency pediatric surgeries during the 1st wave of covid 19 was lower than before the outbreak by 50% and during 2nd wave was lower than the 1st wave by 40%. Despite a drop in total number of emergency pediatric surgical cases operated, the proportion of the types of surgeries performed remained relatively the same. Several factors were responsible for the decreased number of cases being performed during the time period of pandemic including the fear of contracting covid 19 infections at the health care facility amongst parents.
These declining trends might be related to the rapid spikes in COVID-19 cases and an increase in the risk of nosocomial transmission of COVID-19 infection.

CONCLUSION: The pediatric emergency surgeries in our institution have been severely affected by the COVID-19 pandemic as our institution is assigned as dedicated covid centre during the second wave but not during 1st wave of covid 19. It should be noted that delay of surgery for “time-sensitive” and urgent diseases in children might affect their growth, development, and quality of life.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Challenges during Bronchoscopy in background of COVID-19 Pandemic- Institutional Protocols to overcome challenges in protecting Health care providers

**Authors:** Mohammed Shoaiib, Vinay Jadhav, Gowrishankar

**Department Institution:** Indira Gandhi Institute of Child Health, Bangalore

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**Abstract:**

Aims and Objective

• To study the difficulties faced in protecting the health care providers in bronchoscopic procedures during the pandemic. To study how

Materials and methods-

Study period is from April20 to May21 at IGICH Bangalore. Total of 71 patients who underwent bronchoscopy were studied. Bronchoscopy for both therapeutic and diagnostic were included. We formulated certain protocols at our institute to avoid cross infection and better outcome

Discussion

• Bronchoscopy is high risk procedure because of detectible disruption of mucosa and the increased pressures utilized to oxygenate and ventilate patients during the procedure. Surgeons and Anesthetist who are in close contact with patient’s airway during the procedure are susceptible, because suctioning and cough reflex produce significant amounts of droplets or aerosols, contaminating indoor equipment, procedure room’s air. Bronchoscopy cannot be postponed in most of pediatric instances which may lead increase morbidity and mortality. Therefore, it is critical to formulate a protocol for bronchoscopy procedure, like CT scan confirmation, Use of telescope camera port, complete sedation of child before shifting to OR, Use of locally made total body plastic drape and other methods which protected health care providers. During this pandemic we performed 65 emergencies and 6 elective bronchoscopies out of which 3 children were tested covid positive during procedures. With institutional protocols it was easy to operate bronchoscopy procedure without risking health care provider for COVID infection

Conclusion

Bronchoscopy is an emergency procedure for various indication in particular foreign body aspiration. The safety of Health providers has emerged as of utmost importance without compromising in the care of patient during this Pandemic. With proper pre-procedure and intra-procedural protocols, risk of transmission of infection can be drastically reduced without hampering the care to patient.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** A tale of a long tailed gastrointestinal trichobezoar (Rapunzel Syndrome) in a pediatric patient

**Authors:** MANIKA BOIPAI, DR. RAHUL GUPTA, DR. PRAVEEN MATHUR, DR. PRIYANKA MITTAL

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**Abstract:**

A case report describing a rare presentation of trichobezoar with a long tail extending into the small intestine and its management.
METHOD: A 7-year-old female had complaints of epigastric fullness after feed, intermittent abdominal pain, occasional nonbilious vomiting, a palpable mass, and anorexia for duration of two months. Patient did not present a clear history of trichotillomania or trichophagia. Clinical suspicion was made after noticing a patch of alopecia over her forehead. Lab findings were normal. Abdominal ultrasonography revealed a hair ball in the stomach. Endoscopy confirmed the diagnosis and revealed a bunch of hair in stomach and duodenum with multiple gastric erosions.

RESULT: A mini laparotomy (3.5 cm) over the lump was performed. Anterior gastrotomy revealed a giant trichobezoar with a very large tail (more than 30 cm in size). Trichobezoar was removed by gentle traction to prevent any fragmentation. Enterotomy was bypassed here since the whole bulk got removed through the gastric incision only. Presence of additional daughter trichobezoar was ruled out by gentle examination of the entire small bowel.

CONCLUSION: Even in the absence of history of trichotillomania or trichophagia a provisional diagnosis can be made clinically. Extraction via laparotomy is the most successful treatment modality for larger trichobezoars including Rapunzel syndrome. In-toto removal of the whole segment is necessary especially with those having longer tails to avoid complications like breakage and retention of distal fragments. With careful handling, a small gastrotomy may solely suffice the purpose without including an enterotomy.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** A rare case of Abdominal Cyst

**Authors:** Vibhu Devendra Sharma, DR. SUDHAKAR JADHAV, DR. SANTOSH PATIL, DR. TARUN GUPTA SJKCT’S PAEDIATRIC SURGERY CENTRE AND PG INSTITUTE, SANGLI

**Department Institution:** SJKCT’S PAEDIATRIC SURGERY CENTRE AND PG INSTITUTE, SANGLI

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**Abstract:**

**Aim:** To study a rare case of abdominal cyst

**Methods:** 5-year-old male patient with pain in abdomen and non-bilious vomiting since 4 days. On examination Irritable, moderate dehydration, Pallor +, Abdomen scaphoid, No obvious lump seen. On palpation, ovoid lump in Right hypochondriac region, 6 cm diameter, extending from Right midclavicular line to midline, vertically 3 cm below the subcostal margin to umbilicus, non-tender, firm consistency, smooth surface, not moving with respiration, non – pulsatile. Blood investigations were normal. Ultrasonography revealed 8×6×5 cm cyst, along antrum and duodenum bulb, thick walled (4 mm) homogenous internal debris, with minimal vascularity. CECT revealed Large cystic lesion, 8×6 cm, stretching medial wall of duodenum, displacing the pancreas, with D/D ? Duplication cyst of duodenum. Exploratory laparotomy revealed Gastro-Duodenal Duplication Cyst sharing common wall from the antrum of stomach and extending upto the 1st part of duodenum, displacing the pancreas and compressing the antrum of stomach. Decompression of cyst was done. Partial cyst excision with mucosal stripping of remaining cyst wall was done. Histopathology revealed duplication cyst with pancreatic heteropia.

**Results:** Patient had uneventful recovery. Discharged on 5th post op day.

**Conclusion:** Antral duplication cyst is a rare entity. Partial excision with mucosal stripping is an effective method to manage gastric duplication cyst situated at difficult locations.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Enterocutaneous fistula causing incisional hernia as a complication of VP shunt

**Authors:** Ajay Abraham, Naveen Viswanath, Mohan Abraham, Bindu S, Aswin Prabhakaran, Rita K M, Dony Devasia

**Department Institution:** Department of Pediatric Surgery, Amrita Institute of Medical Sciences, Kochi

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Abstract:
CLINICAL DETAILS:
Our patient is a 7-year-old girl with hydrocephalus for which she underwent ventriculo-peritoneal shunt. She had 2 episodes of shunt malfunction for which shunt revision was done. Following the second shunt revision, she developed foul smelling discharge. A diagnosis of enterocutaneous fistula was made and it was conservatively managed. She continued to have discharge after a month of conservative management and she developed epigastric pain. An ultrasound abdomen was done, which revealed herniation of a bowel loop at the epigastrium from which the fistula tract extended to the skin surface. She underwent incisional hernia repair along with excision of the partially fibrosed enterocutaneous fistula tract. She had an uneventful post-operative recovery.

CONCLUSION:
Ventriculo-peritoneal shunts migrating into bowel as well as development of enterocutaneous fistula have been recorded in literature. But incisional hernia as a result of an enterocutaneous fistula following shunt causing bowel perforation is a 1st time incident. We present this case for its rarity and to emphasis on the fact to expect the unexpected in the abdomen which is rightly called a Pandora’s box.

Mode of presentation: Short Oral presentation (3+2)
Title: case of yolk sac tumour presenting as recurrent intussusception
Authors: Ravitej Singh Bal, AK Shukla, pramila sharma , pradeep gupta
Department Institution: SMS hospital Jaipur
Email: dravitej@hotmail.com
Abstract:
Aim
A case of yolk sac tumour presenting as recurrent intussusception
Method
A 2 year old male child presented in our hospital with complaint of abdominal pain and non bilious vomiting since 3 days. A lump was palpable in right iliac fossa. Per rectal examination was inconclusive. Similar symptoms had occurred 1 month ago and a year before for which ultrasound abdomen gave no conclusive diagnosis. History of significant weight loss present. Required investigations were done and patient was planned for exploratory laparotomy.
Results
Abdominal ultrasound reported a right iliac fossa mass with transient intussusception . CECT abdomen showed mass in right iliac fossa with loss of fat plane to adjacent bowel loops suggestive of neoplastic lesion. Exploratory laparotomy was done in which a pedunculated mass originating from retroperitoneum was found. Mass was excised and sent for histopathological examination which showed features of yolk sac tumour. Post op stay was uneventful and patient was discharged after 6 days.
Conclusion
A patient presenting with recurrent transient intussusception should be followed with thorough evaluation to rule out all differential diagnosis.

Mode of presentation: Short Oral presentation (3+2)
Title: Delayed Presentation of Malrotation: When to predict?
Authors: Himanshu Menghwani, RAJAT PIPLANI, ENONO YHOSHU, SATYASREE BALIJA, MANISH KUMAR GUPTA
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Abstract:
body: Background: Intestinal malrotation is a congenital anomaly that results from abnormal or incomplete rotation and fixation of midgut during embryonic development. It mainly presents in
neonatal period with sudden onset of bilious vomiting and is uncommon beyond infancy.

Aim: This paper aims to highlight the clinical features, radiological findings and treatment outcome at follow up.

Methods: Overall 11 cases of malrotation presented to the Department of Pediatric Surgery with delayed presentation over a period of 4 years (2017 to 2021). All the details were collected from discharge summary and follow up records. A retrospective study of patient presenting with malrotation over period of 4 years

Results: Out of the 11 patients, 4 were female and 7 were male. Age of patients ranged from 14 months to 18 years. Patients beyond infancy present usually with diffuse pain abdomen compare to neonate which present with sudden onset bilious vomiting, therefore become difficult to diagnose. Five patients had associated abnormalities like intussusception or nut cracker syndrome or mesenteric cyst or jejunal stricture or mesenteric lymphadenopathy along with malrotation. Some were diagnosed on USG abdomen and CT abdomen keeping other diagnosis in mind.

Conclusion: Malrotation beyond infancy is an uncommon diagnosis. Malrotation in grown up children usually not suspected due to varied symptoms. High index of suspicion is needed, ultrasound or CT demonstrate reversal of the SMA and SMV positions and the associated whirlpool sign characteristic of volvulus. Early intervention and treatment can prevent any catastrophic events like volvulus and bowel ischemia.

Mode of presentation: Short Oral presentation (3+2)

Title: Peutz-Jeghers syndrome: Surgical dilemma vs. conservative management.
Authors: Anju Verma, Basant Kumar, Vijai D Upadhyaya, Ankur Mandelia, Pujana K
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Abstract:
Intussusceptions secondary to pathologic lead points is a potential surgical emergency and quite common in patients with Peutz-Jeghers syndrome (PJS). Recurrent intussusceptions and abdominal pain creates surgical dilemma. The aim of the study is to present our difficulties during management of recurrent intussusception in patients with PJS.

Methods: We retrospectively reviewed all patients (n=7) with diagnosis of Peutz-Jeghers syndrome treated for recurrent intussusceptions from January 2013 to July 2020. Data collected regarding presentations, management and follow-up with special attention on surgical dilemma.

Results: A total 7 patients were included with age ranged from 4 to 17 years (median 9 years). In these 7 patients, total 14 laparotomies were performed (5 done outside and 9 performed at our center). Two patients underwent laparotomy thrice. At our center, during 9 laparotomy procedures, 3 times resections of bowel were performed due to gangrene while 6 times enterotomy and polypectomy were done after reduction of intussusception. Upper/lower GI endoscopy was done in all cases while intraoperative enteroscopy performed when required. All patients were admitted multiple times (Average admission >4 times) with complaints of acute abdomen. There were radiological evidences of intussusceptions but many times these patients responded with conservative management and resolved spontaneously. We observed that spontaneous resolution occur in patients having intermittent pain without significant vomiting or bleeding and intussuscepted length of bowel were <5 cm (even multiple). Patients with persistent pain, significant vomiting or bleeding invariably required surgery.

Conclusions: Considering the diffuse involvement of the gut, early decision of surgery and extensive resections should not be done in PJS. Conservative treatment must be tried under close observation whenever there is surgical dilemma. The treatment is directed at dealing with the complications of obstruction and persistent bleeding in the form of a limited resection or polypectomy after reduction of intussusceptions.

Mode of presentation: Short Oral presentation (3+2)
**Title:** Colonic atresia with ileal perforation in newborn - Obstruction-perforation complex or intrauterine vascular insult?

**Authors:** Vinayak Rengan, Priya Matthew, Ramesh Tanger, Vinita Chaturvedi

**Department Institution:** Department of Pediatric Surgery JK Lone Hospital & SMS Medical College, Jaipur

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**Abstract:**

Abstract body: Background: Colonic atresias constitute only 10% of all intestinal atresias. Spontaneous ileal perforation is another uncommon entity that needs to be differentiated from the more common necrotising enterocolitis perforation. Can these two entities co-exist?

Case presentation: A 3 day old male neonate weighing 2.5 kgs was admitted to the neonatal surgery unit with history of no meconium passage after birth. Exploration revealed colonic atresia with the colon ending as a blind pouch at the level of hepatic flexure along with 2 ileal perforations each approximately 1 cm in diameter at a distance of 10 cm and 15 cm from the ileo-cecal junction. After resection of colon, caecum and the involved ileal segment, an end ileostomy was fashioned. The baby had an uneventful recovery. Unfortunately on the 5th postoperative day, the baby turned COVID positive, but recovered.

Discussion: This represents an interesting scenario - a neonate with colonic atresia and spontaneous ileal perforation. The association of an obstruction with a proximal perforation is a well known entity.

The presence of the perforation at least 10 cm from the ileo-caecal junction makes this unlikely. The most accepted theory for colonic atresia and spontaneous perforations is the classical vascular insult theory which suggests that mesenteric occlusion due a thrombus/embolus of placental origin causes intestinal atresias. We speculate that a common intra-uterine vascular insult could be the likely cause for both the pathologies.

**Keywords:** Colonic atresia, spontaneous ileal perforation, vascular insult

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**Title:** Appendicular Duplication – Variations in anatomy and associations

**Authors:** MD ASJAD K BAKHTEYAR, Dr V K Thakur, Dr Z Hasan, Dr R D Yadav Dr S K Rahul, Dr Rashmi Ranjana

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**Abstract:**

Aim: To describe the series of appendicular duplication cases managed at a tertiary care center.

Methods: Data regarding the clinical features, associated anomalies and management of cases of appendicular duplication at a tertiary care center from January, 2019 to December, 2020 were collected and analyzed.

Results: Four children with appendicular duplication were managed during this period; three neonates presented with high anorectal malformation and type two pouch colons with a large colovesical fistula. They had a single caecum with two separate appendices symmetrically on either side (type B1). They were managed by division of colo-vesical fistula, mobilization of colonic pouch after limited pouchoplasty and anoplasty as a single stage procedure. None of the appendix was removed. In one of these cases, bilateral ureters were dilated. The fourth case presented as a 3 year-old with pain abdomen and during surgery for suspected appendicitis, partial duplication of inflamed appendix was found (type A). Appendicectomy relieved this child of his symptoms. All patients are doing well on follow-up.

Conclusion: The position, anatomy and associated anomalies of appendicular duplication can be
variable complicating its presentation and management.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** A case of Total Colonic Aganglionosis mistaken as classical Hirschsprung’s disease in early infancy

**Authors:** Garvita Singh, Satish Kumar Aggarwal, Gaurav Singh, Muni Varma

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**Abstract:**
Background: We present a case of total colonic aganglionosis who underwent primary lap assisted pull through in early infancy with a diagnosis of rectosigmoid HD. He developed post operative obstructive complications and was diagnosed as TCA after undergoing 3 more operations.

Case report: A 2 years old boy presented with ileostomy in the left upper quadrant. Soon after birth he was diagnosed as HD and underwent primary lap assisted pull though with a diagnosis of rectosigmoid HD. He then underwent a colostomy and colonic mapping for post operative obstructive symptoms which revealed TCA. He then underwent colostomy closure and ileostomy. Ileostomy had to be revised in view of prolapse, which recurred. At our institution, he was put on rectal irrigation and a repeat pull through was performed wherein all the aganglionic bowel including the pull through colon was resected till anal canal leaving behind ~20cm of left colon. Combined abdominal and transanal approach was used, and ileo anal pull through performed with ~15cm long side-to-side ileocolic anastomosis with the left-over colon. The upper segment of the colon was brought out as a chimney stoma. Biopsies confirmed TCA and ileum at pull through was ganglionic. Child had uneventful recovery.

Discussion: In this child, the frozen section was a limiting factor. However, problem in identifying the transition zone and interpretation of the contrast enema is under question mark. However, clinically the child responded well to washouts before the pull through which is not a common feature in TCA.

Conclusion: A high index of suspicion is required to diagnose TCA in neonatal age group and a careful interpretation of contrast enema, correct identification of transition zone and impeccable pathology support is crucial to success.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Congenital funnel anus with Hirschsprung’s disease : Encounter with a rare ARM variant

**Authors:** Gaurav Singh, satish kumar aggarwal, muni varma, chandrika kalagotla, garvita singh

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**Abstract:**
Aim and methodology: To report the challenges faced in diagnosis and management of an extremely rare case of Congenital funnel anus with Hirschsprung’s disease.

Case report: A 6 years old boy presented with h/o multiple colorectal surgeries, iatrogenic rectourethral fistula and ileostomy status. In the neonatal period he was diagnosed with Rectosigmoid Hirschsprung’s disease, for which primary pull without a covering colostomy was done at Day 3 of life. After 6 months of surgery the child presented with h/o constipation and passing urine through rectum. Following this he underwent 4 surgeries an ileostomy, Redo pull through, stoma closure, correction of rectourethral fistula and ileostomy. Fistula recurred. Examination revealed a funnel anus syndrome with a long (3-4 cm) tunnel leading to a stenosed anal opening. No anal column or corrugator cutis skin. MRI confirmed this and rectal stenosis with recto urethral fistula. Muscle complex and levator were rudimentary. Cystoscopy revealed a rectourethral fistula. A combined Posterior sagittal and abdominal approach was planned. Laparotomy – extensive adhesiolysis and cranio-caudal transplant of ileostomy was required to facilitate tension free pull thru. Posterior sagittal approach – fistula identified and closed. Redo colonic pull thru was done. Post op course was smooth. Urethral catheter was removed after 2 weeks. He is on anal dilatation program, with a plan for Gracilis transposition in future once adequate calibration is achieved.

Conclusion : Congenital funnel anus is rare and it is known to be associated with Hirschprung’s disease. Good anatomical evaluation and low threshold is the key to successful management. Combined Posterior sagittal and
Mode of presentation: Short Oral presentation (3+2)

Title: “Posterior cloaca & variants”: multi-center experience of an unusual ano-rectal and urinary malformation

Authors: Rohit Kapoor, Dr Amit Gupta, Dr Ankur mandeliya, Dr Partap Singh Yadav, Dr Rajiv Chadha, Dr S. R. Choudhury

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Abstract:
Posterior cloacal malformations (PCM) are distinguished from classical cloacal malformations by the posterior location of the common opening in the perineum. We aim to describe our experience of management of these rare and complex malformations.

Methods: This study was a retrospective chart review of all patients with PCM who underwent treatment at two tertiary centers between 2013 to 2021. Individual anatomical variation and it’s impact on the clinical presentation, management and final outcome (cosmesis and function) was analyzed. Associated anomalies were also noted.

Results: Four such patients presented with median age 2 (range: 0-5) years, referred as ambiguous genitalia (n=3;KSCH) and antenatally diagnosed uro-rectal septal defect (n=1;SGPGIMS). On examination, all had underdeveloped external genitalia with no opening and short common channel (<3 cm), three had clitoromegaly with two perineal openings – a urogenital sinus (UGS) opening just anterior to a normal anus and one “cloaca” in true sense of definition with single but posterior perineal opening near site of anus. Associated anomalies comprised: 1. Hydrometrocolpos (n=3) managed by a tube vaginostomy +/- vesicostomy, 2. Urethral duplication with dorsal atretic urethra (n=3), 3. Uterine diadelphys (n=1) and 4. VUR bilateral grade-5 (n=1). Interestingly, a vaginal calculus (n=1) was also noted. Partial urogenital mobilization (anterior sagittal) with feminizing genitoplasty sufficed for those with UGS and normal anus (n=3). In the patient with a single opening located anteriorly, posterior sagittal ano-recto-urethro-vaginoplasty (PSARVUP) was performed. Median follow-up was 2 years; bowel and bladder continence is present in 3 and 1 is yet to be toilet trained.

Conclusion: PCM are unusual complex malformations that necessitate meticulous clinical examination, detailed diagnostic work up and multi-staged surgical management. Hydrometrocolpos is a common sequela to narrow common channel and urethral duplication may have strong association. Management should be tailored to the anatomical variations, associated anomalies and acquired complications like vaginal calculus.

Mode of presentation: Short Oral presentation (3+2)

Title: Burrington flap for perineal groove - A revisit

Authors: Madhumitha Rajan, Prakash Agarwal, Madhu Ramasundaram, Jegadeesh Sundaram, Selvapriya Bharathi

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Abstract:
Perineal groove being a very rare ano-rectal anomaly usually causes cosmetic concerns to the parents. We aim at presenting two such cases which were managed by an antique procedure which is not in vogue in recent times with good cosmetic results.

Case details
Two children of 1 year age presented with pinkish discoloration of midline skin at the perineum from birth which was diagnosed to be a perineal groove. They were managed by Burrington flap.
technique which was described four decades ago and not in routine practice in the present era. Both patients had good cosmetic outcomes without any functional morbidity in the follow up.

Conclusion
We revisited the use of the ancient Burrington flap technique with good cosmetic outcome and is recommended for routine treatment of such cases.

Mode of presentation: Short Oral presentation (3+2)

Title: Total colonic aganglionosis in Bardet-Biedl syndrome: A torrential post-operative course during Covid Pandemic

Authors: Nellai Krishnan, Shilpa Sharma, Minu Bajpai

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Abstract:
Aim: To present a rare case of total colonic aganglionosis in Bardet-Biedl syndrome.

Case report: A 3-year old female child, who had undergone laparotomy and loop ileostomy at another hospital on day four of life for non-passage of stools, presented with excoriation around stoma. On examination, she had post-axial polydactyly in all four limbs. The stoma was partially retracted and peri-stomal skin excoriated. During genetic workup, she was diagnosed with Bardet-Biedl syndrome. She had features of retinitis pigmentosa sine pigmento bilaterally and polydactyly in all 4 limbs. Rest of the systems were normal. She underwent stoma revision and multiple seromuscular biopsies, which revealed absence of ganglion cells from rectum upto distal ileum, consistent with a diagnosis of total colonic aganglionosis. Six months later, laparoscopy assisted resection of aganglionic segments and Matin’s modification of Duhamel ileal pull through was done. However, post operatively, she developed wound infection with torrential haemorrhage followed by an evident feculent discharge from the wound. She had elevated D-Dimer, low platelets and negative RTPCR for Covid infection. On re-exploration, no bleeding point could be identified. However, pin-point perforation was noted in the ileum that was brought to the surface and a tube ileostomy was created. The child developed excoriation peri-stomally, which was managed conservatively and the tube was removed. The excoriations resolved and the child was passing stool both from stoma and per rectal. However after 2 months the child started having repeated episodes of haematochezia. She is under treatment for Enterocolitis and is awaiting ileostomy closure.

Conclusion: Hirschsprung’s disease is occasionally associated with Bardet-Biedl syndrome. Such patients require complete syndromic workup. There is a risk of progressive vision loss due to deterioration of the retina. The outcome of Hirschsprung’s disease in syndromic children may be unpredictable.

Mode of presentation: Short Oral presentation (3+2)

Title: Missed pouch colon- a rare complication of transverse colostomy in a case of female anorectal malformation

Authors: vasu gautam, Arnab kumar saja, Rashmi D, Chetna Khanna, Plnaki Ranjan Debnath, Vijay Kundal, Atul Kumar Meena, Shalu Shah, Amita sen

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Abstract:
BACKGROUND: High divided sigmoid colostomy is the initial surgical procedure to be done in majority of cases of anorectal malformation but some surgeons prefer transverse colostomy in cases of female ARM with single or two perineal openings, to salvage length of left colon for further reconstructive surgeries. Though transverse colostomy has several disadvantages over sigmoid colostomy, we present a case report with a rare complication of undertaking transverse colostomy in a female ARM with two perineal openings i.e. Missed pouch colon.
CASE DESCRIPTION
We report a case of 11 month female, known case of ARM with absent anal opening and two perineal openings. Patient was operated on day of life 2 in another institute and transverse colostomy was made. Patient was later discharged on full oral feeds and functional stoma. She developed gradual distension of abdomen and presented to us with non-functioning stoma, dehydration and distension of abdomen. On examination, a lump was palpable in lower abdomen extending above umbilicus. On x ray, there was a radio opaque shadow in lower abdomen. Patient was taken up for surgery and on exploration, pouch colon type 4 with colo-vaginal fistula was found which was occupying whole abdomen and causing compression over bowel. Resection of pouch colon after ligation of fistula was done and distal mucus fistula of transverse colostomy was closed and distal end of descending colon was fashioned as mucus fistula for purpose of saving the healthy colon which can be later used for abdomino-perineal pull through.

CONCLUSION
Transverse colostomy has now been mostly abandoned in ARM patients. There is also risk of missing pouch colon with transverse colostomy in addition to the usual disadvantages.

Mode of presentation: Short Oral presentation (3+2)

Title: Four cases of colonic atresia: Management strategies depending upon anatomic location
Authors: Saibal Chakraborty, Shashanka Sekhar Panda, Arka Banerjee, Sujoy Neogi, Simmi K Ratan
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Abstract:
Colonic atresia (CA) is the rarest form of gastro-intestinal obstruction with 1:40000 live births manifesting either isolatedly or associated with other anomalies. It is most commonly diagnosed intra-operatively as it poses lots of diagnostic dilemmas preoperatively. Survival is good in absence of associated congenital anomalies. Association with Hirschsprung disease (HD) is very rare (1:1000000) and such patients pose diagnostic and management challenges.

AIMS:
We hereby describe the 4 patients of CA admitted and managed at our centre.

MATERIALS AND METHODS:
Medical records of 4 patients of colonic atresia admitted between July 2017 to April 2021 were analysed for presentation, management and outcome.

RESULTS:
There were 3 males and 1 female patient. There was Ascending colon (n=2, type 3), Transverse colon (n=1, type 3), Descending colon (n=1, type 1). All presented with features mimicking distal small gut obstruction except descending colon atresia patient who mimicked HD clinically and on barium enema showed microcolon. The descending colon atresia patient underwent initial ileostomy followed by Duhamel Pull Through under ileostomy cover. In all other patients resection and anastomosis was feasible in single or staged manner depending upon profile of the patient. Rectal biopsy was performed in all the cases. All the children were doing fine on follow-up and there was no mortality.

Conclusion:
In absence of congenital anomalies outcome is usually good. In children with CA, depending upon the clinical profile of the patient primary repair or staged procedures even pull through are undertaken with rectal biopsy to exclude HD.

Mode of presentation: Short Oral presentation (3+2)

Title: Is fetus in fetu a reason for vasuclar anatomy changes in the host ?
Authors: Vaishnavi V, DR. VIVEK, DR. KARPAGAVINAYAGAM, DR. JEEVARATHY, Prof. R. SENTHILNATHAN , Prof. R VELMURUGAN
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Abstract:
INTRODUCTION
Fetus in fetu is a rare congenital anomaly that occurs secondary to abnormal embryogenesis in a diamniotic monochorionic pregnancy. It consists of a malformed monozygotic diamniotic twin, a vertebrate fetus enclosed within the body of living partner (host). There are several anomalies of IVC, among which the development of Infra renal IVC is of particular interest in this case.

CASE REPORT
10 months old male child admitted with complaints of mass in the abdomen. On evaluation USG abdomen showed presence of a retroperitoneal teratoma with multiple bony components. Contrast CT abdomen and pelvis (CECT) showed well defined hetero dense lesion arising from the retroperitoneum adjacent to right kidney having formed axial skeleton and fat components. The diagnosis of Fetus in fetu was established. Further, 3D Reconstruction CECT Abdomen study revealed altered vascular anatomy of inferior vena cava (IVC). Laparotomy and excision of Fetus in fetu along with the sac was done.

This paper describes the vascular anomaly of IVC in the host child and lessons learned. There is no known publications so far of vascular anomaly in the host child. This presentation details this rarest anomaly.

CONCLUSION
FIF developing inside the abdomen of the host might have caused occlusion of the right supra cardinal veins in the early weeks of gestation as a result of which there was a hypoplastic cord like infra renal IVC. Venous anomalies should be anticipated during surgery of FIF to avoid major catastrophic events.

Mode of presentation: Short Oral presentation (3+2)

Title: Duplication cyst with a twist

Authors: Praveen T, Prof.R.Velmurugan, Dr.C.Saravanan, Dr.A.Anirudhan, Dr.V.Rohit Gopinath

Department Institution: Institute of Child Health, Madras Medical College

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Abstract:
INTRODUCTION:
Though Small bowel duplication with volvulus is relatively common presentation, colonic duplication are usually long and do not cause volvulus. Ours is a rare case of colonic duplication cyst with volvulus.

CASE REPORT:
A seven-year-old boy presented with complaints of acute abdominal pain, vomiting and abdomen distension of 3 days duration. Abdomen was distended with guarding and rigidity. Plain radiograph of abdomen showed massively dilated bowel loop, suggestive of acute intestinal obstruction. Ultrasound abdomen shows cystic mass of size 20 x 15 cms in right iliac, right lumbar and epigastrium. CECT abdomen revealed dilated bowel arising from right iliac fossa suggestive of cecal volvulus. He was resuscitated and taken up for exploratory laparotomy with intra-operative, findings of volvulus of colonic duplication cyst of size 25x10 cms, arising from the mesenteric side of cecum. Cecum, appendix and small bowel were normal. Hpe proved it to be a duplication cyst with the nodular lesion being a mature teratoma. The ileocecal segment and appendix along with the duplication cyst was resected and end to end anastomosis was done. Postoperative period was uneventful. Child is on follow up.

CONCLUSION:
Colonic intestinal duplication does exist as rare form of congenital defect of the gastrointestinal system clinically. Given its atypical presentation and the challenge to make a diagnosis, clinician should be aware of the possibility of its existence and raise a high index of suspicion in case of equivocal

06/30/2021
Mode of presentation: Short Oral presentation (3+2)

Title: An unusual cause of Boerhaave syndrome in a paediatric patient.

Authors: Preetam Kumar Das, Prof R Velmurugan, Dr Ananthan, Dr S Vijayraj

Department Institution: Institute of Child Health and Hospital for Children, Madras Medical College

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Abstract:

Introduction:
Foreign body-airway are a common occurrence in pediatric age group and so are esophageal foreign bodies. Instrumentation of the respiratory tract and the alimentary tract for foreign body removal is routinely performed and may lead to complications which are, although rare, well known. Here in we present a rare case of an apparently unrelated cross system involvement.

Case:
A 3 year old girl presented to the hospital outpatient as a case of recent wheezer and was subsequently diagnosed as a case of foreign body Right bronchus.

Procedure:
Child underwent a failed rigid bronchoscopic foreign body removal and later brought out the foreign body following a bout of rigorous cough the next day. She subsequently developed a spontaneous esophageal rupture, which was then repaired.

Conclusion:
Foreign body in the airway and the alimentary tract are common. On doing instrumental procedure for foreign body removal in one system, iatrogenic injury to the other system is rare but well known in the medical fraternity; But spontaneous cross system involvement of an airway foreign body leading to alimentary tract complications are hard to come by and seldom thought-of, let alone sought for.

Vigilance and wide range of differential diagnosis has led to the early detection and early esophageal repair for this patient and henceforth improving the outcome drastically.

The purpose of bringing this to light is to create awareness that spontaneous cross system involvement can happen and keeping this in mind can lead to early diagnosis and improved outcomes.

Mode of presentation: Short Oral presentation (3+2)

Title: Lap assisted C-arm guided retrieval of a retained capsule endoscope in a pediatric patient

Authors: Manish Kumar Kashyap, Sandesh Parelkar, Beejal Sanghavi, Rahul Kumar Gupta, Kedar Mudkhedkar, Deepa Peswani, Rujuta Shah, Manish KhoBragade, Saundharya S

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Abstract:

Case report-
12years old boy with peri-umbilical pain and per rectal bleeding underwent capsule endoscopy as part of evaluation by pediatric gastroenterology team. The patient was referred to us due to inability to pass the capsule for more than 2 weeks after ingestion. There were no symptoms or signs of obstruction and patient was clinically stable. Serial abdominal X-rays showed retained capsule in left lower abdomen. CT enteroclysis showed the impacted capsule in mid jejunal loop.

As there was no further movement of capsule on serial X-rays, the patient was posted for diagnostic laparoscopy. Under intraoperative C-arm guidance, the position of the capsule was identified. A 5mm grasper was used to lift the suspected jejunal loop and was confirmed to contain the capsule by rotating the C-Arm from 0 degree to 30 degree . The isolated bowel loop was delivered out through extension of umbilical port. Enterotomy was done and the capsule was removed. There were multiple strictures in the jejunum, hence a local resection and anastomosis was done. Post-operative period
was uneventful. Histopathology revealed ischemic and inflammatory changes. Another case of 10 years male boy was referred to us with same history underwent patency capsule (dummy capsule) because of same complication. Barium meal follow through was normal and capsule was absorbable hence patient is kept on conservative follow-up.

Conclusion:
Retention is a complication of CE, but occurs as a result of underlying disease like stricture, motility disorder, suspected bowel ulcers, or malignancies. Laparoscopy is a feasible and safe approach for diagnosing any pathology and intraoperative C-arm is useful for localizing the capsule in small intestine.

Mode of presentation: Short Oral presentation (3+2)

Title: Umbilical cord hernia with trapped accessory lobe of liver with radial limb defect: a rare association

Authors: Rashmi D, Vijay Kumar Kundal, Amita Sen
Department Institution: Dr. Ram Manohar Lohia Hospital, New Delhi
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Abstract:
AIMS: Umbilical cord hernia is a simple failure of midgut to return to the abdominal cavity at 10-12 weeks. Accessory lobe of liver causing nonclosure of umbilical ring is extremely rare condition. It is formed during development of embryonic body wall folds and disturbed complete closure of umbilical ring. Here, we aim to draw attention to a rare case of umbilical cord hernia with accessory lobe of liver entrapped in the amniotic sac with radial limb anomaly with malrotation.
METHODS: 1Day/F child with birth weight of 2.0 kg was admitted with us with hernia of umbilical cord with right radial limb defect. Ultrasound of the sac and abdomen revealed that liver was the main content.
RESULTS: On exploration, firm, dark brown solid mushroom shaped mass (2x4cm) was found, typical of a liver. The elongated mass was attached to the left lobe of liver. The accessory lobe of liver was dissected free from amniotic sac and fixed to the inside of anterior abdominal wall to avoid torsion. Malrotation was noted and corrected. Primary repair of the abdominal wall defect was accomplished without any difficulty.
CONCLUSION: Accessory lobe of liver if diagnosed preoperatively should be excised. But when diagnosis is not clear or there is any doubt regarding the nature of mass, it should be fixed to the inside of the anterior abdominal wall and patient should be kept on regular follow up in view of high chances of torsion of accessory lobe of liver.

Mode of presentation: Short Oral presentation (3+2)

Title: Uncommon colonic mucosal remnants in chronic umbilical granuloma- 2 cases

Authors: Muhammed Jaseel P P, S. Namavayam
Department Institution: Kanchi Kamakoti Childs Trust Hospital Chennai
Email: mjaseelpp@gmail.com

Abstract:
AIM:
To report two cases of unusual colonic mucosa in chronic umbilical granuloma
METHODS:
We report cases of two girls with chronic umbilical granulomas which are treated by chemical cautery, not responded. Later surgical excision done and histopathology showed colonic mucosal remnants in both cases
RESULTS:
Both cases surgical excision of granuloma was done. Histopathologic evaluation showed un common colonic mucosa in both cases.

CONCLUSION:
Even though umbilical granulomas are very common clinical condition in infancy caregiver should suspect uncommon vitelline or urachal anomalies in recurrent granulomas which are resistant to cauterization.
In literature variety of heterotopic tissues noted in umbilical lesion including pancreatic, liver and intestinal mucosal remnants reported among that gastric mucosa is common. Small intestinal mucosa is also noted but rarely colonic mucosa.
In our cases chronic granuloma, intestinal mucosal remnant was present, on histopathological evaluation both documented as colonic mucosa which is uncommon.

Mode of presentation: Short Oral presentation (3+2)

Title: Congenital mesenteric defect with strangulated hernia - A series of three cases
Authors: Gnana Chaitanya Kondabolu, Sreekanth K.T, Arun Kumar L, John Mathai
Department Institution: CMC Vellore
Email: chaitu.sparta@gmail.com

Abstract:
Body: Introduction:
Herniation through a congenital mesenteric defect is a rare but extremely serious condition. Although termed 'congenital' most patients present symptomatically in adulthood and delays in diagnosis are common in early childhood and infancy. Early symptoms can be non specific hence most present with intestinal obstruction, strangulation, and eventually, necrosis of the segment of bowel protruding through. Here we present three children who presented with transmesentric herniation and bowel gangrene
Case report:
All three patients were boys, with ages of 54 days, 2 years and 7 years. The infant presented with abdominal distension and respiratory distress while the older children presented with features of peritonitis and septic shock. Initial resuscitation was done and all of them taken up for an emergency laparotomy. The infant had a large proximal mesenteric defect of around 15 cm with herniation and volvulus of proximal ileal loops resulting in gangrene of 70 cms of bowel. The older children had defects in the distal ileal mesentery with herniation of ileal loops and gangrene affecting 30 cms and 75 cms of ileum. Resection and primary anastomosis was done in all three cases. Post operative period was uneventful and all are doing well in follow up with adequate weight gain.
Conclusion:
While the embryological basis of congenital mesenteric defects are not well known, an awareness of the condition is essential in children presenting with small bowel obstruction. The mortality is reported be as high as 45% due to extensive bowel gangrene, highlighting the need for timely intervention

Mode of presentation: Short Oral presentation (3+2)

Title: Chronic Iron Deficiency in Meckel’s Diverticulum- A Rare finding
Authors: Sampreeti Mukherjee, Shilpa Sharma, Minu Baipai
Department Institution: All India Institute Of Medical Sciences, New Delhi
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Abstract:
Massive painless intestinal hemorrhage is a well-documented finding in children with Meckel’s Diverticulum. However, presentation with chronic anemia due to associated occult bleeding is a very rare yet significant finding.
Aim: We aim to shed light on this rare finding of chronic anemia seen in a 2-year-old male diagnosed with Meckel’s Diverticulum, via a case report.
Case presentation: We encountered a 2-year-old male child with 3 episodes of massive per rectal bleeding spanning over 9 months. He had received blood transfusion post each episode, was given hematinics. Inspite of all this, he continued to maintain hemoglobin in the range of 5-8g/dl. Stool microscopic examination revealed RBCs indicating chronic occult bleeding in the gastrointestinal tract. Meckel’s scan showed an ectopic functioning gastric mucosa in the right lower quadrant of the abdomen. The child underwent resection of the diverticulum and is doing well since then. Histopathology of the resected specimen showed Meckel’s diverticulitis with normal ileal and gastric mucosa and pancreatic heterotropia.

