

ORAL SESSION 1 - GASTROINTESTINAL (GIT) I

LO11

LAPAROSCOPIC ILEOCECAL RESECTION IN PEDIATRIC CROHN'S DISEASE: IMPACT OF ANASTOMOTIC TECHNIQUE ON POSTOPERATIVE OUTCOMES

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Abstract

Purpose

Ileocecal resection (ICR) is frequently required in pediatric Crohn's disease (pCD), but postoperative complications and recurrence (POR) remain major concerns. Limited evidence exists regarding the impact of anastomotic technique on these outcomes in children. This study aimed to compare the safety and effectiveness of laparoscopic-assisted end-to-end (ETE), side-to-side (STS), and Kono-S anastomoses.

Methods

A retrospective analysis of pediatric pCD patients undergoing ICR between April 2018 and December 2023. Data on anastomotic configuration, perioperative parameters, and 6-month postoperative colonoscopy findings were collected. Additionally, long-term follow-up was conducted to assess clinical recurrence and reintervention rates. Complications were classified using the Clavien–Dindo classification (CDc). Logistic regression assessed the odds of endoscopic recurrence (ER, Rutgeerts score >1), with ETE as the reference.

Results

Thirty-eight patients (18 females, 47.4%) were included (ETE: 14, STS: 10, Kono-S: 14). No significant preoperative differences were noted. Median operative times were 151 min (ETE), 142 min (STS, $p=0.78$), and 169 min (Kono-S, $p=0.09$). No significant difference in complication rates was observed. Median hospital stay was 6.5 days (ETE), 6 days (STS, $p=0.85$), and 6 days (Kono-S, $p=0.70$). Neither STS (OR=1.13, 95%CI=0.21–6.16) nor Kono-S (OR=0.41, 95%CI=0.09–1.87) were associated with an increased risk of ER.

Conclusion

We conclude that STS and Kono-S anastomoses are safe alternatives to ETE in pediatric Crohn's disease surgery. Both techniques demonstrated comparable operative time, complication rates, and hospital stay, with no increased risk of postoperative endoscopic recurrence. These findings support their routine use in clinical practice.

LO12

COST ANALYSIS OF FOUR SURGICAL TECHNIQUES FOR PEDIATRIC INGUINAL HERNIA REPAIR IN A DUTCH HOSPITAL.

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Abstract

Introduction: Pediatric inguinal hernia repair (IHR) can be performed using open repair, laparoscopic approaches such as the percutaneous internal ring suture (PIRS) or conventional laparoscopic IHR (LIHR) with N- or Z-suture, and robot-assisted IHR (RIHR). While there is extensive literature on clinical outcomes, data on costs remain scarce. This study aims to determine the real costs of these four techniques.

Methods: A retrospective cohort of consecutive patients who underwent pediatric IHR in the past five years was analyzed. Patients were grouped by technique. Individual one-year costs were collected from hospital records, including pre-operative, per-operative, postoperative costs and costs of complications.

Results: 184 patients were included into the four groups: PIRS (n= 56), LIHR (n=56), Open (n=50), RIHR (n=22). When exclusively looking at the total OR costs, costs for PIRS were significantly lower than the costs of the other techniques, and RIHR had the highest costs, due to prolonged anesthesia time, which is explained by docking of the robotic system. Other costs of the treatment journey (excluding OR costs) were significantly influenced by gestational age, age at surgery, reducible incarceration, metachronous contralateral hernia and recurrence. Hospitalization costs were significantly higher for the open technique.

Discussion and conclusion: This retrospective analysis shows that the PIRS technique is related to lower OR costs. Other (non-OR) costs are highly dependent on patient characteristics and clinical outcomes. Prospective randomized studies are needed to confirm these findings and guide optimal choice of surgical technique with an adequate cost-effectiveness study.

LO65

CLINICAL PATHWAY TIPS AND TRICKS FOR LAPAROSCOPIC NISSEN'S FUNDOPLICATION IN NEUROLOGICALLY IMPAIRED CHILDREN: A SINGLE INSTITUTION'S DECADE OF EXPERIENCE

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Abstract

Introduction:

Neurologically impaired patients have a high incidence of intractable gastroesophageal reflux disease (GERD), which can lead to life-threatening events. Laparoscopic fundoplication, with or without gastrostomy, is a highly recommended surgical option for this group, offering advantages such as minimal invasiveness, reduced postoperative pain, fewer wounds and pulmonary complications, and faster recovery compared to the open approach. This study elaborates on a single institution's decade-long experience, with a special focus on clinical pathway development and surgical tips and tricks to optimize outcomes.

Patients and Methods:

A retrospective cohort review was conducted using electronic medical records from January 2013 to December 2023, including all neurologically impaired patients who underwent laparoscopic fundoplication with or without gastrostomy. A robust clinical pathway was developed to streamline management across a multidisciplinary team, including pediatric surgery, pediatric gastroenterology, pediatric pulmonology, swallowing specialists, pediatric neurology, and general pediatrics.

Results:

A total of 99 neurologically impaired patients underwent laparoscopic Nissen's fundoplication (with or without gastrostomy) during the study period. Patients' ages ranged from 2 months to 13 years; 56% were female and 44% were male. The main indications for surgery were recurrent aspiration pneumonia secondary to severe GERD (45 patients) and failure to thrive (40 patients). Four patients (4%) required redo laparoscopic fundoplication due to wrap herniation into the chest. Other postoperative complications included gastrostomy-related issues such as granuloma formation, stenosis, leakage, and wound dehiscence. There was no mortality events related to GERD management in this cohort.