Discussion: Multiple articles and textbooks in Paediatrics and Paediatric Surgery fail to mention chronic iron deficiency anemia as a complication of Meckel’s Diverticulum. The ectopic gastric mucosa in the diverticulum can produce acid and cause ulceration of the adjacent ileum causing chronic bleeding. Thus Meckel’s diverticulum should be included in the differential diagnosis of any child undergoing evaluation of chronic anemia with occult blood loss, so that timely intervention can be taken and morbidity can be reduced.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** A novel complication of short bowel syndrome: D-lactic acidosis

**Authors:** Ashish Prasad, Prashant Jain

**Department Institution:** BLK-MAX Super Speciality Hospital

**Email:** prasadaashish@gmail.com

**Abstract:**

Aim: To present a rare complication of short bowel syndrome presenting with neurological symptoms and D-lactic acidosis.

Method: The challenges in the diagnosis and management of a 5 year old boy, follow up case of short bowel syndrome requiring multiple admissions for unusual neurological symptoms with metabolic acidosis were reviewed.

Result: 5-year-old boy, follow up case of short bowel syndrome, presented with complaints of generalized weakness and lethargy for two days along with progressively increasing drowsiness. He had complaints of diarrhea and decreased urine output. An arterial blood gas analysis showed severe metabolic acidosis (pH of 7.1, Hco3-7mmol/L) with a high anion gap (20 mmol/l) and normal lactate levels (2 mmol/L). The rest of the blood investigations including sepsis workup, renal and liver function tests, blood sugar, serum ammonia were within the normal limits. He was treated as a case of acute gastroenteritis with dehydration and responded well to conservative management. After 2 months, he was readmitted with similar neurological complaints, however, this time he did not have complaints of diarrhea and his hydration status was normal. The investigations again revealed similar findings of severe metabolic acidosis, low bicarbonate levels with a high anion gap but normal lactate levels (1 mmol/L). The metabolic acidosis was managed as before, although this time, no obvious cause of metabolic acidosis could be identified. A peculiar finding of severe metabolic acidosis with a high anion gap and normal lactate levels (L-lactate in routine blood gas analysis) was observed during both admissions. These findings in a child with short bowel syndrome prompted us to suspect a diagnosis of D-lactic acidosis. To objectively verify our diagnosis, we tried for D-lactic acid assay in various reputed labs, but unfortunately, the facility for estimation of D-lactic acid is not available anywhere in our country. To prevent future recurrences the patient was advised a low carbohydrate diet and avoid foods like yogurt and pickles. Despite this, the child required multiple admissions for similar complaints.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Where’s The Rest Of The Bowel?

**Authors:** Hiramani Pathak, Vikram Khanna, Ashitosh Pokharkar, Shrishti Goel
**Department Institution:** Lady Harding Medical College and associated Kalawati Saran Children Hospital  
**Email:** pathak1723@gmail.com  
**Abstract:**  
**Aim:** To report a rare case of congenital short bowel syndrome (CSBS)  
**Material and methods:** A 33 weeks preterm, male child with low birth weight presented with features of intestinal obstruction. Exploratory laparotomy was performed for persistence of symptoms. Intra-operatively, foreshortened small bowel, approximate length ~ 25 cms and malrotation with ileo-caecal junction in left upper quadrant was found. Intra-op diagnosis of CSBS with malrotation was made. Postoperatively, enteral feeding could not be established due to persistent bilious aspirate.  
**Result:** Child had a stormy post-operative course and succumbed on day 24 of life.  
**Conclusion:** CSBS is a rare condition with dismal prognosis. Diagnosis is made at laparotomy. Malabsorption and dysmotility are hallmarks.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Gastric Outlet Obstruction in patients of Morgagni Hernia Gastric Outlet Obstruction – Case report and review of literature  
**Authors:** Apoorv Singh, Anjan Dhua, Devendra Yadav, Prabudh Goel, Minu Bajpai  
**Department Institution:** Department of Pediatric Surgery, AIIMS, New Delhi  
**Email:** dr.singhapoorv@gmail.com  
**Abstract:** To present a case report and literature review on the presentation and management of Morgagni hernia with gastric outlet obstruction.  
**Methods**  
A 2-year-old male child presented to the casualty with features suggestive of gastric outlet obstruction for the last few months. On investigatory workup, the patient was found to have features suggestive of a right-sided Morgagni Hernia with the stomach and pylorus and transverse colon as the contents of the hernial sac. The patient, hence, underwent diagnostic laparoscopy, which revealed the findings of a left-sided Morgagni hernia with pylorus going up into the hemithorax as its content. The contents were easily reduced, and partial excision of the hernial sac was done, followed by definitive repair of the hernial defect. The patient had an uneventful postoperative course. Following this, a systematic search of the PubMed/Medline database was done to identify similar cases in the literature and the data was subsequently analysed.  
**Results**  
The search revealed seven case reports in total, with only one of them pertaining to the pediatric age group. The articles had documented a plethora of symptomatic presentations in these patients, with three of them presenting as an acute emergency with gastric incarceration. All the patients were adequately managed with laparotomy and reduction of the contents, followed by hernial repair.  
**Conclusion**  
Morgagni Hernia with gastric outlet obstruction is a rare presentation of an even rarer anomaly. However, the patients can be satisfactorily managed with laparotomy/laparoscopy if diagnosed early, albeit a few cases of gastric incarceration have been reported.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Gastric Volvulus In A Operated Patient Of Diaphragmatic Eventration– Case Report And Review Of Literature  
**Authors:** Apoorv Singh, Prabudh Goel, Vishesh Jain, Devendra Kumar Yadav, Anjan Kumar Dhua, Minu Bajpai  
**Department Institution:** Department of Pediatric Surgery, AIIMS, New Delhi
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Abstract:
To share our experience with management of gastric volvulus in a follow-up case of diaphragmatic eventration compare it with the reports available in literature.

Methods:
A 12-year-old adolescent male, follow-up of diaphragmatic eventration (left) presented to the emergency room with features of gastric outlet obstruction. Contrast-enhanced computed tomography of the abdomen was suggestive of organoaxial volvulus of the stomach with a rapid cut-off at the level of the pylorus.

PUBMED, PUBMED Central, Web of Science, Scopus and EMBASE databases were interrogated for similar cases and a systematic review of available literature was conducted.

Results:
The clinical features, investigation protocol and operative management and follow-up course will be discussed. The search revealed twenty-four studies in total with total thirty-two patients. The articles had documented a plethora of symptomatic presentations in these patients, with 23.3% (n=12/30) of the patients presenting with partial or complete gastric necrosis. All the patients except one were managed with exploratory laparotomy and derotation of the stomach, followed by gastrostomy (n=9) or gastropexy (n=12). There was a documented 9% (n=3) mortality in this review.

Conclusion:
Gastric volvulus whether acute or chronic is a pediatric surgical emergency requiring prompt diagnosis and surgical intervention. The systematic review has generated an updated, comprehensive source of information for ready reference.

Mode of presentation: Short Oral presentation (3+2)

Title: Unusual presentations of gastrointestinal tract duplications in children

Authors: Deepti Pai, Muneer A Malik, J K Mahajan, Ram Samujh

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Abstract:
Aim- Highlighting the rare presenting symptoms and their management in gastrointestinal (GI) duplications.

Methods- All patients operated for GI duplications between 2007 and 2021 in a single unit were retrospectively analyzed.

Results- Out of total 35 cases, there were 6 cases of GI duplication cysts with unusual and rare presentations which included 2 rectal, 2 duodenal, and 1 gastric and ileal duplication cysts each. There were 4 males and 2 females, age of presentation ranging from 1 day to 7 years. Unusual presentations seen in 3 neonates were; meconium discharging from a gluteal swelling besides having a normal anus in a case of rectal duplication cyst, necrotizing enterocolitis in gastric duplication cyst and another case of rectal duplication was incidentally diagnosed at the time of definitive surgery for AVF. One case of ileal duplication cyst presented with progressive pallor and malena and was found to have a Meckel’s diverticulum also during surgery. Another case of duodenal duplication cyst presented as appendicitis with abdominal pain radiating to the back which was unusual accompaniment of appendicitis. One patient presented with antenatal diagnosis of choledochal cyst, which was confirmed with imaging in the postnatal period also, but was found to have a duodenal duplication cyst during surgery. Most common investigation for diagnosis was contrast enhanced computed tomography of abdomen and pelvis (n=3). Complete excision has been done in 5 cases and one is awaiting surgery. All the patients did well in the immediate postoperative period and are symptom free in the follow up.

Conclusions- GI duplication cysts may present with a wide spectrum of symptoms and may be misdiagnosed, but keeping a high level of suspicion intra-operatively lead to correct diagnosis and adequate management with good prognosis.
Title: Strong's procedure for superior mesenteric artery syndrome- lessons learnt from bypass mishaps

Authors: Rashmi D, Arnab Kumar Saha, Pinaki Ranjan Debnath, Amita Sen

Department Institution: Department of Pediatric Surgery, Dr. Ram Manohar Lohia Hospital, New Delhi

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Abstract:
Superior Mesenteric Artery syndrome refers to duodenal obstruction secondary to narrowed aortomesenteric angle. Surgical options may include Duodenojejunostomy, Gastrojejunostomy and Strong’s procedure. With this brief case report of a patient with SMA syndrome and malrotation of gut, we aim to highlight the role of Strong’s procedure after a failed Gastrojejunostomy.

METHODS: A 14-year-old male patient had recurrent episodes of pain abdomen, bilious and non-bilious vomiting and diarrhoea all through his childhood. On evaluation by a surgeon, CECT was suggestive of SMA syndrome. The general surgeon then performed Gastrojejunostomy without addressing the duodenum. Patient’s symptoms worsened on POD-5 and he was then referred to Paediatric surgeon.

RESULTS: Patient underwent re-exploration which revealed a dilated stomach and 2nd and 3rd part of duodenum. The DJ junction was noted to be in midline. Transverse colon was obstructed behind the dilated stomach. Strong’s Procedure was then performed keeping the Gastrojejunostomy site intact. Strong’s procedure is a less invasive surgery that refers to division of the ligament of Trietz and placing the duodenum to the right side of the aorta. Patient was kept on Total Parenteral nutrition until POD-7 when oral sips were allowed and feed was slowly built up.

CONCLUSION: Being the least invasive surgery described for SMA syndrome, Strong’s procedure can be advocated in infants or in emergency surgeries where precious time can be saved by avoiding anastomoses. A Gastrojejunostomy, if performed, will never suffice until the duodenal obstruction is addressed.

Title: Abdomino-transanal approach for Long gap Rectal Atresia

Authors: Amit Gupta, Abhay Joglekar, Priya Singh, Rajiv Chadha

Department Institution: Department of Pediatric Surgery Lady Hardinge Medical College, Kalawati Saran Children's Hospital, New-Delhi

Email: amitpedsurgeon@gmail.com

Abstract:
Background: Transanal approach is quite popular for short segment Hirschsprung’s disease. We describe its indication in a rare anomaly.

Case: Our patient underwent high sigmoid divided colostomy for Rectal atresia in neonatal period. Distal cologram showed anteriorly displaced high ending rectum (very Long gap) with a fistulous tract at terminal end without any apparent communication. So, mobilisation of terminal end of rectum during surgical repair would require abdominal approach. Posterior sagittal approach is preferred for surgical repair for rectal atresia, but the long gap indicated an abdominoperineal approach. Ultrasound and MRU showed associated crossed fused ectopia of left kidney with gross hydroureteronephrosis located in right lower abdomen & pelvis with poor function (<5%) on DMSA renogram indicating left nephroureterectomy. Due to the location, approach for both mobilising rectum and left nephroureterectomy would be from right lower abdomen. The dilemma was regarding the approach for anastomosis to the anal canal. The anal canal did not allow Hegars’s dilator beyond 2.5cm. Abdomino-transanal approach was considered as an alternative to abdominoperineal approach.
thereby avoiding position change during the procedure. At 9 months of age, both the procedures were performed in lithotomy position. Transanally, anal mucosa was excised 0.5cm above the dentate line till its blind end where a wide opening was created through which the mobilised rectum was pulled through and anastomosed to the preserved anal mucosa above the dentate line.

Conclusion: Abdomino-transanal approach suited this rare anomaly. It avoided position change and posterior sagittal dissection during abdominoperineal approach. It also reduced the overall procedure time.

Mode of presentation: Short Oral presentation (3+2)

Title: Role of laparoscopy in intra-abdominal cystic lesions in pediatric age group

Authors: Manish Kumar Kashyap, Sandesh Parekar, Beejal Sanghavi, Rahul Kumar Gupta, Kedar Mudkhedkar, Deepa Peswani, Rujuta Shah, Manish Khobragade, Saundharya S

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Abstract:
To study the feasibility, safety and success rate of laparoscopy in pediatric and neonatal age group for the management of intra-abdominal cysts.

Materials & Methods:
This was a retrospective study of all children under 12 years who presented with intra-abdominal cystic lesions that were managed laparoscopically at a single tertiary care institute, Port size and sites depended on location of the cyst, pathology and age of the child. Factors assessed were age, sex, pathology, duration of surgery, conversion, port size and sites, complications and recurrences.

Results:
In the study duration from January 2005 to March 2021 (16 years), we have managed more than 120 intra-abdominal cystic lesions laparoscopically both emergency & planned basis. Various pathologies were ovarian cysts, splenic cysts, liver cysts, choledochal cysts, enteric duplication cysts, mesenteric cysts, lymphangiomas, pre sacral cystic teratomas, omental cysts, pancreatic pseudocysts & hydatid cysts. Seven were converted to open. There were 3 recurrences.

Conclusion:
Laparoscopic management of intra-abdominal cysts is a feasible & safe approach with excellent cosmetic outcomes.

Mode of presentation: Short Oral presentation (3+2)

Title: Unusual duplication anomalies in gastrointestinal tract

Authors: Rashmi Ranjana, V.K. Thakur, Ramdhani Yadav, S.K. Rahul, D. Choubey, Md. A. K. Bakhteyar

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Abstract:
Aim: Evaluation of gastrointestinal duplication at unusual sites and with unusual presentation.

Material and Methods: Data regarding uncommon gastrointestinal duplication anomalies managed in the department of paediatric surgery at a tertiary care centre from January, 2016 to December, 2020 were collected and analyzed.

Results: Twelve cases of unusual gastrointestinal duplication anomalies were managed during this period. These cases were unusual either due to presentation at uncommon sites [Cervical esophageal duplication -2; Appendicular duplication with type 2 pouch colon and anorectal malformation-3; Partial appendicular duplication with appendicitis – 1; posterior anal duplication -1] or due to unusual symptoms [jejunal duplication with malrotation – 1; ileal duplication with bezoar – 1; bleeding ileal duplication with heterotopic mucosa and Meckel diverticulum –1, rectal duplication with rectovestibular fistula -2 with one case presenting with right non functioning duplex moiety
with ectopic ureteric insertion and left megaureter] These unusual presentations required a lot of suspicion for diagnosis and case-specific management ensured minimal complication without any mortality. Histopathology with evidence of adjacent gastrointestinal tissue confirmed the diagnosis in all cases. Conclusion: Duplication anomalies can present at unusual sites and with unusual symptoms. Appropriate management has to be tailored to the merits of the individual case.

Mode of presentation: Short Oral presentation (3+2)

Title: Liver abscess in infants: Our Experience
Authors: Sonali Kelkar, Ranjendra Saoji, Nilesh Nagdive, Thavendra Dihare, Kamalkant Sharma
Department Institution: Department of Pediatric Surgery GMCH Nagpur
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Abstract:
To study demographic characters, presentation & management and outcomes of infants presented with liver abscess.

Materials and methods:
Case records of 5 infants diagnosed with liver abscess in last 2 years were studied. Detailed data about the age at presentation, any risk factors, presenting symptoms, imaging studies, blood investigations; pus culture and sensitivity were collected. Type of drainage, antibiotic management and follow up were studied.

Results:
Out of 5 infants, male to female ratio was 1:4. Mean age of presentation was 4.4± 3.4 months. All presented with feeds refusal, fever & abdominal distension. Mean WBC count was 21800/cmm ±5540. Liver function test was normal in all cases. Ultrasound was done suggestive of multiple abscess cavities in different segments predominantly in segment 6th, 7th, & 8th. Average volume of liver abscess cavity was 108cc±75.9. All infants were treated with broad spectrum antibiotics including piperacilline+tazobactum, metronidazole & amikacin. Duration of antibiotics was 21 days (15 days intravenous & 7 days oral). Single USG guided aspiration was done in one infant and 3 required 3 to 4 times (average 2.5±1.4) USG guided aspiration. Pigtail catheter insertion was done in one case that had sub capsular rupture with large abscess cavity. Follow up ultrasound was done every 3 days in admitted patients. Pus C/S had shown growth of polymicrobial organisms. All infants were asymptomatic at follow up at 15 days. However, residual abscess cavity with resolving abscess was finding of ultrasound done at follow up. Duration of follow up was at 15 days, 1 month & 2 months.

Conclusions:
Liver abscess in infants was mostly pyogenic. Early diagnosis, antibiotic coverage & ultrasound guided aspirations gave better outcome.

Mode of presentation: Short Oral presentation (3+2)

Title: Biliary atresia splenic malformation with situs inversus
Authors: Manasa Reddy, Shailesh Solanki, Ravi Kanojia, Mohammad Fahim Ahmed, Sadhna B Lal, Ram Samujh
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Abstract:
Introduction: Biliary atresia (BA) is a progressive, inflammatory, and sclerosing cholangiopathy of biliary ducts and when associated with splenic malformations, rotational abnormalities is known as Biliary atresia splenic malformation (BASM). We present a case of BASM with emphasis on approach, intraoperative anatomy, and surgical intricacies.
Patient and method: A 58-day infant was brought to us with history of clay-colored stools since birth and appearance of jaundice on day 5 of life. On examination, she was icteric with palpable liver. LFT’s revealed high direct bilirubin(12.1mg/dl) with normal liver enzymes. Ultrasonography and echocardiography were suggestive of situs inversus with a small contracted gall bladder (GB) and dextrocardia. HIDA scan suggested absent biliary-enteric drainage. The liver was dark, cirrhotic and firm with polysplenia on the right, stomach on the right, duodenojejunal (DJ) flexure in the midline with free lying ileocecal junction. The GB was dissected from its bed. Abnormal proper hepatic artery and its bifurcation overlying the portal vein bifurcation made the dissection challenging and porta hepatitis narrow and deep. The cone of fibrotic portal plate was excised between the portal vein bifurcation. Portoenterostomy was done with Roux loop of the jejunum (20 cm) taken 15 cm from DJ flexure. We could not bring the roux loop through the meso-colic window in a straight course due to malrotation and hence was placed between the duodenum and transverse colon and was fixed to duodenum with serosal sutures to keep it position.

Result: The postoperative course was uneventful. Baby passed green colored stools on day 7 and was discharged on day 8. At 3 months follow-up, she is passing normal colored stools and has a total bilirubin of 2.2 mg/dl and normal liver enzymes.

Conclusion: Heterotaxy and associated abnormalities in a case of BASM pose surgical challenges and one should be prepared for the required modifications.

Mode of presentation: Short Oral presentation (3+2)

Title: A case of EHPVO with rare cause of small bowel obstruction managed with splenectomy, lienorenal shunt with resection and end to end jeuno-ileal anastomosis

Authors: Garvita Singh, Satish Kumar Aggarwal, Gaurav Singh, Muni Varma, Chandrika Kalagotla

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Abstract:
Background: We present a case of total colonic aganglionosis who underwent primary lap assisted pull through in early infancy with a diagnosis of rectosigmoid HD. He developed post operative obstructive complications and was diagnosed as TCA after undergoing 3 more operations.

Case report: A 2 years old boy presented with ileostomy in the left upper quadrant. Soon after birth he was diagnosed as HD and underwent primary lap assisted pull though with a diagnosis of rectosigmoid HD. He then underwent a colostomy and colonic mapping for post operative obstructive symptoms which revealed TCA. He then underwent colostomy closure and ileostomy. Ileostomy had to be revised in view of prolapse, which recurred. At our institution, he was put on rectal irrigation and a repeat pull through was performed wherein all the aganglionic bowel including the pull through colon was resected till anal canal leaving behind ~20cm of left colon. Combined abdominal and transanal approach was used, and ileo anal pull through performed with ~15cm long side-to-side ileocolic anastomosis with the left-over colon. The upper segment of the colon was brought out as a chimney stoma. Biopsies confirmed TCA and ileum at pull through was ganglionic. Child had uneventful recovery.

Discussion: In this child, the frozen section was a limiting factor. However, problem in identifying the transition zone and interpretation of the contrast enema is under question mark. However, clinically the child responded well to washouts before the pull through which is not a common feature in TCA.

Conclusion: A high index of suspicion is required to diagnose TCA in neonatal age group and a careful interpretation of contrast enema, correct identification of transition zone and impeccable pathology support is crucial to success.

Mode of presentation: Short Oral presentation (3+2)

Title: Spontaneous perforation of common bile duct in children: Rare clinical condition

Authors: Himanshu Menghwani, Manish Kumar Gupta, Satya Sree Balija, Enono Yhoshu, Rajat Piplani
**Department Institution:** Department of Paediatric Surgery, All India Institute Of Medical Sciences, Rishikesh  
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**Abstract:**  
Objective: Spontaneous or non-traumatic common bile duct (CBD) perforation in children is a rare condition leading to difficulty and delay in diagnosis and resulting in high mortality. It is rarely suspected and correctly diagnosed preoperatively. The purpose of this study is to highlight the clinical features, investigations and treatment outcome of spontaneous common bile duct perforation in children.  
Method and Methods: We report here 3 children (2 males and 1 female) presented in emergency with complaints of pain and distension of abdomen, associated with vomiting and non-passage of stool and examination findings suggestive of peritonitis. Abdominal drain was put in emergency and bilious fluid was drained. Patient were taken up for exploratory laparotomy and diagnosed as case of spontaneous CBD perforation for which cholecystectomy with excision of CBD and hepaticojejunostomy was done and abdominal drain was placed.  
Results: All children presented with features of peritonitis with bilious output in abdominal drain and subsequently diagnosed as a case of spontaneous CBD perforation on exploratory laparotomy and were treated accordingly. Following surgery patients did well in post-op and abdominal drain output decreased gradually and was then removed and patients were started on oral diet and were discharged after 7-10 days in satisfactory condition.  
Discussion: Spontaneous perforation of bile duct should ideally manage with immediate surgery with excision of CBD along with cholecystectomy and a biliary enteric bypass should be done.  
Conclusion: Due to less incidence, the index of suspicion for this diagnosis is low. But bilious peritoneal tap with features of generalized peritonitis may be considered as clues for suspicion. Accordingly, Surgery remains the mainstay of treatment.  
Level of Evidence: The level of evidence is level IV (case series with no comparison group)  

**Mode of presentation:** Short Oral presentation (3+2)  

**Title:** Gall Bladder Duplication with Choledochal Cyst - An Unusual Case of Biliary Anatomy  
**Authors:** Rahul Deo Sharma, Shruti Tewari, A Sushma, Surendra Singh, Anant Bangar, Rajeev Redkar  
**Department Institution:** Department of Paediatric Surgery, Lilavati Hospital & Research Centre, Mumbai  
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**Abstract:**  
Duplication of the gallbladder is an uncommon congenital abnormality with incidence of about 1 in 3-4,000 cases. Preoperative delineation of double GB is important, due to the increased complexity of biliary system anatomy. This may lead to higher rates of complications. Preoperative MRCP imaging can delineate the anatomy of the biliary system and potentially decrease the chances of complications.  
Case Report  
Four year 3 months old male child presented with complaints of non radiating upper abdominal colicky pain, associated with fever and non-bilious vomiting for 24 hours. There was yellowish discoloration of skin and eyes for last 2 months. A History of similar episode of abdominal pain was present 1 year ago, where USG abdomen showed double gall bladder.  
Investigations were suggestive of acute pancreatitis with cholecystitis, managed conservatively. MRCP showed double gall bladder and dilated CBD with intra-ductal calculi along with >2cm common channel with intraluminal calculi and Type II Choledochal cyst from common channel. At ERCP it was not possible to cannulate the pancreatic duct. At Exploration, an intraop cholangiogram showed Double GB with one cystic duct draining into dilated common hepatic duct. Double cholecystectomy with excision of dilated Bile duct till head of pancreas done. On Choledochoscopy stones present, which were flushed. Hepaticodochojejunosomony along with Roux en Y side to end jejuno-jejunosomony done. A broad base Meckel’s diverticulum and a splenunculus were noted and left untouched. Post operative period was uneventful.
Conclusion - We report a rare case of gallbladder duplication with common pancreaticobiliary channel with a Type III choledochal cyst, Meckel's diverticulum and splenenculus. MRCP is a useful tool to delineate the anatomy in such complex biliary anomalies. Cholecystectomy with disconnection of biliary system from pancreatic system helps in resolution of such anomalies.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Indications and feasibility of emergency laparoscopic surgery in Acutely presenting Choledocal cyst

**Authors:** Arpith Kumar NM, Satish Kumar

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**Abstract:**

AIMS: Indications and feasibility of emergency laparoscopic surgery in Acutely presenting Choledocal cyst. Choledocal cyst is a Congenital cystic dilatation of extrahepatic and/or intrahepatic biliary tree. Choledocal cyst is a rare congenital dilatation of the bile ducts. 3-8times more common in females.

METHODS: A 3-year 8-month-old child with 4 days of abdominal pain and jaundice had type 4 A choledocal cyst with cholangitis and pancreatitis on investigations. She was managed with antibiotics and analgesics, but the pain was unrelenting. On the 4th day of admission, she was posted for laparoscopy under general anesthesia. A 10 mm umbilical port for the camera and 3 additional ports of 3 mm for instrumentation were used. The principles of open surgery were followed and cyst excised with jejunojejunostomy performed extracorporeally through the umbilical port and the hepaticojejunostomy performed intracorporeally.

RESULTS: Child had elevated counts and liver enzymes. The pain and fever was not responding to analgesia and resuscitation. Suspecting impending perforation - a laproscopy was performed which showed acutely distended, thin walled Choledocal cyst. Laparoscopic excision with hepaticojejunostomy was performed and child recovered uneventfully.

CONCLUSION: The ideal treatment of Choledocal cyst is elective surgery by lap or open method. Emergency surgery is indicated in cases of perforated cyst or sepsis unresponsing to medical management. Our child had impending perforation and emergency surgery was successful.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Single-port, single-instrument, thoracoscopic Removal of Antenatally Displaced Intrathoracic Pleuro-amniotic Shunt

**Authors:** Gaurav Prasad, Kanika Sharma, Prabudh Goel, Devendra Kumar Yadav, Minu Bajpai

**Department Institution:** Department of Pediatric Surgery All India Institute of Medical Sciences New Delhi

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**Abstract:**

Abstract body: Objective: To report a case of thoracoscopic removal of displaced intrathoracic pleuroamniotic shunt.

Methods: The authors herewith report a case of hydrops fetalis with intra-uterine dislocation of pleuroamniotic shunt into fetal thoracic cavity. The shunt was via co-axial single-port single-instrument thoracoscop at 19-months of age. The surgical technique and experience will be described.

Results: The case is being reported to highlight our experience with the use of co-axial scope for a single-port single-instrument thoracoscopic and successful retrieval of displaced pleuro-amniotic shunt.

Conclusion: Children with displaced pleuroamniotic shunt in thoracic cavity should be managed conservatively till the initial cause of hydrops is stabilised and they are fit to undergo thoracoscopic operative procedure. Thoracoscopy is a safe modality for retrieval of intrathoracically displaced pleuroamniotic shunt.

**Mode of presentation:** Short Oral presentation (3+2)
Title: Case of Bilateral Pheochromocytoma with Intraaortocaval Paranglioma with Retinal angioma in Von hipple lindau syndrome

Authors: Gaurav Sharma, Satya Sree B

Department Institution: Pediatric Surgery ALIMS Rishikesh

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Abstract:

INTRODUCTION—Von Hippel–Lindau (VHL) disease is an autosomal dominant disorder which includes pheochromocytoma, renal cell carcinoma, cysts and adenomas of the pancreas kidney, highly vascular tumors (hemangioblastomas) in different organs like the retina, cerebellum, medulla and spine. The morbidity of VHL depends on the organ system involved. The VHL gene is mapped to 3p25-26 and it consists of three. Von hippel-lindau disease (VHL) and Multiple endocrine neoplasm (MEN) are at high risk to develop Bilateral Pheochromocytoma. Bilateral adrenalectomy will leave these patients with permanent adrenal insufficiency. Life-long steroid use is mandatory for these patients and Addisonian crisis, osteoporosis, and other problems of steroid substitution therapy can be experienced. Partial cortical sparing adrenalectomy to spare adrenal function has been advised for these patients to avoid bilateral complete adrenal ablation. We report here a case of laproscopic partial cortical sparing bilateral adrenalectomy.

CASE REPORT—A 17 year old male presented with history of headache associated with on and off abdominal pain nausea palpitations since 4 years. On August 2019 he presented to emergency department with hypertension crisis he was advised for pheochromocytoma workup but then was lost for follow-up again in Feb 2020 he presented with intermittent headache abdominal pain bleeding rectum was stabilized with anti hypertensives and received one unit PRBC transfusion 24 hour urine metanephrine (641mcg/l) and normetanephrine (5192mcg/l) were elevated, CECT abdomen and pelvis shows bilateral adrenal lesion with central areas of necrosis suggestive of pheochromocytoma right adrenal gland measuring 30*45*55 mm and left adrenal gland measuring 45*29*66 mm Whole body 131I-MIBG scan showed accumulation in bilateral adrenal gland suggestive of pheochromocytoma after which patient underwent laparoscopic partial cortical sparing bilateral adrenalectomy with pelvic drain on 3/3/2020 further ophthalmological evaluation of patient revealed retinal angiomas in infratemporal location and laser photocoagulation was done. He did not have any cerebellar/ testicular/ pancreatic/ renal tumors diagnosed with VHL syndrome on genetic testing post surgery he was put on hydrocortisone and fludrocortisone. After 2 weeks of surgery 24 hour metanephrine was sent they were normal. After 1 year he presented again with occasional palpitation and restlessness not associated with abdominal pain or any black outs. 24 hour metanephrine were normal. On imaging (CT Angio abdomen pelvis and MIBG scan) he was diagnosed as case of paraganglioma measuring 14*10mm in aortocaval region with incidental finding of shrunken left kidney with 15% of total renal fuction on DMSA and DTPA scan. Excision of paraganglioma was done post operative period was uneventful and he was discharged with followup.

Mode of presentation: Short Oral presentation (3+2)
An 8-year-old boy presented with a 10-day history of accidental ingestion of bathroom cleaner. He was initially managed at a local hospital and presented to us with bouts of vomiting after every 2 to 3 feeds. Barium study revealed normal esophageal caliber, dilated stomach with streak of contrast passing across the antrum. The child was taken up for laparoscopic assisted feeding jejunostomy. Upper gastrointestinal endoscopy done 2 months later showed antral stricture which could not be negotiated with the endoscope. However, patient was asymptomatic and tolerated oral feeds. He was on 6 month follow up for reassessment and determination for the need of laparoscopic gastrojejunostomy.

Conclusion

Feeding jejunostomy can be done exclusively by a minimally invasive technique without morbid scars and intra-abdominal adhesions even in cases of corrosive stricture which traditionally requires multiple open surgeries with related morbidity.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Our 5 year experience of MAS using 3D system in pediatric surgery

**Authors:** Aditi Rangnekar, S.V Parelkar, B.V Sanghvi, R.K Gupta, K.P Mudkhedkar, D.P Makhija, R.S Shah

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**Abstract:**

**Aim:** To assess safety, efficacy and feasibility of 3D minimal access surgery (MAS) in pediatric age group. To study its successful application in the treatment of congenital and acquired conditions in children. The purpose of this scientific work consists in highlighting the spectrum, indications, applicability, and effectiveness of 3D MAS in children.

**Methods:**

Our experience is based on 3D minimal access surgeries (laparoscopic and thoracoscopic) in Pediatric Surgery Department performed on 244 children (Day 44-13 years) from February 2016 to May 2021. For 3D MAS, 3 D telescope with Camera Control Unit (CCU), 3D monitor and 3D recorders were used. Videos were stored in department archives. Patient data, operative procedures and image quality of the 3D system will be assessed from Medical record department as well as pediatric surgery department.

**Results:** Parameters such as duration of surgery, intraoperative blood loss, need for conversion to open, length of hospital stay and postoperative complications were assessed. In the study duration, we have managed 244 children with congenital and acquired conditions using 3D MAS. Majority of patients have been managed successfully providing excellent cosmetic outcomes even in infants.

**Conclusions:**

MAS using 3D vision utilizes stereoscopic depth perception, better understanding and visualization of the anatomy. It is a safe, efficacious and feasible approach in pediatric patients and proved to be more effective facilitating the surgeon’s performance, while maintaining the benefits of minimally invasive surgery, especially in complex maneuvers such as suturing.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** A bridge between laparoscopic and open technique in treatment of Pelvi Ureteric Junction Obstruction for the beginners

**Authors:** Akshay Kalavant B, Anil Halgeri, Prashant Zulpi, Venkatesh Annigeri

**Department Institution:** Department of Pediatric Surgery SDM College of Medical Sciences, Dharwad

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Abstract:
Aim: To look for the feasibility of laparoscopy assisted pyeloplasty for beginners and its outcome.

Method: It's a retrospective non randomized analytical study of patient undergoing pyeloplasty in SDM college of medical sciences from June 2018 to February 2020. The patients were divided into two groups based on whether patients have under gone laparoscopic assisted approach (group A) or open pyeloplasty (group B) and followed up for one year. Following patients were excluded from the studies- redo cases, PCN catheters prior to surgery, ectopic kidneys. The above features were compared between the two groups.

Results: There were 12 patients in the laparoscopic assisted group and 16 patients in open groups. In group B the number of female patients were only one. Where as in group A 50% were females. Duration of surgery was more in group A with mean operating time of 154.16 mins compared to group B of 103.33 min. There were 4 patients in group A with age above 3 years, three of them had to be converted to open and one had to undergo surgery with a larger scar. Excluding the four patients there was no difference in age group of the patients between two group. Anterior posterior diameter of the pelvis was also more comparable in the two groups. The hospital stay was more in the patient in the group A. One patient had recurrence of PUJO needing redo surgery. There was no major complication in open technique except wound infection who required number of hospital stay of 8 days. There is no significant difference between the two groups in analgesics used.

Mode of presentation: Short Oral presentation (3+2)

Title: Laparoscopic Posterior Cysto-gastrostomy for Pancreatic Pseudocysts in Children
Authors: Sonal Malviya, Sandesh Parelkar, Beejal Sanghvi, Rahul Kumar Gupta, Kedar, Deepa Peswani, Rujuta Shah, Manish Khobragade, Soundharya

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Abstract:
AIM: To study safety and effectiveness of laparoscopic posterior cysto-gastrostomy for the treatment of pancreatic pseudocyst in children.
Methods: A retrospective review was conducted of 2 children who underwent laparoscopic posterior cysto-gastrostomy in our tertiary care center. Patient data, operative techniques and postoperative course were analyzed.
Results: We describe 2 children, aged 11 and 2.5 years with pancreatic pseudocyst treated by laparoscopic posterior cysto-gastrostomy. 3 port technique was used for both. As both cases had predominantly retro-gastric and less adherent pseudocyst, we chose posterior approach for laparoscopic cysto-gastrostomy. Hook electrocautery was used to incise posterior gastric wall and adjacent pseudocyst. In the smaller child, interrupted silk sutures were used for anastomosis and in the older child 45mm endo-stapler along with silk sutures was used for anastomosis. Both children tolerated the procedures well. The patients were discharged within ninth postoperative day and have been asymptomatic on 5 and 2years follow-up, respectively without any recurrence.
Conclusion: Laparoscopic posterior cysto-gastrostomy is a safe and effective alternative to anterior approach with a more precise cyst visualization and dissection that permits more tissue to be sent for histopathological examination. Furthermore, the posterior approach's larger anastomosis and more dependency would seem to yield lesser occlusions commonly seen with anterior approach. The posterior approach avoids incision on the anterior wall of stomach and is as effective as anterior approach.

Mode of presentation: Short Oral presentation (3+2)
Title: Emergency Laproscopic-assisted management of bleeding Meckels diverticulum
Authors: Amat us Samie, Kumar Abdul Rashid, Reyaz Ahmad Wani, Mudasir Ahmad
Department Institution: Magray Superspeciality Hospital GMC Srinagar
Email: wani.riaz@gmail.com
Abstract:
To assess feasibility of Emergency laparoscopic-assisted management of bleeding Meckels diverticulum.
Method
Children with painless bleeding per rectum with inconclusive upper and lower GI endoscopy were subjected to diagnostic laparoscopy in emergency. After confirmation of diagnosis, resection anastomosis was done extracorporeally by delivering the diverticulum with adjacent bowel via umbilical port.
Results
A total of 7 (4 male and 3 female) patients of bleeding Meckels diverticulum underwent laparoscopic-assisted resection during a span of 3 years. All of them needed one or more PRBC transfusions during preoperative stabilization. None of the patients was subjected to CT or Meckel scan. Pneumoperitoneum was created by open technique. Only 2 ports (5 or 10 mm umbilical camera port and 5 mm working port) were needed. Mean operative time was 55±12 min and average hospital stay was 4 days. There were no intra and postoperative complications except for adhesion obstruction in one patient, which was managed conservatively. Histopathology of the specimens revealed ectopic gastric mucosa in all of them.
Conclusion
Emergency lap assisted surgery is simple, quick, cosmetic and cost-effective management for bleeding Meckels diverticulum and a better alternative to open surgery.

Mode of presentation: Short Oral presentation (3+2)

Title: Laproscopic-assisted management of Intra-abdominal cysts in children
Authors: Amat us Samie, Kumar Abdul Rashid, Reyaz Ahmad Wani, Mudasir Ahmad Magray, Omar Masood
Department Institution: Department of Pediatric Surgery Superspeciality Hospital GMC Srinagar
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Abstract:
Aim
The aim of this study is to present our experience with laparoscopic-assisted management of various intra-abdominal cysts in children.
Methods
All children with intra-abdominal cysts who underwent laparoscopic-assisted surgery over last 5 years were studied. The parameters studied were type of cyst, timing of diagnosis (prenatal or postnatal), clinical picture, sonographic and/or CT findings, intra-operative findings and outcome of lap-assisted surgery.
Results
Thirteen children with intraabdominal cysts, including 4 omental cysts, 4 duplication cysts, 3 mesenteric cysts and 2 ovarian cysts, underwent surgery with laparoscopic assistance. 8 out of 13 were diagnosed prenatally. Abdominal pain was the predominant clinical feature seen in 10 patients. Nine out of 13 patients needed CT scan for diagnostic clarity after having undergone ultrasonography, while MRI was done in 2 patients. The cysts were delivered through the umbilical port and excised outside abdomen. No complications were seen intraoperatively or post-operatively. Operative time ranged from 30 to 150 minutes with mean of 68.84±33.36 minutes. Average hospital stay was 3 days.
Conclusion
Laparoscopic-assisted management of intraabdominal cysts is a fairly good, quick and cosmetic alternative to laparoscopic and open surgery, especially for beginners in laparoscopy.
Abstract:
4 Years old female child was admitted with complaints of upper abdominal pain for 3 months associated with non bilious vomiting. child had the habit of swallowing hairs and cotton threads for 2 years with one episode of passing hairs in stools .she had delayed in developmental milestones . on examination there was fullness in epigastrium . child was further evaluated with ultrasound abdomen ,x-ray , upper GI contrast. She was diagnosed to have trichobezoar . child was planned for laparoscopic removal of the trichobezoar and performed.s The specimen was removed intoto with endo bag without spillage .The child had an uneventful recovery .

DISCUSSION :
A novel and minimally invasive option is laparoscopic approach, in which anterior gastrotomy and removal of trichobezoar is done. It is kept inside a sterile endobag to avoid contamination of the peritoneal cavity. Endo bag containing trichobezoar was extracted through a umbilical port which gave the patient better cosmesis as compared to upper midline incision of laparotomy. It also enables less postoperative morbidity, shorter hospital stay, early recovery, and probably lesser postoperative complication in view of her pediatric age.

CONCLUSION :
Laparoscopic removal of trichobezoar in children is feasible and associated with minimal trauma and early recovery. Only few cases have been reported in literature.

Title: Laparoscopic end ureterostomy in a neonate with vesico-ureteric junction obstruction associated with ano-rectal malformation
Authors: Pujana Kanneganti, Ankur Mandelia, Shyamendra Pratap Sharma, Rohit Kapoor
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Abstract:
We aim to describe our surgical technique of laparoscopic end ureterostomy in a neonate with vesico-ureteric junction obstruction (VUJO) associated with ano-rectal malformation (ARM).

Methods
A 3.2 Kg male baby was born at term to a 38 year old G4P2011 mother by LSCS. Antenatal USG had shown left moderate hydro-ureteronephrosis (HDUN). The baby was found to have an absent anal opening at birth with penoscrotal hypospadias. The urine was meconium stained. High sigmoid loop colostomy was done on day 1 of life. USG showed gross left HDUN with raised cortical echoes. VCUG showed no evidence of reflux. A renal dynamic scan was consistent with features of left VUJO with 35% split renal function (SRF).

Results
Laparoscopic left lower end ureterostomy was planned for temporary diversion. The baby was positioned with a roll under the flank with the left side up. The colostomy was excluded from the surgical field with a sterile, transparent dressing. A 5 mm optical port was inserted under vision in the right upper quadrant. Two 3 mm working ports were introduced in the left upper and right lower quadrant. Left ureter was grossly dilated and tortuous. The ureter was dissected till VUJ preserving its vascularity. VUJ was narrow and fibrotic and was clipped and divided. Left ureteric end was exteriorized and an end ureterostomy was fashioned with absorbable mucocutaneous sutures. Post-operative period was uneventful with the ureterostomy functioning well. Follow up USG showed partial resolution of left HDUN. The baby is planned for PSARP at 3-6 months of age and ureteric reimplantation at 1 year of age.

Conclusion
Laparoscopic end ureterostomy is a feasible and safe option for temporary urinary diversion for VUJO in neonates. It is especially useful in cases like ours, where a sigmoid colostomy for ARM is present in the left lower quadrant, which makes an open approach to left VUJ difficult.

Mode of presentation: Short Oral presentation (3+2)

Title: Our experience in laparoscopic partial nephrectomy/total nephroureterectomy
Authors: Abhishek Anand, T J Banerjee, A K Basu, P Gupta, K Bhaumik
Department Institution: Department of Pediatric Surgery, Institute of Child Health, Kolkata
Email: pandeyabhi16@gmail.com
Abstract:
Aim: To present our experience in laparoscopic nephroureterectomy and partial nephrectomy.
Body: Total number of patients were 12. Four cases diagnosed as multicystic kidney. Two patients had pyonephrosis. One patient had tubercular non functioning kidney. Two patient of chronic pyelonephritis with function less than 5% and two patient had duplex system with non functioning upper pole. Ultrasound whole abdomen, MR Urogram, Renal scan and Routine pre-operative blood test. All patients underwent lap nephrectomy. Two patients of duplex system with non functioning upper pole underwent partial nephrectomy. Average operation time was 45 min.
Result: Post operative period was uneventful and patients were discharged on Post OP Day 5.
Conclusion: LAP nephroureterectomy/partial nephrectomy is technically not a difficult procedure. Result is excellent and cosmetically very good.

Mode of presentation: Short Oral presentation (3+2)

Title: Laparoscopic duodenal atresia repair
Authors: Deepak Kumar, Vaibhav Pandey
Department Institution: Department of Pediatric Surgery, Institute of Medical Sciences, Banaras Hindu University, Varanasi
Email: deepak.dr.15jul@gmail.com
Abstract:
Introduction: A proper surgical correction of duodenal atresia has rewarding outcome. With advent and advances in neonatal minimal access surgery, laparoscopic duodenal atresia has also been performed successfully with excellent outcomes and advantages of minimal access surgery. Methods: Our patient presented on day 6 of life with abdominal distension, bilious vomiting with barium meal follow through showed features of obstruction 4th part of duodenum. A laparoscopic repair was performed. A 5mm port at infraumbilical region was used for telescope and two other 5 mm ports were introduced as per the principles of triangulation. Pneumoperitoneum was created upto 10 mm Hg and gall bladder and stomach were retracted by transabdominal stay sutures. Duodenum was dissected and was opened across the obstructing membrane. A duodeno-duodenostomy was performed with 5-0 absorbable suture in continuous fashion. Results: The postoperative recovery was uneventful.
Conclusions: Laparoscopic repair of duodenal atresia in neonatal period is a feasible option with advantages of minimal access surgery.

Mode of presentation: Short Oral presentation (3+2)

Title: Laparoscopic ureteroureterostomy for in an infant with ectopic ureter
Authors: Deepak Kumar, Vaibhav Pandey
Department Institution: Department of Pediatric Surgery, Institute of Medical Sciences, Banaras Hindu University, Varanasi
Email: deepak.dr.15jul@gmail.com
Abstract:
Introduction: Congenital dribbling of urine due to ectopic ureter is a correctable cause of continence. It is more common in females with and is associated with a duplex collecting system and complete ureteral duplication. We present our experience of management of such case with laparoscopic approach.

Methods: A 1-year-old girl presented with urinary incontinence with episodes of UTI, a suspicion of Rt renal duplicated pelvicalyceal system with duplication of ureter on a previous ultrasound. IVP showed duplicated right renal pelvicalyceal system with double ureter on rt side with dialated upper moiety the ectopic ureter opening into the anterior wall of vagina .MCU shows no VUR . A careful urethrocystoscopy showed a normal right lower moiety orifice and an ectopic upper moiety. The surgical treatment consisted laparoscopic right ureteroureterostomy. At laparoscopy, a larger upper pole ureter and a normal lower pole ureter on the right side were identified. A terminolateral ureteroureteral anastomosis was performed.

Results: After the procedure, the child reported immediate resolution of urinary dribbling.

Conclusions: Laparoscopic ureteroureterostomy is excellent option for duplicated system with ectopic ureter with normal lower moiety orifice.

Mode of presentation: Short Oral presentation (3+2)

Title: An unusual case of vesical urothelial papilloma associated with right lower ureteric calculus
Authors: Abhijit Kumar, Rujuta S Shah, Deepa P Makhija, Kedar P Mudkhedkar, Rahul K Gupta, Beejal V Sanghvi, Sandesh V Parelkar
Department Institution: Department of Pediatric Surgery, Seth G.S. Medical College & K.E.M. Hospital, Mumbai
Email: abhi_dmc@hotmail.com
Abstract:
AIM: To present a rare case of bladder papilloma at right vesico-ureteric junction in association with right lower ureteric calculus.
METHOD: 8-year old boy presented with right flank pain and hematuria since 3 months. USG KUB showed bladder mass lesion at right vesico-ureteric junction (VUJ), right lower ureteric calculus near VUJ and proximal right ureteric dilatation. CT scan of abdomen showed obstructive right lower ureteric calculus with an ill-defined vascular soft tissue at the right VUJ, likely a papilloma/mucosal prolapse. EC scan showed good function on both sides. Cystoscopic excision of the lesion was done using hook cautery and DJ removal forceps. Right ureteric opening could be identified but guidewire could not be negotiated across it. 3D laparoscopic right ureterolithotomy was done and 2 cm x 1.5 cm grey-coloured stone was retrieved. Laparoscopically DJ stent was placed in right ureter and guided into bladder.
RESULTS: Postoperative course was uneventful. Histopathology reports were suggestive of urothelial papilloma. DJ stent was removed after 6 weeks, with cystoscopy showing no residual papillomatous lesion.
CONCLUSION: Urothelial bladder neoplasm is uncommon in paediatric population. Though association between vesical calculus and neoplasm is known in adults, this remains undefined in children. Here we describe a case which had urothelial papilloma of bladder in association with lower ureteric calculus.

Mode of presentation: Short Oral presentation (3+2)

Title: Laparoscopic management of a rare association: Infantile hypertrophic pyloric stenosis with coexisting neonatal neuroblastoma
Authors: Deepti Pai, Nitin. J. Peters, Ram Samujh, Shubhalaxmi. R. Nayak, Sandhya Yaddanapudi, Deepak Bansal
Department Institution: Department of Pediatric Surgery, Post Graduate Institute of Medical Education and Research, Chandigarh
Email: drpaideepti@gmail.com
Abstract:
Aim: Infantile hypertrophic pyloric stenosis (IHPS) has been associated with several entities. Neuroblastoma is the most common extracranial solid paediatric tumour. IHPS has not been reported to be associated with neonatal
neuroblastoma, to the best of our knowledge. We are presenting the first case of neonatal neuroblastoma to be associated with IHPS. We managed it by laparoscopic excision and pyloromyotomy.

Methods: A 29 days old, first order, female neonate, weighing 3.6kg, presented with history of recurrent non bilious vomiting. On examination, child had signs of dehydration, abdominal examination revealed no palpable mass. Ultrasound (USG) abdomen was performed, which confirmed the diagnosis with 4.2mm thickness of pyloric muscle and channel length of 20mm and also revealed right adrenal mass of 27x21mm with central stellate calcifications and peripheral vascularity. Contrast enhanced CT abdomen was done which showed a 30x22mm well demarcated, hypodense mass in relation to right adrenal gland showing poor inhomogeneous enhancement after IV contrast and calcification.

Results: Patient underwent laparoscopic excision of tumour with right adrenalectomy and pyloromyotomy in the same sitting, after adequate pre-operative stabilization. Tumour along with right adrenal gland was excised in toto and extracted via laparoscopic tumour retrieval bag. Pyloromyotomy was performed successfully. Post operatively, oral feeds were started on post op day 1 and discharged. Histopathological examination of tumour revealed poorly differentiated neuroblastoma. N-myc amplification was negative. Oncology unit opined to follow the patient. The patient is stable at a three month follow up and has no recurrence in the USG.

Conclusion: Laparoscopy is a safe and sound approach for treating an infant with IHPS and other operative pathologies, like neuroblastoma simultaneously. Depending on surgeon’s experience, laparoscopy could be considered an ideal choice for handling this rare association.

Mode of presentation: Short Oral presentation (3+2)
Title: Pyopagus Conjoined Twins: Separating the separables from the inseparables
Authors: Kashish Khanna, Minu Bajpai, Prabudh Goel, Sandeep Agarwala, Devendra Kumar Yadav, Anjan Kumar Dhua, Vishesh Jain, Ajay Verma, Aparajita Mitra, Rajeshwari Subramanian, Renu Sinha, Manpreet Kaur, Ashok Kumar Jaryal, Maneesh Singhal, Shashank Chauhan, Pradeep Ramakrishnan
Department Institution: All India Institute of Medical Sciences, New Delhi
Email: kash.modern@gmail.com

Abstract:
Background: The incidence of Conjoined twins (CT) is 1 per 200,000 live births. While some are unsalvageable, others may be surgically salvageable but involve complex systemic anatomies, pyopagus twins form one such category.
Aim: To study the anatomic complexities and technical challenges involved in the management of pyopagus CT.
Materials and Methods:
Two similar cases of conjoined twins presented to our department within a gap of 2 months in 2018. Both the set of pyopagus twins were girls and were antenatally detected. The twins were joined at the hip, facing partially away from each other. They shared a common perineum with separate urethral and vaginal openings, however they had a single anal opening.
The journey of these inseparable twins from their admission in the ward to the investigation rooms, the detailed management, their meticulous separation in the operation theatres and their discharge as two separate individuals would be presented in detail.
Conclusion: A multidisciplinary team effort, detailed investigations to decipher the various shared organ system, spinal and vascular anatomy, along with neurophysiological monitoring form the cornerstones for a successful surgical separation.

Mode of presentation: Short Oral presentation (3+2)
Title: Heteropagus twins: an anecdote of five cases
Authors: PRIYANKA MITTAL, PRIYANKA MITTAL, PRAVEEN MATHUR, DINESH BAROLIYA
Department Institution: Sawai Man Singh Medical College
Email: priyanka1986mittal@gmail.com
Abstract:
BACKGROUND
Heteropagus, or parasitic twins are asymmetric conjoined twins in which the tissues of a severely
defective twin (parasite) are attached externally, with or without internal connections, to a relatively
normal twin (autosite). The estimated incidence of heteropagus twins is approximately 1 per 1 million
live births. Most of the published work on this rare anomaly comprises of isolated case reports. We
intend to present a single unit experience of senior author with different anatomical subtype of parasitic
twin and the anatomicopathology observed.
MATERIALS AND METHODS
This was a retrospective study done from 1995 to 2020, conducted in a single unit, in the department
of Paediatric Surgery at a tertiary referral center. All cases of heteropagus twins presenting during this
period were included.
RESULTS
5 heteropagus twins presented during this period. Mean age of presentation was 3.5 days. No sex
preponderance was observed. Types of heteropagus twins were- thoracopagus (n=1), epigastric
heteropagus (n=1), parapagus (n=1), omphalopagus (n=1) and, pygopagus (n=1). 2 patients had an
associated omphalocele and 1 patient had meningomyelocele. 2D echocardiogram was normal for 3
patients, whereas 1 patient was found to have tetralogy of Fallot physiology. Patients were taken up for
surgery after detailed radiological evaluation and optimisation. Mean operating time was 1.9 hours.
Postoperative course was uneventful for 4 autosites; whereas 1 autosite succumbed to cardiac issues.
CONCLUSION
Prognosis for autosites is generally good, provided severe cardiorespiratory problems are ruled out.
Early separation is advisable as tissues are pliable and available for defect closure. Detailed
discussion with radiologist and meticulous dissection can further reduce complications.
**Department Institution:** All India Institute of Medical Sciences, New Delhi

**Email:** mehak.sehgal91@gmail.com

**Abstract:**
Introduction and Aim: Splitting the spinal cord into respective components while separating the conjoined twins may have long-lasting implications for the survivors. To study the role of neurophysiological monitoring in delineating the spinal anatomy as an important component to pre-operative planning and twin separation.

Material and Methods: Prospective study based upon 2 pairs of pyopagus conjoined twins with a shared spinal anatomy including the spinal cord. The twins were subjected to neurophysiological monitoring under general anesthesia during work-up (first pair of twins) to identify the neuronal supply and cross-innervation of various organs including lower limbs and anal sphincters with respective brains and during the separation surgery (both pairs).

Results: The spinal cord was joined terminally in both the set of twins. Neurophysiological monitoring done preoperatively on the first set of twins revealed cross innervation from twin B to twin A, although twin A had its independent complete innervation. The sphincter was predominantly controlled by twin A. In the second set of twins, there was no cross innervation, both twins had equal control of sphincter hence the sphincter allocation was done using other factors. Neurophysiological monitoring was also utilized intraoperatively to divide the cord in its functional midline instead of anatomical midline thereby preserving neural outflow and function.

Conclusion: Better functional outcomes are possible with the use of neurophysiological monitoring during the workup and management of spine-sharing conjoined twins.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Conjoined Twins (Thoraco-Omphalophagus): A Case Report

**Authors:** Reya Rachel Abraham, Nabeel A Qadri, Zameer M, Vinay C, Sanjay Rao, Ashley D’Cruz

**Department Institution:** Narayana Health

**Email:** reya.r.abraham@gmail.com

**Abstract:**
Introduction: Conjoined twins are an extremely rare congenital malformation with an incidence of 1 in 1,00,000. We are reporting a case of a conjoined thoraco-omphalopagus female twin treated at our institute.

Case report: Female conjoined thoraco-omphalopagus twins, presented to us at day 6 of life. The twins were born at term by caesarean delivery with a combined birth weight of 4.1 kg. On presentation the babies were in respiratory distress, with the larger twin maintaining better hemodynamical stability and saturations. Evaluation with USG, ECHO and CT angiogram showed a fused heart with partial AVCD, DORV, valvar PS and dual aortic arch. The second twin also had mixed TAPVC. There was also fusion of the livers of the two twins. Both the twins were ventilated and required inotropic support. As the twins shared a single fused heart it was decided that salvaging both the twins would not be possible. The babies were dependent on prostacyclin infusion for pulmonary circulation, to keep the PDA open. Endovascular PDA stenting was performed at 1 month of age for twin 1 in view of duct dependence. Post procedure the haemodynamics improved. Separation of the twins was carried out at 2 months of age. The common chest was opened and all major vessels from the heart to the smaller twin were gradually occluded, ligated and divided. The larger twin remained stable. The fused livers were divided and separation was achieved. The chest and abdominal wall were reconstructed to achieve closure. The surviving twin remained stable. She continued to be ventilator dependent due to tracheomalacia and severe kyphoscoliosis causing restrictive lung disease. A tracheostomy was performed 2 weeks later. She was gradually weaned off the ventilator and gradually started on oral feeds. Child was discharged clinically well at 4 months and 26 days of age with the tracheostomy in situ. She was eventually decannulated from her tracheostomy after 6 months. She is one year old and
remains well, is developing normally and is awaiting spinal corrective surgery and cardiac repair in the future. 
Conclusion: Each surgery of a conjoined twin is unique and its success is decided upon many factors. Adequate preoperative planning, a skilled multidisciplinary approach and postoperative management contribute to the success rate.

Mode of presentation: Short Oral presentation (3+2)

Title: Sirenomelia: The Mermaid Syndrome
Authors: Mehak Sehgal, Shreya Tomar, Prabudh Goel, Minu Bajpai
Department Institution: All India Institute Of Medical Sciences, New Delhi
Email: mehak.sehgal91@gmail.com

Abstract:
Objectives: To present the departmental experience with Sirenomelia and generate a comprehensive source of information by conducting a systematic review of literature.
Material and Methods: The department was recently presented with a case of Sirenomelia on Day 0 of life. Multiple databases and search engines including PUBMED, PUBMED Central, Cochrane, Google Scholar, Google search engine, Research Gate and pre-publication archives (BioRxiv, ARxiv, PrePubMed) were interrogated with appropriate search terms to mine data upon the 35 reported cases of this rare entity.
Results: The clinical presentation, workup, management and outcome of a case of Sirenomelia at our centre along with clinical photographs will be discussed and presented. A comprehensive review of published literature on this subject will be presented to highlight the epidemiology, commonly implicated factors in etiopathogenesis, antenatal diagnosis, clinical presentation, management options, final outcomes and details of notable individuals to consolidate the available information on this rare anomaly.
Conclusions: Considering the consistent reporting of cases from different parts of the world despite the rarity of this anomaly, it is imperative to generate a comprehensive source of information and reference as a supplement to the published literature which is largely in the form of case reports.

Mode of presentation: Short Oral presentation (3+2)

Title: Cervical Meningomyelocele With an Unusual Content- A Case Report
Authors: Sampreeti Mukherjee, Shilpa Sharma, Devasenathipathy Kandasamy, M C Sharma, Minu Bajpai
Department Institution: All India Institute of Medical Sciences, New Delhi
Email: sampreetimukherjee@gmail.com

Abstract:
Background: Cervical meningomyelocele is itself a rare form of pediatric congenital spinal anomaly, forming only up to 3-5% of spina bifida cases. Occasionally we come across patients with an unusual content inside the meningomyelocele and become baffled regarding the next course of action intraoperatively.
Aim: We aim to present a case report of a 2-month-old male child with cervical meningomyelocele and no features of raised intracranial tension with an unusual content inside the sac.
Case: We encountered a 2-month-old child with history of a 3*5 cm swelling at the nape of neck since birth with no neurological dysfunction. Transillumination of the swelling was present and the contents of the sac were neither expressible nor palpable. Pre-operative MRI revealed spinal dysraphism at C4 level with herniation of meninges and CSF forming a well-defined cystic structure with no hydrocephalus. There was a lesion within the sac that could not be discerned on radiology. Intraoperatively, the 5*6 cm sac was found to have a narrow 1 cm stalk. The contents of the sac were histopathologically proved to be a 1*0.4*0.3 cm hemangiomatic component with meninges and areas of hemorrhage. The contents were easily excised from the base as there was no neural connection
and tension free repair was done. Child is doing well post operatively.
Conclusion: Intraoperatively, the characteristic presence of a protruding finger like appendage or a
cystic portion of a meningocele without direct connection to spinal canal, suggests the presence
of a hamartomatous or teratomatous component inside the meningocele sac. The pathogenesis
of this tissue lies in the stimulation of aberrant differentiation of mesodermal precursors by the exposed
neural tissue. Since these lesions are benign, simple excision is an excellent treatment modality and
has a very low chance of recurrence. Also, since these are soft tissue tumors, MRI seems to be a
superior modality in pre-operative detection of these tumors.

Mode of presentation: Short Oral presentation (3+2)

Title: A case report of a 3rd Branchial Cleft anomaly presenting as a Thyroid abscess.

Authors: Vishak, Satish Kumar KV

Department Institution: Bangalore Baptist Hospital

Email: vishky08@gmail.com

Abstract: A case report of a young child presenting with a painful neck swelling. This presentation elaborates on our evaluation
and treatment of the patient.

Mode of presentation: Short Oral presentation (3+2)

Title: cervical agenesis – a rare case and its management

Authors: Manajitsinh Jadhav, Shashank Dubey

Department Institution: Lokamanya Tilak Municipal Medical college and Genaral Hospital, Sion, Mumbai

Email: manajitsinh000@gmail.com

Abstract: Abstract body: Cervical agenesis is a rare Mullerian anomaly in which absent cervix is replaced by a fibrous tract
connecting the lower segment of uterus to the vaginal apex. This condition require surgical
reconstruction to restore the uterovaginal canal and thus menstruation in such patients. Historically these patients
were treated by hysterectomy, current approaches are directed towards canalization and establishing uterovaginal
continuity . We describe a successful canalization of the uterovaginal canal using peritoneum and skin advancement
flaps in a case of cervical agenesis.

Mode of presentation: Short Oral presentation (3+2)

Title: Unusual interlabial mass in a preterm neonate. Fibroepithelial polyp of vagina

Authors: Monica Tiruveedula, Kudeja, Gayathri, Ravi Patil, Satish Kumar KV

Department Institution: Banagalore Baptist Hospital, Bengaluru

Email: monicamannu92@gmail.com

Abstract: Aims – Vaginal masses in neonates range from very benign lesion to highly malignant
lesion such as botryoid tumors. A preterm neonate with a polypoid mass in the vagina presented as a botryoid tumor
and underwent complete excision biopsy, and was reported as benign fibroepithelial polyp
Methods – A 20day baby girl born preterm as 2nd of twin had normal antenatal scans, parents noticed a vaginal
mass at 2 weeks and at 20 days was referred to us. Clinically a polypoidal mass indistinguishable from botryoid tumor
was noticed in the interlabial region. Imaging confirmed normal pelvis and intraabdominal organs. With a differential
diagnosis of benign/malignant lesion , the baby was taken for elective surgery.
Results – Examination under anaesthesia revealed a 2*3cm firm mass bilobed sessile lesion arising from just proximal
to hymen. Cystovaginoscopy ruled out extension. A complete surgical excision with 2mm margin and primary closure
was achieved. Biopsy was reported as benign fibroepithelial polyp of vagina. (FEPV). Baby is doing well on follow up with no recurrence.

Conclusion – Benign FEPV is a rare tumor of vagina which needs to be differentiated from malignant tumors, especially from botryoid tumor, as the external appearance are similar. FEPV has not been reported in preterm neonates.

Mode of presentation: Short Oral presentation (3+2)

Title: To study the clinical presentation and outcome of surgical management of uncommon Branchial anomalies in our hospital

Authors: Abhinav Sihag, Lakshmi Sundararajan, Thirunavukkarasu

Department Institution: Kanchi kamakoti CHILDS trust hospital

Email: sihagabhinav9@gmail.com

Abstract:
Abstract body: Introduction & Aims: Branchial cleft anomalies are congenital cysts, sinuses or fistulae which occurs due to incomplete involution of branchial apparatus. 1st and 3rd/4th cleft anomalies are uncommon and difficult to diagnose and treat. We hereby present our experience with such branchial cleft anomalies and outcome of their surgical management.

Methods: We retrospectively analysed all cases of branchial cleft anomalies who underwent surgical treatment from 2013 to 2021 in our hospital. Non 2nd arch anomalies were included in this study. Patient demographics, clinical presentation, imaging, surgical management and outcomes were recorded and analysed.

Results: Out of 48 cases, 10 cases identified (20%) as 3rd/4th branchial and 7 cases (14%) as 1st branchial cleft anomalies. All cases presented with recurrent infections which were diagnosed clinically and by imaging using USG and/or MRI of the tract. They were treated initially with antibiotics and/or abscess drainage followed by elective excision of cyst or sinus or fistula tract. 1st cleft anomalies presented in the infra-auricular and retromandibular regions while 3rd/4th cleft anomalies presented as thyroiditis or thyroid abscess. They were also assessed with video-laryngoscopy but internal opening of tract was seen only in one child. All cases were found to be symptom free after excision with no recurrence on follow up.

Conclusion: Branchial cleft anomalies related to 1st and 3rd/4th arches are notorious for recurrent infection which may also involve thyroid gland. Hence these lesions need complete work up with imaging and video laryngoscopy to identify any internal opening. Complete excision ensures success of treatment.

Mode of presentation: Short Oral presentation (3+2)

Title: Management of Paediatric Umbilical Granuloma

Authors: Pujana Kanneganti, Vijai Dutta Upadhyay, Basant kumar, Ankur Mandelia, Anju verma, Shyamendra Pratap sharma, Rohit Kapoor

Department Institution: Department of Paediatric Surgical Superspecialties, SGPGI, Lucknow

Email: pujanakanneganti@gmail.com

Abstract:
Aims: This study highlights the role of common salt in management of umbilical granuloma.

Material and method:
Common salt application for management of umbilical granuloma is a standard modality at the study Institute. All the cases of umbilical granuloma managed during July 2018 to January 2020 were evaluated. Data retrieved from electronic data system of hospital and OPD records. As per the record salt application was done for 3 days and patient was reviewed on 5th day (this was one session). If UG persist again same procedure was done till 4 sessions. If after 4th session UG still persist was considered as non responsive and other treatment option adopted to cure the UG.

Result:
A total of 36 cases were of umbilical granuloma were managed during this period. In 6 cases UG was
resolved with one complete session of salt application, in another 11 cases two complete sessions were required, in 15 cases three complete sessions were needed and in 2 cases 4 complete cycles were required for resolution. Complete resolution seen earlier in patients presented between age of 4-6 weeks in comparison to those who presented late and the difference was found to be statistically significant.

Conclusion: Common salt can be an effective and low cost management option to treat umbilical granuloma.

Mode of presentation: Short Oral presentation (3+2)

Title: Cystic lesion of umbilicus with abnormal presentation

Authors: Pranay Kumar, Md Asjad K bakhteyar, Z Hasan, D Chaubey, Ramji Prasad, Rashmi Ranjana

Email: pranayuro@gmail.com

Abstract:

Abstract body: Aim: To present a case of abnormal cystic lesion near the umbilicus.

Methods: Apprehensive parents brought a one day male baby to pediatric emergency, with an abnormal cystic structure near the umbilical region. Child was delivered by normal vaginal delivery with a birth weight of 2.9 KG, was clinically stable and had passed meconium and urine. On gross examination, it appeared to be a vascular lesion alongside a large umbilical hernia. On palpation, there was a soft cystic non-tender translucent lesion towards the right side of a large umbilical hernia which could be easily reduced. The lesion had a narrow stalk connecting it to the abdominal wall. Patient was clinically stable and routine hematological reports were normal. Ultrasound with color Doppler showed a thick walled cystic structure of size 3 x 5 cm2 with mild vascularity. An anterior abdominal wall defect of size 4 cm x 3cm was present next to it in the umbilical region. Transfixing the stalk lead to necrosis of this cystic lesion. Patient was discharged after 1 week.

Results: Patient had uneventful follow-up and has no other complains other than a large umbilical hernia at four months of age.

Conclusion: Cystic lesions at umbilicus may have abnormal presentation with variable anatomy and origin.

Mode of presentation: Short Oral presentation (3+2)

Title: Congenital prepubic sinus - Five cases of a rare entity

Authors: Reyaz Ahmad Wani, Kumar Abdul Rashid, Omar Masood, Amat us Samie, Mudasir Ahmad Magray

Email: wani.riaz@gmail.com

Abstract:

Abstract body: Aims: Congenital prepubic sinus (CPS) is a very rare condition presenting in early life as a discharging sinus. Complete surgical excision is key to successful treatment. We aim to highlight the clinical picture, diagnosis and management of 5 such cases at our Centre.

Methods: The data of all the five cases operated over last 10 years was analyzed and details of surgical excision revisited from operative records and clinical photographs.

Results: We came across five cases (3 girls and 2 boys) of CPS over last 10 years. The mean age at presentation was 37.6 (SD=14.92) months with chief complaint being discharging sinus in all of them. Complete excision was possible in all the cases, facilitated by a novel technique of placing prolene 1-0 suture as a guide in the sinus tract per operatively.

Conclusion: Congenital prepubic sinus is a very rare condition presenting in early life as a discharging sinus. Complete surgical excision is key to successful treatment. We aim to highlight the clinical picture, diagnosis and management of 5 such cases at our Centre.

Methods:

The data of all the five cases operated over last 10 years was analyzed and details of surgical excision revisited from operative records and clinical photographs.

Results:

We came across five cases (3 girls and 2 boys) of CPS over last 10 years. The mean age at presentation was 37.6 (SD=14.92) months with chief complaint being discharging sinus in all of them. Complete excision was possible in all the cases, facilitated by a novel technique of placing prolene 1-0 suture as a guide in the sinus tract per operatively.

Conclusion:
CPS is a rare entity of unknown cause treated by complete surgical excision with no recurrence.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** The mirage of hemangioma - a rare case of congenital infantile fibrosarcoma  
**Authors:** Somya Bhatt, Rahul Saxena, Balamurugan T, Arvind Sinha  
**Department Institution:** All India Institute of Medical Sciences, Jodhpur  
**Email:** drrahulsaxena@gmail.com  
**Abstract:**  
Abstract body: Aim: To present an important clinical and pathological mimicker of hemangioma.  
Method: We describe a case of 14 month old male child with a swelling in right gluteal region for last 12 months which is progressively increasing in size. Incisional biopsy findings were s/o Capillary hemangioma (CH) and patient received propranolol for 7 months. On examination there was a single large swelling of around 20x15 cm over right gluteal region with smooth surface, well defined margins and firm consistency with a biopsy scar. The tumor marker AFP and B-HCG were normal. CT angiography was s/o large heterogeneously enhancing mass lesion in right gluteal region. The patient underwent pre-operative angio-embolization f/b surgical excision. Histopathology was suggestive of a congenital infantile fibrosarcoma with microscopic margin positive. The tumor staging was AJCC Stage I and IRS Group II. Patient is kept on watchful management and no evidence of recurrence after 6 months of regular follow up.  
Conclusion- Infantile Fibrosarcoma is common STS in infants and it can present as a congenital tumor. MC sites are extremities and trunk and it frequently mimics hemangioma. It usually present as a large painless mass which can be locally aggressive but rarely metastasize. It has a characteristic a t(12;15)(p13;q25) translocation, which creates an ETV6/NTRK3 gene fusion. They are relatively chemo-radiosensitive and bears a good prognosis with 3 year EFS of around 95%. First-line chemotherapy is combination of vincristine and actinomycin- D. No adjuvant chemotherapy is recommended if resection is complete or microscopically incomplete (IRS group-I/R0 or II/R1).

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Complication and management of a case of inadvertent placement of dialysis catheter in femoral vein through superficial femoral artery  
**Authors:** Sunil K S Gaur, Sarita Chowdhary  
**Department Institution:** Institute of Medical Sciences, BHU, Varanasi  
**Email:** gaurasks2007@gmail.com  
**Abstract:**  
Abstract body: Large bore catheters for temporary dialysis are often placed internal jugular vein or femoral vein, guided by external landmarks or ultrasound techniques. Inadvertent arterial catheterization or injury may occur during attempted placement of dialysis catheter in the femoral vein which can lead to devastating complications due to its large caliber if it goes unrecognized. In this poster we are describing the complication and management of a case of inadvertent placement of dialysis catheter in femoral vein through superficial femoral artery. In a 9 year boy of stage-v chronic kidney disease a femoral venous dialysis catheter was placed by dialysis technician taking the external landmarks into consideration without the help of any imaging technique. After 4 session of alternate day dialysis when the catheter was removed the bleeding from the insertion site could not be stopped by compression for around two hour. Then surgical exploration was done. Femoral vein injury was Closed by pledgeted polypropylene suture. Superficial femoral artery was ligated at both ends of injury as the arterial wall margins were unhealthy and patient was a chronically debilitated. Post operatively the limb was warm and oxygen saturation was 100%.Imaging guided percutaneous catheter placements should be practiced in every patient to avoid such complications.

**Mode of presentation:** Short Oral presentation (3+2)
Title: Difficult VP Shunt and Bilateral Herniotomy in a pediatric patient with Mucopolysacharidosis type 1 (Hurler Syndrome)
Authors: Rahul Gupta, Rahul Gupta
Department Institution: Department of Pediatric Surgery SMS Medical College Jaipur
Email: meetsurgeon007@gmail.com
Abstract:
Aims: To present a rare case of Mucopolysacharidosis type 1 (Hurler Syndrome) with progressive hydrocephalus who presented with bilateral inguinal hernia.

Methods: A 1-year old male child presented with bilateral large inguino-scrotal swellings. He had motor developmental delay with poor speech at one year of age. On examination, facial features revealed large head size and prominent forehead, bilateral corneal clouding and coarse facies. Clinically, the patient had bony deformities, kyphosis, and retarded growth with a short stature for his chronologic age. Per-abdomen examination revealed hepatosplenomegaly with bilateral large reducible inguinal hernias. Radiographic findings suggested dysostosis multiplex, characteristic feature of mucopolysacharidosis. Serial Cranial Ultrasonography revealed progressive Hydrocephalus which was subsequently confirmed by CT brain. A definitive diagnosis of Hurler syndrome was made by positive urine spot test for GAGs and a marked deficiency of alpha-L-iduronidase activity in his leukocytes.

Results: Right VP Shunt was performed after preoperative optimisation Bilateral inguinal hernia repair were contemplated after a gap of 4 weeks. Herniotomy was sufficient on right side; mesh hernioplasty was performed on left side. Both shunt placement and hernia repair were difficult owing to abnormal vascularity and tissue characteristics. On 5 months follow-up, there was gradual reduction in Ventricular Hemispheric Ratio (VHR) and patient is doing well on follow-up. Molecular study revealed homozygous variation in IDUA gene.

Conclusions: A high index of suspicion must be there in a child with typical facial features presenting with inguinal hernia along with hydrocephalus. Surgical management of the MPS1 patient is challenging but with the timely medical and surgical treatment, prognosis is improving.

Mode of presentation: Short Oral presentation (3+2)

Title: Umbilical CSF Fistula Post VP Shunt Insertion – A Case Report
Authors: Benjamin Chacko, Nabeel Qadri, M. M. Zameer, Vinay Chandrashekar, Sanjay Rao, Ashley L J D’cruz
Department Institution: Narayana Hrudayalaya, Bengaluru
Email: benjaminchacko25@gmail.com
Abstract:
Abstract body: Introduction: VP shunt insertion is a commonly performed surgical procedure in management of hydrocephalus. We report an unusual complication of ventriculoperitoneal (VP) shunt : umbilical cerebrospinal fluid (CSF) fistual
Case Summary: A twelve year old boy presented with history of clear fluid leaking through the umbilicus. He had undergone VP shunt insertion four months prior for hydrocephalus secondary to suprasellar and third ventricular craniopharyngioma. On examination, egress of fluid was noted from umbilicus on pressing reservoir although the shunt catheter tip could neither be seen nor palpated per abdomen. No history of umbilical discharge, umbilical defects, hernia or inflammation previously. Neurological examination was unremarkable. Ultrasound abdomen revealed the shunt closely abutting the umbilicus, coursing superiorly along the subcutaneous plane of the anterior abdominal wall. Diagnostic laparoscopy confirmed omentum stuck to the umbilicus with VP shunt inside. Omentum was released and shunt released from anterior abdominal wall. CSF flow noted. There were no further episodes of umbilical discharge.
Conclusion: Complications of VP shunt are well described. Umbilical CSF fistula is a rare complication. It’s aetiology is not know but commonly attributed to the mechanical pressure or distal tip irritation of anterior abdominal wall.
Ultrasonography is a good modality for diagnosis. VP shunts should be positioned appropriately far away from umbilicus.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Abdominal cerebrospinal (CSF) Pseudocyst: A three year experience in a tertiary care centre

**Authors:** Archana Mardi, Arka Banerjee, Lianne DMello, Sujoy Neogi, Simmi K Ratan, Shasanka S Panda

**Department Institution:** Maulana Azad Medical College, New Delhi

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**Abstract:**

Abstract body: INTRODUCTION: Congenital hydrocephalus is a common congenital entity affecting the central nervous system of children. Abdominal pseudocyst is a rare complication of the distal end of the Ventriculo-Peritoneal (VP) shunt. In this study, we analyzed the children who presented with abdominal pseudocyst following VP shunting and also proposed a treatment protocol of abdominal CSF pseudocyst based on our experience.

METHODS: This was a retrospective study conducted in our tertiary hospital. Nine cases were included over a period of 3 years (June 2018 to May 2021). Patient demographic and clinical details were recorded in a proforma and analyzed later.

RESULT: In our study, there were 5 boys and 4 girls with the median age of the patients being 5 years (8 months to 9 years). The commonest indication for VP shunt was congenital hydrocephalus. The average duration between shunt surgery and development of the abdominal CSF pseudocyst was 3.7 years. CSF culture showed growth of E coli in 2 patients and Acinetobacter species in one. After a course of intravenous antibiotics, the patients were operated once they were afebrile and the leukocyte count had normalized. Six patients were treated with revision of the peritoneal end of the shunt. One patient underwent shunt exteriorization and external ventricular drain insertion. One patient was managed conservatively. Average follow up duration was 5 months. One patient presented with similar symptoms 2 months after VP shunt revision and required another revision of the peritoneal end.

CONCLUSION: Abdominal CSF pseudocyst is a rare complication following VP shunt insertion. There is a need for a standardized treatment protocol and early shunt revision. This will decrease the need for shunt exteriorization and prevent intracranial infections.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Alternate feeding procedure: History revisited

**Authors:** Sriram Christopher, Vembar D, Raghul M, Velmurugan R

**Department Institution:** Madras Medical College, Chennai

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**Abstract:**

Abstract body: Background: Accidental ingestion of caustic agents continues to be a major concern for pediatric emergency department clinicians. Caustic ingestions are seen most often in young children between one and three years of age and can cause severe acute injury and long-term complications, especially developing strictures. Feeding becomes a challenge in these children until a definitive procedure can be performed. Here we describe Bishop-Koop procedure for enteral feeding in three children with corrosive stricture and gastric outlet obstruction.

Method: Three children who developed corrosive stricture with gastric outlet obstruction underwent Bishop-Koop procedure in jejunum for enteral feeding, as an alternative to the common intubated feeding jejunostomy. These children were followed up for ease in feeding, weight gain and associated complications.

Results:
All of the children had easy feeding with adequate weight gain, without any complications.

Conclusion:
Bishop-Koop procedure is an easy and safe alternate enteral feeding procedure to build up nutrition until definitive management.

Mode of presentation: Short Oral presentation (3+2)
Title: Proposing a pivotal answer to the ganglion cyst annoyance
Authors: Anis Akhtarkhavari, S. Namasiyavam
Department Institution: Kanchi Kamakoti CHILDS Trust Hopital
Email: anis219@gmail.com
Abstract:
Abstract body: Background: Ganglion cysts are benign and most common soft tissue swellings that arise in the hand or wrist, seen in the paediatric population. They are believed to originate from the synovial sheath and are often proposed to occur due to repetitive minor trauma. Symptoms commonly include swelling along with pain and rarely weakness or paresthesia. Various treatments and procedures have been offered thus far with no conclusive results. Probably due to the high recurrence rate and unsolicited cosmetic outcome after a surgical approach.
Aim: We present a novel technique of aspiration of cyst content and hyaluronidase injection with an appropriate follow up protocol
Methods: We retrospectively analyzed all cases of ganglion cysts presented to our surgical unit since 2003. All patients who were managed with aspiration and injection of hyaluronidase with a proper post operative follow up were included in our study.
Results: Long term follow up of our patients using this technique has given us 100 % results with no scar and zero recurrence.
Conclusion: Understanding the anatomy and pathophysiology of ganglion cyst has enabled us to propose a less invasive and definitive treatment for ganglion cysts.