Conclusion:

Laparoscopic Nissen's fundoplication with or without gastrostomy is a safe and effective intervention for neurologically impaired children with Gastroesophageal reflux disease, demonstrating a low recurrence rate and significant improvements in quality of life for both patients and their families. Establishing a robust, multidisciplinary clinical pathway is critical for achieving favorable outcomes.

LO61

ENDOSCOPIC MANAGEMENT OF DUODENAL WEB: A PEDIATRIC CASE SERIES

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Abstract

Introduction: Duodenal web is an uncommon congenital condition, reported to be more prevalent in patients with Down syndrome. While the classical treatment has been surgical—either open or laparoscopic—endoscopic management has gained increasing acceptance over recent years and is now considered the first-line approach in our center. We present two pediatric cases successfully managed endoscopically in 2025.

Case 1: A 15-day-old full-term newborn (38 weeks, 3.5 kg) with a prenatal diagnosis of Down syndrome and suspected duodenal atresia. Upper gastrointestinal endoscopy (UGIE) revealed an esophageal stricture 16 cm distal to the dental arch. An ultraslim scope was advanced beyond the stricture. A duodenal web with a small fenestration was identified in the duodenal bulb. A hydrophilic guidewire was passed through the opening, followed by balloon dilation over the wire and subsequent radial incisions. The patient tolerated breastfeeding 4 hours post procedure.

Case 2: A 5-year-old girl with Down syndrome, referred due to a persistent radiologic image resembling a foreign body since the age of 4. UGIE revealed multiple foreign bodies in the antrum and duodenum, and a fenestrated duodenal web. Guidewire cannulation through the fenestration allowed balloon dilation up to 20 mm, enabling scope passage. The patient tolerated oral feeding on postoperative day 1 without discomfort or complications.

Conclusion: Endoscopic tools offer a minimally invasive and highly effective alternative for managing duodenal webs, with a significant impact on patients' lives. This is why we believe this approach should now be considered the first-line treatment.

LO71

POSTCHOLECYSTECTOMY SYNDROME AFTER PEDIATRIC CHOLECYSTECTOMY: RECOGNIZING A COMMON COMPLICATION

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Abstract

Aim:

Postcholecystectomy syndrome (PCS) is defined as the persistence or occurrence of abdominal symptoms following cholecystectomy. This study aims to draw attention to the potential development of PCS after cholecystectomy in children.

Methods:

Patients who underwent cholecystectomy in our clinic between 2019 and 2023 were retrospectively evaluated. Demographic data, body mass index (BMI), age at the time of surgery, comorbid diagnoses, and follow-up durations were recorded. All patients completed the Pediatric Quality of Life Inventory Gastrointestinal Symptoms Scale (PedsQL GSS) questionnaire, which assesses ten domains across fifty-eight items. The questionnaire evaluated the presence of abdominal symptoms over the past month, including stomach pain, discomfort while eating, dietary restrictions, difficulty swallowing, nausea and vomiting, gas and bloating, reflux, constipation, diarrhea, and blood in the stool. Patients who reported one or more symptoms and whose scores were two standard deviations below those of healthy controls were diagnosed with PCS.

Results:

Twenty-two patients (nine males, thirteen females) who underwent cholecystectomy were included in the study. The mean age at the time of surgery was 11.3 ± 4.22 years. Nine patients had a diagnosis of hemolytic disease. Seventeen patients reported preoperative complaints of abdominal pain or nausea, while five had no such complaints. All patients underwent laparoscopic cholecystectomy. According to the Peds QL GSS questionnaire, 7 patients (31.8%) were diagnosed with PCS. When comparing patients with and without PCS, no statistically significant differences were found regarding gender, comorbid conditions, BMI, age at surgery, or follow-up duration. However, constipation, diarrhea, and discomfort while eating were significantly more frequent among patients with PCS compared to those without ($p < 0.05$).

Conclusion:

PCS occurs in approximately one-third of pediatric patients following cholecystectomy. The most common symptoms among PCS patients are constipation, diarrhea, and discomfort while eating. Follow-up of these symptoms postoperatively may improve the quality of life in these patients.

LO123

MINIMAL ACCESS ESOPHAGECTOMY FOR PEDIATRIC ESOPHAGEAL STRICTURES: OUR EXPERIENCE OF FOUR CASES

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Abstract

Management of complex esophageal strictures in children—whether congenital or post-caustic ingestion—remains a surgical challenge. Minimally invasive esophagectomy (MIE), though technically demanding in pediatric patients, offers potential benefits of better visualization, reduced pain, and faster recovery. This series describes our experience with four pediatric cases of esophageal stricture managed with MIE, incorporating a novel thoracic duct-sparing technique.

Methods:

A retrospective analysis was performed on four pediatric patients (ages 3–11 years) who underwent thoracoscopic esophagectomy for complex esophageal strictures between 2023 and 2025. Preoperative work-up included endoscopy and contrast studies. All patients had long-segment strictures unresponsive to endoscopic dilatation. Perioperative and postoperative outcomes were evaluated.

Results:

All four patients underwent thoracoscopic esophagectomy via a transthoracic approach. Three had post-corrosive strictures, and one had gastroesophageal reflux-associated peptic stricture. Esophagectomy was followed by single-stage gastric or colonic replacement in three cases, while one underwent cervical esophagostomy with delayed replacement. Operative challenges included mediastinal fibrosis and altered anatomy; however, enhanced visualization using minimally invasive techniques facilitated safe dissection. In one case, near-infrared indocyanine green (ICG) fluorescence imaging successfully identified and preserved the thoracic duct, avoiding chyle leak. No intraoperative complications occurred. Postoperatively, all patients had uneventful recoveries, with no anastomotic leaks. One child required a single session of endoscopic dilatation.