Mode of presentation: Short Oral presentation (3+2)
Title: Pediatric Hydrocele Masquerade
Authors: Chudar, Vembar, Raghul, Velmurugan, Hariharan
Department Institution: Institute of Child Health Chennai
Email: chudar.dr@gmail.com
Abstract:
Lymphatic malformation presenting as scrotal swelling is very rare. Discussing a case which initially presented as hydrocele and operated for the same later turned out to be a lymphatic malformation. Histopathology confirmed it so.
This is a case report of a 4 year old boy who presented with left scrotal swelling of 3 years duration, had undergone PV sac ligation 1 1⁄2 months before presenting to us , came with recurrence of scrotal swelling. On evaluation was found to have a retroperitoneal lymphangioma masquerading as hydrocele. Differential diagnoses at surgery were scrotal LM, retroperitoneal LM, or abdomino-scrotal hydrocele. Two phase MRI performed both at the time of scrotal swelling and scrotal non-swelling showed a retroperitoneal LM bulging into the scrotum via the inguinal canal. Managed by surgical exploration via intra abdominal approach.
CONCLUSION
LM causing scrotal cystic lesion is rare, and it requires a high index of suspicion to make the correct diagnosis. Hence this must be kept in mind while exploring any scrotal swelling and should not skip a basic sonogram to be done preoperatively.

Mode of presentation: Short Oral presentation (3+2)
Title: Comparative study between circumcision and preputioplasty in the management of phimosis in our institute
**Authors:** Upadhyayula Kameswara karrthik, Tapan Jyothi Banerjee, Parthapratim Gupta, Ashoke Kumar Basu, Kuntal Bhaumik

**Department Institution:** Institute of Child Health Kolkata  
**Email:** rouxenyapple@gmail.com

**Abstract:**

Abstract body: Aim-To discuss about the indications, counseling, techniques and results in our institute over last 3 years  
Methods and materials - 246 patients out of which 62 patients underwent circumcision and 184 underwent preputioplasty with mean age of 30 months (18-144). We performed circumcision in all cases of balanitis xerotica obliterans, recurrent balanoposthitis, paraphimosis, recurrent UTI in PUV & VUR patients and for religious purposes. Preputioplasty was performed in all other cases with tight prepuce where the preputial skin is healthy. Result - 2 patients underwent redo Circumcision after primary circumcision and 3 patients underwent circumcision after preputioplasty as prepuce could not be retracted. 12 children had postoperative edema which had subsided gradually. All the parents in both the groups were satisfied with the final result and cosmesis. Conclusion- At present parents are more in favor of preserving the foreskin but counseling is very important regarding preputialplasty as regular cleaning is necessary after the procedure. Management depends on the age of the child, condition of the preputial skin, cause and associated anomalies.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Van Wyk Grumbach Syndrome  
**Authors:** Apoorva Zarkar, Sudhakar Jadhav, Santosh Patil  
**Department Institution:** SJKCT’s Paediatric Surgery Centre & PG Institute, Sangli  
**Email:** adzarkar@gmail.com

**Abstract:**

Abstract body: AIM- To study a rare case of bilateral recurrent ovarian cysts.  
METHODS- 10 years female presented with severe pain in abdomen since 10 days. A case of precocious puberty. Operated for bilateral hemorrhagic ovarian cysts 2 months back by general surgeon. Now, USG and CT abdomen suggestive of bilateral ovarian cysts, so operated for the same at our institute. This time also she had bilateral hemorrhagic ovarian cysts. Child presented again 1 month later with similar complaints and on sonography she had recurrence of ovarian cysts. So, further investigated and found out to have acquired hypothyroidism. Patient started on levothyroxine and is thriving well.  
RESULT- Child diagnosed of having Van Wyk Grumbach Syndrome.  
CONCLUSION- Van Wyk Grumbach Syndrome is a rare presentation of a common endocrinal disorder so in case of recurrent ovarian cysts, always do a thorough endocrinal evaluation.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Post op gastrointestinal sequelae in Congenital diaphragmatic hernia (CDH)- “Out of the frypan into the fire”  
**Authors:** Ankur Bhardwaj, Shilpa Sharma, Minu Bajpai  
**Department Institution:** All India Institute of Medical Science, Delhi  
**Email:** ankur.sprout@gmail.com

**Abstract:**

Abstract body: Aim: Around 60-80% CDH pts have associated Gastroesophageal reflux(GER). The aim is to describe a case who required surgery for symptomatic malrotation which was lying hidden under the garb of GER.  
Method: To describe a case of CDH that had a post-operative torrential course
Results: A 2 days old baby (37 weeks; 2.7 kg), presented with respiratory distress. Skiagram chest showed Bowel loops occupying full left hemithorax till 2nd rib. Laparotomy revealed 4*3 cm left posterolateral diaphragm defect with huge sac upto thoracic inlet. Contents were small bowel loops, hugely dilated stomach and spleen. Non rotated bowel with no volvulus seen in left iliac fossa. Diaphragmatic defect was closed primarily. Baby had high nasogastric output from POD-1 which increased from 40 ml (POD-2) to 70 ml bilious (POD-7). Trophic feeds were started on POD-4 when baby had bilious vomiting and developed tachypnea due to aspiration. Anti GER measures started but pre feed aspirates remained high. Oral Contrast study done on POD-13 showed features of malrotation. Exploratory laparotomy done on POD-14 revealed LADDs bands to mid duodenum, Dilated jejunum till mid jejunum and multiple interbowel adhesions. LADDs procedure was done. Baby passed stools on POD-4 but NG output remained high till POD-7 of 2nd surgery and started decreasing after that. Feeds were increased very slowly along with anti GER measures and rectal stimulation. Full tube; oral feeds were reached by POD-16;20. Vomiting stopped by POD-18. And baby was discharged 38 days after CDH repair on ad lib feeds.

Conclusion: GI complications in CDH neonates can be quite troublesome. GER aggravates already respiratory compromised neonate. Management needs lot of patience and perseverance. Management of GER took around 20 days in our case but it resolved without need of anti reflux surgery. Associated malrotation may get diagnosed late due to similar presentation as of GER.

Mode of presentation: Short Oral presentation (3+2)

Title: Neonate with Kasabach–Merritt phenomenon-associated Kaposiform Hemangioendothelioma: A case report

Authors: Rupa Banerjee, Sangamitra Bhattacharya, Debasish Mitra

Department Institution: Apollo Hospitals, Kolkata

Email: dctrrupa@gmail.com

Abstract:

Abstract Title: Neonate with Kasabach–Merritt phenomenon-associated Kaposiform Hemangioendothelioma: A case report

Abstract body: Aim:

Kaposiform Hemangioendothelioma (KHE) refers to locally aggressive or borderline tumors. Combination of KHE and Kasabach-Merritt phenomenon (KMP) in newborn children is a life-threatening constellation. We report a case of 20 days old boy with KHE at neck associated with KMP treated successfully with medical management.

Case report:

A 20 day’s old boy was referred intubated with respiratory distress and swelling in neck. Small swelling was present since birth and it size suddenly increased in last 1 week and he had difficulty in feeding and breathing and was admitted and then intubated. On examination there was a firm swelling in anterior neck with erythematous skin changes. Blood investigations revealed low platelets and hemoglobin and he received PRBC and platelets. USG Doppler showed poorly demarcated heterogeneous mass with intensive vascularization and CT scan further revealed infiltrative mass with fuzzy, ill-defined contours, which intensively accumulates contrast, and early contrast enhancement suggestive of KHE. Steroid and propranolol was started immediately. As his condition deteriorated he was then started on sirolimus and later received vincristine. The size of swelling reduced significantly and he was extubated after 16 days and is doing well after 2 months follow up and on steroid and propranolol.

Conclusion:

Severe thrombocytopenia, manifestations in early childhood period of life, high risk of complications, absence of the published large clinical groups and randomized trials determine the importance of documenting each case of KHE to better understand the pathophysiology of the disease and choose its optimal management and treatment.

Mode of presentation: Short Oral presentation (3+2)

Title: Pyloric duplication: a rare case report

Title: Pyloric duplication: a rare case report
Authors: Nirkhi Shah, Mahesh Vaghela, Vaishri Ramji, Rakesh Joshi
Department Institution: B J Medical college, Ahmadabad
Email: meet.nirkhi@gmail.com

Abstract:
Abstract body: Aim:
We present a rare case of pyloric duplication, antenatally and postnatally diagnosed with intraabdominal cyst.

Methods:
A neonate was referred on day one of life with abdominal distension and two palpable swellings in epigastrium and umbilical region. Antenatal ultrasound was suggestive of intra-abdominal cystic lesion. Postnatal ultrasound and CECT abdomen showed two-three cysts of varying size, not communicating with small bowel, with a provisional diagnosis of mesenteric cyst. In view of the large size of the cyst and risk of future obstruction, exploration was planned. Intraoperatively, there was single dumbbell shaped thick-walled cyst sharing a common wall with pyloroduodenal canal. It was not communicating, but causing partial obstruction. Aspiration of cyst yielded mucoid material. Almost the entire cyst wall was excised, leaving behind less than 2% of mucosa, which was cauterized without opening the pyloric mucosa. Feeding was initiated on third post-operative day, but the baby required a second surgery for burst abdomen on day 5. Feeds were re-started after 4 days and patient was discharged without further complications. Histopathology was conclusive of duplication cyst.

On follow up there is no local collection or reoccurrence.

Discussion:
With an incidence of 2.2%, pyloric duplication is one of the very rare types of duplication. It can present anytime as an epigastric mass, or with symptoms like gastric outlet obstruction, gastrointestinal bleeding, ulceration. Surgery varies from simple excision to pylor-o-antrectomy. The cyst has a common wall with pylorus which often makes complete removal impossible without injuring pylorus. Partial excision with marsupialization is an acceptable option. However, patients need long term follow up with ultrasound in view of the rare possibility of recurrence.

Conclusion:
Alimentary tract duplication should always be kept in differential diagnosis of unusual neonatal cystic lesions. Timely diagnosis with clinical suspicion and accurate imaging helps in appropriate treatment with resection or partial excision and prevents future complications.

Mode of presentation: Short Oral presentation (3+2)

Title: Spontaneous in-vivo knotting of tubes and catheters – an unintentional surgeon’s knot
Authors: Ajay Kumar, Arka Chatterjee, Ramesh C Tanger, Arun K Gupta
Department Institution: Department of Pediatric Surgery, SMS medical college and attached hospitals, Jaipur
Email: drajay2006@gmail.com

Abstract:
Aim
To discuss three rare cases of spontaneous knotting of tubes and catheters in paediatric patients.

Background
Catheter and tubes are very commonly used during patient management. Catheterization of urinary bladder and naso-gastric tube placement are one of the commonest procedures in any health care facility. Knotting of these tubes within the body is a rare phenomenon.

Methods
Three patients were encountered with knotting of tubes and catheters. One patient had a spontaneous knot in the naso-gastric tube, within the stomach. Another patient presenting with a blocked Ventriculo-Peritoneal shunt had a knot in the peritoneal end. The third patient, a one year old female had a spontaneous intra-vesical knotting of the foley’s catheter.
Results
The naso-gastric tube in the first patient was gently withdrawn by careful traction after sedating the patient – a knot was discovered at the lower end. The patient with the blocked shunt underwent shunt removal and the knot at the peritoneal end was found to be the culprit for the blockage of the shunt. The bulb of the foley’s catheter could not be deflated due to the knot, which was gently released utilizing haemostatic forceps after placing in under traction, per urethra.

Conclusion
Spontaneous in-vivo knotting of various tubes and catheters, is a rare occurrence. This phenomenon should be kept in mind during the removal of tubes or catheters which are retained and are difficult to remove.

Keywords
knotting, naso-gastric tube, foley’s catheter, VP shunt

Mode of presentation: Short Oral presentation (3+2)

Title: An approach to giant neonatal hydrocolpos with normally sited anus – Diagnosis and management including a one stage operation

Authors: Juju Jacob Kurian, Harshjeet Singh Bal, Sudipta Sen

Department Institution: Christian Medical College, Vellore

Email: jujjujacobkurian@gmail.com

Abstract:
Aim
Giant non cloacal neonatal hydrocolpos is a rare entity where the abdominal tube vaginostomy done for initial drainage is replete with complications. Here we describe our method of emergent and definitive management of these children, where definitive repair, depending on the aetiology, has been made possible in a single stage.

Material and Methods
Retrospective analysis was made on seven girls who presented primarily or with history of non cloacal giant hydrocolpos at two tertiary care centres from January 2013 to March 2021. None had imperforate anus or a bulging hymenal membrane. Four had high vaginal atresia (VA) and three had Urogenital sinus (UGS), one with high confluence.

Four girls (2 VA, 2 UGS) presented to us as neonates and were managed by emergency drainage procedures other than tube vaginostomy: CIC in one (low UGS) and a one stage abdominoperineal U flap vaginoplasty in three (2 VA, 1 high confluence UGS) which was also the definitive procedure. The girl with a low UGS later underwent a perineal procedure.

Three presented elsewhere as neonates (2 VA, 1 UGS) and had abdominal tube vaginostomy as the emergency drainage procedure. This was complicated by tube dislodgements and pyocolpos till successful reconstruction was performed by us later. Successful reconstructions included the abdominoperineal U flap vaginoplasty in one (VA) and a perineal procedure in another (low UGS).

Results
Reconstruction resulted in a patent and a good calibre neo-vagina requiring once daily dilatations in all at a mean follow up of 48 months.

Conclusion
Immediate management of giant non cloacal neonatal hydrocolpos may either be vaginal CIC or a surgical procedure. The abdomino-perineal U flap vaginoplasty is a one stage neonatal procedure that provides effective drainage and forms a definitive neo-vagina.

Mode of presentation: Short Oral presentation (3+2)

Title: Neonatal Liver Abscess - A Rare Complication of Community-Acquired Neonatal Sepsis
Abstract: 
Abstract body: Aim: To review the clinical presentation, laboratory investigations, radiology, potential risk factors, management of neonatal liver abscess
Methods: This is a retrospective analysis of newborns in the neonatal intensive care unit of our hospital who were diagnosed with liver abscess. Their presentation, predisposing factors, laboratory investigations, imaging, management and outcome were assessed.
Result: A total of 6 neonates, all outborn deliveries, were reviewed with age ranging from 10 days to 27 days (median of 15.5 days) and weight ranging from 3.1 kgs to 4.2 kgs (median 3.3 kg). None of the patients were premature with gestational age at birth ranging from 34 weeks to 39 weeks (median 37 weeks). None of them had a history of nursery admission and umbilical catheterization. Four patients had a history of umbilical sepsis. Organisms were isolated in blood or pus in 4 patients (methicillin-resistant Staphylococcus Aureus (MRSA) in 3 patients and methicillin-sensitive Staphylococcus Aureus in 1 patient). All the patients empirically received vancomycin with clindamycin which was then later modified based on culture and sensitivity report. 3 cases with features of peritonitis had ruptured liver abscess and underwent operative management. The rest of the patients were successfully managed conservatively with antibiotics alone and did not require any intervention. The median duration of stay in hospital was 18.5 days and antibiotics were given for 3-4 weeks. All patients were followed on ultrasound for abscess resolution. Two of them on follow-up developed portal cavernoma.
Conclusion: Neonatal liver abscess is a rare complication of neonatal sepsis with serious clinical sequelae. Although the literature suggests prematurity, umbilical catheterization, and necrotizing enterocolitis being the common risk factors but, in this review, community-acquired umbilical sepsis and MRSA infection is found to be the main cause of the liver abscess.
Mode of presentation: Short Oral presentation (3+2)
Title: Apple-peel intestinal atresia along with Isolated ileal duplication cyst in a newborn – a rare case report
Authors: Jaini Modi, Gayatri, Parag
Department Institution: Bai Jerbai Wadia Hospital for Children, Parel, Mumbai
Email: jainimody@yahoo.com
Abstract:
Abstract Title: Apple-peel intestinal atresia along with Isolated ileal duplication cyst in a newborn – a rare case report
Abstract body: Apple-peel type of intestinal atresia and non-communicating ileal duplication cyst are rare congenital malformations. The coexistence is not reported in English literature. A five-day-old male neonate having intestinal obstruction and was found to have both the anomalies during laparotomy and was successfully managed. Apple-peel type of intestinal atresia may coexist with duplication cyst. Non-communicating duplication cysts should be differentiated from mesenteric cysts. Precise surgical technique and postoperative care are essential for salvage of these neonates.
Mode of presentation: Short Oral presentation (3+2)
Title: Combating poor prognostic factors in Congenital diaphragmatic hernia
Authors: Mehak Sehgal, Shilpa Sharma, Ramesh Agarwal, Minu Bajpai
Department Institution: All India Institute of Medical Sciences, New Delhi
Email: mehak.sehgal91@gmail.com
Abstract:
Introduction: Congenital diaphragmatic hernia (CDH) is a challenging condition with significant mortality and long term morbidity. Improving survival by combatting physiological derangements requires an individualized approach
to stabilization. We present a case of CDH with a good outcome post prolonged stabilization efforts.

Case report: An antenatally detected case of left CDH, born at early term (38+5 weeks; 2.5kg) with severe birth asphyxia and was intubated. Baby was in shock requiring ionotropes. He was resuscitated, stabilized with HFO and CMV(A/C mode) and taken up for surgery at day 6 of life while on mechanical ventilation. Contents included stomach, part of liver, spleen, small and large bowel loops. Goretex patch repair was done for the left sided CDH large defect of 70% and absent posterior rim. Post-operatively there was extubation failure, due to neonatal opioid withdrawal syndrome, in view of prolonged fentanyl use due to persistent pulmonary hypertension of newborn and ventilatory requirements, which was managed with morphine and clonidine and baby was successfully extubated on day 16 of life. The baby had oral candidiasis, anemia, gastroenteritis, early NEC and reactive pleural effusion during post-operative course. Baby was transitioned from total parenteral nutrition to formula and breast feeds and was discharged successfully after 50 days of ICU stay. He had repeated episodes of respiratory tract infections during follow up that responded to antibiotics. However, he is healthy, gaining weight (5.8kg) and doing well at 5.5 months of follow up.

Conclusion: Poor outcomes in CDH can be attributed to the multitude of physiological instabilities, which requires intensive resuscitation, stabilization and rehabilitation efforts. Good outcome can be expected and attained even in patients with poor prognostic factors with a team effort of pediatric surgeons and neonatologists. Patch repairs need good follow up to monitor any infections or recurrence.

Mode of presentation: Short Oral presentation (3+2)
Title: "Subcutaneous Basidiomycosis: A Mistaken Identity"
Authors: Vinayak Prakash Thattaruparambil, Shalini GH, Rajkiran Raju S, Kiran M, Prasanna Kumar AR, Shubha AM, Jayanthi Savio* (Microbiology)
Department Institution: St. Johns National Academy of Health Sciences, Bangalore
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Abstract:
Aim: A case of right gluteal and upper thigh mass in a young girl simulating soft tissue tumor proved to be a histological surprise. Microbiological assay confirmed a rare fungal infection- Basidiomycosis that showed prompt response to antifungal therapy
Methods: A 4 year old girl was referred with a progressively increasing mass in the right gluteal region over a period of 3 months. It started as a small papule over the right buttock and was painless with mild alteration in the gait. Weight loss documented was significant. Partial drainage was attempted elsewhere following an ultrasound suggestion of abscess yielding minimal bloody fluid. Examination revealed a 10x8 cm firm, non-tender indurated mass over right gluteal region, fixed to skin with no joint involvement and a similar 3x3 cm swelling over upper thigh. CECT showed a ill-defined, non-homogeneously enhancing soft tissue lesion.
Results: With a provisional diagnosis of soft tissue tumor an Incisional biopsy was done. The lesion was atypically mushy with slough at the base. Granulomatous suppuration with dense eosinophilic infiltrate (Splendore Hoeppi phenomenon) and broad aseptate non-branching hyphae was an unexpected histological surprise. Culture grew Basidiobolus. Oral Potassium Iodide was not tolerated but near complete response to 8 weeks of oral Itraconazole therapy was noted.
Conclusion: Subcutaneous Basidiomycosis is a rare tropical infection which can mimic idiopathic nodular panniculitis, cutaneous tuberculosis, abscess or soft tissue tumors. Atypical morphology, specific histology with demonstration of fungal hyphae clinches the diagnosis. Nitroimidazoles guarantee definitive treatment.

Mode of presentation: Short Oral presentation (3+2)
Title: Intrauterine intussusception leading to ileal atresia: A case report.
Authors: Ajay Kumar, Ankit Singh, Saurav Sultania, Neeraj Tuteja, Vinita Chaturvedi
**Department Institution:** Department of Pediatric Surgery, SMS Medical college and attached hospitals, Jaipur  
**Email:** drajay2006@gmail.com  
**Abstract:**  
Intrauterine intussusception is a rare cause of jejuno-ileal atresia. Here we report a case of ileal atresia consequent to intrauterine intussusception. The neonate presented with features of neonatal intestinal obstruction which on exploration had ileal atresia with distal ileo-ileal intussusception. The case was managed successfully by resection and end to back anastomosis. This case is reported to highlight intrauterine intussusception as one of the causes of ileal atresia.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Huge retroperitoneal hydatid cyst secondary to liver cyst masquerading as lump abdomen - case report  
**Authors:** Saswati Behera, Monika Bawa, Ravi P Kanojia, Ram Samujh  
**Department Institution:** Department of Pediatric Surgery PGIMER Chandigarh  
**Email:** drshaswati67@gmail.com  
**Abstract:**  
Abstract body: Background: Hydatid disease is not common in children. It is prevalent in cattle rearing Mediterranean countries, manifesting as cystic masses. Echinococcus is the causative helminth and affects liver and lungs in 95% of cases. Rarely, the presentations may be due to the secondary involvement or extension with a non-viable hepatic cyst per say. Extension into unusual location like retroperitoneum may complicate the differential diagnosis. Surgical intervention remains the best modality.  
Case presentation: 9 years old female child presented with huge abdominal swelling associated with pain for 2 months. Contrast Enhanced Computed Tomography (CECT abdomen and pelvis) suggested a huge multicystic intraperitoneal lesion of size 20*25 cm extending from gastrohepatic region to the right lumbar area. Another small cystic lesion was noted in segment VII and VIII with hepatomegaly, suggestive of hydatid. Intraoperatively, we found a huge retroperitoneal hydatid cyst with daughter cysts, which was removed in toto after scolicidal treatment. The hepatic cyst was calcified without any cystobiliary communication managed with deroofing.  
Results: The child is asymptomatic, on albendazole therapy and follow up radiology ruled out any recurrence.  
Conclusion: Secondary hydatid cysts could be large enough to cause complications with a dormant primary hepatic hydatid cyst.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** A rare case of caecal perforation in a child diagnosed with Henoch-Schonlein purpura  
**Authors:** Rupa Banerjee, Sangamitra Bhattacharya, Debasish Mitra  
**Department Institution:** Apollo Hospital, Kolkata  
**Email:** dcrrupa@gmail.com  
**Abstract:**  
Aims: Henoch-Schonlein purpura (HSP) causes multi-system small vessels vasculitis, 50 – 80 % of which involves G.I tract. This is mostly benign and has a good response to steroids. Vasculitis leading to intussusception bleeding and perforation are rare. We present a case of 11 years girl with HSP complicated with caecal perforation.  
Case report: A 11 years old girl known case of HSP on steroids presented to emergency with complaints of pain in right side of abdomen and loss of appetite for last 7 days. There was no history of fever, vomiting or constipation. Pain gradually increased and abdomen distended. On examination she was very sick looking and tachycardic. Per abdomen examination revealed severe tenderness in RIF and gauding. Blood investigation showed raised counts. She was shifted to for laparotomy with a provisional diagnosis of appendicular perforation. Intra-operative findings revealed peritoneum filled with fecal matter and on further dissection a perforation was identified at caecum with everted
Appendix was inflamed and also we noticed inflamed mesenteric vessels. As perforation was very close to ICJ and adjacent bowel had doubtful viability, perforated loop was brought out as stoma and appendectomy done. Post-operative course was smooth. On 2 months follow up she is doing well. Conclusion: Vasculitis-induced thrombosis leading to ischemia and necrosis of bowel wall is mostly seen in small intestine. To the best of our knowledge this is the first case of HSP vasculitis induced caecal perforation.

Mode of presentation: Short Oral presentation (3+2)

Title: Diagnostic Dilemma and a Custom-Laparoscopic Cure for Multilocular Peritoneal Inclusion Cyst in an Adolescent Female

Authors: Nellai Krishnan, Anjan Kumar Dhua, Prabudh Goel, Devendra Yadav, Devasenathipathy Kandasamy, Minu Bajpai

Department Institution: All India Institute of Medical Sciences, New Delhi

Email: nellai93@gmail.com

Abstract:

Abstract body: Aim: To present our experience with a case of peritoneal inclusion cyst (PIC) in an adolescent female as a sequela to perforation peritonitis and its management.

Case report: Fourteen-year-old girl presented with vague lower-abdominal pain for 3-months. She had sustained ileal perforation 8 years back, which was managed surgically.

Examination of abdomen was unremarkable other than the healed scar. Radiology revealed a large cyst in closely related to the left adnexa; however, the uterus and both the ovaries could be separately visualised. The cyst could not be characterised further.

Diagnosis was established upon laparoscopy. A therapeutic cocktail of laparoscopic excision, deroofing and marsupialization of the multi-cystic lesion was considered appropriate. Histopathological analysis was consistent with a fibro-collagenous cyst wall lined by columnar epithelial cells, diagnostic of a PIC. Review of literature focussing upon the different management options will be presented.

Result: Post-operative recovery was uneventful. Cosmetic result has been excellent.

Conclusion: PICs may occur in young female adolescents with predisposing conditions like previous abdominal surgery. They can be approached laparoscopically for excision with optimal results.

Mode of presentation: Short Oral presentation (3+2)

Title: OHVIRA Syndrome In A Young Girl- A Case Report

Authors: Tanvi Goel, Shilpa Sharma, Devasenathipathy Kandasamy, Minu Bajpai

Department Institution: AIIMS New Delhi

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Abstract:

body: Aim: To present a rare case of OHVIRA Syndrome (Obstructed hemivagina and Ipsilateral Renal agenesis) and its management.

Method: The clinical presentation and management of the case is described.

Results: A 13 year old girl presented with pain in left lower abdomen since last 10 months aggravating during menses. She had attained menarche with LMP 5 days back. The child had sought treatment elsewhere where some drainage procedure was done. At presentation: A lump of 5*5cm was felt in hypogastrium and left iliac fossa-non tender, firm, restricted mobility with defined lower border. On examination, normal urethral opening and single external vaginal opening were found; with hydrometrocolpos and renal agenesis on the left side on radiology. A Pig tail inserted drained well daily till 2 weeks after which urinary output started from the pigtail-detected in the bladder and removed. Redo pigtail insertion was done but unsuccessful. The patient was posted for surgery. Vaginoscopy+ Partial excision of septum, Vaginoplasty, Drainage of Left Hematocolpos was done. Under anaesthesia, a bulge was present on the left side, anterolaterally in the vestibule; with 1 cm short deep
UGS. On Vaginoscopy: only 1 cervical os on the right side. Left was a small blind pit. The vestibular bulge on the left was opened up and 200ml of dark brown blood drained. The septum was oblique, excised and remodelled; 3 cm distance freed from introitus. The child was started orally after 48 hours and discharged in one week. She is well on follow up, with a healthy wound and normal menstruation.

Conclusion: OHVIRA syndrome presents with obstructed hemivagina with ipsilateral renal anomaly; classically with uterus didelphys. This should be suspected in menstruating women with cyclic pelvic pain, mass and unilateral renal agenesis. Resection of the vaginal septum is the treatment of choice.

Mode of presentation: Short Oral presentation (3+2)

Title: An experience with Shah-Waardenburg syndrome: A spectrum of Intestinal Aganglionosis
Authors: Rahul Gupta, Praveen Mathur, Manisha Goyal
Department Institution: Department of Paediatric Surgery and Centre of Rare Disease, Department of Pediatrics, SMS Medical College, Jaipur, Rajasthan, India
Email: meetsurgeon007@gmail.com

Abstract:
Abstract body: Aims: To present our experience with two neonates with Shah-Waardenburg syndrome.
Methods: Two consecutive cases of Shah-Waardenburg syndrome that were managed over the last 3 years (2018 to 2020) at our tertiary care teaching institute are described. Patients were suspected because of the characteristic clinical presentation (non-passage of meconium) and subsequently on the basis of the diagnostic criteria for Waardenburg syndrome.
Results: Both neonates (one female and one male) presented with bilious vomiting and non-passage of meconium on first and second day of life. Clinical examination revealed white forelock, bilateral hypochromic irides (blue eyes) and broad high nasal root in both the patients. Per-abdomen revealed soft abdominal distension. In the latter patient (male), there was arterio-venous malformation involvement of face. Family history (sibling) of similar presentation was seen in the latter neonate. Radiological features of small bowel obstruction were present in both neonates. The female neonate passed meconium after high rectal washes with saline enema; the attendants refused for further surgical management. In the latter exploration revealed distended jejunal loops; colon contracted and unused (microcolon). Multiple sero-muscular biopsies and an initial ileostomy were performed in view of the suspicion of TCA i.e. total colonic aganglionosis (absence of transition zone and also frozen section facilities were not available). It was followed by Jejunostomy as ileostomy did not function. The histopathology of gut biopsies revealed aganglionosis in the entire colon and ileum. Both patients had unfavourable outcomes.

Conclusion: A patient of Waardenburg syndrome presenting with non-passage of meconium and features suggestive of neonatal intestinal obstruction should be evaluated on the lines of Shah-Waardenburg syndrome. Patients with Shah-Waardenburg syndrome have a wide spectrum of aganglionosis with higher incidence of extended intestinal aganglionosis or total colonic aganglionosis.

Mode of presentation: Short Oral presentation (3+2)

Title: Superior mesenteric vein thrombosis with collaterals a rare association of malrotation of gut in adult- case report
Authors: Chetna Khanna, Pinaki R Debnath, Atul Meena, Amita Sen
Department Institution: Dr RML Hospital, New Delhi
Email: chetnakhanna10@gmail.com

Abstract:
AIMS AND OBJECTIVES: to acknowledge that case of malrotation diagnosed in adult life without symptoms can be managed conservatively.

MATERIALS AND METHODS:
A twenty seven year old female was referred with an incidental finding of multiple dilated veins in epigastric region on usg. Patient underwent a triple phase ct scan and was diagnosed as a case of type 1 malrotation of gut with SMV thrombosis and enlarged mesenteric venous collaterals. Patient had no complaints of pain in abdomen, vomiting, constipation or diarrhoea or never had any symptoms of obstruction.

RESULTS:
Patient was managed conservatively with regular follow ups, blood investigations, usg doppler for past 5 years with no change in bowel habits and no symptoms suggestive of obstruction were present in follow up.

CONCLUSION:
Malrotation can be incidentally diagnosed later in life. Asymptomatic patients diagnosed with malrotation incidentally should be given a trial of conservative management as chances of patient landing in post operative adhesive obstruction are high and chances of collateral vein injury intraoperatively can lead to disastrous effects.

Mode of presentation: Short Oral presentation (3+2)

Title: Stem cell mobilization for residual neurologic deficits following traumatic spine and pelvic injury in a case of Polytrauma

Authors: Nellai Krishnan, Shilpa Sharma, Minu Bajpai, Poonam Mishra, M V Padma, Vivek Trikha

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Abstract:
Aim: To describe a case wherein stem cell mobilization was used in the treatment of a traumatic injury to spine and pelvis in a child.
Case report: A 12-year old girl was brought to the casualty with a history of road traffic accident. All other passengers in the motor vehicle had succumbed on spot. She had intra-peritoneal bladder rupture with associated diffuse axonal injury, multiple brain haemorrhages, occipital condylar fracture, bilateral neck of femur fracture and left sacral fracture. Initial management was as per ATLS protocol. She underwent closed reduction and fixation for femur fracture. Bladder rupture was managed conservatively with pigtail catheter placement in abdomen. She had persistent left lower limb weakness. Nerve conduction velocity (NCV) study indicated left lumbosacral radiculoplexopathy in sciatic nerve roots involving L2-S1 with active denervation and no re-innervation. She was subjected to stem cell mobilization for nerve regeneration. Passive and Active physiotherapy was instituted. NCV repeated 1 month later showed evidence of chronic re-innervation. There was partial improvement in the motor and sensory power of left lower limb. Permission was sought for off label treatment with autologous adipose tissue derived mesenchymal stem cells and Bone marrow Derived Haematopoietic Stem Cells therapy for the sciatic injury. The Ethics Committee advised to wait for further improvement.
Meanwhile she got inflicted with burn injury. The wounds healed. However, though she can walk with a limp, she has a trophic ulcer in left foot heel.
Conclusion: Stem cell mobilization for neuronal recovery may be a promising alternative therapy in the treatment of traumatic spine injury. The recovery depends on the amount of traumatic damage.

Mode of presentation: Short Oral presentation (3+2)

Title: Surgical Issues in Button Battery Ingestion

Authors: Maithreyi S, R.Velmurugan, R.Senthilnathan, G.Hariharan, C.Sankkarabharathi

Department Institution: Institute of Child Health, Madras Medical College

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Abstract:

body: Aim
To study the demographic factors, clinical aspects, our experience in management of button battery ingestion and the outcomes

Methods
In this retrospective study, the records of patients who had ingested button battery and admitted in ICH between January 2018 and May 2021 were analyzed. Demographic factors, clinical presentation, time lag between ingestion and retrieval (if required), endoscopy and X-ray findings, surgical intervention, complications and outcomes were tabulated.

Results
There were 51 recorded cases of button battery ingestion admitted in our institution, of which 7 children required endoscopic retrieval. 3 children had complications post-retrieval, of which one death occurred.

Conclusion
Delayed diagnosis of button battery ingestion can have serious consequences, even post-retrieval. There is an urgent need to spread awareness among parents and health care providers regarding the unique dangers of button battery ingestion and advantages of early intervention in preventing complications.

Mode of presentation: Short Oral presentation (3+2)

Title: Nitin Vyas
Authors: Nitin Vyas, Sudhakar S. Jadhav, Santosh V. Patil, Ravindra M. Vora, Dinesh K. Kittur

Department Institution: SJKC trust's paediatric surgery centre and P.G. Institute
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Abstract:
Aim: To study 2 cases of Infantile Achalasia Cardia
Methods: This is a study of a case of 1 year old girl and 11 months boy who presented with non-bilious vomiting since 5 months of age and 2 months respectively. Systemic examination was normal in both. Barium swallow revealed Achalasia cardia, showing uniformly dilated esophagus, sudden narrowing at gastro-esophageal junction, air in esophagus and scanty gas in stomach even on delayed films. Hellers cardiomymotomy with posterior fundoplication was done.

Results: Patients did well post-operatively, and are on regular follow ups.
Conclusion: Achalasia cardia is a very rare entity in infancy and pediatric age group. Hellers cardiomymotomy with fundoplication is the most effective treatment to relieve dysphasia due to achalasia

Mode of presentation: Short Oral presentation (3+2)

Title: Intrarenal Teratoma in Childhood: Two Cases of this Rare entity with Review of Literature
Authors: Shreya Tomar, Vishesh Jain, Sandeep Agarwala. Anjan Dhua, Deva, Manisha

Department Institution: Department of Pediatric Surgery AIIMS New Delhi
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Abstract:
Aim of the study
Intrarenal Teratoma in childhood: Two cases of this rare entity with review of literature.

Methods
Case 1- Six-year-old female presented with non-tender abdominal lump, occupying nearly whole of the abdomen with variegated consistency. Ultrasound abdomen showed a large complex mass with solid-cystic structure, CECT showed primary neoplastic complex renal mass with no invasion to surrounding structures.
Case 2- Two-and-a-half-year-old boy presented with large right abdominal lump with hypertension (140/80 mm Hg). Mass was bimanually palpable with renal angle fullness. Ultrasound abdomen revealed mass with solid-cystic areas and a long bone like echogenic structure. CECT scan confirmed the presence of a heterogenous right renal mass with areas of fat density along with linear calcified bone like structures.
Serum alpha fetoprotein in both the cases and was within the normal limits.

Main Results
Case 1 underwent Nephroureterectomy as the mass was replacing the entire kidney.
Case 2 underwent nephron sparing surgery (NSS) after control of hypertension. Post-operative course of both the children were uneventful. Histopathology revealed mature teratoma. Follow up was done with imaging and AFP. Both children are disease free at last follow-up at five years and six months respectively. Literature search conducted revealed 24 articles on intrarenal teratoma of which four patients underwent partial nephrectomy.

Conclusion
Renal teratoma presents as a very large mass, on CECT is seen as a solid mass with cystic areas, calcification and fatty tissue component. Thorough evaluation with CECT and serum AFP should be done. Nephroureterectomy has been the treatment of choice. NSS can be considered if the tumour is polar in location and decent renal parenchyma can be salvaged.

Mode of presentation: Short Oral presentation (3+2)
Title: Teratoma: Uncommon sites
Authors: Ashish Prasad, Prashant Jain

Department Institution: BLK-MAX Super Speciality hospital
Email: prasadaashish@gmail.com

Abstract:
Abstract body: Aim: To present rare cases of teratoma presenting in uncommon sites
Methods: This is a retrospective analysis of cases diagnosed with teratoma at unusual sites and who had undergone surgery. Their presentation, tumor marker levels, imaging, intraoperative findings, histopathology, and outcome were reviewed. In all the cases, the preoperative evaluation was done by Imaging (Ultrasound/CECT/MRI), serum alpha-fetoprotein (AFP).
Result: A total of 8 cases of teratoma presenting in uncommon sites like cervical, mediastinum, stomach, retroperitoneum, pelvis, and testis (4 cases). these patients had variable presentation depending on the site of the lesion. In all cases, the preoperative Serum alpha-fetoprotein (S.AFP) and imaging (Ultrasound/CECT/MRI) confirmed the diagnosis. All these cases were surgically resected with an uneventful post-operative course. Testicular sparing surgery was performed in 4 cases of testicular teratoma (TSS). On histopathology, all the patients had mature teratoma except 2 who had immature elements. On follow-up of 1 to 6 years, all patients are asymptomatic. Only 1 patient who had undergone TSS, subsequently required orchidectomy for recurrence.
Conclusion: Cervical, mediastinal, gastric, retroperitoneal, pelvic, and gonadal teratomas are rare sites, accounting for 30 % of all the teratomas. Most of these tumors are benign with a good outcome. Complete surgical resection is curative, and chemotherapy is reserved only for malignant cases. TSS is a good option for benign testicular teratoma with encouraging results.

Mode of presentation: Short Oral presentation (3+2)
Title: Extrarenal Teratoid Wilms Tumor - A case report
Authors: Ashitha K. Unny, Anis Akhtarkhavari, Arathi Srinivasan, S Balagopal
Department Institution: Kanchi kamakoti childs trust hospital
Email: ashitha.aku@gmail.com

Abstract:
Abstract body: Aim: To report a case of extra renal teratoid wilms tumor in a 6 year old female child
METHODS: 6 year old female child initially evaluated for abdominal pain and fever associated with lower abdominal fullness. She was detected to have intraabdominal mass and trucut biopsy showed features of small round cell tumor. IHC suggested Ewings sarcoma/PNET. Following chemotherapy, excision of residual
tumor at the pelvic brim (PETCT - negative) was done which was well defined and removed in toto.
Histology of residual tumor showed features of extra renal teratoid Wilms tumor as a surprise.

RESULTS:
Post surgery child underwent radiotherapy and was well for 2 months. Later she presented with
abdominal distension and PETCT showed diffuse metastatic recurrence in the abdomen, pelvis with
retroperitoneal and supraclavicular lymphnodal metastasis. Omental biopsy confirmed extrarenal
teratoid Wilms tumor. Child is now on salvage chemotherapy.

CONCLUSION:
Extra renal teratoid Wilms tumor is an unusual morphological entity with classic triphasic malignancy
with predominantly heterogenous tissue and they are highly malignant. Cases of extra renal Wilms
tumor in pediatric literature is rare and extrarenal Wilms teratoid tumors are much more rarer. It should
be kept as a differential for extensive retroperitoneal tumors.

Mode of presentation: Short Oral presentation (3+2)
Title: Rare retroperitoneal teratoma of infancy
Authors: SURENDRRA SINGH, Shruti Tewari, Rahul Deo Sharma, Sushma Achugatla, Rajeev Redkar

Department Institution: Lilavati Hospital and Research Centre
Email: drr surendrasingh kgm u@gmail.com
Abstract:
INTRODUCTION - Teratoma arises from pluripotent cell and composed one or more
germlayer. In infancy these tumours are most commonly diagnosed in sacro-coccygeal region while
other sites are ovary, testis, mediastinum, brain and retroperitoneum. Rarely, kidney can be involved as
a rare site of extra gonadal germ cell tumor.
CASE REPORT - Three month old female child presented with complaints of abdominal distension
since one and half months of age. On examination, patient was febrile with firm tender mass palpable
per abdomen, extending from right flank to umbilical region, crossing midline. Blood investigation
revealed a raised WBC counts (20730/mm3) and AFP level (31.2 IU/ml). Ultrasound reported an
11x6x9 cm mass in right suprarenal region, displacing right kidney and pancreas. On PET-CT with
DOTATEC reported absence of high grade uptake in large solid cystic, heterogeneously enhancing
lesion, measuring 7.8x9.7x8.8 cm with a supra renal epicenter. Low grade activity within solid
component of the tumor most likely represented associated inflammation. Areas of calcification,
necrosis and fat density were seen within the mass. These findings along with raised AFP levels were
suggestive of a teratoma. USG guided biopsy was inconclusive. At laparotomy a large mass in right
hypochondrium, extending to right lumbar region pushing right kidney inferiorly and adherent to inferior
vena cava on its medial aspect was noted. The mass was removed in toto which involved separation of
aorta and icv from the mass. Histopathology reported high grade immature teratoma[2/3]. No
post-operative chemotherapy was needed as tumor resected completely. Patient is currently doing
well on three monthly follow up.
CONCLUSION - In infancy, retroperitoneal teratoma is very rare malignancy. Early recognition and
complete excision of tumor carries good prognosis.

Mode of presentation: Short Oral presentation (3+2)
Title: Experience with rare and surgically challenging teratomas(Extragonadal)
Authors: Rishabh Jain, Niyaz Ahmed, Mamta Sengar, Chhabi Gupta, Vivek Manchanda, Parveen
Kumar
Department Institution: Chacha Nehru Bal Chikitsalya
Email: rjainingmc@gmail.com
Abstract:
Aim – To present experience with rare and surgically challenging teratomas
Teratomas are embryonal neoplasms of a considerable clinico-scientific and speculative interest. They arise from an abnormal development of the primordial germ cells and/or embryonal totipotent cells. Therefore, they may develop in both gonadal and extragonadal sites. Like gonadal lesions, extragonadal lesions are encapsulated and contain tissues from the three germinal layers. Teratomas are embryonal neoplasms of a considerable clinico-scientific and speculative interest. They arise from an abnormal development of the primordial germ cells and/or embryonal totipotent cells. Therefore, they may develop in both gonadal and extragonadal sites. Like gonadal lesions, extragonadal lesions are encapsulated and contain tissues from the three germinal layers.

Methodology

We have shared our experiences with 4 unusual presentation of extragonadal teratomas out of 15 cases of teratomas operated in three years. 1) Diaphragmatic teratoma 2) Sacrococcygeal teratoma with spinal extension 3) Retroperitoneal teratoma 4) Cervical teratoma (neck).

Discussion

Extragonadal teratomas are rare, accounting for only 1-5% of germ cell tumours. They sometimes present with unusual features in the form of unusual location, acute presentation as an emergency or an unusual phenotypic appearance. In our environment, late presentation is common for many reasons sometimes from social and economic factors; hence, they usually present when complications have set in. Conclusion: Complete surgical excision is management of choice.

Mode of presentation: Short Oral presentation (3+2)

Title: Unusual presentation of neuroblastoma

Authors: Manish Kumar Gupta, Sampreeti Mukherjee, Devendra Kumar Yadav, Minu Bajpai

Department Institution: All India Institute of Medical Sciences, New Delhi

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Abstract:

Aim: To share our experience in managing two cases of neuroblastoma with unusual presentation and diagnosed only after histopathological examination.

Materials and methods –

1st case - 10m boy admitted with abdominal distension for 15days with hypertension and rash over the cheeks for the same duration. On examination an irregular mass felt over right lumbar and hypogastric region. Ultrasound was suggestive of multicystic dysplastic right kidney. MRI abdomen revealed large intra abdominal cystic SOL with multiple internal septations and hemorrhagic fluid levels inside, extending and compressing the retroperitoneal structures, displacing bowels loops suggestive of retroperitoneal lymphangioma. Patient was referred to us and laparotomy was planned. On laparotomy a 10cm*12cm size retroperitoneal cystic lesion with multiple septations and extensive haemorrhage was found. It was extended into paravertebral region, encasing the IVC, Aorta, portal vein and renal vessels and dense adhesion with colon and pancreas. Debulking was done.

2nd case - 11m, girl presented by mother with complaints of fever for 6days, abdominal distension and nonbilious vomiting for 2days. On admission child was septic with respiratory distress. Hb -7.4, TLC - 22400, CRP-220 and platelets -43000. After resuscitation and stabilisation Ultrasound and MRI abdomen was done which were suggestive of large retroperitoneal multiloculated predominantly cystic lesion with hemorrhagic components compressing left kidney. So diagnosis of retroperitoneal teratoma is made and planned for laparotomy. On laparotomy plenty of pus and haemorrhagic fluid removed. Huge retroperitoneal lesion found which was adhered with stomach, duodenum, left kidney, transverse
colon and descending colon. The lesion was almost completely resected.

Result – Both the patients were put on ventilator in post operative period and gradually improved. In both the cases histopathological report came out to be Schwannian poor, poorly differentiated neuroblastoma with unfavourable histology. At present they are in follow up and receiving chemotherapy.

Mode of presentation: Short Oral presentation (3+2)
Title: Role of testicular sparing surgery (TSS) in Testicular Teratoma
Authors: Ashish Prasad, Prashant Jain
Department Institution: BLK-MAX Super Speciality Hospital
Email: prasadaashish@gmail.com
Abstract:
Abstract body: Aim: To present our short experience of TSS in the management of testicular teratoma
Methods: This is a retrospective analysis of cases diagnosed with testicular teratoma and who had undergone TSS. Their presentation, tumor marker levels, imaging, intraoperative findings, histopathology, and outcome were reviewed. In all the cases, the preoperative evaluation was done by serum alpha-fetoprotein (AFP), beta-human chorionic gonadotrophin (B-HCG) levels, and ultrasound. In all the cases the testis was delivered through the inguinal approach and a frozen section was performed to confirm the histological nature of the tumor.
Results: All the patients presented with complaints of testicular swelling and preoperative evaluation was suggestive of benign pathology. The median age of presentation was 8.5 years. Two patients had right side testicular mass while 2 cases had left testicular mass. The median size of the tumor was 2.5 cm. 2 cases had a lesion on the upper pole and 2 had on the lower pole. All patients had findings of mature teratoma on the frozen section correlating with findings on hematoxylin and eosin staining. On follow-up ranging from 1 to 5 years, only 1 patient had recurrence subsequently requiring orchidectomy.
Conclusion: Testicular sparing surgery is a viable option in pre-pubertal testicular tumors as they have a low potential for malignancy and recurrence along with the added advantage of preserving leydig cells and seminiferous tubules. TSS has been found to have encouraging results in long-term studies.

Mode of presentation: Short Oral presentation (3+2)
Title: Adrenocortical “Oncocytoma”: a rare tumor presenting as Cushing’s syndrome in a 6-year-old
Authors: Pujana Kanneganti, Ankur Mandelia, Rohit Kapoor, Shyamendra Pratap Sharma
Department Institution: SGPGIMS, Lucknow
Email: pujanakanneganti@gmail.com
Abstract:
Aims
Adrenocortical oncocytomas are exceptionally rare tumors of adrenal gland, with less than 200 cases reported in literature across all age groups. They are very uncommon in children and 90% of these are non-functional. We aim to describe a case of functioning oncocytoma in a 6 year old child presenting as Cushing’s syndrome.
Methods
A 6-year-old boy presented to us with hirsuitism and excessive weight gain for the last 1.5 years. On examination, he was hypertensive and had Cushingoid features. Endocrinological workup showed markedly elevated serum cortisol levels with loss of diurnal variation with suppressed serum ACTH levels. Serum DHEA, testosterone and 17-OHP levels were also elevated, suggesting a “mixed” type of tumor. CT abdomen revealed a 4.4 x 3.8 cm heterogeneously enhancing lesion in the left adrenal with washout characteristics suggesting an adenoma.
Results
Laparoscopic trans-peritoneal left adrenalectomy was performed using 4 ports. Post-operative period was
uneventful. Histopathology showed a circumscribed tumor composed of nests and sheets of atypical cells with moderate to markedly pleomorphic hyperchromatic nuclei, inconspicuous nucleoli and moderate to abundant amount of eosinophilic cytoplasm. No capsular or vascular invasion was seen. Mitosis was scant with absence of necrosis. Weinke index score was 1/9 (atypical mitoses+). The final diagnosis was adrenocortical oncocytic adenoma (oncocytoma). At a follow up of 4 months, the boy is asymptomatic with no evidence of recurrent or residual disease.

Conclusion
The occurrence of adrenocortical oncocytomas in children, especially with hormonal excess as in our case, is very unusual. The management consists of complete surgical resection. These tumors are usually associated with good prognosis as opposed to adrenocortical carcinomas, and should be differentiated with the help of pathology scoring systems like Weinke index.

Mode of presentation: Short Oral presentation (3+2)

Title: Cystic nephroma and its varied management scenarios – A report of 2 cases
Authors: Ashish Prasad, Prashant Jain
Department Institution: BLK-MAX Super Speciality Hospital
Email: prasadaashish@gmail.com
Abstract:
Aim: We report our experience with 2 cases of cystic nephroma managed with different strategies.
Methods: Two cases of cystic nephroma were reviewed for clinical, radiological, and histopathological characteristics. Also the required surgical approach was reviewed.
Result: The 2 cases reviewed were 10 months and 4 years old, presented with complaints of abdominal lump noticed by the parents. In both cases contrast-enhanced computed tomogram revealed a well-defined thin-walled cystic mass with hypoattenuating contents and thin internal septations, arising from the upper pole of the right (size 14X13X11cms) and left (size 10X8X8 cms) kidney respectively. Imaging was highly suggestive of cystic nephroma and upfront surgery was planned. One of them required radical nephrectomy along with lymph node sampling while the second case underwent nephron-sparing surgery (NSS) after confirmation on frozen section. After a follow-up of 2 years, both patients are presently asymptomatic.
Conclusion: CN is a rare benign renal entity, and its surgical management can be variable depending on its size and location. Preoperative imaging may not be useful to differentiate it from other cystic renal tumors and the only definite way is to differentiate it by histopathology. We recommend surgery should be the first line of treatment and every attempt should be made to perform NSS, after ruling out malignancy with the help of intraoperative frozen section biopsy.

Mode of presentation: Short Oral presentation (3+2)

Title: Congenital malignant Rhabdoid Tumour of neck – Uncommon tumour in a neonate
Authors: Manasa Reddy, Muneer A Malik, JK Mahajan, Ram Samujh
Department Institution: PGIMER Chandigarh
Email: docmanasareddy@gmail.com
Abstract:
Background: Non-renal, non-central nervous system malignant rhabdoid tumours (MRT) are rare in neonates. To the best of our knowledge, only 5 cases of congenital MRT of neck have been described till date.
Case report:
A 13-day old male neonate, born at 35 weeks of gestation via normal vaginal delivery, after an uncomplicated pregnancy presented with mass on the right side of the neck since birth. There was no history of noisy breathing, difficulty in feeding or any abnormal movements of eyes or limbs. On
physical examination, a large firm, non-tender mass measuring 6 x 6 cm with well-defined margins was noted on right side of the neck.

Ultrasonography (USG) showed a solid soft tissue mass of 5x4.7 cm with evidence of thick echogenic tissue separated by hypodense lobular contents. Renal and CNS USG examination was normal. Contrast-enhanced computed tomography (CECT) revealed a well-defined, heterogeneously enhancing mass lesion of 5.1x5.5x5.6 cm in the right posterior cervical and paravertebral space, displacing the tracheo-laryngeal airway and carotid vessels medially.

Baby underwent resection of the tumour in toto, however, on posterior side the tumour was not separable from the paravertebral muscles, a part of which was also excised. The baby required postoperative ventilation for 7 days but could not be weaned off high oxygen support for 15 days due to right acquired postoperative eventration necessitating plication of the diaphragm. Histopathological examination revealed tumor cells with irregular nuclear border, vesicular chromatin, prominent nucleoli and moderate amount of cytoplasm. Immunohistochemistry showed loss of expression for INI-1 and variable positivity for CD99 and FLI-1 and were negative for desmin, myogenin and myoD1 consistent with malignant rhabdoid tumor. Chemotherapy was planned and the parents were explained regarding the poor prognosis. However, they made an informed choice to opt out of treatment and the baby was discharged home.

Conclusions: Despite rarity of the occurrence, rhabdoid tumors have to be considered in the setting of a neck mass in neonates especially in the presence of a metastatic disease. In absence of metastatic disease, a complete surgical excision may offer some hope in these babies.

Mode of presentation: Short Oral presentation (3+2)

Title: Cystic partially differentiated Nephroblastoma-A rare case report
Authors: Mohanraj T, Meenakshi Sundari, Karuppasamy N, Aravindhan C, Srinivasakumar R, Selvakumar, Praveen P
Department Institution: DEPARTMENT OF PEDIATRIC SURGERY, MADURAI MEDICAL COLLEGE & HOSPITAL, MADURAI
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Abstract:

Aim:
The aim of this case report is to discuss a rare case of Cystic partially differentiated Nephroblastoma in a six month female infant.

Methods:

6 month female infant presented with complaints of abdominal distension for 15 days. Examination revealed abdominal mass of size 15 cm * 10 cm occupying most of abdomino-pelvic regions. Tumor markers [AFP & beta hCG] were within normal limits. Radiological evaluation revealed possibility of right ovarian lesion with cystic & solid components measuring 11.9 cm * 8.7 cm extending to left hypochondrium with compression of left kidney. Laparotomy revealed a large cystic lesion arising from left kidney, which was proceeded to left Nephrectomy. Specimen sent for HPE.

Results:

HPE examination revealed findings suggestive of Cystic partially differentiated Nephroblastoma

Conclusion:

CPDN is a rare variant of Wilms tumor with a favorable prognosis. Histopathologic examination helps to differentiate it from other cystic lesions of the kidney and is of therapeutic importance.

Mode of presentation: Short Oral presentation (3+2)

Title: Giant gastric teratoma - Can a tumour grow heavier than the child?
Authors: Vinayak S Rengan, Vinayak S Rengan, Naresh Pawar, Gunjan Sharma, Ramesh Tanger, Arun Gupta

Department Institution: JK Lone Hospital & SMS Medical College

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Abstract:
Background: Gastric teratomas are extremely rare entities. Not more than a few hundred cases have been reported worldwide. They constitute less than 1% of all teratomas. Mature well-differentiated teratomas constitute 85% of all gastric teratomas. The other 15% are immature teratomas with strong malignant potential. The teratomas despite being mostly benign constitute a major surgical challenge because of their propensity to grow rapidly and impinge on vital structures.

Case presentation: We present here a one month old boy weighing 3.2 kilograms who came to us with a grossly distended abdomen. The mass was initially treated with prednisolone after an erroneous diagnosis of hemangioendothelioma was made. We diagnosed it as a case of intra abdominal teratoma based on imaging parameters. The child was taken up for surgery and the giant tumour was found to arise from the lesser curvature of the stomach. Interestingly the tumour weighed 1.8 kilograms which meant that the tumour alone was heavier than the infant himself. The child recovered well after surgery and is in follow-up.

Conclusions: Treatment of extremely large intra abdominal tumours presents a huge challenge for the surgical team. An efficient imaging team that helps us arrive at accurate diagnosis is also essential. However it is shown that prompt and efficient surgery can result in good outcomes.

Mode of presentation: Short Oral presentation (3+2)

Title: Infantile Gastric teratoma: Varied Presentation, Experience and lessons learnt

Authors: Nitin Sharma, Shipra Sharma, MA Memon

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Abstract:
Introduction: Gastric teratoma of infancy is very rare. The presentation pattern and outcome are challenging. We are sharing our experience and the lessons learnt in managing them.
Aim: To analyze the outcome of cases of infantile gastric teratoma.
Material and Methods: This is a retrospective analysis of the infants managed between June 2014 to March 2021. Those with incomplete data, incomplete follow-up or not giving consent were excluded. All were subjected to ultrasound abdomen, CECT abdomen and/or MRI abdomen for detailed imaging of the disease. A serum alfa feto protein was done preoperatively in all. The relatives were counseled. Patients were subjected to laparotomy after proper preoperative work up and the teratoma was excised with an adequate margin. The level of excision ranged from wedge resection, partial gastrectomy to total gastrectomy with reconstruction. A drain was kept in the bed. Feeds were allowed after 5th post operative day. The follow up at 15 days and 3months was taken. Follow up alfa feto protein level was accessed at 15 days and 3 months. The data was analyzed and compiled.

Results: Eight out of 9 infants formed the study group. The mean age at presentation was 60 days(range10 days-280 days). The mean age at surgery was 180days (range 30-365 days). The mean operating time was 84 min(Range45-180min). The mean duration of the hospital stay was 10days (range8-29days). Mean duration of start of the feed was 120 hour(range 118-196 hours). Mean follow up after discharge was 3 months(range 15 days-69months). There was no mortality. Wound infection was seen in one case. Mean alfa feto protein level was 104ng/ml(range42-204ng/ml). The follow up Alfafeto protein was normal in all.

Conclusion: Infantile gastric teratoma is rare. Most of them are mature teratomas. Complete excision gives good outcome.
Title: An extremely rare association of sacrococcygeal teratoma type 4 presenting as anal canal duplication: lesions learned
Authors: Girish Saini, Rahul Gupta
Department Institution: Department of pediatric surgery, SMS Medical College, Jaipur
Email: dr.girishsaini@gmail.com
Abstract: Aims: To present an extremely rare association of anal canal duplication with sacrococcygeal teratoma type 4
Methods: A 3-year-old female child presented with discharge from the anus along with itching and vague perineal pain. On examination anus was slightly patulous, there was discharge from the anus. A small 5mm size second opening was located just behind her normal anus at 6 o'clock position. Probing under sedation revealed tubular lesion, about 2.5 cm in length and lumen ending blindly without connection to the normal anus and rectum; hence a working diagnosis of anal canal duplication was kept. Rest of the examination and ultrasound were normal. Therefore no further evaluation was contemplated.
Results: Patient was placed in prone jackknife position for excision of the anal canal duplication. During completion of the dissection, a presacral mass was encountered along with duplication of the anal canal. The duplication tract and the presacral lesion were completely excised along with coccygectomy. The histopathology report confirmed mature teratoma and anal canal duplication.
Conclusions: Anal canal duplication should be suspected in patients with any opening located midline and posterior to the normal anus, especially in female patients. Association of anal duplication with sacrococcygeal teratoma type 4 is extremely rare; and we report the 2nd case in the world literature.

Mode of presentation: Short Oral presentation (3+2)
Title: no man is an island, maxillofacial tumours
Authors: Dhinesh Balaji, Prof R Velmurugan, Dr Arun Kumar, Dr Balaji, Dr C Saravanan
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Abstract: BACKGROUND AND AIM: Primary mandibular tumours in children are a rare occurrence, hence predicting their biological behaviour as well as treatment and prognosis are not well documented. They represent a major challenge in clinical practice because they can lead to functional impairment, facial deformation, and long-term disfigurement. Their treatment often requires a multidisciplinary approach. Here we are presenting 2 cases of maxillo facial tumours which are testimony to the above mentioned fact.
CASES
1 Case
A 5-year-old male child was brought with complaints of difficulty in opening the mouth for a period of one year. Child was diagnosed to have a right sided mandibular lesion and was evaluated for the same. Initial biopsy was inconclusive, and the child was suspected to have osteofibroma of the right side of the mandible. Right sub-total mandibulectomy along with plate reconstruction was done in a single stage. Histopathology report was suggestive of neurofibroma. Post operative period was uneventful.

2 Case
A 10-year-old male child presented with complaints of massive swelling over both sides of the face for 1 year. Expansile lesion over both sides of maxilla extending to ear lobules bilaterally, Elevates the left eye upwards and obliterating nasolabial fold on both sides, Swelling was firm in consistency, non-tender with no secondary changes. Patient had a history of similar swelling in the left side of mandible. Incisional biopsy was done and correlating with clinical findings and family history, the patient was diagnosed with “Familial Gigantiform
Cementoma”. Patient underwent resection under elective tracheostomy and a tumor of 1.5 kg was removed in toto and reconstruction done with titanium plates in August 2019. Patient was reviewed till one month no recurrence was found. Child subsequently lost follow up. Significant family history with patient’s mother, grandmother’s sister, aunt and patient’s own brother having similar swellings. CT Facial bones done showed Bilateral expansile lesion with ground glass matrix and thinned out cortex. Specks of calcified matrix seen with the lesion. Lesion causes compression of floor of both orbits and roof of oral cavity causing displacement of tongue posteriorly. A 3D printed cast was made and surgical excision was planned. Child underwent an excision of the tumour with an OMFS team and reconstruction using titanium implants along with a tracheostomy and gastrostomy. Post operatively child was on elective ventilation and is at present stable

CONCLUSION:
Facial maxillary tumours are difficult to management due to the extensive dissection required, close proximity of vital structures, need for extensive reconstruction and possibility of life long disfigurement and morbidity. With a multidisciplinary approach, extensive planning, good anatomical awareness, meticulous dissection, fine tissue handling and good post operative care these problems can be circumvented to an extent.

Mode of presentation: Short Oral presentation (3+2)
Title: Giant juvenile fibroadenoma in a young female-a diagnostic dilemma
Authors: vasu gautam, chetna khanna, rashmi D, Pinaki Ranjan Debnath, Atul Kumar Meena
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Abstract:
Background- A giant fibroadenoma is a rare variant (constituting 0.5% of all fibroadenomas) that is characterized by a rapidly growing tumour, with a mass greater than 5 cm diameter in greatest dimension and/or weighing more than 500 gm. Phyllodes tumour account for <0.5% of all breast malignancies and are characterised by diverse range of biological behaviour ranging from benign to malignant. Due to similar presenting features, there has been diagnostic dilemma between phyllodes tumour and giant juvenile fibroadenoma.
Clinical description- We report a case of unilateral breast mass in a 11-year-old prepubertal female who presented with a 1-month history of asymmetrical enlargement of the left breast. On examination, a firm non tender mobile mass of size 11*10 cm was present involving the upper inner and outer quadrants of the left breast along with retro-areolar region. The overlying skin was normal and free from underlying mass with no axillary lymphadenopathy or nipple discharge. Patient was investigated preoperatively with USG and FNAC which was suggestive of fibroadenoma. Patient was then taken up for surgery and Nipple areolar complex sparing lumpectomy was done. Histopathological examination of excised lump is suggestive of giant juvenile fibroadenoma.
Conclusion – Large breast mass in a pediatric age female poses a diagnostic dilemma to the treating surgeon. Proper evaluation is needed to differentiate between several benign breast masses as well as malignancy. The definitive diagnosis is made histologically. Total excision of the lump with conservation of nipple and areola is indicated to make a definitive diagnosis and to relieve the compression of the normal breast tissue.

Mode of presentation: Short Oral presentation (3+2)
Title: Lingual Schwannoma in a child
Authors: SUJIT KUMAR, V.K. Thakur, S.K. Rahul, D. Choubey, R.D. Yadav, Md.A.K. Bakhtiyar
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Abstract:
Background: Schwannomas are benign tumors originating from Schwann cells of the
nerve sheath. Although common in the head and neck region, they are seldom seen to involve the tongue.

Aim: To describe the presentation of lingual Schwannoma in a child.

Methods: A four-year-old female presented with a progressively enlarging mass over posterior aspect of tongue since four months. Lesion was initially noticed by the parents but consultation was only sought when difficulty in swallowing and change in voice appeared with increase in the size of the lesion. On examination, a painless, exophytic growth was seen on the posterior aspect of the tongue, with bossellated surface and well-defined borders. It was friable to touch. No other oral pathology or enlarged cervical lymph nodes was evident. Magnetic resonance imaging revealed a well-defined, lobulated, hyper-intense mass in the posterior aspect of the tongue, suggestive of soft tissue mass most likely lympho-hemangioma. Surgery was done under general anaesthesia with nasal intubation and the lesion could be excised completely. Histopathology confirmed the lesion to be Schwannoma (Neurilemmoma).

Results: Complete excision was curative and patient has been asymptomatic since 9 months after surgery.

Conclusion: Although Paediatric Lingual Schwannomas are rare; they should be kept in the differential diagnosis of soft-tissue lesions involving the tongue; complete excision should be attempted for definitive management.

Mode of presentation: Short Oral presentation (3+2)

Title: Giant Abdominothoracic Lipoblastomatosis with recurrence: not again!

Authors: Sampreeti Mukherjee, Shilpa Sharma, Asit Ranjan, Minu Bajpai

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Abstract:

Background: Lipoblastoma and lipoblastomatosis are rare benign adipocytic tumors which arise from embryonic white fat and present as rapidly enlarging masses. These tumors are extensive and infiltrative, thus making them difficult to distinguish from well differentiated liposarcoma. Also, they are more commonly seen in extremities and very rarely seen on the anterior chest wall.

Aim: We aim to present a case report of a delayed recurring chest wall mass with extensive intraperitoneal and retrosternal extension.

Case Presentation: A 11-year-old boy presented with a past history of swelling over right anterior chest wall of size 15*10 cm for which he underwent surgery at 2 years and 6 years of age. The recurrent lipomatous mass was excised. Intraoperatively, the tumor was found to have extensive intramuscular, intraperitoneal and retrosternal extension up to the peritoneum and infiltration into the falciform ligament. The child presented with recurrence of tumor at the same site that appeared after 5 years of follow up with rapid increase in size to the current size of 20*10*5 cm. He is currently awaiting a definitive surgery.

Discussion: Awareness of lipoblastoma and lipoblastomatosis is important to avoid mutilating surgery and chemotherapy in children as these are benign tumors which are treated with complete excision. Completeness of surgery is especially significant in lipoblastomatosis due to its deep infiltrative nature and the risk of recurrence which can be as high as 80% in incompletely resected tumors or 14-25% in completely resected tumors. Thus, lipoblastoma and lipoblastomatosis should be suspected in children with a rapidly growing chest wall mass, and post-surgery these children should be followed up at 6 monthly- yearly intervals for at least 5-10 years to watch out for recurrence.

Mode of presentation: Short Oral presentation (3+2)

Title: CERVICAL GANGLIONEUROMA

Authors: DR. GUNJAN SHARMA, Gunjan sharma

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Abstract:
Ganglioneuromas are benign neoplasms of neuroblastic origin which arise from central or peripheral parts of the autonomic nervous system. They are normally found at posterior mediastinum, retroperitoneum, and the adrenal gland but ganglioneuromas are rarely found in the cervical region.

Patient concerns:
A 03-year-old boy was admitted with a left-lateral neck mass slow growing over a 7-days duration. The tumor was painless and was not associated with any systemic or compression-related symptoms. No symptoms of Horner’s syndrome, including ptosis, myosis, ipsilateral facial anhidrosis, and flushing, were observed. Laboratory routine tests were within normal limits, and magnetic resonance imaging demonstrated a solid and well-circumscribed mass in the carotid space.

Diagnosis:
Due to the patient’s symptoms, laboratory test results together with radiographic investigation findings, the 03 years old boy was diagnosed with cervical ganglioneuroma.

Interventions:
Surgical excision.

Outcomes:
The postoperative period was uneventful. The patient is now in stable condition after operation, with improvement in symptoms during follow-up recovery.

Lessons:
Ganglioneuromas should be accounted as the differential diagnosis of pediatric soft tissue tumors of the head and neck. The diagnosis for ganglioneuromas in cervical region can only be ascertained with postoperative pathologic examination, and excision is considered as the only effective treatment modality known so far which may cause Horner’s syndrome at times. However, patients have a favorable prognosis without recurrence overall.

Mode of presentation: Short Oral presentation (3+2)

Title: Non-Hodgkin’s Lymphoma with ileo-caecal mass and bilateral ovarian masses mimicking Krukenberg’s tumour

Authors: Arka Chatterjee, Pramila Sharma, Pradeep Gupta, Ramesh Chand Tanger, Arvind Kumar Shukla

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Abstract:
To study a case of Non-Hodgkin’s Lymphoma with synchronous ileo-caecal and bilateral ovarian mass.

Background:
Extranodal lymphoma in the Gastro-intestinal tract occurs in 10–30% of all patients with Non-Hodgkin’s Lymphoma. Ovaries are the most frequent site of non-Hodgkin’s lymphoma in the gynecologic tract the terminal ileum is the most commonly affected location of Non-Hodgkin’s Lymphoma in children.

Methods:
Case report
A 3 year old female patient presented with pain abdomen, abdominal distension and vomiting. The patient’s abdomen was distended and diffusely tender. Ultrasound of the abdomen showed large bilateral ovarian masses. Exploratory laparotomy was done, which revealed large bilateral tumours completely involving both the ovaries, multiple enlarged mesenteric lymph nodes and a mass involving the ileo-caecal junction.

Result:
Bilateral salphingo-oophorectomy involving the masses was done, along was resection of the ileo-caecal mass with ileo-ascending colon anastomosis and removal of few large mesenteric lymph nodes. Histopathology revealed Non-Hodgkins Lymphoma involving the ileo-caecal region, bilateral ovarian masses and the lymph nodes.

Post-operatively, after adequate wound healing, definitive chemotherapy was initiated.

Conclusion
Krukenberg’s tumors generally are ovarian carcinoma that contains a significant component of mucin-filled signet-ring cells. These usually originate from the stomach and are carcinomas.

In this case, Non-Hodgkins Lymphoma involved the ileo-caecal region, bilateral ovaries and multiple mesenteric lymph nodes, mimicking Krukenberg’s tumours, which is a very rare presentation.

Keywords
Non-Hodgkins Lymphoma, Krukenberg’s tumours, ovaries, ileo-caecal region

Mode of presentation: Short Oral presentation (3+2)

Title: Pilomatrixoma: unusual calcific subcutaneous mass
Authors: Gaurav Prasad, Kanika Sharma, Prabudh Goel, Anjan Kumar Dhua, Minu Bajpai
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Abstract:
Objective: To report two cases of pilomatrixoma, a rare, benign, appendageal tumour

Material and Methods: The authors hereby report two cases of this rare entity which are peculiar from several aspects.

Case-1: Twelve-year-old girl with a 2 x 1.8 cm, ovoid-shaped, slowly growing, hard, subcutaneous swelling on left leg

Case-2: Six-year-old girl with 4.2 x 3.8 cm, stadium shaped, painless, left flank hard swelling.

Results: Both the cases presented with a positive tent-sign. Pressing on one edge of the swelling was causing the other edge to become prominent like a ‘teeter-totter’. Bluish-red discoloration of the overlying skin was remarkable.

Case-1: Excision biopsy of the lesion was performed with an elliptical incision. The excised specimen was hard and irregular with surface nodularity (Figure 1 inset). Cutting through the specimen, a gritty sensation was felt and the cut-surface was grayish-white in color and variegated. Histopathology was suggestive of the diagnosis of a pilomatrixoma.

Case-2: Excision biopsy was performed. Grossly the mass was white in appearance and well-circumscribed. Histopathological examination was consistent with pilomatrixoma.

Both the index cases are doing well after 2.5 years and 6 months of follow-up respectively.

A review of literature will be presented.

Conclusion: The pilomatrixoma can have a diverse presentation clinically and histologically, which can lead to misdiagnosis. However, with the awareness and vigilance for cutaneous lesions differentials, this lesion can be treated appropriately, thus prevent futile psychosocial stress, unnecessary work-up and treatment for the patient.

Mode of presentation: Short Oral presentation (3+2)

Title: RETIFORM VARIANT OF SERTOLI LEYDIG CELL TUMOR – A RARE OVARIAN TUMOR
Authors: PRAMOD R PILLAI, ANILKUMAR P L
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Abstract:
AIM: Ovarian torsion is an uncommon cause for abdominal pain in children, the possibility of malignancy mimicking symptoms of ovarian torsion is even rare.
METHODS AND RESULTS: We are reporting an atypical case of ovarian tumor presenting as ovarian torsion in less than 5 years of age. Sertoli Leydig cell tumor typically occurs in younger women and presents as abdominal swelling or pain.

CONCLUSION
We would like to highlight retiform variant of Sertoli Leydig cell tumor as it can be easily misdiagnosed for other histological similar disease if not looked for carefully.

Mode of presentation: Short Oral presentation (3+2)

Title: Yolk sac tumor of penis: A rare site for extragonadal germ cell tumor
Authors: Jay Kishor Soren, Dipak Ghosh, Janki Bisht
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Abstract: YOLK SAC TUMOR OF PENIS: A RARE SITE FOR EXTRAGONADAL GERM CELL TUMOR

BACKGROUND: Germ cells have the ability to differentiate along multiple lines at different stages of development so the tumours that arise from these cells are varied despite having a common histogenetic origin. The yolk sac tumour (YST) variant is the most common tumour seen in over 80% of testicular germ cell tumours in children. Yolk sac tumor of the penis is a rare occurrence and less than five cases have been reported in the literature.

AIM: To report a rare case of penile yolk sac tumor

CASE REPORT
A 3 year old male child presented with swelling and discharge from penis for 2 days. Patient was catheterized at the emergency with a diagnosis of phimosis. During circumcision a fungating mass was found beneath the prepuce of which a tissue biopsy was taken. The biopsy suggested yolk sac tumor for which the child was put on chemotherapy after which the mass regressed considerably.

CONCLUSION
The Yolk sac tumor variant of Germ cell tumor, also known as endodermal sinus tumour, is a primitive teratoid tumour composed of many epithelial and mesenchymal patterns as well as endodermal structures. The management of Yolk sac tumor is a combination of surgery to debulk tumour, chemotherapy inclusive of cisplatin and radiotherapy depending on the stage of disease and presence of metastasis. We are reporting a rare case of penile yolk sac tumor which regressed considerably after chemotherapy.

Mode of presentation: Short Oral presentation (3+2)

Title: Metastatic Medullary thyroid carcinoma (MTC) as a source of Ectopic Adrenocorticotropic Hormone (ACTH) leading to Cushing’s Syndrome in a 10 year old child
Authors: Delona Treesa Joseph, Dhruv Mahajan, Sandeep Agarwala, Vishesh Jain, Anjan Dhua, RKhadgawat, N Tandon, M Jana, D Kandasamy, G Prasad, R Kumar, R Lodha
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Abstract: Background and Aims: Ectopic Adrenocorticotropic hormone (ACTH) syndrome (EAS) as a cause of Cushing’s Syndrome (CS) is not only difficult to diagnose, but also difficult to manage. Medullary thyroid carcinoma (MTC) causing EAS is rarer, especially in the pediatric population. The management of fulminant CS in such a patient poses a complex dilemma.

Methods: A 10-year-old male presented with features of CS with increased weight gain, hyperpigmentation, facial puffiness, easy bruising, and decreased height gain. The diagnosis was confirmed by raised Serum Cortisol levels, 24 hours free urinary cortisol, and dexamethasone overnight test. A raised serum ACTH level and normal MRI brain led to suspicion of EAS. A 68-Gallium DOTANOC scan revealed somatostatin receptor-expressing nodules in both lobes of the
thyroid with cervical nodal and bilateral pulmonary metastasis. A Fine needle aspiration cytology of the thyroid nodule confirmed the diagnosis of MTC, corroborated by raised serum calcitonin (>2,000pg/ml) levels. There were no features of multiple endocrine neoplasia (MEN). CS-induced hypertension and dyselectrolytemia was barely manageable by pharmacotherapy. Due to deteriorating clinical condition and unpredictable response to inhibitors of adrenal steroidogenesis, an upfront bilateral adrenalectomy was performed to control the symptoms. However, the ultimate outcome would remain poor due to metastatic medullary carcinoma thyroid.

Results: The use of DOTANOC in EAS is a useful tool in the identification of the primary site causing EAS. Bilateral adrenalectomy offers effective and expeditious management of uncontrollable Cushing syndrome, albeit requiring hormone replacement later on.

Conclusions: CS is a life-threatening disease in children which could rarely be caused by ectopic ACTH production by MTC. The significant morbidity of CS associated with the poor prognosis of metastatic MTC poses a daunting therapeutic challenge. Tackling fatal CS first by adrenalectomy followed up by resection of the primary tumor, later on, is a viable treatment option.

Mode of presentation: Short Oral presentation (3+2)

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**Title:** Bronchial carcinoid tumor in an adolescent female: delayed diagnosis and management during the COVID pandemic

**Authors:** Rohit Kapoor, Ankur Mandelia, Nayab Farzana, Neha Nigam, Preeti Dabadghao, Shyamendra Pratap Sharma, Pujana K, Shantanu Pande

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**Abstract:**

Aims

We aim to report a case of a right bronchial carcinoid (BC) tumor which was initially referred to us as a case of COVID pneumonia.

Methods

A 17 year old girl was admitted to our COVID triage facility with complaints of cough, dyspnea, low grade fever and intermittent hemoptysis. She was tachypneic with absent air entry on the right. COVID
RT-PCR was negative. Chest X-ray showed ground glass opacity of the entire right lung field. CT chest showed a large peri-hilar soft tissue density lesion with mediastinal lymphadenopathy. Flexible bronchoscopy showed a fleshy mass completely obstructing the take-off of the right main bronchus at the carina. Serum chromogranin-A level was raised. 68-GA-DOTANOC PET-CT showed avid tracer uptake in the peri-hilar mass and mediastinal nodes suggesting BC.

Results
Intra-operatively, the left main bronchus was intubated with a left sided double lumen endotracheal tube. On thoracotomy, the right lung was solidified, full of pus, with extensive pleural adhesions. A large hilar mass was completely obstructing the right main bronchus and reaching up to the carina. Due to dense peri-hilar adhesions, right pulmonary vessels were dissected by an intra-pericardial approach. Right main bronchus was divided flush at the carina and the pneumonectomy specimen with endobronchial tumor was removed intact. Bronchial stump was repaired and reinforced with a muscle flap. All grossly enlarged mediastinal lymph nodes were excised. Post-operatively, patient was ventilated for 24 hours and discharged after two weeks. At 6 months follow up, she is asymptomatic with no evidence of residual or recurrent disease. Histopathology confirmed a “typical” carcinoid tumor.

Conclusion
Pediatric BC are very rare tumors, usually presenting with non-specific symptoms which often leads to misdiagnosis and treatment as benign disease for long periods before definitive diagnosis. Early detection and prompt treatment by complete surgical resection is the key to a successful outcome.

Mode of presentation: Short Oral presentation (3+2)

Title: A tale of two VIPomas: hidden tumors causing physiological havoc
Authors: Pujana Kanneganti, Ankur Mandelia, Moinak Sen Sarma, Shyamendra Pratap Sharma, Rohit Kapoor
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Abstract:
Aims
We aim to report two very rare cases of VIP secreting tumors, resulting in chronic secretory diarrhea.