Conclusion:

Minimal access esophagectomy is a safe and effective approach for managing complex pediatric esophageal strictures. The addition of ICG fluorescence guidance enables precise thoracic duct identification and preservation, especially in fibrotic or anatomically distorted fields. Our early experience supports wider adoption of thoracoscopic techniques in esophageal surgery in children, with appropriate expertise and infrastructure.

ORAL SESSION 2 - UROLOGY I

LO133

COMPARISON OF OUTCOMES OF OPEN, LAPAROSCOPIC AND ROBOT-ASSISTED LAPAROSCOPIC PYELOPLASTY IN CHILDREN WITH URETEROPELVIC JUNCTION OBSTRUCTION: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Abstract

Introduction

Pelvi-ureteric junction obstruction (PUJO) is a common cause of paediatric hydronephrosis. Pyeloplasty is the most performed robot-assisted operation in children with PUJO. We aimed to compare outcomes of open pyeloplasty (OP), laparoscopic pyeloplasty (LP), and robot-assisted laparoscopic pyeloplasty (RALP) through systematic review and meta-analysis of the literature.

Methods

This systematic review was conducted in accordance with the PRISMA guidelines. The databases MEDLINE, PubMed, EMBASE and the Cochrane Register of Controlled Trials were searched up to March 2025. Included studies compared outcomes in paediatric patients (<16 years) undergoing two or more types of pyeloplasty for PUJO. Studies involving renal tract abnormalities or redo pyeloplasty were excluded. For each outcome measure reported by a minimum of three studies, pairwise meta-analysis of outcomes was conducted for length of stay (LOS), minor complications and frequency of subsequent redo pyeloplasty using the random effects model and Knapp-Hartung adjustment. Risk of bias was assessed using the Newcastle-Ottawa Scale.

Results

Twelve studies were included (n=1080). Eight studies compared two forms of pyeloplasty. Two studies were triplicate comparisons of OP, LP and RALP. The final two cohort studies involving RALP patients only, were subsequently unable to be meta-analysed but underwent narrative synthesis. Compared to OP, LP was not associated with a shorter LOS (SMD, 95% CI: -4.37, -11.97 - 3.24) nor reduction in the frequency of minor complications (OR, 95% CI: 0.60, 0.10 - 3.45) or reoperation rates (OR, 95% CI: 0.46, 0.13 - 1.72). Compared to LP, RALP was not associated with a shorter LOS (SMD, 95% CI: -2.92, -9.77-3.92) or reoperation rate (OR, 95% CI: 0.80, 0.10-6.44). Compared to OP, RALP was not associated with a shorter LOS (SMD, 95% CI: -3.29, -16.62-12.04).

Conclusion

We conclude that existing evidence showed comparable outcomes amongst surgical approaches and eagerly await higher quality evidence from clinical trials and prospective observational studies.

LO175

ALTERNATIVE TECHNIQUES TO DISMEMBERED ANDERSON-HYNES PYELOPLASTY (AHDP) IN MANAGEMENT OF HYDRONEPHROSIS. A SINGLE CENTER CASE SERIES.

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Abstract

Purpose: Hydronephrosis represents the most common urinary malformation in children. It is caused by uretero-pelvic-junction-obstruction (UPJO), due to intrinsic ureteral stenosis (UPJ-aperistaltic-dysplastic-segment) or extrinsic compression by aberrant Crossing Vessels (CV).

We report our experience in management of hydronephrosis focusing on particular cases characterized by giant pelvis dilation due to intrinsic-obstruction (IO), or complicated by suspected extrinsic-obstruction (EO) which required alternative surgical approach to classic AHDP.

Methods: 419 patients treated for UPJO at our Department from 1990 to 2024 were included. 307 children presented an Intrinsic-Obstruction. 88 presented a pure Extrinsic-Obstruction. In 24 an EO was suspected and 4 presented a huge pelvis dilation (range: 5 to 7cm). In these group presenting symptoms were recurrent abdominal/flank pain and hematuria. Ultrasound (US) confirmed hydronephrosis in all. Preoperative diagnostic studies also included MAG3-renogram and Functional-Magnetic-Resonance-Urography(fMRU). A laparoscopic approach was performed.

Results: 307 patients underwent to open/laparoscopic-AHDP. 88 with pure EO underwent to open/laparoscopic Vascular-Hitch (VH). In 4 patients with suspicion of IO, approached by retroperitoneoscopy, a psoas-hitch was performed for CV-Extrinsic-Obstruction. In the group of 24 patients: 20 underwent laparoscopic non-dismembered diamond-like pyeloplasty after intraoperative confirmation of intrinsic stenosis; in 4 with a giant hydronephrosis we combined this technique with VH to avoid CV-falling over the UPJ suture (simultaneous presence of Intrinsic-Obstruction and CV). In all pyeloplasty ureteral double-J stent was placed removed after 1 month. No postoperative nor long-term complications at follow-up were recorded. We observed no recurrence of symptoms and a complete obstruction's resolution at ultrasound and MAG3-renogram.

Conclusion: In our experience, the application of combined/alternative techniques in treatment of multifactorial hydronephrosis proved to be safe and feasible. Advantages include a reduced risk of ureter twisting/rotation during anastomosis, preservation of the junction's vascularization with lower risk of long-term stenosis and a reduction of operating times

LO185

EXTRACORPOREAL LITHOTRIPSY IN PEDIATRIC PATIENTS WEIGHING LESS THAN 10 KG - OWN EXPERIENCE

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Abstract

Urolithiasis is a condition more commonly seen in adult patients. However, it also poses a significant clinical problem in the pediatric population, partly due to the high risk of recurrence throughout the patient's life. In our clinic, we have observed patients with urolithiasis as early as the second month of life.

Approximately 30% of patients with renal colic require surgical intervention. With advancements in technology minimally invasive procedures are being performed. These include extracorporeal shock wave lithotripsy, ureterorenoscopic lithotripsy, and retrograde intrarenal surgery.