Methods
Case1: A 3 year old boy presented to us with chronic diarrhoea associated with polyuria and polydipsia since 1 year of age. He was extensively investigated at multiple hospitals and was misdiagnosed as Hirschsprung’s disease for which a sigmoid colostomy was done elsewhere. The boy had failure to thrive with features of hypokalemia and renal tubular acidosis. Case 2: A 2 year old girl presented with chronic diarrhoea since 9 months of age. At admission, she was malnourished and dehydrated with metabolic acidosis with hypokalemia. In both children, work up for celiac disease, immunodeficiency, infective etiology, milk allergy, cystic fibrosis was negative. There was no response in stool frequency to fasting for 48 hours. A CT chest and abdomen revealed a heterogeneous soft tissue mass in the posterior mediastinum (Case 1) and in the left adrenal (Case 2). 24 hour urinary catecholamine and serum VIP levels were elevated in both cases.

Results
In both cases, pre-operative preparation included correction of dehydration and hypokalemia. Pre and intra-operative high dose octreotide infusion was used. In Case 1, right thoracotomy with complete excision of posterior mediastinal tumor was performed. In Case 2, laparotomy with left adrenalectomy was done. Histopathology in both cases revealed ganglioneuroma. In both cases, there was rapid normalization of stool frequency and consistency. On follow up, both children are asymptomatic with good weight gain and no evidence of recurrence.

Conclusion
A thorough work up of chronic, secretory diarrhoea in children is essential to diagnose VIPomas. Neuroblastic tumors are the most common cause of tumors leading to secretory diarrhoea in children.
Correction of fluid-electrolyte and acid-base imbalance is a major challenge both pre and intraoperatively. Surgical excision of the mass is the treatment of choice.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Pediatric Perianal Rhabdomyosarcoma: Uncommon location of a common tumor

**Authors:** Saswati Behera, J.K.Mahajan, Muneer Abas Malik, Ram Samujh

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**Abstract:**
A 2-year-old male child presented with swelling over the right perianal region of 1-month duration. Examination findings revealed a midline firm, non-tender, irregular swelling of size 50x30x30 mm near the anal verge, in the gluteal cleft (Fig 1a). Per rectally, a firm perianal lesion was palpable which was bulging through the posterior wall.

The patient underwent magnetic resonance imaging (MRI) of abdomen and pelvis at local hospital, showing a T2 hyperintense well defined heterogeneous cystic lesion of size 38x30x35 mm with suspicious communication into the terminal end of spine without any retroperitoneal or regional lymphadenopathy (Fig 1b). It was closely abutting the external anal sphincter, displacing it anteriorly.

Core tissue biopsy from the mass confirmed it to be embryonal variant of rhabdomyosarcoma, with diffuse sheets of round tumor cells, positive immunohistochemistry for myogenin, desmin and CD99.

Metastatic workup included bone scan and computed tomography of chest (CT) showed no metastatic foci elsewhere.

The patient was started on VAC regimen with Vincristine, Actinomycin D and Cyclophosphamide. Post chemotherapy, MRI pelvis was repeated which revealed a significant reduction in size with an ill-defined soft tissue lesion measuring 14x27x20 mm extending up to the anal verge inferiorly with mild compression of the right ischio-anal fat (Fig 1c).

The tumor was excised in toto along with underlying midline anal sphincter fibers using per rectal finger assistance. The anal sphincter was reconstructed by suturing the cut edges of the fibres in the midline (Fig 2). Histopathology showed rhabdomyosarcoma with predominantly fibrocollagenous tissue with large areas of sclerosis with residual tumor in less than 5% of total excised tissue and was staged as intergroup rhabdomyosarcoma study group II, stage 1 (IRSG) (Fig 3).

He is doing well in the follow up period and continent for feces after image guided radiation therapy (IGRT) (45 Gray each). The scar is healthy with normal anal sphincter tone at six months of follow up.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Upper extremity Soft tissue Sarcomas in Pediatric patients - A Case Series

**Authors:** AKSHAY BAHETI, Akshay Baheti, Pratik Raut, Paras Kothari, Abhaya Gupta, Shahaji Deshmukh

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**Abstract:**
Background
Soft tissue sarcomas (STS) are a rare occurrence with a poor prognosis due to their aggressive biology. Characterization of individual prognostic factors is critical for optimal STS treatment in order to minimize tumor-related mortality and recurrence rates.

Case Presentation
We present a case series of 3 upper extremity soft tissue malignancies in pediatric population. All the three patients were managed curatively with wide local excision and adjuvant therapy, followed by observation without any recurrence.

Conclusion
Independent anatomy of the upper extremities, — especially the hand, contributes to a deliberate
reduction of resection margins in attempt to preserve the extremity and its function, with the primary objective of tumor-free resection margins. Radical primary excision of soft tissue malignancies sharply reduced local recurrence and thereby diminished metastatic risk.

Mode of presentation: Short Oral presentation (3+2)

Title: Intra-diaphragmatic Extralobar Pulmonary sequestration accompanying Diaphragmatic Eventration

Authors: Rupesh Keshri, Sandip Kumar Rahul, Ramdhani Yadav, Vinit Kumar Thakur, Digamber Chaubey

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Abstract:

Intra-diaphragmatic extralobar pulmonary sequestration (IDEPS) represents a unique subset of pulmonary sequestrations (PS) which often increases the complexity of presentation and adds to the diagnostic dilemma.

Methods

A nine month old male child presented with a history of respiratory distress and fever since last two weeks, with history of similar episodes in the past six months. Contrast-enhanced computed tomography of chest and abdomen revealed left sided eventration of diaphragm, along with a supra-diaphragmatic mass adherent to the diaphragm with separate blood supply from the descending aorta, without any communication with the tracheo-bronchial tree suggesting a diagnosis of extralobar PS.

Child underwent exploration through a left subcostal incision. Stomach, several small intestinal bowel loops and transverse colon were found at an abnormally high location in left chest. After reducing them, an intact thin-walled flabby diaphragm was found on the left side; a well-defined vascular pedicle was seen entering the chest through a small defect medially in the diaphragm, it was excised en-mass along with a portion of diaphragm; diaphragm was repaired. Child did well in the post-operative period and was discharged on full oral diet on seventh post-operative day. Biopsy revealed features of broncho-alveolar tissue in the excised mass confirming a diagnosis of PS. Child has been asymptomatic on follow-up visits and after 12 months of surgical repair. Diaphragmatic eventration with IDEPS being rare merits extensive radiological assessment to reveal the anatomic variations and guide the approach to surgery.

Mode of presentation: Short Oral presentation (3+2)

Title: Tracheal injury in an infant due to endotracheal intubation: a case report

Authors: Amit Pandey, Shailesh Solanki, Prema Menon, Shivani Dogra, Ram Samujh

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Abstract:

Tracheal perforation in an infant due to endotracheal intubation (ETI) in pediatric population is not an unheard entity. Most of the time these are minor injuries and require no specific management. Rarely this injury can be serious and potentially fatal. We present a case of TI in an infant who was referred as a case of suspected foreign body aspiration.

Case Presentation: A 8 months old girl was referred from a peripheral hospital to pediatric emergency as a case of suspected foreign body aspiration. Child was intubated after multiple attempts in peripheral hospital and was referred with deteriorated general condition. Patient had severe respiratory acidosis, pneumothorax and pneumomediastinum on chest Xray. Left ICD was placed in pediatric emergency. On rigid bronchoscopy there was a tracheal perforation in posterior wall at carina with no
evidence of foreign body. Patient underwent right posterolateral thoracotomy and repair of the tracheal perforation. In post op period patient showed resolution of pneumothorax and acidosis but developed neurological sequelae of prolonged hypoxia. Patient developed bilateral dilated sluggishly reacting pupils and GCS of E1V1M0 and expired on POD 3.

Discussion: Tracheal tube introducers or stylets are widely used during endotracheal intubation and injuries due to them are rarely described. In our case too we suspect that perforation in posterior tracheal wall at carina was caused probably by the tip of the stylet which might have been used to intubate the patient in peripheral health centre. The most common signs suggesting an iatrogenic tracheal rupture after intubation are subcutaneous emphysema, pneumothorax and pneumomediastinum. Tracheal injuries are either managed conservatively or surgically.

Conclusion: Iatrogenic tracheobronchial injuries though rare can occur during endotracheal intubation. High index of suspicion is required to suspect this if the clinical condition of the patient shows deterioration.

Mode of presentation: Short Oral presentation (3+2)

Title: a hybrid lesion of congenital pulmonary airway malformation and bronchopulmonary sequestration - a rare case report

Authors: Jaini Modi, Shashank Dubey, Dhvani Shah
Department Institution: Lokmanya Tilak Municipal General Hospital, Sion, Mumbai
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Abstract:
Congenital malformations of the lungs are rare. Congenital pulmonary airway malformation and bronchopulmonary sequestrations are commoner malformations amongst them. Co-existence of both in a single lesion is extremely rare. Such hybrid lesions or rather malformations have been sparsely reported. We report a similar lesion in an eleven years old male who presented with hemoptysis and diagnosed to have a hybrid lesion.

Mode of presentation: Short Oral presentation (3+2)

Title: Bronchial carcinoid in children: Presentation, management and outcome

Authors: Delona Treesa Joseph, Sandeep Agarwala, Vishesh Jain, P Goel, A Dhua, AK Bishoi, SK Kabra, M Jana, D Kandasamy
Department Institution: AIIMS New Delhi
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Abstract:
Body: Background and Objective: Endobronchial masses are often misdiagnosed as benign conditions which delay the definitive diagnosis and treatment. Timely diagnosis and appropriate treatment of bronchial carcinoids have reported overall survival rates of more than 95%. The aim of this report is to highlight the presentation, management and outcome of two cases of endobronchial carcinoid.

Materials and Methods: Retrospective review of records of two cases with details of investigations and management.

Results:
Case 1: A twelve year old male child who was symptomatic for over three years with intermittent fever and productive cough and occasional hemoptysis had been managed in lines of tuberculosis and asthma, elsewhere, without any relief. CECT scan revealed an enhancing polypoidal mass in right main bronchus. Bronchoscopic biopsy was suggestive of a carcinoid tumour. The patient then underwent a bronchotomy and excision of the carcinoid tumor.

Case 2: Ten year old male child who presented with noisy breathing and streaky hemoptysis was detected to have a homogeneously enhancing endobronchial mass in the bronchus intermedius of right main bronchus with resultant air trapping in upper and middle lobes on CECT scan. Enhancement with contrast was suggestive of a carcinoid tumor. However, there were no classical signs or symptoms of a
carcinoid and even 24 hour urinary 5HIAA levels was normal. Patient underwent a wedge resection of right main bronchial mass with primary reconstruction. The histology of resected specimens from both cases confirmed a typical bronchial carcinoid with sampled lymph nodes being free. The post-operative course was uneventful in both children.

No adjuvant therapy was given. Both the cases are doing well at 6 years and 6 months of follow-up respectively.

Conclusion: Proper evaluation of endobronchial masses gave the correct diagnosis and subsequent resection with conservation of the lungs resulted in favorable outcome in both the cases.

Mode of presentation: Short Oral presentation (3+2)

Title: Congenital Esophageal Diverticulum in a 2-year-old: a rare anomaly

Authors: Gaurav Prasad, Vishesh Jain, Sandeep Agarwala, Anjan Dhua, Prabudh Goel, Devendra Kumar Yadav, Rohan Malick

Department Institution: Department of Pediatric Surgery, AIIMS, New Delhi

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Abstract:
Objective: To report a rare case of congenital esophageal diverticulum in a 2-year-old boy

Material and Methods: The authors report a case of a 2-year-old boy who presented with dysphagia. The symptoms manifested after weaning at 6 months of age. Barium esophagogram revealed the presence of a diverticulum in the upper one-third of the esophagus within the thoracic cavity. The child underwent esophagoscopy which confirmed presence of a esophageal diverticulum with an eccentric opening. Esophageal dilatation was attempted but failed. Subsequently, right posterolateral thoracotomy was performed with surgical excision of the diverticulum was performed. The postoperative period was uneventful. The postoperative imaging showed free distal flow of contrast.

Results: The child was accepting both solids and liquids at the last follow up of 3 months.

A review of literature will be presented.

Conclusion: Congenital esophageal diverticulum is a very rare entity. The diagnosis is evident on contrast esophagogram. It is important to rule out associated abnormalities like motility disorder and stricture. Surgical excision is often curative.

Mode of presentation: Short Oral presentation (3+2)

Title: A Rare case of Bilateral Congenital Lobar Emphysema – Staged approach

Authors: Manikandan.U, S.Meenakshi Sundari, N.Karuppasamy, C.Aravindan, R.Srinivasakumar, G.Selvakumar, P.Praveen

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Abstract:
The aim of this case report is to discuss a rare case of Bilateral Congenital lobar emphysema in a ten month old female infant.

METHODS:
Ten month old female infant presented with complaints of recurrent URI for past 6 months. On examination- Decreased air entry on both sides with expiratory wheeze bilaterally. X-ray and CT chest revealed Hyperlucency of Right middle lobe and left upper lobe with Herniation of both involved lobes. Initially right middle lobectomy was done followed by Left upper lobectomy 6 month later. Specimen sent for HPE.

RESULTS:
HPE showed distended alveolar spaces with features of CLE. Child was followed up for 6 months and is asymptomatic.
CONCLUSION:
Bilateral Congenital lobar emphysema is very rare and is an important cause of respiratory distress in neonates and infants. It is curable with lobectomy.

Mode of presentation: Short Oral presentation (3+2)

Title: Intra bronchial mucoepidermoid carcinoma in an 8 year old girl: A case report of rare tumor with review of literature
Authors: Lamia Inayath, Hemangi Athawale
Department Institution: Grant Government Medical College, Mumbai
Email: lamiinayath@gmail.com
Abstract:
Background and aim: Intra bronchial and intra tracheal tumors are very rare in pediatric age group. Most of the literature clubs primary pulmonary tumors with these; hence actual incidences are not well defined. Amongst this mucopidermoid carcinoma (MEC), whether low or high-grade account for only 0.1 to 0.5% of lung carcinomas.
Case presentation: We report such a rare case of an eight year old girl presenting with history of recurrent lower respiratory tract infections with respiratory distress. CT scan of chest was suggestive of a mediastinal mass. She underwent rigid bronchoscopic biopsy, histopathology showed it to be mucus gland adenoma. She underwent right thoracotomy with complete excision of mass along with right lower lobectomy. Histopathology reported it to be a low-grade MEC with clear margins. She did not require any chemotherapy or radiotherapy and has no recurrence at 1-year follow up.
Conclusion: Primary pulmonary MEC is a rare malignant tumor in pediatric population. Prompt radiological diagnosis followed by biopsy and complete resection can lead to long-term survival in low-grade MECs, as in this report.

Mode of presentation: Short Oral presentation (3+2)

Title: A rare case of bilateral congenital cystic adenomatoid malformation
Authors: Abhishek Anand, T J Banerjee, A K Basu, P Gupta, K Bhaumik
Department Institution: Institute of child health
Email: pandeyabhi13@live.com
Abstract:
To share our experience in managing a rare case of bilateral CCAM.
Materials& Methods:: 8 month old boy presented with high grade fever and respiratory distress. He was put on ventilator support after which he developed tension pneumothorax first on right side and then on left side which was managed with ICD. Patient was extubated after 5 days, drains removed and was put on oxygen support through nasal cannula for 8 days during which he again developed pneumothorax on both sides and drain was given for the same. Then he was referred to us and after stabilising the child, HRCT thorax was performed which was suggestive of bilateral CCAM. At first right sided thoracotomy and upper lobe lobectomy was performed. Then after 7 days left sided thoracotomy and lobectomy of upper lobe done.
Result: In postoperative period baby was on ventilator support for 15 days and gradually weaned and was put on AIRVO for next 7 days. He developed septicemia, managed with parental antibiotics and discharged in stable condition.
Conclusion: Bilateral CCAM is very rare with poor prognosis. Very few reported cases are available till date. Normal CXR does not exclude the possibility of CCAM and CT chest is diagnostic.

Mode of presentation: Short Oral presentation (3+2)

Title: Laryngotracheo oesophageal cleft: a rare entity
Authors: Lamia Inayath, Hemangi Athawale
Abstract:
Background and aim: Laryngotracheo oesophageal cleft is a rare anomaly in a newborn presenting with respiratory distress and choking with feeding symptoms identical with oesophageal atresia with or without tracheo-oesophageal fistula. It is an abnormal communication of the larynx and the trachea with the oesophagus occurring during fifth to seventh week of gestation as a result of circumoid cartilage failing to fuse dorsally. LTOC varies greatly in anatomical extent and clinical severity; more severe forms in which the some or all of the tracheal cartilaginous rings are incomplete are fatal unless corrected surgically. LTOC occurs in less than 1/10,000 to 1/20,000 live births with slightly male predilection and has a autosomal dominant mode of inheritance. Routine chest X-rays and barium oesophagogram are usually not conclusive but bronchoscopy will delineate anatomy of cleft clearly.
Case presentation: We present detailed case report of neonate with respiratory distress and choking on feeding and illustrating maneuvers at endoscopy and subsequent individualized surgical management of child.
Conclusion: LCs are rare malformations of the larynx, whose prognosis is highly dependent on the extension of the cleft and other associated malformations. The improvement in survival in recent years can be explained not only by the advances in treatment and management, but also by an earlier diagnosis.

Mode of presentation: Short Oral presentation (3+2)

Title: Management of Neonatal Congenital Sternal clefts with Associated Surgical and Cardiophysiological challenges during the COVID-19 Pandemic.
Authors: Mehak Sehgal, Shilpa Sharma, Ramesh Menon, Akshay K Bisoi, Sandeep Chauhan, Minu Bajpai.

Department Institution: Department of Pediatric Surgery, All India Institute of Medical Sciences, New Delhi

Email: mehak.sehgal91@gmail.com

Abstract:
Aim: Sternal clefts are rare congenital chest wall deformities; seldom encountered by pediatric surgeons. The aim is to describe the challenges in their management.
Method: Cases of sternal cleft managed during Covid Pandemic from September 2020 to February 2021 are described.
Results:
Case 1: A 2 day old female neonate presented with abnormal movement and bulging of chest and neck in midline. There was a defect in upper chest, parchment skin lined with visible cardiac movements suggestive of ectopia cordis with complete sternal cleft. Child was managed conservatively with chest binder and local wound care. At 50 days of life, primary closure of pericardium, anterior chest wall with rib grafting was done with back up for cardiac surgery. She developed wound dehiscence with tear in pericardium that was managed with meticulous dressings including amniotic membrane patches. She was successfully extubated, and discharged at 84 days of life.
Case 2: A 6 day old male neonate born to HIV and covid positive parents presented with bulge in anterior chest and abdominal wall. There was a partial sternal cleft with absent body of sternum and xiphisternum with an omphalocoele, defect in pericardium and diaphragm, confirming to Pentology of Cantrell. Echocardiography revealed an acyntotic ASD and VSD. He was given prophylactic ART therapy. He had repeated episodes of LRTI. Child eventually required mechanical ventilation; had difficult extubation; requiring a tracheostomy. Omphalocele was managed conservatively. Chest binder support was given intermittently. He was gradually weaned to CPAP, but developed severe Acinetobacter pneumonia with ARDS and cardiac failure requiring ionotropic support. He expired without having undergone surgical correction after intensive care nursing of 4 months.
Conclusion: Sternal clefts need to be treated aggressively with a multispeciality team effort and early, preferably in the neonatal period to avoid the physiological complications of the anatomical defects.

Mode of presentation: Short Oral presentation (3+2)

Title: Neonatal Empyema: Report of two cases

Authors: Krishnendu Moitra, Tapan Jyoti Banerjee, Ashoke K Basu, Parthapratim Gupta, Kuntal Bhaumik

Department Institution: Department of Pediatric Surgery, Institute Of Child Health

Email: krishnendumoitra@gmail.com

Abstract:
Aim: To share our experience in the diagnosis and management of empyema thoracis in two neonates and to highlight the challenges faced as this is very rare.
Methods:
20 day old boy presented with severe respiratory distress and fever for which the baby was immediately put on ventilator requiring high PEEP. The patient gradually deteriorated with rising septic parameters and sinking clinical conditions. Bedside USG followed by USG guided diagnostic tap was done on day 10 which yielded copious amount of pus and it was sent for culture which revealed MRSA. Surgical consultation was taken on day 11. A 12Fr ICD was placed but the baby did not improve clinically so right sided open thoracotomy followed by decortication was done under GA on day 16.
15 day old girl baby presented with severe respiratory distress and fever for which the baby was immediately put on ventilator. Bedside USG and USG guided pleural tap was done on day 3 followed by tube thoracostomy. Culture revealed growth of Klebsiella. The patient responded clinically to management with IV antibiotics and tube thoracostomy.
Result:
The first baby showed preliminary signs of recovery but again there was clinical worsening, septic shock and ultimately the baby died due to septic shock. The second baby showed gradual improvement clinically and her septic parameters improved and extubated by day 9. Chest tube removed on day 15 and then discharged in a stable condition.

Conclusion:
Neonatal empyema is a very rare entity and only a few cases have been reported in literature, mostly due to Methicillin resistant Staphylococcus aureus. Though, no single standard protocol is available, management with ICD and IV antibiotics is successful in majority of patients. High index of suspicion should be kept in neonate with respiratory difficulty not responding to conventional management. Surgical consultation and intervention should not be delayed in case of pleural effusion secondary to pneumonia, refractory to medical management.

Mode of presentation: Short Oral presentation (3+2)

Title: Congenital lung lesions – Institutional experience

Authors: Mayur Soni, Sudhakar Jadhav, Santosh Patil, Ravindra Vora, Dinesh Kittur.

Department Institution: Sushrut Jadhav Kinderchirurgie Charitable Trust's Paediatric Surgery Centre & P.G. Institute

Email: mayursoni74@gmail.com

Abstract:
To Study of congenital lung lesions.

Method:
In a span of 3 years 18 cases of congenital lung cases presented to our institute. Out of which 4 cases were of Bronchogenic cyst , 4 cases of Congenital lobar emphysema lung, 3 cases of Lung sequestration and 7 cases of Congenital pulmonary airway malformation, age of presentation varied from day 1 of life to 9 years, most common presentation was recurrent urti in bronchogenic cyst and sequestration. Antenatal scan showing lung lesions seen in 4 patients of congenital pulmonary airway malformation and congenital lobar emphysema. Hrct evaluation was in all cases of Bronchogenic cyst. Thoracoscopic excision of cyst done in 3 cases of bronchogenic cysts and thoracotomy needed in one case. Thoracotomy with lobectomy done in cases of cpam and cle. Thoracotomy with excision of sequestration done in all 3 cases. All cases were histopathologically confirmed

Results: Patients did well post operatively.

Conclusion : In cases of congenital lung lesion where most of bronchogenic cyst and pulmonary sequestration presented with respiratory tract infection, whereas most of congenital pulmonary airway malformation and congenital lobar emphysema presented antenatally, if managed early have good post operative outcome.

Mode of presentation: Short Oral presentation (3+2)

Title: Gastric lung !! Intralobar Sequestration Associated with Gastric Enterogenous Cyst

Authors: Khyati Kiran Janapareddy, Nitin J Peters, Shubhalaxmi R Nayak, Ram Samujh, Nandita Kakkar, Debiyotj Chatterjee

Department Institution: Departrment of Pediatric Surgery, PGIMER, Chandigarh

Email: khyati.kiranj@gmail.com

Abstract:

Aims

Intralobar Sequestrations (ILS) is a rare anomaly that is usually asymptomatic and manifests in adults with features of recurrent pneumonia and rarely as haemoptysis. The co-existence of ILS with enterogenous cyst is even rare with only with a single case reported. We aim to report a rare case of concomitant ILS with enterogenous cyst and name this entity as the “Gastric Lung”. Patient Methods:

We describe a case of 6 month male infant presenting with multiple episodes of haemoptysis. Evaluation revealed
consolidation of segment of left lower lobe with pseudoaneurysm of pulmonary artery with spina bifida at first thoracic vertebral level. Diagnostic thoracoscopy revealed a bluish intra pleural sequestered segment in the left lower lobe which was excised and histopathology confirmed pulmonary sequestration. The child remained asymptomatic for 6 months followed by recurrent haemoptysis. Re-evaluation revealed recurrence of lesion which was excised by a thoracotomy. Histopathology revealed gastric mucosal content in this cyst.

Results
The child is doing well following second surgery with remission of haemoptysis and anaemia.

Conclusion
Intralobar sequestration may rarely be associated with enterogenous cyst. Findings of vertebral anomalies along with thoracic cysts should encourage investigation for enterogenous cysts. Haemoptysis caused by ILS though rare should be thoroughly investigated to prevent transfusion requiring anaemia in children.

Mode of presentation: Short Oral presentation (3+2)

Title: Esophageal duplication cyst – a cause of stridor and progressive dysphagia
Authors: Chetna Khanna, Pinaki R Debanath, Atul Meena, Shalu Shah, Amita Sen
Department Institution: Dr RML Hospital, New Delhi
Email: chetnakhanna10@gmail.com

Abstract:
AIMS AND OBJECTIVES: to acknowledge esophageal duplication cyst as a differential diagnosis in a case of progressive stridor, dysphagia and respiratory distress in an infant.

MATERIALS AND METHODS:
A 40 day old male child presented in emergency with severe respiratory distress and decreased oral intake and chest indrawing since 3 days. Mother gave history of progressive inspiratory stridor, dyspnoea while feeding since birth and recurrent emesis while feeding. Patient was unable to maintain saturation so was immediately intubated and was taken on ventilatory support. Patient was investigated and was diagnosed with large cystic mass 6.7*3.9cm in posterior mediastinum.? Duplication cyst.

RESULTS:
Patient underwent left anterolateral thoracotomy and a cystic mass of 7*4cm filled with mucus separate from the surrounding structures but displacing trachea and esophagus was completely excised and histopathology was suggestive of oesophageal duplication cyst with gastric mucosa. Post op period was uneventful and patient was relieved of all the symptoms in follow up period of 1 year.

CONCLUSION:
Duplication cysts are rare but should be included in the differential diagnosis of a child with airway difficulties, swallowing problems. Complete cyst excision/cyst enucleation is the treatment of choice in symptomatic cases which is curative.

Mode of presentation: Short Oral presentation (3+2)

Title: Delayed bizarre presentation of congenital diaphragmatic hernia- a case report
Authors: Kokilavani, Velmurugan, Saravanan
Department Institution: Kanchi Kamakoti CHILDs Trust Hospital
Email: koksneurocard@gmail.com

Abstract:
AIM:
Congenital diaphragmatic hernia (CDH) is a condition characterised by a defect in the diaphragm leading to protrusion of abdominal contents into the thoracic cavity interfering with normal lung development. Usually presents in the neonatal period and some cases present at a delayed age. This
case is being presented not only for delayed presentation, but also for its presentation with bizarre clinical features.

METHODS:
A 1yr 4 months old boy, presented elsewhere with dysuria, for which on evaluation with ultrasound abdomen showed features of cystitis and was treated as UTI. Later the child became sick and was referred here further management. Here on investigation with xray chest and abdomen revealed features of ?CDH/ ? segmental eventration. Child underwent laparotomy and had left posterolateral defect in diaphragm. Reduction of contents and repair was done.

RESULTS:
Postoperatively child is doing well.

CONCLUSION:
This delayed presentation with bizarre clinical feature like dysuria can be explained by severe dehydration due to recurrent vomiting caused by intermittent gastric volvulus.

Mode of presentation: Short Oral presentation (3+2)

Title: Perinatal diagnosis and management of developmental lung malformations: experience and early outcomes

Authors: Shyamendra Pratap Sharma, Ankur Mandelia*
Anita Singh, Kirti Naranje, Mandakini Pradhan

Department Institution: Department of Pediatric Surgical Super Specialties, SGPGIMS, Lucknow

Email: shyambrd07@gmail.com

Abstract:
Aims
We aimed to describe our experience and early outcomes of developmental lung malformations which presented in the perinatal period and were surgically corrected at our institute.

Methods
This was a retrospective review of the electronic medical records of all cases with congenital lung malformations who presented to us perinatally in the past 18 months. The data was collected for pre and perinatal characteristics. All the suspected cases underwent a thorough diagnostic evaluation, including a computed tomographic (CT) scan of thorax. The cases were categorized initially for expectant management or surgical correction as per presentation. The outcomes included data on perinatal intervention, ventilation, shock, sepsis, hospital stay and follow-up status.

Results
During the study period, there were 6 cases of developmental lung malformation who presented to us in the perinatal period. Antenatal diagnosis was available in 4/6 (66.7%) of cases, which included 1 case each of congenital pulmonary airway malformation (CPAM) and sequestration and 2 cases of mediastinal cysts. 2 patients with congenital lobar emphysema (CLE) had a normal antenatal scan and presented post-natally. Fetal thoraco-amniotic shunting was performed at 24 weeks of gestation for a case of large mediastinal cyst with hydrops. The mean birth weight and gestational age was 2905±307 grams and 364/7± 23/7 weeks. Mean age of presentation was 40 days. All 6 cases developed respiratory distress, 2 (33.3%) soon after birth and 4 (66.7%) within the first 90 days of life. Mean duration of post op ventilation was 5 days with one baby requiring high frequency oscillatory ventilation. Sepsis and shock occurred in 4 (66.7%) and 3 (50%) babies, respectively. All the babies got discharged in healthy condition and at last follow up, all are thriving well.

Conclusion
The perinatal management of babies with developmental lung malformation requires a coordinated effort of a multidisciplinary team. The treatment of these malformations may result in few short term morbidities; however, long term outcomes are favorable.

Mode of presentation: Short Oral presentation (3+2)
Title: JIAPS sur la Plateforme Internationale - Scientometric comparison with georeferenced pediatric surgery journals and a standard international pediatric surgery journal
Authors: Sampreeti Mukherjee, Anjan Kumar Dhua, Prabudh Goel, Devendra Kumar Yadav, Vishesh Jain, Sandeep Agarwala, Minu Bajpai
Department Institution: AIIMS Delhi
Email: sampreetimukherjee@gmail.com
Abstract:
To explore the bibliometric characteristics of JIAPS for research productivity, citations, and beyond and also compare its performance with two other georeferenced pediatric surgery journals (GRPSJ) and one standard international pediatric surgery journal (SIPSJ).
Methods
Primary data was acquired from Scopus® database. Bibliometric parameters were noted. Top-cited articles (citations ≥20) were also analysed. Collaborative maps were generated by obtaining co-authorship links (VOSviewer software). Bibliometric parameters (h-index, SCImago Journal Ranking [SJR], total cites, cites/document, and international collaboration) were compared with two GRPSJ and one SIPSJ using the SCImago portal.
Results
1095 results were obtained published 2002-2021, receiving 3077 citations, authored by 2080 authors from 48 countries with an h-index of 17. The top three countries were India, United Kingdom, and Iran. The leading institutes were the All India Institute of Medical Sciences (AIIMS), Delhi (n=142), PGIMER, Chandigarh (n=76), and Lady Hardinge Medical College (n=55). Leading contributing authors were Bhatnagar V (n=54), Rao, KLN (n=43), & Agarwala, S (n=39). The top-cited documents (n=15) received a total/median (IQR) of 456/29(13) citations and published between 2005 to 2014. The key areas of interest were “pediatric urology,” “oncology,” and “anorectal malformation” (n=3/15, each). VOSviewer software returned 143 items in 4 clusters and 13501 links. Amongst the GRPSJ, JIAPS had the highest h-index & SJR ranking but was 2nd in total cites received and cites/document and last for international collaboration. The GRPSJ had unfavourable values compared to SIPSJ in all the parameters (p<0.00001).
Conclusion
Based on Scopus® data and SCImago portal, the leading contributors in JIAPS were from India, AIIMS, Delhi, and Bhatnagar V as the source country, institute, and author, respectively. The hotspot topics among the top-cited articles were “pediatric urology,” “oncology,” and “anorectal malformation.” Despite having a better h-index and SJR, articles in JIAPS lagged in citations received and demonstrated low international collaboration.

Mode of presentation: Short Oral presentation (3+2)

Title: A rare case of intra-renal paraganglioma in a child masquerading as renal cell carcinoma
Authors: Aditya Arvind Manekar, Narahari Janjala, Bikasha Bihary Tripathy, Subrat Kumar Sahoo, Manoj Kumar Mohanty
Department Institution: Department of Pediatric Surgery, All India Institute of Medical Sciences, Bhubaneswar
Email: dr.aditya.manekar@gmail.com
Abstract:
Renal cell carcinomas are rare in children, accounting to around 2% of all pediatric
renal tumors, with significant differences in their histology and pathogenesis when compared with those common in adults. Paragangliomas are extra-adrenal pheochromocytomas that derive from chromaffin cells and arise along the sympathetic paraganglia in the body being secretory in majority cases. The rarity of these tumors can easily mislead the pre-operative diagnosis, leading to a drastic outcome especially when it arises in atypical locations. A significant percentage of patients experience considerable intraoperative hemodynamic complications; it is therefore essential to have a high index of suspicion in making the diagnosis of an extra-adrenal paraganglioma in the light of atypical tumor location and unspecific symptoms. Radiological features vary depending on the location of the tumor mass, and may blend with the surrounding anatomy. They are very uncommonly present at an atypical site and with myriad of symptomatology and may not be diagnosed until the intra-operative period or post-operative period. An asymptomatic intra-renal paraganglioma in a child is a very rare entity. We hereby present a rare case of a 14 year old girl who presented with a vague abdominal pain with a working diagnosis of a renal cell carcinoma after imaging which later turned out to be an intra-renal paraganglioma on histopathology.

Mode of presentation: Short Oral presentation (3+2)
Title: Renal Angiomyolipoma in a child
Authors: Sujit Kumar, S K Rahul , Z Hassan, R Prasad, R Ranjana, R Keshri
Department Institution: Department of Pediatric Surgery, Indira Gandhi Institute of Medical Sciences, Patna
Email: drsujit.igims@gmail.com
Abstract:
Renal Angiomyolipoma is a rare tumour in a child; its differentiation from malignant tumours may be difficult and have management issues.
Aim: To describe a rare case of Paediatric Renal Angiomyolipoma
Methods: An 18 months-old-boy presented with complains of intermittent passage of blood in urine associated with pain abdomen. He passed clear urine between two episodes of red coloured urine. There was no history of bleeding from any other side or of any other symptoms. On examination, patient was pale, afebrile but tachycardic at presentation. Abdominal examination revealed no tenderness, left kidney was palpable but no distinct mass could be appreciated clinically; external genitalia were normal. Abdominal and pelvic ultrasound revealed a small heterogeneous, hyper-echoic soft tissue mass lesion in the upper pole of the left kidney without any hydronephrosis. Contrast enhanced tomography of abdomen showed a heterogeneous mass in the upper pole of left kidney with significant lipid density suggesting Angiomyolipoma. Partial nephrectomy with removal of the upper pole containing the growth was done; remaining portion of the kidney was healthy with distinct planes from the tumour. Histopathology confirmed the diagnosis of Angiomyolipoma.
Result: Patient had uneventful post-operative period and has been asymptomatic on follow-ups since the last eight months.
Conclusion: Being rare, Angiomyolipoma involving the kidney of a child may be confused with more frequently found malignant lesions like Wilms’ tumour. Characteristic findings on imaging and histopathology guide proper management in such cases.

Mode of presentation: Short Oral presentation (3+2)
Title: A case of bilateral renal triplication with right ectopic ureter
Authors: Garvita Singh, Satish Kumar Aggarwal, Gaurav Singh, Muni Varma
Department Institution: Department of Pediatric Surgery, Sir Ganga Ram Hospital, New Delhi
Email: garvitasingh429@gmail.com
Abstract:
Background: Ureteral triplication is among the rarest congenital disorder of the urinary tract. Bilateral ureteral triplication being even more rare. We report a case of a 3-year-old girl with bilateral ureteral triplication (type 3) in which combination of contrast studies and endoscopic procedures were utilised to establish the diagnosis.
Case report: A 3-year-old girl presented with dribbling of urine since birth along with normal voiding and was diaper dependent with no history of UTI. CT Scan showed bilateral renal duplication with bilateral ectopic ureteric opening below the bladder neck, into the urethra. She underwent cystoscopy and on table dye study which revealed right ureteric orifice in the urethra and on doing RGP using ureteric stent, ureteral triplication was found at the upper end with extravasation of contrast (iatrogenic) in perirenal space. She also had left VUR with upper tract triplication on left sided as well. Further imaging was done and MR urogram showed vagina filled with fluid due to the right ectopic ureteric opening. She also had a vaginal septum extending till the cervix. Bladder was very small. She underwent right ureteric reimplantation. The urethra was patulous. Once bladder capacity improves, she is planned for left ureteric reimplantation and bladder neck repair/ deflux to bladder neck.

Discussion: A bilateral renal triplication is a rare anomaly and may coexist with VUR, incontinence and ectopic ureters. Triplication per se may be asymptomatic, but associated VUR, incontinence and ectopic ureters should to be managed in a planned and phased manner.

Mode of presentation: Short Oral presentation (3+2)

Title: Renal angiomyolipoma in children: Experience from a tertiary care centre
Authors: Dhruv Mahajan, Vishesh Jain, Anjan Kumar Dhua, Sandeep Agarwala, Manisha Jana, Prakash Ramteke
Department Institution: Department of Pediatric Surgery, AIIMS New Delhi
Email: 280691dhruv@gmail.com

Abstract:
Aim: To evaluate the clinical presentation, diagnosis, management and outcome of renal angiomyolipoma in children.
Material and Methods: A retrospective review of all cases of renal angiomyolipoma in a tertiary care centre over a period of ten years (2011-2020) was done.
Results: There were 4 cases of renal angiomyolipoma, with median age of 11 years (range, 4-14 years). There was equal male: female distribution. The most common presentation was lump in abdomen in three patients with associated constitutional symptoms in 50 %. Two patients had associated Tuberous Sclerosis. All patients had renal mass without any vascular or local invasion. No metastasis was detected in any patient. One patient received pre-operative neoadjuvant chemotherapy for Wilms tumor. Nephroureterectomy was done in three patients and partial nephrectomy in one. On histopathology, two were classical angiomyolipoma and two were epithelioid type. No recurrence was found at a median follow-up of 6.5 years (range, 1-11 years).
Discussion: Renal angiomyolipoma is a rare renal tumor in children. Few cases are associated with Tuberous Sclerosis. The classical type is more commonly seen while epithelioid type is very rare in children with only 6 reported cases. Classical type is usually benign while epithelioid type is potentially malignant. In the absence of Tuberous sclerosis, the index of suspicion is low and differentiation from other renal tumors can only be suspected on imaging. Nephrectomy or partial nephrectomy is curative. Metastasis is reported in 17% and recurrence in 49% of adults. No other adjuvant therapy is required in classical type. In epithelioid type, mTORC1 inhibitors like Everolimus, Sirolimus and various Chemotherapy regimens have been tried without success. Rigorous follow-up is a must to detect recurrences.
Conclusions: In the differential diagnosis of a pediatric renal tumor, angiomyolipoma should also be kept in mind; especially in the setting of Tuberous Sclerosis.

Mode of presentation: Short Oral presentation (3+2)

Title: Prenatal Urolithiasis: Management of a case and Review of literature
Authors: Sumona Bose, Shalini H, Rajkiran Raju, Kiran M, Prasanna Kumar AR, Shubha AM
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Abstract:
Aim: To report a rare case of antenatally detected left sided renal stone at 20 weeks
gestation, its follow up and management with review of literature on prenatal urolithiasis
Method: 2 years / female antenatally diagnosed at 20 weeks gestation to have multiple echogenic foci in left lower calyx, followed up with regular antenatal and postnatal scans revealed progressive increase in size of the calcific foci with increasing hydronephrosis. CTKUB showed a hydronephrotic left kidney, normal ureter and a 2.4x1.1 cms oval calculus in the pelvis. Renogram confirmed hydronephrosis with obstructed curve and DRF of 33 %.
Result: A calculus 3x3 cms partially intrarenal into the lower calyx was retrieved by left pyelolithotomy. On probing the ureter , valve causing narrowing of the ureter was apparent . This part of the upper ureteric segment was excised and pyeloplasty was done. Post - operative recovery was uneventful. Stone weighed 2.58 gms , contained 100 % cystine . USG after 3months documented resolution of reflux and EC scan confirmed good drainage with improvement of function to 49%. Conclusion: The presented case is only third among the prenatal urolithiasis reported so far in literature, other two cases detected at 28 and 34 weeks of gestation and managed conservatively. Prenatal urolithiasis is a rare occurrence. Emphasis is on prolonged follow up and evaluation for associated structural defects specially in those with increasing stone size. This will prompt timely intervention with renal function preservation.