The aim of this study is to present the treatment indications and outcomes for the smallest patients at our clinic using an ESWL machine that enables stone localization through ultrasonography.

From 2018 to 2024, we performed 843 ESWL procedures on patients aged 0-18, including 19 patients weighing less than 10 kg. The average age of operated patients was 14.4 months (5-23). The average weight was 8.6 kg (4.8-10).

In this patient group, the size of the stones ranged from 4.5 to 30 mm. The average number of procedures resulting in complete kidney clearance of stones was 1.8. In 8 patients, the kidney was cleared of stones with a single procedure. In 4 patients, complete kidney clearance of stones required combined procedures - ESWL, URSL, RIRS, and the placement of a DJ stent. In 4 patients, the ESWL procedure was complicated by a UTI (1) or stone path (3), those patients required prolonged hospitalization.

After analyzing the collected data, we can conclude that extracorporeal shock wave lithotripsy is an effective and safe method for pediatric patients weighing less than 10 kg. It is well tolerated by children and helps reduce the number of necessary invasive procedures, as well as avoid surgical treatment.

L039

LAPAROSCOPIC VS ROBOTICALLY ASSISTED SURGERY FOR THE TREATMENT OF URACHAL ANOMALIES IN PEDIATRIC PATIENTS

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Abstract

Purpose: Urachal remnants are rare anomalies of the urinary tract, including cysts, diverticula, and tumors. This study reports our experience with minimally invasive surgery (MIS), comparing laparoscopic and robotically assisted approaches in pediatric patients.

Methods: Between January 2019 and January 2025, 23 patients (13 boys and 10 girls) with a mean age of 5.9 years (range: 6 months - 14 years) underwent surgery at our centers for symptomatic urachal anomalies. Fifteen patients (65.2%) were treated laparoscopically using three trocars (3 or 5 mm), while eight patients (34.8%) underwent robotically assisted surgery with the Da Vinci Xi system, utilizing three 8-mm ports and one 5-mm accessory port. ICG was administered through the Foley catheter, enabling fluorescence-guided identification of the urachal remnant in all cases. Complete excision was achieved using MIS, including a small bladder cuff. Bladder closure was performed with a transfixing 2/0 Vicryl suture and endoloop.

Results: All procedures were successfully completed using MIS. Histopathology was performed on all excised specimens, with negative results in all cases. The median operative time was 45 minutes (range: 33-73). All patients retained a Foley catheter for 24 hours postoperatively and were discharged within 24-48 hours. No intraoperative or postoperative complications were observed. The median follow-up period was 2 years (range: 3 months - 7 years).

Conclusion: MIS can be considered the gold standard for the treatment of symptomatic urachal remnants in children. Both laparoscopy and robotic-assisted surgery are safe and effective techniques. These approaches allow for rapid, minimally painful procedures with a low complication rate. Robotics, compared to laparoscopy, offers improved ergonomics and technical advantages, particularly during the dissection phase when the remnant extends to the umbilicus. It also facilitates faster bladder suturing. In our experience, ICG-guided surgery was helpful in the early dissection stages for identifying the lesion.

LO54

LESS IS MORE - OPTIMIZING ICG USE IN PEDIATRIC LYMPHATIC SPARING LAPAROSCOPIC VARICOCELECTOMY: PRELIMINARY EVIDENCE FOR SAFE DOSE REDUCTION

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Abstract

Purpose: Lymphatic-sparing laparoscopic varicocelectomy guided by indocyanine green (ICG) fluorescence imaging is an established approach for the treatment of pediatric varicocele. Previous studies conducted by our group have suggested a possible association between the administration of 2 mL intratesticular ICG and the postoperative appearance of hypoechoic intratesticular areas. This study aimed to report preliminary findings on the feasibility, safety, and effectiveness of reduced-dose ICG administration during laparoscopic Palomo varicocelectomy, with specific attention to lymphatic preservation, surgical outcomes, and adverse effects.

Methods: A retrospective analysis was performed on 64 pediatric patients who underwent laparoscopic Palomo varicocelectomy between January 2023 and December 2024. Patients were divided into two groups based on the volume of ICG injected: Group 1 (G1, n=50) received 1 mL of ICG, while Group 2 (G2, n=14) received less than 1 mL, with dosing adjusted according to the left testicular volume and patient age. All procedures were conducted using near-infrared fluorescence imaging to ensure real-time visualization and preservation of testicular lymphatics, following a standardized ICG-sparing protocol. The primary outcomes evaluated included the number of lymphatic vessels identified, postoperative hydrocele incidence, recurrence rate, and any ICG-related adverse events.

Results: All procedures were completed without intraoperative complications. Between one and four testicular lymphatic vessels were clearly visualized and preserved in each case. There were no statistically significant differences between the two groups in terms of lymphatic visualization, operative time, or recurrence rate ($p=0.001$). No cases of postoperative hydrocele or adverse reactions related to ICG administration were observed during a minimum follow-up period of five months.

Conclusion: Reduced intratesticular ICG dosing in laparoscopic lymphatic-sparing varicocelectomy appears to be a safe and effective alternative to standard dosing protocols. These findings warrant validation through prospective, randomized studies with larger cohorts.

LO56

COMPARATIVE OUTCOMES OF OPEN AND ROBOTIC URETERAL REIMPLANTATION IN CHILDREN WITH VESICoureTERAL REFLUX: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Abstract

Purpose

Open ureteral reimplantation (OUR) is the traditional gold standard for surgical correction of vesicoureteral reflux (VUR), with 95–100% success rates. Robotic-assisted laparoscopic ureteral reimplantation (RALUR) has emerged as a minimally invasive alternative, offering potential advantages in recovery, though with more variable reported outcomes. This systematic review and meta-analysis aimed to compare OUR and RALUR in pediatric VUR patients, focusing on surgical success, postoperative complications, hospital stay, and analgesic use.

Methods

A systematic review and meta-analysis was conducted according to PRISMA 2020 guidelines. PubMed, Cochrane Library, and Web of Science were searched for studies published between January 1, 2010, and March 31, 2025. Studies comparing pediatric cohorts undergoing OUR and RALUR were included.

Results

Eight retrospective studies were included, totaling 544 patients (248 OUR, 296 RALUR). Open techniques included: Cohen (85/113), Politano-Leadbetter (7/113), extravesical (20/113), Glenn-Anderson (1/113); robotic techniques included: extravesical/Lich-Gregoir (248/273), dismembered reimplantation (25/273). Median age was 4.2 years (OUR) vs 6.2 years (RALUR), median weight 16.5 kg vs 22.1 kg, with a median VUR grade of 3.27 and 3.21 respectively. No intraoperative complications were reported. Median morphine use was 0.25 mg/kg (OUR) vs 0.14 mg/kg (RALUR). Early postoperative complication rates were 12.7% (OUR) vs 9.8% (RALUR). Median hospital stay was 2 days (OUR) and 1 day (RALUR). At a median follow-up of 15 months (2-44) success rates were 94.2% (OUR) vs. 95.5% (RALUR). Meta-analysis showed no significant difference in postoperative complications (7 studies, n=432, RALURvsOUR; OR 0.74, 95% CI 0.26–2.13; p=0.52, I²=32%) or surgical success (7 studies, n=431, RALURvsOUR; OR 1.27, 95% CI 0.50–3.19; p=0.62, I²=0%).

Conclusion

Despite variations in surgical techniques and patient characteristics, RALUR appears to be a safe and feasible alternative to open surgery in the treatment of pediatric VUR, with comparable early complication and success rates.

SO258

EARLY ROBOTIC EXPERIENCE IN PYELOPLASTY: AN ANALYSIS OF FEASIBILITY, SAFETY , AND THE LEARNING CURVE COMPARED TO LAPAROSCOPY

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Abstract

Introduction

This study presents our early institutional experience comparing outcomes of laparoscopic pyeloplasty (LP) and robot-assisted laparoscopic pyeloplasty (RALP) for treating ureteropelvic junction obstruction (UPJO) in children.

Materials and Methods

This study includes prospectively collected data from RALP cases and retrospectively collected data from LP cases in paediatric patients with UPJO between 2023 and 2025, performed by two robotic-trained paediatric urology consultants. All patients received a dismembered Anderson-Hynes pyeloplasty, with clinical and radiological follow-up. Patients' demographics, operative time, and postoperative outcomes were analyzed.

Results

Thirty-seven patients were included: 21 underwent LP (12 males, 9 females; median age 3.4 years), and 16 underwent RALP (9 males, 7 females; median age 10.8 years). In 35% involved crossing vessels. Median follow-up was 9.9(2.3-4.5) months for LP and 2(1.1-5.3) months for RALP. All patients showed improved renal drainage on postoperative imaging. Complications included one case of stent displacement (LP) and one intravesical hematoma with hematuria due to ureteric polyps (RALP). No conversions to open surgery or significant safety concerns occurred.

Median operative time was longer in the RALP group (194 (153-308) vs. 167.5 (127-403) minutes), with a median console time of 118(127-403) minutes. As experience in RALP increased, operative times decreased by a median of 21 minutes. In patients with BMI >20, RALP was associated with shorter operative times (232 vs. 250 minutes). Length of hospital stay (33 vs 34 hours) and opioid use (12 vs 14 hours) were comparable between groups. There was no duration difference among techniques regarding side and cause for UPJO. Notably, subjective factors such as surgical ease and surgeon fatigue were not quantified

Conclusion

RALP is a safe and feasible alternative to LP, with comparable success and complication rates, particularly helpful in patients with higher BMI. Continued familiarity may further improve efficiency and clarify RALP's advantages.

ORAL SESSION 3 - THORAX I

LO108

EVALUATION OF THORACOSCOPIC RESECTION FOR CONGENITAL LUNG MALFORMATIONS IN INFANTS AND CHILDREN.

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Abstract

Background: Thoracoscopy is now widely accepted as a treatment for Congenital lung malformations (CLM) in pediatric patients. However, there is a paucity of literature regarding its safety and efficacy, especially in neonates and early infancy. This study aimed to evaluate the safety and efficacy of thoracoscopic resection of CLMs in early infancy and children.

Patients and Method: A prospective study was conducted from 2021 to 2024. Pediatric patients diagnosed with any type of CLM were included in this study. Patients who had undergone surgery before or had contraindications to thoracoscopy were excluded from this study. All patients were operated on using 3 ports video assisted thoracoscopy (VAT). Intraoperative complications were the primary outcome of this study, while operative time, postoperative complications, and the need for secondary intervention were the secondary outcomes.

Results: 40 patients with CLMs, 24 males (60%) and 16 females (40%), with a mean age of 11.10 ± 15.24 months, were operated thoracoscopically without conversion. These included (50%) congenital pulmonary airway malformation (CPAM), (20%) extra-lobar bronchopulmonary sequestration (BPS), (15%) congenital lobar overinflation (CLO), (15%) bronchogenic cysts. Mean Operative time was 91.50 ± 35.88 minutes. There were no intraoperative complications other than some blood loss, which was controlled thoracoscopically. Patients were discharged from the hospital on an average 4th - 5th day. Air leak occurred in (5%). It was managed conservatively. No late postoperative chest infections were recorded during follow up visits.