Mode of presentation: Short Oral presentation (3+2)
Title: Xanthogranulomatous Pyelonephritis - An Evasive Diagnosis
Authors: Akriti Tulsian, Suraj Gandhi, Vini Joseph, Syamantak basu ,Apoorva Makan, Hemanshi Shah, Neha Sisodiya
Department Institution: Department of Pediatric Surgery, B.Y.L Nair Ch. Hospital and Topiwala National Medical College, Mumbai
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Abstract:
Introduction: Xanthogranulomatous pyelonephritis (XGP) is a chronic granulomatous disease of renal parenchyma. It is an uncommon entity, accounting for 0.6% of histologically documented cases of chronic pyelonephritis. It is commonly misdiagnosed.
Cases: We present three cases of XGP with different presentations and disease process. One case presented at 7 year of age as a psoas abscess. Another case presented at 1 year of age with a non-healing sinus post percutaneous nephrostomy for left pyonephrosis. And a third case presented at 2 years of age with pelviureteric junction obstruction with failure to thrive. All three patients had non-functioning kidney and underwent nephrectomy of the affected kidney. They were diagnosed with XGP on histopathological examination. The patients showed resolution of symptoms on follow up.
Discussion: XGP is a rare renal pathology and rarer in the pediatric and neonatal age group. Most common presentations being: recurrent fever, weight loss, failure to thrive and abdominal lump. It is clinically and radiologically similar to conditions like pelviureteric junction obstruction, cystic lesions, renal tuberculosis and renal malignancies. Definitive diagnosis is on histopathological examination.
Conclusion: XGP is an evasive diagnosis in the preoperative period. High index of suspicion is essential for early diagnosis. Timely diagnosis and management shows significant improvement in clinical condition and growth of the patient.

Mode of presentation: Short Oral presentation (3+2)
Title: Xanthogranulomatous pyelonephritis complicating case of Grade 4 Renal trauma
Authors: Rishabh Jain, Mamta Sengar, Natasha gupta, Kavita Vani, Chhabi Gupta, Vivek manchanda, Niyaz Ahmed khan, Parveen Kumar
Department Institution: Department of Pediatric Surgery , Chacha Nehru Bal Chikitsalya, New Delhi
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Abstract:
To present a rare complication of conservatively managed grade 4 renal trauma
Case Report

7 year old girl with grade 4 renal trauma referred to us 4th day after incidence of trauma occurred. Patient was planned for conservative treatment. Patient was discharged well after a course of antibiotics and supportive management. After a month patient came back to us with limping and right renal angle fullness. DJ stenting and USG guided drainage of collection was planned. As DJ stent was seemed to enter colon peroperatively, CECT abdomen was repeated. It suggested presence of multiple perinephric fistulae with colon and psoas muscle with xanthogranulomatous transformation of perinephric tissue. Patient was managed successively by angiographic embolization of renal vessels after a failed attempt of Nephrectomy.

Discussion: Non operative management strategy is preferred modality in paediatric renal trauma. Xanthogranulomatous pyelonephritis is an uncommon finding in paediatric patients.

Conclusion: Renal artery embolization via angiography is an effective minimally invasive treatment for blunt kidney injury with xanthogranulomatous inflammation.

Mode of presentation: Short Oral presentation (3+2)

Title: Extra-Renal Calyces: A rare renal anomaly
Authors: Hiramani Pathak, Vikram Khanna, Charu Yadav, Kashish Khanna
Department Institution: Department of Pediatric Surgery, Lady Harding Medical College and associated Kalawati Saran Children Hospital, New Delhi
Email: pathak1723@gmail.com
Abstract:
Aim: To report a rare case of Extra-renal calyces (ERC)
Material and methods: A 10 year old male presented with symptoms suggestive of left pelvi-ureteric junction obstruction (PUJO) which was confirmed on ultrasonography. Dynamic scan confirmed severe hydrenephrosis and poorly functioning (9%) left kidney. Patient was taken up for surgery with consent for left nephroureterectomy also. Intra-operatively, note was made of multiple tubular structures (1-3cms in length) arising from the kidney and draining into a dilated pelvis, ureter was attached to the lowermost part of renal pelvis with narrowing at PUJ. Left nephroureterectomy was done. Histopathological findings showed markedly dilated pelvicalyceal system with thickened ureter and focal hydropic changes in kidney.
Result: The child is symptom-free and is on our follow up.
Conclusion: Multiple tubular calyces, which lay outside the kidney, should alert the surgeon towards the possibility of ERC. ERC can be confused with renal duplication anomalies. ERC may be associated with PUJO type of hydrenephrosis.

Mode of presentation: Short Oral presentation (3+2)

Title: Proximal Ureteral Atresia with Cross Fused Ectopia– A Case Report
Authors: Suraj Gandhi, Akriti tulsian, Neha s shenoy, vini Joseph, Symantak basu apoorva makan, hemanshi shah
Department Institution: Department of Pediatric Surgery, BYL Nair hospital, Mumbai
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Abstract:
Ureteral atresia is a rare anomaly usually associated with dysplastic kidney. Proximal ureteral atresia is even rarer. We report a case of a nine-month boy who presented with massive lump in lower abdomen. On ultrasonography and CT IVP, hydrenephrotic left kidney was fused to the lower pole of right kidney. The left kidney was very poorly functioning on renal scan. Intraoperatively there was left proximal ureteral atresia with left cross fused ectopia with massive hydrenephrosis. Reduction pyeloplasty with ureteral substitution using appendix was performed.
On review of literature, only few cases of proximal ureteral atresia have been reported. Failure of development of ureteric bud, ischemic injury or failure of canalization can result in ureteral atresia. Renal function may be regained by establishing unobstructed drainage. In cases where the native ureter is of a narrow caliber and therefore
inappropriate, ureteral substitution should be considered. Ureteral atresia is a rare anomaly and each case needs individualized treatment based on the anatomic findings and renal function.

Mode of presentation: Short Oral presentation (3+2)

Title: Open extraperitoneal dismembered pyeloplasty for ectopic pelvic kidney- Feasibility and Outcome

Authors: Ankur Bhardwaj, Devender Kumar Yadav, Prabudh Goel, Minu Bajpai

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Abstract:
Ectopic pelvic kidney with pelvi-ureteric junction obstruction was usually operated by peritoneal approach. The purpose of the study was to evaluate feasibility and outcome after open extraperitoneal dismembered pyeloplasty for ectopic pelvic kidney

Methods- A Prospective evaluation of all patients who underwent extraperitoneal open pyeloplasty was conducted. Presentation, diagnostic criteria, surgical detail, and outcome was assessed. Success was defined as symptomatic relief and radiological improvement.

Results- Five patients of ectopic pelvic kidney with pelvi-ureteric junction obstruction were identified. Mean age at presentation was 5.2 years. 3 had right and 2 had left side of ectopic kidney. All presented with off and on pain. Diagnosis was established by USG and diuretic renal dynamic scan. Surgical ease was noted while doing extraperitoneal pyeloplasty, as no bowel loops were encountered in the field. Mean follow up was 49.4 months (range 4-88 months). Postoperative renal function improved in one patient while hydronephrosis was improved in all.

Conclusion- Extraperitoneal open dismembered pyeloplasty for ectopic pelvic kidney with pelvi-ureteric junction obstruction is a safe and feasible option with satisfactory outcome.

Mode of presentation: Short Oral presentation (3+2)

Title: Pyelo-renal backflow: A perplexing diagnosis on Antegrade Pyelogram

Authors: Chandramouli Goswami, Prabudh Goel, Minu Bajpai, Anjan Kumar Dhua, Devasenathipathy Kandasamy

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Abstract:
Aim: To present the rare yet enigmatic phenomenon of ‘pyelo-renal’ backflow.

Method: The findings consistent with the phenomenon of pyelo-renal backflow on the antegrade nephrostogram following a failed pyeloplasty have been described.

Result: Eight-months-old boy with multiple congenital anomalies underwent left Anderson-Hynes Pyeloplasty for pelvi-ureteric junction obstruction. Left ureter distal to the site of obstruction was papery thin wall and a lumen too small to accommodate even a 0.025” guide wire. Consequently, a stent less pyeloplasty was performed, but a 6 Fr infant feeding tube was inserted through the lower-pole parenchyma into the renal pelvis. Antegrade contrast study done through the nephrostomy tube (postoperative day 10) revealed obstruction at the level of pelvi-ureteric junction, yet the contrast was visualized in the pelvis of contralateral kidney and urinary bladder (pyelo-venous backflow) masquerading as vesico-ureteric reflux.

The phenomenon of pyelo-renal, pyelo-tubular, pyelo-interstitial, pyelo-sinus and pyelo-lymphatic backflow is known to happen in the presence of obstruction to outflow from renal pelvis. Injection of contrast at a pressure above the critical limit may result in forniceal tears and back-flow of contrast into the renal tubules and beyond. Conclusion: Pyelorrenal backflow resulted in contrast entry into the systemic circulation from the left kidney and its excretion by the contralateral normal kidney. If one is unaware of this entity or is not alert to the possibility, it is easily confused with vesico-ureteric reflux on the contralateral side, thereby complicating the diagnosis further.

Mode of presentation: Short Oral presentation (3+2)
A rare case of Crossed fused ectopic kidney presenting with pelviureteric junction obstruction on ipsilateral side - Case report and systematic review

Authors: Dhruv Mahajan, Devendra Yadav, Prabudh Goel, Minu Bajpai
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Abstract:
Background: Crossed fused ectopia (CFE) is an uncommon congenital renal abnormality. It is often unrecognized as supported by case reports of incidental finding in cadavers. The renal vasculature is grossly anomalous. In symptomatic patients, it can be associated with a wide range of urological problems such as Pelviureteric junction obstruction (PUJO), Vesicoureteric reflux, ureteric strictures, and renal dysplasia. No concrete literature review exists on incidence, natural history and the management of PUJO associated with CFE.

Aim: To review and outline the presentation, diagnosis, work-up and management of CFE associated with PUJO

Material and Methods: The PubMed, MEDLINE, and Scopus databases were systematically searched using PRISMA guidelines. Out of 75 results, 11 case reports were included in the study after removal of duplicate records and records marked ineligible on screening. The demography, clinical presentation, diagnosis, imaging and treatment options were analysed.

Results: The mean age of presentation was 18.3 years (range – 3 months to 40 years). A female preponderance was seen [58.3 % (7/12)], whereas CFE in general have been found more in males. Though overall left to right CFE is more common, however 58.3 % (7/12) of cases were Right to Left CFE when associated with PUJO. PUJO was more commonly seen in the uncrossed orthotopic kidney (7/12) as compared to PUJO in the ectopic crossed kidney (5/12). A high incidence of crossing vessel was seen in 41.6 % (5/12). Open, laparoscopic and robotic pyeloplasty are all reasonable options. It is essential to be cognizant of association with Klippel Feil syndrome and associated renal stones.

Conclusions: PUJO associated with CFE is more likely to be associated with a crossing vessel. Anomalous vascular anatomy should be kept in mind when planning intervention for PUJO in a CFE.

Mode of presentation: Short Oral presentation (3+2)

Title: Hydronephrosis in Horseshoe Kidney-Is pyeloplasty always needed?
Authors: Kiran M D, Devendra Kumar Yadav, PrabudhGoel, Minu Bajpai
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Abstract:
Objective- To evaluate the hydronephrosis and treatment-options in Horseshoe kidney
Materials and Methods- Case details of hydronephrosis in horseshoe kidney were reviewed from 2015 to 2020. Diagnosis of hydronephrosis, treatment option and follow up of these patients were reviewed.
Results- Two cases of unilateral hydronephrosis in horseshoe kidney were reviewed. Diagnosis of unilateral hydronephrosis and horseshoe kidney was established by ultrasonography. Hydronephrosis was further evaluated by well-tempered renal dynamic scan, which showed obstruction at the level of pelviureteric junction with preserved function in both cases. Both the cases had dilated pelvis and the ureter was passing over the isthmus. No aberrant vessel was identified. After the midline isthotomy, the involved pelvis was drained out automatically and good peristalsis was noted in pelvis and ureter. The involved kidney was mobilized form both the pole and three-point lateral fixation was done in the psoas muscle. Both the patients are doing well in the follow up.
Conclusion- Per-operative through assessment is needed in cases of horseshoe kidney. Isthotomy and lateral three-point fixation prevents hanging of ureter over the medially placed lower pole of kidney.

Mode of presentation: Short Oral presentation (3+2)

Title: Renal Dynamic Study for Pelvi-Ureteric Junction Obstruction: Pitfalls and Caution
Authors: Sampreeti Mukherjee, Prabudh Goel, Vishesh Jain, Madhavi Tripathi, Minu Bajpai
**Department Institution:** Department of Pediatric Surgery, AIIMS, New Delhi  
**Email:** sampreetimukherjee@gmail.com  
**Abstract:**  
Background: Management of children with Pelvi-ureteric Junction obstruction (PUJO) relies significantly or sometimes solely on a renal dynamic scan (RDS). However, there are some situations which warrant caution.  
Aim: The authors herewith present their experience with two cases of PUJO wherein the interpretation of the renal dynamic scan findings warranted circumspection.  
Case Details: Case 1: A 4-month-old child with PUJO in left (ectopic/ pelvic) kidney presented with persistent (post-surgery) obstruction on RDS. Ultrasonography was suggestive of mild hydronephrosis with improvement in Society for Fetal Urology (SFU) grading. Caution: The draining from pelvis in replaced by the filling bladder; caution is needed while drawing the ROI (region of interest) curve and interpretation of findings.  
Case 2: A 3-and-a-half-year-old female had right hydronephrosis (and normal ureter) on ultrasonography. Yet the RDS depicted a dilated ureter; caution is needed to differentiate bowel excretion of contrast from a dilated ureter.  
Conclusion: An obstructed curve in RDS in the presence of abnormal renal anatomy or the presence of hydroureteronephrosis should be evaluated critically and correlated with ultrasonography as an oversight may lead to wrong diagnosis and may unnecessarily subject a child to a gamut of investigations and procedures.  
**Mode of presentation:** Short Oral presentation (3+2)  
**Title:** Uretero-pyelostomy in ureteral duplication anomaly  
**Authors:** Ashitosh Pokharkar, Amit Gupta, R Chadha, SR Choudhury, YK Sarin, H Pathak, C Yadav  
**Department Institution:** Department of Pediatric Surgery, Lady Hardinge Medical College and associated Kalawati Saran Children’s Hospital, New Delhi  
**Email:** ashitoshpd106@gmail.com  
**Abstract:**  
Aim: To highlight the role of uretero-pyelostomy in management of ureteral duplication anomaly.  
Material and methods: A 5 year old male child presented with history of left inguinal hernia, intermittent pyuria and occasional pain in right flank for 3 months. Examination confirmed left inguinal hernia, rest was unremarkable. Ultrasound KUB revealed right hydroureteronephrosis (HDUN), Micturating Cystourethrogram (MCU) was normal with no vesicoureteric reflux (VUR). Magnetic Resonance Urography (MRU) showed complete duplication on right side with gross dilatation of upper pole pelvicalyceal system and right ureter ectopic insertion near bladder neck. DTPA Renal Scintigraphy (DRS) showed normal functioning 46% left kidney (LK) and mildly impaired function of Right kidney (RK) upper moiety 41% and adequate functioning lower moiety (59%) lower moiety (overall 54%). On Cystoscopy, both ureteric orifices were normal and a bulge seen at bladder neck with peristaltic activity (? Ectopic Right Ureter). Because of relatively preserved function of upper moiety, an end to side Right uretero-pyelostomy was done with anastomosis between upper moiety ureter and lower moiety pelvis; redundant distal tortuous upper pole ureter was excised carefully preserving blood supply to lower pole ureter.  
Results: Postoperative period was uneventful and patient is doing well at 8 months of follow up. USG KUB has shown decrease in right upper moiety hydronephrosis and DRS differential function of rt upper moiety (38%) is preserved.  
Conclusion: 1) Ureteral duplication anomaly in males, although uncommon, is a differential diagnosis during evaluation of hydroureteronephrosis. In this case, absence of VUR on MCU led to followed further by special investigations (MRU & DRS) clinched the diagnosis. 2) Uretero-pyelostomy has a definite role in selective cases of ureteral duplication anomaly with good function of upper moiety and no VUR in lower moiety ureter.  
**Mode of presentation:** Short Oral presentation (3+2)  
**Title:** Concurrent primary pelvi-ureteric junction (PUJ) obstruction in boys with antenatally presenting PUV. Report of 2 cases.  
**Authors:** Satish Kumar KV, Naveen Thomas; Asha Thomas; Pankaj Srivatsav  
**Department Institution:** Department of Pediatric Surgery, Baptist Hospital, Bangalore
Abstract:
Aims: Persistence of hydronephrosis following valve ablation is often attributed to ureteral dilatation with or without high grade VUR, which can progress to secondary PUJ Obstruction. Two babies with antenatally diagnosed PUV had significant unilateral hydronephrosis, which was worsening after valve fulguration. Both babies had concurrent PUJ Obstruction and underwent pyeloplasty.

Methods: Two male neonates had antenatally diagnosed bilateral hydronephrosis, which was progressively. Postnatally, one baby had valve fulguration on day 4 of life. Unilateral hydronephrosis was worsening with resolution of ureteral dilatation and contralateral hydronephrosis. EC renogram confirmed left sided PUJ Obstruction the baby underwent cystoscopy left RGP at 5 months and pyeloplasty was performed. The 2nd baby had worsening unilateral hydronephrosis and renogram showed obstruction at left PUJ with reduced function. Since baby had voiding symptoms, a MCU was performed which was suggestive of possible PUV with no VUR. After valve fulguration at 6 months baby underwent cystoscopy (with division of residual valves) and open pyeloplasty was performed confirming classical PUJ Obstruction.

Results: Both babies have recovered well following PUV fulguration and nadir creatinine in normal range. One child is now 2 1/2 year old, toilet trained and has no voiding symptoms and hydronephrosis is resolved. The other child is 8 months and voiding well with resolving hydronephrosis

Conclusions: Concomitant PUJO in PUV presenting antenatally is rare. Persistence of hydronephrosis following treatment of PUV is often due to high bladder pressure or secondary to high grade VUR, where ureteral dilatation resolves but the PUJ remains narrow, which is a potential site for obstruction leading to secondary PUJ obstruction. A careful evaluation for co-existing primary PUJ obstruction is needed if hydronephrosis is worsening following adequate valve ablation and with no ureteral dilatation or VUR, as it can lead to rapid renal deterioration if not recognized and corrected early.
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Abstract:
Abstract body: Aim: To describe a rare congenital anomaly, duplication of bladder with its attendant management challenges. Methods: Retrospective review of the course of events that lead to the diagnosis of a case of duplication of bladder and its subsequent management. Results: A 14-year-old male presented to Paediatric Surgery OPD with history of dribbling of urine since birth. Child was born with prepenile scrotum with two urinary openings (2 cm inferior to shaft @ 6 o’clock position and second opening @ 1 o’clock position superior to shaft). There was no dry period, and no history of recurrent urinary tract infections. Radiologic examination including Retrograde Urethrogram and Magnetic Resonance Urogram revealed two bladders. Only one urethra was visualised and was traceable from collapsed bladder and entering into phallus, corpora appeared hypoplastic. One bladder was not seen communicating with phallus. During laparotomy, two separate urinary bladders were observed with no communication, each draining one ureter. Each bladder had a capacity of approximately 300 mL. A thick fibrous wall/septum was seen separating the two medially. This was divided and the two bladders anastomosed. Post op, patient has recovered well and drains via an appendicovesicostomy created for continence. Conclusion: Duplication of bladder is a rare congenital anomaly, with very few cases reported worldwide. Management is a challenge, and should take in consideration the anatomy and function of the upper and lower urinary tracts to decide appropriate course of action.

Mode of presentation: Short Oral presentation (3+2)

Title: Ectopic ureter arising from Congenital posterior urethral diverticulum: A quest for embryological origin of the entity
Authors: Sunil K S Gaur, Dr. Sarita Chowdhary
Department Institution: Department of Pediatric Surgery, Institute of Medical Sciences, BHU, Varanasi
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Abstract:
Introduction: The ectopic ureter and posterior urethral diverticulum are two known common urological anomalies of pediatric patients. Ectopic ureter originates from the mesonephric duct, while posterior urethra develops pelvic part of urogenital sinus. The ureteric origin from posterior diverticulum is not reported. Aim: To highlight the unusual association of posterior urethral diverticulum with ectopic ureter. Methods and Results: A one-month old boy with symptoms of obstructive uropathy presented to OPD. KUB-Ultrasoundogram demonstrated left hydroureteronephrosis with left renal cortical thinning, while MCU suggested dilated posterior urethra with bladder diverticulum and left hydroureteronephrosis. Urethrocystoscopy showed a very large diverticulum in posterior urethra which was leading to left grossly dilated and tortuous left ureter. No posterior urethral valve or verumontarum was noted. Bladder neck was noted supero-anterior to diverticular opening, with small bladder capacity and normal right ureteric opening at trigone. In view of persistent urological obstruction, surgical excision of large bladder diverticulum with left ureter and small kidney was done. Histopathology confirmed the presence of............ Conclusions: The report defines first case where ectopic ureter arises from congenital posterior urethral diverticulum. The embryologic origin of entity is hypothesized as absorption of ureteric bud in diverticulum.

Mode of presentation: Short Oral presentation (3+2)

Title: An unexpected case of acute bladder outlet obstruction
Authors: Garvita Singh, Satish Kumar Aggarwal, Gaurav Singh, Muni Varma
Department Institution: Department of Pediatric Surgery Sir Ganga Ram Hospital, New Delhi
Email: garvitasingh429@gmail.com

Abstract:
Background: Bladder outlet obstruction in children can be caused by a number of anatomical and functional factors. We report a case of acute bladder outlet obstruction in a PUV patient, post fulguration, unexpectedly caused by a large fecaloma compressing on the bladder neck.
Case report: An 11 months old boy came to ER with acute retention of urine and required urgent catheterisation to decompress the bladder. He was a follow up case of PUV with right MCDK and had undergone valve fulguration earlier with resolution of symptoms. He was apparently well till a day back and had no previous such episodes. He was then admitted post catheterisation for cystoscopic evaluation.
An on-table expression cystourethrography was attempted after filling the bladder, but bladder was not expressible at all after removing the catheter and applying suprapubic pressure. RGU was attempted but contrast did not reach the urinary bladder. Cystoscope could not be introduced across the urethra into urinary bladder because of acute and non-negotiable angle. Rectal examination revealed a very large and hard fecaloma. Manual evacuation was done and wash given following which scope was easily negotiated into the bladder. There were no residual valves. Patient was discharged with Foley’s catheter in situ which was removed after a week.
Discussion: Chronic constipation in children should not be ignored. It can cause serious urological as well as GI complications if severe.

Mode of presentation: Short Oral presentation (3+2)

Title: Caudal duplication in a child with covered extrophy: A case report.
Authors: Muni Varma, Gaurav Singh, Kush Luthra, Chandrika Kalagotla, Garvita Singh, Satish Kumar Aggarwal
Department Institution: Department of Pediatric Surgery, SIR GANGA RAM HOSPITAL, New Delhi
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Abstract:
Aim: To present a case of caudal duplication in a child with covered extrophy.
Case report: A 3 month old girl who had been born with ARM and had undergone sigmoid colostomy presented for definitive pull through. She had 4 openings on the stoma - from upper two she was passing stools. Further examination revealed a low set umbilicus with pubic diastasis and lower abdominal divericitation of rectii. She had a single clitoris with 2 urethral orifices and 2 separate vaginal openings with complete vertical midline vestibular septum, a small right rectovestibular fistula and another perineal fistula in the midline. Spine was normal. Clinical findings were confirmed on MRI as well as cystoscopy and dye study which revealed duplication of urinary bladder, uterus didelphys (complete duplication of uterus and vagina) with duplicated and asymmetric hindgut. The right hemi rectum located in the vestibule as a stenotic opening while the left hemi rectum opened as an anterior perineal fistula. She underwent PSARP with unification (Stapled and manual) of hindgut and vaginoplasty. Urinary system was not intervened. After three months the stoma was closed. Post op course was uneventful.
Discussion: Caudal duplication syndrome is a rare anomaly which is known to involve the gastrointestinal, genitourinary system and spinal canal. Multiple theories for its embryological pathogenesis involving the cloaca and neural tube have been proposed without much consensus. Emphasis should be on individualised management as in our case the duplicated hindgut and vagina were individually joined by dividing the septum while the urethra, bladder and uterus were left untouched as they were not causing any obstruction.

Mode of presentation: Short Oral presentation (3+2)

Title: Exstrophy variants: Types and Anomalies associated
Authors: Pattu Pogula Jagadish, Devendra Kumar Yadav, Prabudh Goel, Minu Bajpai
Department Institution: Department of Pediatric Surgery All India Institute Of Medical Sciences, New Delhi
Email: pattu.jagadish@gmail.com
Abstract:
Aim: To study the different presentations and associated anomalies in patients with exstrophy variant
Methods: Prospective study upon 4 patients with exstrophy variants over the period 2014-2021 and the various associated anomalies with them.
Results: 4 children which includes 3 males and 1 female with exstrophy variants were included in the study. Mean age is 2.3 years.
Case 1: A 1 year male complaining of dribbling of urine from the subumbilical defect. He has superior vesical fissure. Child also had High Anorectal malformation
Case 2: A 3 month male presented with bilateral inguinal hernia and exposed bladder plate with normal penis and urethra. It is a superior vesical fissure variant with associated left renal agenesis
Case 3: A 6 year female presented with low-lying umbilicus and had widened pubic symphysis. This patient had pseudoexstrophy.
Case 4: A 2 year male presented with bilateral undescended testis, bilateral inguinal hernia with puckering of lower abdominal wall. He also had widened pubic symphysis
Conclusions: As opposed to classical exstrophy-epispadias complex. Exstrophy variants is assoicated with various anomalies and varied presentations.

Mode of presentation: Short Oral presentation (3+2)
Title: Early Endoscopic Decompression in Treatment of Pediatric Ureteroceles Presenting to a Single Institution and Requirement of Secondary Procedures in these Patients.
Authors: Mudasir A Magray, Gowhar Nazir Mufti, Nisar Ahmad Bhat
Department Institution: SKIMS Srinagar
Email: drmudasirmagray@gmail.com
Abstract:
Introduction
The basic goals of treatment of ureteroceles are preservation of renal function, relieving obstruction, preventing and managing reflux, and maintaining continence. Our study was mainly focussed on the role of early endoscopic decompression in these patients and need for a secondary procedure.
Material and methods
The study was conducted as prospective study starting from January 2015 to December 2018, at the Division of Pediatric Surgery of the Sheri Kashmir Institute of Medical Sciences (SKIMS), India. Children were either diagnosed prenatally as having ureteroceles or postnatally mostly presenting as urinary tract infections. All the children with diagnosis of ureterocele at ultrasonography were included, if treated by endoscopic access. Both intravesical and extravesical ureteroceles were included.
Results
Twelve patients presented with ureteroceles over a 3 year period. There were 8 girls and 4 boys. 2 patients were diagnosed prenatally and 10 in postnatal period. Average age of the patients at the time of decompression was 16 months. 9 patients in the study group had unilateral single system ureteroceles. 2 patients had bilateral ureteroceles with one patient among them having bifid system on right side. One patient had unilateral ureteroceles with a bifid system. UTI was the most common presentation. Two patients in our study required a definitive surgery (16.66%) after initial decompression. Rest of the 10 patients were strictly followed up did not require a definitive surgery. Among these 10 patients one patient had bilateral ureteroceles and underwent endoscopic decompression only. 9 patients had single system unilateral ureteroceles and decompression sufficed in them as a definitive treatment. Among these 9 patients two had mild degree of VUR which resolved with conservative treatment. Patients who have achieved toilet training were observed for bladder dysfunction and had none till date and are still on follow-up.
Conclusion
We recommend endoscopic decompression as a definitive treatment in unilateral single system ureteroceles, however a close follow-up is recommended.
Mode of presentation: Short Oral presentation (3+2)

Title: Excision of a large bladder diverticulum causing urine obstruction – a rare presentation

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Abstract:
Bladder diverticulum is herniation of the mucosa through the muscularis propria of the bladder wall. Congenital bladder diverticulum is very rare and needs surgical excision when they present with urinary obstruction.

Materials and methods:
3-year male child presented with complaints of difficulty in passing urine with hesitancy. He had two episodes of urinary tract infection in the past. Ultrasound showed a posterior bladder diverticulum. MCU was done which showed a massive diverticulum pushing bladder out of small bony pelvis stretching urethra and causing mechanical obstruction associated with right grade 3 vesicoureteric reflux.

Results: He underwent open bladder diverticulum excision with right ureteric reimplantation and DJ stenting. Postoperative period was uneventful. Per urethral catheter was removed on POD4. DJ stent was removed after 6 weeks.

Conclusion:
Congenital Bladder diverticulum is rare entity but bladder diverticulum secondary to infravesical obstruction is quite common. Bladder diverticulum requires diverticulum excision and bladder wall repair at the site of diverticulum with/without ureteric reimplantation.

Mode of presentation: Short Oral presentation (3+2)

Title: Modified Politano Lead Better Ureteric re-implantation : A novel technique

Authors: gaurav singh, Satish Kumar Aggarwal, Muni Varma, Chandrika Kalagotla, Garvita Singh

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Abstract:
To present our experience with a novel modification of Lead better politano – Completely intravesical, technique of ureteric reimplantation.

Method: Case records of patients who underwent Modified Lead Better Politano ureteric reimplantation, between March 2020 and March 2021 were reviewed. Demographics, indication of reimplant, associated anomalies, surgical procedures and outcomes were recorded. Operative technique: Bladder is opened in midline via the Pfannensteil incision. Ureter is mobilised by a circumferential incision around the orifice. The muscle above the hiatus is mobilised on both sides and divided at 11o’clock on Right side and 1 o’clock on Left and ureter is thus shifted up to new hiatus. Detrusor is then closed behind the ureter, if tunnel length needs further lengthening the orifice is shifted medially and down further. The hiatus is shifted up and lateral by incising the detrusor under vision and suturing it behind the new tunnel. Tunnel length further increased by shifting the meatus more towards the bladder neck, thus achieving about 2 cm tunnel.

Results:
Age/sex Etiology Unilateral/Bilateral Post-op complications Associated anomalies
1 2 Y/F Reflux Left – Grade V No No
2 4Y/M Duplex Left No No
3 12Y/M Obstructing - refluxing Right – Grade IV No No
4 4Y/M Reflux Bilateral (Right – II, Left – III) UTI Left PUJO
5 4Y/M Reflux Left – Grade V UTI/Hematuria PU, Hutch Diverticulum
Conclusion: The present modification makes the procedure technically easier, completely intravesical and fool proof neo-tunnel without risk of kinking of ureter, thus establishing the flap valve anti reflux mechanism. Endoscopic manipulation is possible in future.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Needle as foreign body in urethra: Successful Removal

**Authors:** Sahil Mashal, Anil Kumar

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**Abstract:**
AIM: To discuss the management of self-inserted sewing needle in the lower urinary tract.

METHOD: We describe here a 10-year-old boy who had self inserted a sewing needle into his urethra. Initial attempts were made to remove the needle from the urethra by inserting a cystoscope but was not successful. The patient presented to our institution with bleeding per urethra with feeding tube intrinsu per urethra. On examination a foreign body was palpable at bulbar urethra. X-ray pelvis done which showed a needle in the urethra. Ultrasound suggestive of needle breaching the urethra. On examination a needle is palpated along the bulbar urethra and on per rectal examination, needle could be palpated.

As already attempted for urethroscopic removal, direct removal of needle under general anaesthesia done.

RESULT: Under general anaesthesia, patient placed in lithotomy position and applying pressure on needle per rectally, incision made over the most prominent part of the needle and incision deepened, retrieved the needle by holding with needle holder. No active bleeding per urethra and at the incision site was noted. Per urethral feeding tube was removed and 12Fr catheter was inserted and patient was discharged. Patient was followed up after 3 weeks and retrograde urethrogram was done, which was normal. No stricture or remnant of sewing needle was noted.

CONCLUSION: Per Rectal examination plays an important role and gives adequate information and timely management of the child leads to uneventful hospital stay. Psychiatric evaluation is mandatory to detect an underlying mental disorder.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** A conglomeration of hindgut and urogenital anomalies in a baby girl.

**Authors:** Babu Sree Vatsa, Sathish Kumar, Naveen Thomas, Khudeja

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**Abstract:**
A baby girl with antenatally diagnosed left MCDK and right hydroureteronephrosis was delivered at term. There was no dysmorphism, but had ARM with rectovestibular fistula and spine was normal. Baby underwent colostomy and during follow up developed rec UTI at 1 month. Baby was further investigated and found to have a large ureterocele on right with worsening HUN and left kidney was atrophic. A cystogram and cystoscopy with RGP showed- A partially ruptured ureterocele, Right HUN, Short Urogenital sinus, septate vagina and uterus didelphys. The baby was discharged on prophylactic antibiotics and was free of UTI. At 6 months baby underwent elective ASARP and was doing well. Latest ultrasound showed minimal hydronephrosis and maintained renal cortical thickness and no ureterocele. The renal parameters are normal and baby is thriving with no further UTI's and is on antibiotics.

**Mode of presentation:** Short Oral presentation (3+2)

**Title:** Prostatic Abscess in a neonate

**Authors:** Md Asjad Karim Bakhteyar, S K Rahul, Ramji Prasad, D Chaubey, Pranay Kumar, Sujit Kumar

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Abstract:
Aim: To describe the clinical features of a neonate with prostatic abscess
Method: A 27 days old male child presented with high grade fever and excessive crying while voiding for 10 days. Parents did not complain about any dribbling of urine or narrowing of urinary stream. Bowel movements were normal. On examination, patient was febrile and dull with dehydration due to inadequate feeding. Per abdomen was soft, non-distended, non-tender; bladder was not palpable. Raised total leukocyte count with normal serum creatinine was found; abdominal and pelvic sonogram revealed an enlarged prostate gland with diffuse heterogeneous hypo-echogenicity with peripheral enhancement suggestive of Prostatic abscess; bilateral kidneys and ureters were normal; bladder was thick-walled. On per rectal examination, a smooth, rounded, tender and fluctuant swelling was found anteriorly. Patient was catheterized and basic resuscitative procedure was instituted.
Routine urine showed presence of pus cells. Under ultrasound guidance, 15ml pus was aspirated per-rectally; pus culture showed Enterococcus fecalis, sensitive to Linezolid and Vancomycin. Patient received intravenous Vancomycin for 5 days and was discharged on oral linezolid for 3 weeks.
RESULT: Neonate improved dramatically after USG guided pus aspiration and antibiotic therapy. He was asymptomatic on follow-up.
CONCLUSION: Neonatal Prostatic abscesses are rare and cause severe sepsis; early diagnosis and ultrasound-guided drainage under antibiotic coverage ensures prompt recovery.

Mode of presentation: Short Oral presentation (3+2)

Title: Scrotal AV malformation
Authors: Dhinesh Balaji, D Vembar, M Raghul, R Velmurugan
Department Institution: Institute of child health, Madras medical college, Chennai
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Abstract:
Background
Scrotal swelling is a very common condition in surgical practice. Differential diagnosis includes benign lesions that affect any component of the scrotum (testicles, soft tissues, and vascular plexus), malignancy, metastasis, and infection. Arteriovenous malformations (AVMs) of the scrotum are rare lesion, usually diagnosed incidentally during evaluation of scrotal masses.
Case presentation
A 5 year old boy presented with left hemi-scrotal swelling, diagnosed with hydrocele in outside centre, but on further examination and evaluation was found to have a scrotal arteriovenous malformation. He underwent testis preserving hemi-scrotectomy and complete resection of the lesion.
Conclusion:
AVM of scrotum is a rare presentation, proper evaluation and resection with an ample margin of safety is indicated.

Mode of presentation: Short Oral presentation (3+2)

Title: Aphallia- Stage 1 management during infancy
Authors: Suhasini Gazula, Suhasini Gazula
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Abstract:
Aim & Background: Aphallia is defined as an absent phallus with an ectopic urethral opening, characterized by absence of both corpora cavernosa and the corpus spongiosum. Aphallia is extremely rare (1 in 10–30 million births) with only 100 cases reported. Because of its rarity, associated social stigma and its reconstructive complexity, management of this condition was controversial and still remains a challenge.
Management of aphallia by early castration and conversion to female is no longer acceptable. Management requires a stepwise approach to addressing needs as they arise.

Case: We present a 4 month-old baby who presented to us with aphallia and rectourethral fistula and our stage 1 management of the same. We would like to highlight the societal stigma and the scant literature available which made our management of the baby arduous. After bowel preparation, the baby underwent cystoscopy followed by a pre-anal, anterior coronal approach (Bajpai technique) to separate the long common wall the urethral opening from the anterior rectal wall and constructing a perineal urethrostomy. Scrotal flaps were raised and scrotal phalloplasty was done. Wound dehiscence and retraction of urethrostomy occurred on POD-7. Secondary suturing was done after which baby had an uneventful recovery.

Conclusion: Aphallia is a complex congenital anomaly requiring early and ongoing psychological support for both the parents and the child that is sustained into adulthood. Respecting normal psychological development and gender identity, phallic reconstruction should preferably be completed by the time the child becomes aware of his penis.

Mode of presentation: Short Oral presentation (3+2)

Title: Omphalocele With Unusual Content Of Bladder Prolapse Through Wide Patent Urachus-Mystery Till Solved

Authors: Tanvi Goel, Shilpa Sharma, Devasenathipathy Kandasamy, Minu Bajpai.

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Abstract:

Aim: Patent vitellointestinal duct anomalies are common. Here we describe an unusual case of Omphalocele with unusual underlying hidden anomaly.

Methods: A rare case of a Omphalocele with unusual contents is described.

Results: A term neonate presented on day 11 of life with defect in the lower abdomen with swelling since birth and exposed with bowel like structure with a thin membranous covering since 1 week. There was an umbilical defect, measuring 6x4 cm with covering of normal skin in the proximal half to three-fourth and exposed bowel like structure in distal part. There was a visible opening in that bowel like structure which could be calibrated and had watery serous discharge from it. No meconium staining. There was divarication of recti also. Anal opening was normal. No pubic diastasis was seen. Detailed radiological evaluation of the child was done, including ultrasound and contrast studies from the opening and the normal urethra. They all showed communication to the urinary tract but could not lead to a formal diagnosis. The child was operated at 4 months age. Intraoperatively, Bladder mucosa was found prolapsed through the defect with metaplastic tissue forming circumferential cover. Bladder capacity was good and both ureters and vas were identified well. The Metaplastic tissue was excised and bladder closure was done in three layers. Cicatrised tissue at the neck was used for umbilicoplasty during repair. He was discharged in one week but catheter was kept for 2 weeks. The lax abdominal wall was strapped for 3 weeks to help regain muscle tone. He is doing well on follow up, with a healthy wound and normal voiding.

Conclusion: We report a rare urachal anomaly, unique to neonates, which mimics an abdominal wall defect on clinical examination. Delaying repair for complete evaluation helps to achieve a better surgical outcome.