Conclusion: thoracoscopic resection of CLMs is a safe, feasible and effective option for the management of CLMs in early infancy and childhood. It may offer comparable intraoperative difficulties and acceptable early and late post-operative complications.

Keywords: Congenital lung malformations, Thoracoscopy, Congenital pulmonary airway malformations, Children.

LO78

DOES PRIMARY POSTERIOR TRACHEOPEXY PREVENT COLLAPSE OF THE TRACHEA IN NEWBORNS WITH OESOPHAGEAL ATRESIA AND TRACHEOMALACIA? A STUDY PROTOCOL FOR AN INTERNATIONAL, MULTICENTRE RANDOMISED CONTROLLED TRIAL (PORTRAIT TRIAL)

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Abstract

Introduction:

Oesophageal atresia (OA) is a rare congenital condition characterized by a blind-ending oesophagus, often associated with a tracheo-oesophageal fistula (TOF). Many children with OA also develop tracheomalacia (TM), leading to respiratory symptoms, blue spells, or even respiratory arrest. In severe cases, a secondary posterior tracheopexy may be indicated. By performing a primary posterior tracheopexy (PPT) during the initial OA correction, respiratory sequelae of TM and a possible secondary surgery might be prevented. This study aims to determine if PPT can reduce collapse in TM and if this effect is sustained over time.

Methods

This international, multicentre, double-blind randomized controlled trial will include 78 children with OA type C. Patients will be randomly assigned in a 1:1 ratio to either the no-PPT (control) or PPT (intervention) group. The degree of TM will be assessed via pre-, intra-, and postoperative tracheobronchoscopies, and follow-up consultations until 6 months of age. Linear regression analysis will be performed to evaluate the degree of tracheal collapse during the intra- and postoperative tracheobronchoscopies and the differences in symptoms between PPT versus no-PPT group.

Results

The protocol has been approved by the Medical Research Ethics Committees of Utrecht and Rotterdam and is awaiting approval in the UK and Sweden. Data will follow.

Conclusion

This is the first randomized controlled trial investigating the efficacy of PPT, assessing the degree of TM at multiple time points. We expect that this study will provide new insights into the development of TM over time and the potential effect of primary OA correction on TM.

LO244

OPTIMIZING LONG-GAP ESOPHAGEAL ATRESIA REPAIR: A MULTICENTER RETROSPECTIVE STUDY

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Abstract

Introduction: The surgical management of long-gap esophageal atresia (LGEA) remains complex and challenging. This study compares management strategies and clinical outcomes in LGEA patients treated at five high-volume centers.

Methods: A retrospective analysis was conducted on LGEA patients (type A and B) treated between 2008 and 2024. Demographics, surgical treatment, timing of definitive repair and outcomes were collected and analyzed.

Results: A total of 138 patients were included. The surgical approaches involved: thoracoscopic in 112/138 (81.2%) patients (for five patients was open for final procedure), open in 24/138 (17.4%) patients and conversion from thoracoscopic to open in 4/113 (3.5%) patients. The surgical strategies consisted of: primary esophageal anastomosis – 11/138 (8%) patients, esophageal lengthening using internal traction – 40/138 (29%) patients (in 38 patients a full anastomosis was achieved: in 35 using only internal traction technique, while 3 patients required Collis/ Collis-Nissen procedure as definitive management), esophageal lengthening using external traction – 30/138 (21.7%) patients (1 patient required gastric pull-up as the final management), delayed primary anastomosis – 39/138 (28.3%) patients, and esophageal reconstruction – 16/138 (11.6%) patients. Median age at esophageal continuity and median time between the initial procedure and esophageal anastomosis was reduced for esophageal lengthening procedures. There was no surgery-related mortality. 4 patients died before the anastomosis due to concomitant malformations. Postoperative complications included anastomotic leakage, recurrent strictures, and fundoplication requirement. The native esophagus was preserved in 114/133 (85.7%).

Conclusions: Management at high-volume, experienced centers is crucial for optimizing outcomes and preserving the native esophagus in LGEA patients. Thoracoscopic staged esophageal lengthening using either external or internal traction, effectively reduces time to achieve esophageal continuity and the need for esophageal substitution, when primary esophageal anastomosis is not feasible. Early postoperative complications were comparably infrequent across centers, irrespective of the surgical strategy.

LO177

MINIMALLY INVASIVE REPAIR OF PECTUS EXCAVATUM: BAR STABILIZATION WITH RIGHT-SIDED PERICOSTAL SUTURES ONLY.

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Abstract

Purpose: Since the introduction of the Nuss technique for the correction of pectus excavatum, bar displacement has remained one of the most significant complications. Various stabilization techniques have been proposed, including bilateral pericostal sutures. This study evaluates whether fixation with pericostal sutures only on the right wing of the bar is as effective as bilateral fixation, potentially simplifying the surgical procedure without compromising outcomes.

Methods: We conducted a retrospective study of patients treated with the Nuss technique for pectus excavatum between June 2013 and April 2024 at our institution. Two groups were compared: Group 1 (n = 145): Bilateral pericostal sutures on both wings of the bar. Group 2 (n = 79): Pericostal sutures only on the right wing. Non-absorbable sutures were placed using fascia forceps under thoracoscopic guidance. The decision to apply unilateral or bilateral fixation was based on intraoperative bar stability and the anatomical severity of the deformity. We compared bar displacement rates, operative time, and other complications between the groups. Statistical analysis was performed using the Mann-Whitney U test and Fisher's exact test.

Results: Out of 224 patients, bar dislocation occurred in 3 cases in Group 1 and in 1 case in Group 2. No statistically significant differences were found between the two groups regarding bar displacement rates or postoperative complications.

Conclusions: Unilateral right-sided pericostal suture fixation did not increase the risk of bar displacement compared to bilateral fixation. Given the comparable outcomes and the simplified surgical process, we have progressively adopted the unilateral technique in our practice.

L075

THORACOSCOPY UNDER NON-INTUBATED ANESTHESIA IN CHILDREN

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Abstract

Objective: The use of bronchial blockers or double-lumen intubation tubes sometimes leads to adverse events. Our objective was to evaluate the feasibility of pediatric thoracoscopic surgical interventions in spontaneous ventilation and without intubation.

Method: From 2023 to 2025, 10 children underwent 14 thoracoscopic procedures with spontaneous ventilation in our center. A first procedure (pleural abrasion and apical lung resection for pneumothorax) was performed in an intubated adolescent. The technique was then extended to adolescents under non-intubated anesthesia with spontaneous ventilation using a laryngeal mask (5 pleural abrasions with apical lung resection), then to children and infants during longer procedures (2 mediastinal tumor biopsies, 2 bronchogenic cysts and one pulmonary sequestration by thoracoscopy, 2 thoracic neuroblastomas and one right upper pulmonary lobectomy by robotic surgery). PEEP was initially zero, then adjusted at 2–3 cmH₂O with pressure support of 6 to 9 cm H₂O.

Results: All 14 operations were completed without conversion. The mean age of the patients was 8.7 years (6 days-17 years) and the weight was 29 kg (3-59). The working space was satisfactory despite lung movements. There were 6 episodes of hypotension in 4 patients, one of which required vasopressors and a transient episode of desaturation to 87% resolved after temporary increase in FiO₂. Thoracoscopies lasted an average of 81 min (25-220). A chest tube was inserted in 11 cases and removed after an average of 2.2 days (1-4). No patient required postoperative mechanical ventilation. We reported no grade III or higher complications according to Clavien-Dindo, with a follow-up of 1 month to 1.6 years.

Conclusion: Thoracoscopy in children can be performed under non-intubated general anesthesia with spontaneous ventilation. The benefit of this technique should be evaluated prospectively.

SO84

IMPACT OF PATIENTS AGE ON PERIOPERATIVE MORBIDITY AND MORTALITY IN BONCHOGENIC CYST SURGERY

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Abstract

Aim of the study

Bronchogenic cyst (BC) is a congenital lung malformation progressing over time. Complete surgical resection is the definitive treatment, indicated upon diagnosis to prevent complications. The aim of this study is to assess the relationship between age at surgery and intra-operative technical difficulties, as well as post-operative morbidity and mortality.

Methods

This is a retrospective cohort study including all the patients who underwent surgery for BC from 2010 to 2024 in two surgical teams (a pediatric and a thoracic adult) among the same institution. Data collected included demographics, preoperative characteristics (symptoms, cyst size, location), perioperative factors (operative time, technical difficulties) and postoperative data (complications according to Clavien-Dindo, length of stay, mortality).

Main Results

Forty-five patients were included: 36 adults and 9 children, with median ages of 45 [29-53] and 1 year [0-5] respectively. Preoperatively, adults were more symptomatic (80.6% vs 33.3%, p-value = 0.010) and presented larger cyst (5.19 vs 3.11 cm, p-value < 0.0001). Regarding perioperative and postoperative data, surgical time was longer in adults (128 vs 88 minutes, p-value = 0.015) and children were discharged from hospital earlier (5 vs 3 days, p-value = 0.02). Regarding postoperative complications, Clavien-Dindo ≥ 3 only occurred in adults (5% (n=2) vs 0%, p-value = 1). No mortality was observed in this cohort. No malignancy was reported on pathology specimen.

Conclusion

This comparative study confirms increased difficulties of BC management with the age of the patients. Surgery of BC in early childhood is associated with lower morbidity, probably linked to mild inflammatory reactions.

ORAL SESSION 4 - VIDEO I

VP20

PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS: LAPAROSCOPIC PARTIAL INTERNAL BILIARY DIVERSION. VIDEO DEMONSTRATION OF A TECHNIQUE

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Abstract

Intractable pruritus in children is often due to chronic cholestasis syndromes such as progressive familial intrahepatic cholestasis and Alagille syndrome. Biliary Diversion procedures have been considered for relief of pruritus in children with good liver function. As 95% of bile acids are reabsorbed in the terminal ileum, biliary diversion interrupts the entero-hepatic circulation resulting in excretion of bile acids. PIBD over PEBD offers stoma free life to the patients. We aim to demonstrate the surgical technique for one such case.

Methods: A 12 months-old girl with neonatal cholestasis with itching with pigmented stool with soft hepatomegaly with multiple scratch marks, diagnosed as PFIC-1 on medical management referred from paediatric gastroenterology for diversion. She had intractable pruritis and worsening of LFT were planned for Laparoscopic Partial Internal Biliary Diversion.

Results: French Position was made. 3 ports - 10mm x 1 Infraumbilical (Camera), 5mm x 2 Right and left flank (working port) were placed. Liver surface appears smooth, minimal neovascularisation was present. Jejunal loop was identified distal to DJ and marking sutures were placed and conduit was made extra corporeally via umbilical port. JJ was done in 2 layers with 4-0 Vicryl and 4-0 PDS extra corporeally. Jejunal loop along with JJ repositioned back. Umbilical port was closed partially to place a 10 mm camera port. Through retrocolic route Jejunal limb is advanced. Cholecystojejunal anastomosis was done with 4-0 PDS. Jejunocolic anastomosis was done with PDS 4-0 (with transverse colon). 24 Fr drain was placed in pelvis. Port sites closed. Post-op recovery was uneventful. At 1 year and 2 months follow-up respectively patients are asymptomatic, no pruritus and with mild jaundice.