Mode of presentation: Short Oral presentation (3+2)

Title: Congenital Anterior Urethrocutaneous Fistula: Variable clinical presentation and their management

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Abstract:

Aim: To review our experience with 3 cases of Congenital Anterior Urethrocutaneous Fistula (CAUF) and highlight their variable presentation and management
Result: A total of 3 cases of CAUF were managed and reviewed in our institution and reviewed. These cases had variable presentation in form of isolated urethrocutaneous fistula, CAUF with hypospadias like features and CAUF in association with urethral duplication. The management was individualized based on the various clinical features like the caliber of the distal urethra, site, and size of the fistula, and other associated anomalies. The management of these cases involved primary fistula repair, Snodgrass repair and combined repair of the CAUF and urethral duplication. In all cases, the repair was reinforced with tunica vaginalis flap. On follow up ranging from 1 to 3 years none of these patients had recurrence of fistula with normal urinary stream and insignificant post void residual urine on ultrasound.

Conclusion: CAUF is a rare urethral anomaly as compared to the posterior/perineal urethrocutaneous fistula which is usually classified as urethral duplication or accessory urethra. Besides awareness about the condition, a careful clinical examination, evaluation, and an appropriate surgical technique is required to achieve an optimal functional and aesthetic outcome.

Mode of presentation: Short Oral presentation (3+2)

Title: Near Total Amputation Of Glans Penis Post Circumcision- A rare complication
Authors: Sampreeti Mukherjee, Shilpa Sharma, Minu Bajpai
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Abstract:
Background: Circumcision is the most commonly performed operation in the world. In general, a variety of techniques are used, and it is being performed by a significant number of non-medical personnel. While circumcision is associated with only minor and treatable complications, it can also have some dangerous complications which can become an urologic emergency
Aim: We aim to present a case report of a 3-year-old boy who presented with partial penile amputation post ritual circumcision at 2 years 10 months of age
Case presentation: We encountered a 3-year-old boy who underwent circumcision at a local hospital. He developed gangrene of distal penis post-surgery, which healed and sloughed off leading to a near total amputation of glans penis with only 30% of residual glans and a small sized meatal opening. He had been using dilators every day to keep the urethral opening patent. He also had history of straining during micturition. We performed dilatation of the urethral opening under anesthesia and advised local testosterone application for increasing glans girth. The boy is awaiting a definitive surgery for repair of the penile deformity.
Discussion: A rare complication of glans loss post circumcision is described. The morbidity of this complication is severe, and it is difficult to manage. Repeated dilatations help treat the associated meatal stenosis and prevent upper tract damage.

Mode of presentation: Short Oral presentation (3+2)

Title: Study Of Pelviureteric Juction Obstruction Due To Crossing Vessels - An Institutional Study
Authors: Edamakanti Swetha Reddy, Niti Vyas
Department Institution: Department of Pediatric Surgery SJKCT Sangli
Email: eswethareddy22@gmail.com
Abstract:
Aim: Study of puj obstruction due to crossing vessels – institutional experience.
Abstract:
In a retrospective review of out of 200 cases which are operated for puj obstruction at our institute 12 cases were due to crossing vessels at pelvi ureteric junction. Most common symptom of presentation is abdominal pain. Associated horse shoe kidney is seen 1 case . USG abdomen and renal dynamic scans – DTPA/Ec scan are done in all cases. After diagnosis of pujo classical dismembered pyeloplasty with pelvi ureteric anastomosis anterior to crossing vessel was done in all cases. All cases are operated by extraperitoneal approach with flank incision .
Results: patient did well post operatively, followed up for next 2 years and are doing well .
Conclusion: Pujo due to crossing vessel should be evaluated in all cases of puj obstruction. Crossing vessel is most common cause of extrinsic compression at pelvi ureteric. Repair can be done extraperitoneally without surgical difficulty.

Mode of presentation: Short Oral presentation (3+2)
Title: Renal hydatid with tuberculosis in a child: A rare coexistence
Authors: Sravanthi Vutukuru, Shailesh Solanki, Prema Menon, Radhika S, Ram Samujh
Department Institution: Department of Pediatric Surgery PGIMER Chandigarh
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Abstract:
Introduction:
Hydatid disease (HD) and Tuberculosis (TB) both are endemic in India with a prevalence of 5-11% and 27% respectively. HD commonly involves the liver (50-70%) and lungs (20-30%) while TB commonly affects the lungs. [1] The incidence of renal HD and renal TB is 2% and 3% respectively of all the cases of HD and TB.[2] The treatment of both the pathologies at the same time requires multifaceted medical management and surgical intervention at the optimal time. Here, we are describing a case of renal hydatid with tuberculosis in a child, its presentation and management along with the review of pertinent literature.

Case report:
A 6-year-old male child presented with vague abdominal pain for the past two years. The child was hemodynamically stable and on examination, a firm lump was palpable in the right lumbar region. Ultrasonography (USG) and CECT abdomen showed an 8.7 x 6.6 cm cystic lesion arising from the upper pole of the right kidney, with fine internal septations with a large exophytic component which was scalloping the posteroinferior surface of the right lobe of the liver. On clinical presentation and radiological images, the possibility of cystic variant of Wilms tumor (WT) kept and child was taken up for exploration with consent of right partial nephrectomy. But on laparotomy, a tense cystic lesion was noted arising from the upper pole of the kidney, abutting the lower surface of the liver and 70ml of clear fluid was aspirated. Deroofing of the cyst was done and a drain was placed in the cyst and abdomen was closed. The histopathology was suggestive of co-existence of both TB and hydatid cyst. The child was started on ATT as well as Albendazole. Doing well on follow-up.

Conclusion/Result:
Co-existence of renal HD and TB is rare, but the awareness of its association is important in managing the patients, who are unresponsive to the standard treatment. Multidrug chemotherapy combined with surgery as and when indicated is the ideal treatment.

Conflict of interest: None
Source of support: None
Acknowledgement: None

Mode of presentation: Short Oral presentation (3+2)
Title: Granulosa cell tumor presenting as precocious puberty
Authors: Sheetal Upreti, Nitin J Peters, Ram Samujh, Indu Mohini Sen, Parikshaa Gupta, Amita Trehan
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Email: sheetal.upreti@gmail.com
Abstract:
Introduction:
Sex cord tumors are rare type of ovarian malignancy in children. Presentation varies from precocious puberty and vaginal discharge to pain abdomen, abdominal distension with mass and massive ascites.

Case report:
Index case is that of a 1 year old child who presented with abdominal distension with a vague palpable abdominopelvic lump. There were signs of precocious puberty in terms of enlarged breast buds and per vaginal discharge. There was gross ascites with right inguinal hernia. CECT scan was suggestive of abdominopelvic mass arising from right adnexa with gross ascites. Child underwent exploratory laparotomy. Ascitic tap done in preoperative period drained 500 ml straw colored ascites. There was ruptured right ovarian mass of 10x8 cm size. Right salpingo-oophorectomy was performed. No pelvic or abdominal lymphadenopathy was present, no liver or peritoneal metastasis found. FSH, LH and estradiol were raised initially which subsided after surgery. HPE was suggestive of granulosa cell tumor. Child was discharged uneventfully four days after surgery. She was not given any adjuvant chemotherapy and is doing well at a 1 year follow up.

Conclusion:
Granulosa cell tumor is a rare tumor in children. Abdominopelvic mass with precocious puberty should alert the surgeon of this diagnosis. Surgery is the cornerstone of management along with adjuvant chemotherapy as per protocol. The long term outcome is good.

Mode of presentation: Short Oral presentation (3+2)
Title: Congenital Malignant Rhabdoid Tumor of Neck – Uncommon tumour in a neonate
Authors: Manasa Reddy, Muneer A Malik, JK Mahajan, Ram Samujh
Department Institution: Department of Pediatric Surgery PGIMER Chandigarh
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Abstract:
"Background: Non-renal, non-central nervous system malignant rhabdoid tumours (MRT) are rare in neonates. To the best of our knowledge, only 5 cases of congenital MRT of neck have been described till date.

Case report:
A 13-day old male neonate, born at 35 weeks of gestation via normal vaginal delivery, after an uncomplicated pregnancy presented with a mass on the right side of the neck since birth. There was no history of noisy breathing, difficulty in feeding or any abnormal movements of eyes or limbs. On physical examination, a large, firm, non-tender mass measuring 6 x 6 cm with well-defined margins was noted on the right side of the neck.

Ultrasonography (USG) showed a solid soft tissue mass of 5x4.7 cm with evidence of thick echogenic tissue separated by hypodense lobular contents. Renal and CNS USG examination was normal. Contrast-enhanced computed tomography (CECT) revealed a well-defined, heterogeneously enhancing mass lesion of 5.1x5.5x5.6 cm in the right posterior cervical and paravertebral space, displacing the tracheo-laryngeal airway and carotid vessels medially.

Baby underwent resection of the tumour in toto, however, on posterior side the tumour was not separable from the paravertebral muscles, a part of which was also excised. The baby required postoperative ventilation for 7 days but could not be weaned off high oxygen support for 15 days due to right acquired postoperative eventration necessitating plication of the diaphragm. Histopathological examination revealed tumor cells with irregular nuclear border, vesicular chromatin, prominent nucleoli and moderate amount of cytoplasm. Immunohistochemistry showed loss of expression for INI-1 and variable positivity for CD99 and FLI-1 and were negative for desmin, myogenin and myoD1 consistent with malignant rhabdoid tumor. Chemotherapy was planned and the parents were explained regarding the poor prognosis. However, they made an informed choice to opt out of treatment and the baby was discharged home.

Conclusions: Despite rarity of the occurrence, rhabdoid tumors have to be considered in the setting of a neck mass in neonates especially in the presence of a metastatic disease. In absence of metastatic disease, a complete surgical excision may offer some hope in these babies."

Mode of presentation: Short Oral presentation (3+2)
Title: Is it possible to create antireflux mechanism without mobilization of ureters and creation of submucosal tunnel: An experimental study
Authors: Nirpex Tyagi, Kureel S N, Gupta A, Pant N, Singh G, Rai RK
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**Abstract:**

Objective- To study the possibility of creating mucosal valve mechanism at ureteric orifice without obstructing the urine outflow but preventing the urine backflow into the ureters.

Material & methods- Ethical waiver was obtained from the institute. Prospective experimental study was conducted on the post-mortem specimen of intact bladder urethra and bilateral ureters retrieved from the already slaughtered lamb available in the meat market. Feeding tube inserted via bladder neck opening into bladder lumen and bladder inflated with saline demonstrated no reflux of urine via transverse cut opening of ureters. Bladder lumen opened, ureteric orifices incised backwards to eliminate the obliquity. After closing the bladder opening, saline inflation test demonstrated bilateral reflux of saline via cut openings of bilateral ureters. Bladder re-opened. The upper limb of horizontal U started 10 mm lateral and 8 mm above the refluxing ureteric orifice. Distal most curvature of horizontal U was kept 5 mm distal to ureteric orifice continuing along the lower limb of horizontal U terminating 10 mm lateral and 8 mm below the refluxing ureteric orifice, mucosal flaps from superior and inferior incision mobilized and edges joined to cover the ureteric orifice creating a flap valve mechanism. Influx of saline via cut end of ureters demonstrated no obstruction. Bladder closed. Saline inflation test and contrast study demonstrated abolition of reflux on flap side and persistence of reflux on another side.

Results- Such five experiments were conducted. On the side where valve was created, vesicoureteric reflux was abolished in four but in one minimal reflux still persisted.

Conclusion- Creating a mucosal flap valve around the ureteric orifice can prevent reflux in 80% of cases without obstruction and without the necessity of ureteric mobilization or creating submucosal tunnel.

**Mode of presentation:** UCC-Award session presentation

**Title:** Clinical Utility of Procalcitonin and C-Reactive Protein as Predictive Biological Markers in Esophageal Atresia

**Authors:** Dhruv Mahajan, Goel P, Bajpai M, Agarwala S, Yadav DK, Jain V, Dhua AK, Chaturvedi PK, Gupta S, Kumar A, Kalaivani M

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**Abstract:**

Neonates, have poor reserves and are highly vulnerable to surgical trauma and infectious micro-organisms. A marker to predict the development of a complication at a very early stage may help save precious time and abort the adverse sequence of events.

Procalcitonin has established as a reliable marker of mortality in critically ill patients and a guide to initiate, escalate or de-escalate anti-bacterial treatment.

Aim: To study the utility of serum procalcitonin in early prediction of the complications (infectious or surgical) in neonates with esophageal atresia.

Material and Methods: Prospective cohort study upon 23 consecutive patients of esophageal atresia managed at our centre over eighteen months. Serum procalcitonin and C-Reactive Protein(CRP) levels was assessed before surgery, 24 hours post-surgery and on post-operative days 3, 5, 7 and 14. The adverse clinical, laboratory and radiological parameters as well as the surgical outcome were correlated with the serum procalcitonin & CRP levels and a temporal relationship was evaluated.

Results: The mean pre-operative PCT levels (1.7 ng/ml) were elevated in all patients and correlated with time required for hemo-dynamic stabilization. The levels depicted a rise (3.28 ng/ml) after surgery and a progressive decline with uneventful recovery. The levels were higher in those who developed severe complications (7.46 ng/ml) in the post-operative period. Rise in PCT was observed in patients who developed complications and the rise was temporal to clinical manifestation of such complication.

CRP levels followed a similar trend with a delayed peak (POD3). Baseline and POD-1 CRP levels correlated with final outcomes (survival or mortality).
Conclusions: Serum procalcitonin and CRP have a potential to be used as biological markers to anticipate sepsis or a surgical complication in surgical neonates ahead of clinical manifestation. Larger studies are required to formulate protocols for clinical use.

Mode of presentation: UCC-Award session presentation

Title: Role of ultrasonography and inflammatory markers in predicting complicated appendicitis

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Abstract:
Aim: To compare the diagnostic accuracy of laboratory investigations and sonography (USG) in distinguishing complicated appendicitis (C-AA) from uncomplicated appendicitis (UC-AA).

Methods: Forty-six children (below 12 yrs of age) who underwent appendicectomy (histopathologically confirmed) at our centre between Nov, 2018 and Jul, 2020 were included. Based on intra-operative findings, they were divided into 2 groups – complicated (perforated, gangrenous or associated with fecal peritonitis; n=18) and uncomplicated AA (n=28). USG findings and inflammatory markers were compared in both groups at admission as well as 2 weeks following surgery.

Results: At admission, the mean values for laboratory markers were: TLC (16090.56 vs 11739.29 per mm3), hsCRP (35.8 vs 31.62 mg/L), PCT (3.83 vs 1.41 ng/mL). These were significantly higher in C-AA. Serum bilirubin was higher (0.77 vs 0.63 mg/dL) but amylase was lower (49.11 vs 75.14 mg/dL) in C-AA compared to UC-AA but not statistically significant. Out of all sonographic markers of appendicitis, visualization of a blind tubular aperistaltic structure was the only sign showing statistical significance – significantly lower in C-AA (50% vs 90%). Independent predictors of C-AA were – duration of symptoms >48 hours (OR 6.3), free fluid/loculated collection in RIF (OR 3.75), TLC >11000/mm3 (OR 3.6), hsCRP >35 mg/L (OR 6.0), PCT >0.6 ng/mL (OR 4.02) and non-visualization of appendix on USG (OR 8.33). Biochemical factors were sensitive (89%) and specific (55%) in differentiating C-AA from UC-AA but addition of sonological parameters significantly improved the specificity of predicting complicated AA to 61% (p=0.0036). On a 2-week follow up, only PCT values in the C-AA group showed a sustained rise whereas others returned to normal.

Conclusion: Combining laboratory data with sonological findings significantly improves the predictive value for differentiating C-AA from UC-AA and can help deciding operative approach and prognosticating.

Mode of presentation: UCC-Award session presentation

Title: Correlation of Plasma Renin Activity values and Resistive Index on Ultrasound Doppler with findings of Renal Dynamic Scan in patients with Society of Fetal Ultrasound grades 3 and 4 unilateral Hydronephrosis

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Abstract:
Aims: We did this study to correlate Plasma Renin Activity (PRA) values and Resistive Index (RI) on Doppler ultrasound with findings of RDS in patients with Society of Fetal Ultrasound (SFU) grades 3 and 4 unilateral HDN and also to determine the cut-off values of PRA and RI which determine the success of surgery.

Methods: Twenty patients with SFU grades 3 & 4 unilateral HDN were enrolled. Demographic detail were recorded. All underwent Anderson-Hynesdismembered pyeloplasty. Based on the follow up RDS scan, these patients could fall
in one of three categories - Improved (Successful), Status quo or Deteriorated (Unsuccessful). Outcomes were compared based on RDS, USG and Doppler findings done at 3 months of post-operative period.

Results: Follow up period ranged from 3 to 6 months. Seventeen patients had successful (improved) outcome based on RDS findings, 12 had improvement in SRF (>5%) and 6 had normal drainage curves (t-t1/2 < 10 minutes). Three patients had indeterminate curves (t-t1/2 between 10 to 20 minutes). Four had improvement on both the criteria, i.e., SRF and drainage curve. Among 3 patients who showed no improvement in RDS, two were in ‘status quo’ category and one patient showed deterioration. 17 patients also showed improvement in PRA and RI.

Conclusion: No significant correlation could be demonstrated between SRF and the respective values of PRA and RI. PRA could replace RDS to predict success of pyeloplasty. A larger trial with bigger cohort of patients is required to confirm our contention.
Urodynamic Study) methods, depending on the status of their toilet training. On the basis of UDS, bladder dysfunction was divided into (1) Hypercompliant bladder (2) Hypocompliant (overactive) bladder (3) Significant PVR. Those who underwent surgery were followed up and assessed for improvement in bladder dysfunction.

Results: The overall incidence of bladder dysfunction was 41.8% (n=36). Amongst toilet trained children (n=48), UDS was possible in 30 out of which 18 (60%) were found to have bladder dysfunction. In 18 where UDS was not possible, 10 (55.5%) had bladder dysfunction. In non-toilet trained children (n=38), 21% (8 out of 38) had bladder dysfunction. Twenty one patients with bladder dysfunction underwent surgery for VUR. Improvement in bladder dysfunction amongst them was 85.7% (18 out of 21). Amongst those where UDS could be done, improvement in bladder dysfunction was found in 66.6% cases (n=6) while in cases where UDS could not be done, improvement was seen in 100% cases (n=9). In non-toilet trained children improvement in bladder dysfunction was seen in 100% cases (n=3).

Conclusions: 1. Although objective assessment of bladder dysfunction by UDS is accurate, it cannot be used in non-toilet trained children. 2. Overcompliant bladders need early surgical intervention to counteract the increasing load of refluxed urine which trickles back into the bladder. They improve after surgery. 3. Overactive (Hypocompliant) bladders need pharmacological intervention (Anti-cholinergics) to increase bladder capacity and decrease the bladder pressures before surgery can be advised. 4. Patients with significant PVR should be advised early surgery as it possibly indicates bladder overload. 5. Bladder dysfunction has a potential role in defining indications for surgery in VUR.

Mode of presentation: UCC-Award session presentation

Title: Redo transperineal urethroplasty for posterior urethral stricture and a large recto-urethral fistula

Authors: Ashish Prasad, Prashant Jain

Department Institution: BLK-MAX Super Speciality Hospital

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Abstract:
Aim: A video presentation describing the steps of redo trans-perineal urethroplasty in a child with posterior urethral stricture and a large colo-urethral fistula.

Methods: This is a 3-year-old male child, operated case of high anorectal malformation, on divided sigmoid colostomy, presented with passing urine only from the rectum. He had undergone multiple failed surgeries for recurrent rectourethral fistula. On evaluation (Imaging and cystoscopy), he had a small capacity bladder with a large colovesical fistula, large rectourethral fistula, and posterior urethral stricture.

Results: The child was planned for staged repair. He underwent laparotomy and repair of colo-vesical fistula along with suprapubic cystostomy. After 1 month, transperineal repair of the rectourethral fistula and urethroplasty along with inferior pubectomy was done, with interposition of fasciocutaneous flap Singapore flap) between the rectum and urethra. The duration of the surgery was 230 minutes with minimal blood loss. The patient on follow-up after 2 years has no recurrent fistula and is awaiting bladder augmentation for small capacity bladder.

Conclusion: Complex recurrent urinary fistulas following surgeries for anorectal malformations is a rare and challenging complication. A transperineal – inferior pubectomy approach along with a vascularized flap allows good exposure and outcome.

Mode of presentation: Video Session presentation

Title: Cystoscopic management of urethral polyp: A rare cause of bladder outlet obstruction in a toddler

Authors: Kashish Singhal, Harparkash Singh Miglani

Department Institution: Miglani Child Surgery Centre

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Abstract:
BACKGROUND & AIM
A fibro-epithelial urethral polyp is a benign urethral tumor and one of the rare causes of bladder outlet obstruction in pediatric age group. A polyp arising from verumontanum often has a congenital etiology but can also occur as a result of inflammation. A polyp can be accessed by suprapubic approach or transurethral excision.

CASE PRESENTATION

A 1.5 year old male, presented to us with voiding dysfunction and dribbling of urine since one month. MRI showed posterior urethral polyp extending into bladder neck. MCU suggested a posterior ureteral filling defect. A cystourethroscopy was done. Irregular bladder wall with trabeculations and sacculations in the mucosa were seen. Few mucosal outgrowths seen near trigone. A large soft tissue polyp was seen in bladder neck, attached to verumontanum with a thick pedicle. Using rectoscopic loop and electrode, pedicle was divided from verumontanum. Polyp pushed into the bladder lumen and retrieved percutaneously using a laparoscopic port and grasper under direct cystoscopic vision.

RESULT

Histopathology revealed a benign Fibroepithelial polyp.

CONCLUSION

Transurethral excision of Urethral Polyp with percutaneous retrieval is a safe approach with minimal

Mode of presentation: Video Session presentation

Title: Kangaroo and fogarty techniques: two newfangled maneuvers to extract Aero-digestive foreign bodies

Authors: Chandramouli Goswami, Prabudh Goel, Devendra K Yadav, Ruchira Nandan, Minu Bajpai

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Abstract:

Aim: To describe the indigenous Kangaroo and Fogarty Techniques for extracting aero-digestive foreign bodies (special situations) and present our experience with the same.

Method: Prospective study (n=6; mean age: 3.4 years, M: F- 5:1), with sharp (n=2, mean age: 4.5 years, M: F-2:0) and fenestrated (n=4, mean age: 27.5 months, M: F-3:1) foreign bodies in aerodigestive tract.

Results: The Kangaroo and Fogarty techniques for sharp and fenestrated foreign bodies respectively will be described.

Kangaroo technique: FBs included an open (un)safety-pin (n=1) lodged in the upper oesophagus and fragmented razor blade (n=1) in trachea.

Fogarty technique: FBs included necklace beads (n=2), non-necklace toy bead (n=1) and broken pen cap (n=1). The removal of the objects was executed by both the techniques: safely, without inflicting injury to the surrounding tissues while maintaining control of the object during extraction. Including a Fogarty catheter (mechanics of use will be discussed) as a necessary component of foreign body extraction-set is suggested.

Conclusion: The Kangaroo and Fogarty techniques are found to be safe, effective and reproducible in removing sharp or fenestrated object from the aerodigestive tract while preventing iatrogenic injury to the surrounding organs in specific situations.

Mode of presentation: Video Session presentation

Title: Rigid bronchoscopy with tracheostomy in foreign body aspiration: a life saving Jugalbandi

Authors: Manasa reddy, Nitin J Peters, Muneer A Malik, Shubhalaxmi R Nayak, Ram Samujh, Neerja Bharadwaj

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Abstract:
background: Pediatric airway foreign body is a life-threatening clinical condition. Most foreign bodies in the airway of children can be retrieved by rigid bronchoscopy. When the foreign body is too large to pass through the subglottic region that can injure the airway, the use of tracheostomy is indicated.

Methodology: We describe 4 patients with complicated foreign body aspiration who presented to us over a period of 3 years and were managed successfully at our institute.

Results: The various foreign bodies encountered were stone, hair pin, thumb tack and a small metal toy. As they could not pass through the subglottic region, extraction was accomplished through tracheostomy with bronchoscopic guidance. All the patients were successfully decannulated.

Conclusion: Despite various technical manipulations through advanced endoscopic equipment, large tracheal foreign bodies may not be amenable to bronchoscopic extraction. Simultaneous use of tracheostomy with bronchoscopy is an effective approach in addressing life threatening large tracheal foreign bodies.

Mode of presentation: Video Session presentation

Title: Laparoscopic restorative proctocolectomy with ileal J pouch - anal anastomosis by double stapled technique for a case of juvenile polyposis coli

Authors: Shyamendra Pratap Sharma, Ankur Mandelia, Rohit Kapoor, Pujana K, Moinak Sen Sarma

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Abstract:

Aims

We aim to describe our surgical technique for laparoscopic restorative proctocolectomy with ileal J Pouch - anal anastomosis (RP-IPAA) for a case of juvenile polyposis coli (JPC).

Methods

An 11 year old girl presented with painless bleeding per rectum for past 3 years. Her father had history of colon cancer. She was very pale and dyspneic. Serum hemoglobin and albumin was 6.9 gm% and 1.4 gm%, respectively. Colonoscopy revealed multiple sessile and pedunculated polyps throughout the colon and rectum. Upper GI endoscopy and CT enterography ruled out polyps elsewhere.

Pre-operatively, anaemia and hypoproteinemia were corrected. As a first stage, total colectomy with rectal polypectomy and Hartmann’s procedure with end ileostomy was done. She was re-admitted 6 months later for laparoscopic RP-IPAA.

Results

Patient was placed in lithotomy position. A 10 mm optical port was introduced high in the epigastrium and two 5 mm lateral working ports were inserted. The proximal end of residual rectum was visualized just above the pelvic peritoneal reflection. Completion proctectomy was performed by dissecting rectum circumferentially down in the Swenson’s plane till 1.5 cm above the dentate line. The rectum was transected just above the levator ani diaphragm with an Endo GIA 45 mm x 3.5 mm stapler. Ileostomy was mobilised and adequate ileal mesenteric lengthening was achieved. An ileal J pouch with a limb length of 10 cms was created by using a 100 mm linear stapler. Purse string suture was taken on the apex of J pouch and anvil of circular stapler was introduced. Ileal J pouch - anal anastomosis (IPAA) was achieved by using circular stapler (CDH 25 mm). Leak test was negative after the anastomosis. Diverting loop ileostomy was fashioned. Post-operatively, patient recovered well and is awaiting ileostomy closure. Histopathology was consistent with juvenile polyposis with low grade dysplasia.

Conclusion

Laparoscopic RPC – IPAA by a double stapled technique is a feasible and safe option in children with polyposis coli.

https://drive.google.com/file/d/1dAcdv-Hl6qIUFcsTfTdiyG4zFouz8BUi/view?usp=drivesdk

Mode of presentation: Video Session presentation

Title: Laparoscopic-assisted anorectoplasty (LAARP) with laparoscopic partial distal colostomy mobilization for anorectal malformation with short colonic length distal to colostomy

Authors: Shandip Kumar Sinha, Dr Praney Gupta, Dr Rakesh Handa
**Department Institution:** Department of Pediatric Surgery, Madhukar Rainbow Children Hospital, New Delhi  
**Email:** shandips@gmail.com

**Abstract:**
Introduction: A short length of colon distal to colostomy can make definitive repair of anorectal malformations a difficult procedure with high chances of complications. We want to describe our experience of using Laparoscopic-assisted anorectoplasty (LAARP) with distal colostomy mobilization for the management of these cases.

Patient and methods: All children who underwent LAARP along with mobilization of colostomy site in the last three years were included in the study. The demographic, clinical, radiological, and operative details along with immediate postoperative outcomes were reviewed.

Results: A total of 5 children with an age range of 5-21 months and weight range of 6.2 to 9.8 Kg were included in the study. All had recto prostatic fistula with distal cologram showing a short length of the colon, distal to colostomy. The children were managed with LAARP along with mobilization of the distal end of the colostomy to gain a length of around 3-4 cm, which was sufficient for tension-free pull through.

Conclusion: LAARP with mobilization of colostomy site should be considered in children with a short distal length of the colon.

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**Mode of presentation:** Video Session presentation

**Title:** Video assisted thoracoscopic ligation of thoracic duct for management of refractory chylothorax in a toddler

**Authors:** Kashish Singhal, Harparakash Singh Miglani

**Department Institution:** Department of Pediatric Surgery, Miglani Child Surgery Centre, Amritsar

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**Abstract:**
Background: Chylothorax refers to accumulation of chyle in pleural cavity and is a rare condition in children. Mostly, it is managed conservatively with a triglyceride deficient diet. Role of Octreotide is identified in medical management for cases showing negligible responses to nutritional changes. For refractory cases, radiological or surgical intervention is indicated. We aim to present this case since Video Assisted Thoracoscopic Surgery in treating chylothorax is a less common approach, especially in early pediatric age group.

Clinical presentation: A 1.5 year old boy was referred with respiratory distress since 19 days. He was extensively investigated and was medically managed after insertion of a chest tube in another hospital. Apart from antibiotics and dietary measures, Octreotide therapy also failed to decrease his chest tube drain output of 400-500 ml/day of viscous milky white fluid. He also had pericardial effusion. An ultrasound guided pericardial tap had been done and about 200 cc of chyle was aspirated. He was referred to us for Surgical Management of Refractory Chylothorax. After going through the records, and counselling the parents, a Video Assisted Thoracoscopic approach for ligation of thoracic duct was done.

Post-op course: Chest tube drain fluid progressively changed in character from viscous milky white to yellowish serous, decreased in quantity and stopped over the next 10 days. The chest tube could be safely removed after that.

Result: Patient is on regular follow up for about 18 months now, and has shown no signs of recurrence with growth remaining optimal for age. He was diagnosed with hyperlipidemia during follow up investigations, and on further investigations in the family, his mother was also found to have high lipid levels, which is being managed medically.

Conclusion: Thoracoscopic ligation and excision of thoracic duct can be a safe and successful treatment option for refractory chylothorax in Pediatric patients. The presentation is being made because of the rarity of the condition.

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**Mode of presentation:** Video Session presentation

**Title:** Esophageal foreign body removal in children

**Authors:** sarita chowdhary, Kanika sharma, Deepak kumar, Akash, Nimisha, Sunil

**Department Institution:** Institute of medical sciences, Banaras hindu university
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Abstract:
Aim: To present rare encountered foreign body in the aero-digestive tract in children and their removal with rigid esophagoscopy.
Material and methods: Retrograde analysis of ingested or aspirated foreign bodies from 2009 to 2019 were done. Data was retrieved from OT records.
Study population: 6 months to 15 years old children. Results: Out of 1100 cases, 800 were of foreign body ingestion and 300 were of foreign body aspiration. Commonly foreign bodies were coin, batteries and rare material like meat bones, seeds, hair clips, magnets, pins, LED bulb were encountered. Most of foreign bodies were impacted in upper esophagus and were removed through Magill forceps. Oesophagoscopic removal was done in 175 cases and in 25 cases laparotomy with enterotomy was required. The aspirated foreign bodies required rigid bronchoscopy.
Conclusion: Children between 1-5 years are more susceptible to foreign body ingestion or aspiration. Batteries are most feared may lead to many serious complications. Suspicion of foreign body aspiration should be kept in mind in situations like refractory asthma, bronchiectasis, or hemoptysis without any underlying cause. Radiography is the most important modality in the evaluation. Computed tomography, virtual bronchogram play an important role in complicated cases.

Mode of presentation: Video Session presentation

Title: Buccal mucosal graft defattening, point of technique.
Authors: Nitin pant, SN Kureel, Archika Gupta, GP Singh

Department Institution: King George’s Medical University, Lucknow
Email: drnitinpant@gmail.com

Abstract:
Aim To present an innovative technique for defattening the harvested buccal mucosal graft. Methods This retrospective study includes a collection of cases where buccal/labial mucosa was harvested for grafting as a urethral plate substitute and defattened using the described technique. A sterile surgical towel was tightly rolled on itself to create a cylinder. Multiple Allis clamps were used to fasten the roll and maintain its cylindrical shape. The harvested graft was placed longitudinally along the cylindrical axis of the roll and spread over its convex surface keeping the mucosa onto the towel. It was then stretched and fixed with multiple 26 Gauge needles applied tangentially at the edges. Defattening was done with the help of fine Reynolds scissors. The convex surface of the scissors was used for defattening. The endpoint of defattening was taken when the underlying towel was uniformly visible through the graft. Lastly, multiple button holes were made with a triangular blade before unmounting the graft.
Results The technique was performed in 43 cases over a period of 7 years (2014-2020). These included primary hypospadias repair (n=21), redo hypospadias repair (n=22). There were no technical difficulties during the procedure. No complications occurred during the defattening procedure. The graft uptake was acceptable in all. Conclusion A rolled surgical towel provides a firm, convex and unslippery surface for graft defattening. The area of contact between the convex cylindrical surface and the convex surface of the scissors is very small leading to precise cuts. Thus, the incidence of inadvertent button hole cuts, marginal cuts in the graft is almost eliminated.

Mode of presentation: Video Session presentation

Title: Management of thoraco-omphalopagus conjoint twins.
Authors: Jiledar Rawat, Sudhir Singh, Gurmeet Singh, Sarita Singh

Department Institution: King George’s Medical University, Lucknow
Email: drawat@kgmcindia.edu

Abstract:
Background and aim: Conjoint twins pose major treatment challenge. They may be
fused at different sites, such as head, thorax, abdomen, etc. Approximately 75% of conjoined twins are female. Of these, 70% are fused at the thorax (thoracopagus) or abdomen (omphalopagus). We operated thoraco-omphalopagus conjoined twins successfully.

Case presentation: One-year-old conjoint twins presented to the department of Pediatric Surgery. It was thoraco-omphalopagus type of twinning. The CT and MRI scan revealed common pericardium, lower part of sternum and diaphragm, and liver sharing between the twins. The operating team comprised experts from Pediatric Surgery, Anesthesia, Plastic Surgery, Cardiac surgery, and Pediatrics departments. Careful separation of pericardium, sternum, and liver was performed by the team. After that, the twins were sent to PICU. One of them was extubated after 72 hours, and the other after 96 hours. However, the second twin required reintubation. He was extubated after 7 days. Both patients are fine now after six months of follow up.

Conclusions: Conjoint twinning is a rare malformation, which needs careful planning. Post-operative care is of utmost importance. Careful planning and a dedicated teamwork may fetch optimal results.

Mode of presentation: Video Session presentation

Title: Advocating use of cot-side suction rectal biopsy to diagnose Hirschsprung’s disease
Authors: Sarah Vecchione, Sarah Vecchione, Govind Murthi

Department Institution: Sheffield Childrens Hospital, Sheffield, United kingdom
Email: murthigvs@gmail.com

Abstract:
Aims: In the UK, cot-side suction rectal biopsy on the awake infant is well established as the procedure of choice for the diagnosis of Hirschsprung’s disease (HD). However, we understand that the use of this procedure is not universal, with paediatric surgeons in some countries, including India, undertaking a full-thickness rectal biopsy under a general anaesthetic for the same purpose. The aim of this video is to illustrate the simplicity of this method and advocate its wide-spread adoption.

Methods: This video demonstrates the equipment and technique used on an infant. Prior to this procedure informed consent was obtained from the mother, including use of the video recording for teaching purposes.

Results: The video demonstrates how an adequate rectal biopsy sample including both mucosa and sub-mucosa can be obtained and sent fresh to the laboratory for immediate processing and analysis.

Conclusion: Cot-side suction rectal biopsy is a simple, safe and accurate method for the diagnosis of HD. The low risk of complications and its repeatability at the cot-side are of advantage over other methods. With this video we demonstrate the step-by-step process to obtain a sample, showing the technique and equipment required.

Mode of presentation: Video Session presentation

Title: Use of novel trifoliate flap for creation of cutaneous stoma for Malone’s procedure: a simple and reproducible technique.
Authors: Kanoujia Sunil, Shiv N kureel, Archika gupta
Department Institution: king George’s Medical university, Lucknow
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Abstract:
Aim: To report a new technique of creating cutaneous stoma for Malone’s procedure, eliminating the possibility of mucosal prolapse and stenosis.

Material and methods: In last 5 years, eleven patients undergoing Malone’s procedure with a technique of appendicocecal intussusception without disconnecting the appendix were subjected to the study of creating cutaneous stoma. On the skin of right iliac fossa on a line from umbilicus to anterior superior iliac spine, the course of vertically oriented superficial epigastric vein visible through skin at the point of crossing the line from anterior superior iliac spine to umbilicus was marked which was taken as centre of trifoliate flap. Around this centre three leaves of trifoliate flap were marked without crossing the course of superficial epigastric vessel which is the base and blood supply of trifoliate flap. Eight millimeter square was marked keeping the vertical limb parallel to vessel, inferior limb kept intact for base, based on right and left and superior
limb half circle flaps completed the figure of trifoliate flaps. Skin, subcutaneous tissue with Scarpa's fascia was incised and one superior, two right and left flaps were lifted up keeping the attachment of base intact. Edges of right and left flaps were joined to form cutaneous tube continuous with skin.

Superior half circle flap fed in vertical cut of equal size on posterior wall of end of appendix.

Outcome measurements: Elimination of cutaneous stomal stenosis, elimination of stomal mucosal prolapse.

Result: In short and long term follow up, there was no stomal stenosis or mucosal prolapse and stoma was easily catheterisable.

Conclusion: The described technique of creating cutaneous stoma using trifoliate flap is simple, reproducible yet prevents meatal stenosis and mucosal prolapse.

Mode of presentation: Video Session presentation

Title: Cystoscopic management of urethral polyp - rare cause of bladder outlet obstruction in a toddler

Authors: Kashish Singhal, Harparks S Miglani

Department Institution: Miglani Child Surgery Centre

Email: kash5060@gmail.com

Abstract:
A fibro-epithelial urethral polyp is a benign urethral tumor and one of the rare causes of bladder outlet obstruction in pediatric age group. A polyp arising from verumontanum often has a congenital etiology but can also occur as a result of inflammation. A polyp can be accessed by suprapubic approach or transurethral excision.

CASE PRESENTATION
A 1.5 year old male, presented to us with voiding dysfunction and dribbling of urine since one month. MRI showed posterior urethral polyp extending into bladder neck. MCU suggested a posterior ureteral filling defect. A cystourethroscopy was done. Irregular bladder wall with trabeculations and sacculations in the mucosa were seen. Few mucosal outgrowths seen near trigone. A large soft tissue polyp was seen in bladder neck, attached to verumontanum with a thick pedicle. Using rectoscopic loop and electrode, pedicle was divided from verumontanum. Polyp pushed into the bladder lumen and retrieved percutaneously using a laparoscopic port and grasper under direct cystoscopic vision.

RESULT: Histopathology revealed a benign Fibroepithelial polyp.

CONCLUSION: Transurethral excision of Urethral Polyp with percutaneous retrieval is a safe approach with minimal
excellent visualization and with increasing experience shortens the operating time, conversion rate, and blood loss and at the same time provides equivalent outcomes as compared to open surgery.

Mode of presentation: Video Session presentation

Title: Redo transperineal urethroplasty for posterior urethral stricture and a large recto-urethral fistula

Authors: Ashish Prasad, Prashant Jain

Department Institution: BIL-MAX Super Speciality Hospital

Email: prasadaashish@gmail.com

Abstract:
Aim: A video presentation describing the steps of redo trans-perineal urethroplasty in a child with posterior urethral stricture and a large recto-urethral fistula.

Methods: This is a 3-year-old male child, operated case of high anorectal malformation, on divided sigmoid colostomy, presented with passing urine only from the rectum. He had undergone multiple failed surgeries for recurrent rectourethral fistula. On evaluation (Imaging and cystoscopy), he had a small capacity bladder with a large colovesical fistula, large rectourethral fistula, and posterior urethral stricture.

Results: The child was planned for staged repair. He underwent laparotomy and repair of colo-vesical fistula along with suprapubic cystostomy. After 1 month, transperineal repair of the rectourethral fistula along with inferior pubectomy was done, with interposition of fasciocutaneous flap (Singapore flap) between the rectum and urethra. The duration of the surgery was 230 minutes with minimal blood loss. The patient on follow-up after 2 years has no recurrent fistula and is awaiting bladder augmentation for small capacity bladder.

Conclusion: Complex recurrent urinary fistulas following surgeries for anorectal malformations is a rare and challenging complication. A transperineal – inferior pubectomy approach along with a vascularized flap allows good exposure and outcome.

Mode of presentation: Video Session presentation