Conclusion: Laparoscopic technique has evolved as standard procedure for various condition in children. Laparoscopic PIBD for PFIC is feasible safe and effective. PIBD has shown to improve symptoms and delayed progression to ESLD.

VP21

LAPAROSCOPIC MODIFIED SWENSON'S PULL-THROUGH FOR HIRSCHSPRUNG'S DISEASE: VIDEODEMONSTRATION OF TECHNIQUE

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Abstract

Background: Hirschsprung's disease (HD) is a congenital disorder characterized by the absence of ganglion cells in the distal bowel, leading to functional obstruction. The Swenson procedure, one of the earliest definitive surgical treatments, aims to preserve the rectal cuff while removing the aganglionic segment. The laparoscopic modified Swenson's pull-through (LMSPT) offers a minimally invasive alternative with potential benefits such as reduced morbidity, faster recovery, and improved cosmesis.

Methods: A retrospective analysis of patients who underwent LMSPT between January 2024-March 2025 at SGPGIMS was done. Data were collected on demographics, operative details, complications, length of hospital stay, and functional outcomes. The surgical technique involved a transabdominal laparoscopic mobilization of the colon followed by a modified Swenson's pull-through with preservation of the anal sphincter complex.

Results: A total of 4 patients (all were males) with mean age of 6 years (range 2-13 years) were included in the study. All patients had undergone staged LMSPT. Mean operative time was 360 minutes. Mean hospital stay was 5 days. Mean follow-up was 8 months (range 2-14 months). Colostomy closure was done in 3 patients. Fecal continence was present in all 3 patients with daily stool frequency of 5 to 6 times. However, 1 patient without colostomy closure, had anastomotic stenosis and was kept on anal dilatations.

Conclusions: Laparoscopic modified Swenson's pull-through is a safe and effective alternative for the surgical management of Hirschsprung's disease, offering advantages such as faster recovery, lower postoperative pain, and better cosmetic results. Larger studies and long-term follow-up are needed to further validate these findings.

VP140

EXPANDING HORIZONS: LAPAROSCOPIC ILEOCYSTOPLASTY FOR PEDIATRIC NEUROGENIC BLADDER

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Abstract

Introduction: This video is a demonstration of complete intracorporeal laparoscopic ileocystoplasty performed for a paediatric patient of neurogenic bladder.

Case: The case is an 8-year female previously operated for myelomeningocele in infancy, with urinary incontinence. She was evaluated and diagnosed with bilateral hydroureteronephrosis, high grade reflux, bilateral cortical scarring, chronic kidney disease. Urodynamic study demonstrated small capacity overactive bladder. After a failed laparoscopic autoaugmentation, she was taken up for augmentation cystoplasty.

Method: In lithotomy position, a supraumbilical camera port, two 5mm instrumentation ports in bilateral flank were created. A 20 cm segment of ileum, located 15 cm proximal to the ileocecal junction, was isolated along with its pedicle. Ileoileal stapler anastomosis was performed to restore bowel continuity. An ileal pouch was created in U shaped configuration with demutualization and reconfiguration. Bladder dome was opened, and two infant feeding tubes were guided into ureteric orifices under laparoscopic guidance. The ileal pouch was sutured to the bladder with V lock 4-0, ensuring full thickness edge to edge watertight closure. A leak test performed by instillation of saline via catheter confirmed integrity of suture line. Ureteric stents were removed by 12th, 13th day and per urethral catheter was removed on 14th day after which CIC was reinitiated.

Conclusion: Laparoscopic enterocystoplasty in children is a highly effective yet technically demanding procedure offering reduced postoperative pain, faster recovery, and improved cosmetic outcomes.

VP137

UNANTICIPATED INTRAOPERATIVE DIAGNOSIS OF CONGENITAL MID-URETERIC STENOSIS - A VIDEO DEMONSTRATION OF ROBOTIC SURGICAL MANAGEMENT

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Abstract

Background: Congenital mid-ureteric stenosis (CMUS) is a rare condition that involves a narrowing of the mid-portion of the ureter, which leads to hydronephrosis. It may be due to strictures or ureteral valves. The condition often presents with symptoms of recurrent urinary tract infections, hydronephrosis, or, in some cases, as an incidental finding during imaging studies for unrelated conditions. Various minimally invasive techniques including laparoscopic resection and uretero-ureterostomy have been described in the literature.

Materials and Methods: 2-year-old female child with a history of antenatally diagnosed left hydronephrosis. There is no history of febrile UTI and pain in the abdomen. Ultrasound showed left side APD of 3.7cm. LLEC scan showed left side severely impaired function and no drainage for up to 2 hours, with SRF of 29%. Patient was posted for Robotic Surgery and intra operatively it revealed to be congenital mid ureteric stenosis. The patient underwent Robotic left Pyeloplasty and the postoperative period was uneventful. Post op LLEC scan showed left side SRF of 36%.

Conclusion: CMUS even though uncommon, has to be anticipated and can be managed with advanced minimally invasive techniques like Robotic-assisted surgeries.

VP119

ADDRESSING RECURRENT ADNEXAL TORSION AFTER FAILED INITIAL OOPHOROPEXY: A VIDEO CASE REPORT

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Abstract

Introduction: Recurrent adnexal torsion, poses a significant risk, particularly in pediatric patients and those with history of ovarian loss, potentially leading to early menopause. Oophoropexy aims to prevent it, but its routine use is debated due to fertility concerns. It's increasingly used for recurrent torsion and/or after contralateral oophorectomy. We present a laparoscopic management of recurrent torsion in a pre-pubertal patient with previous failed oophoropexy.

Case-Report: A 12-year-old female with past history of left oophorectomy for torsion at age 9, and right oophoropexy with U-shaped suture to the utero-ovarian, round and suspensory ligaments for torsion at age 11, presented one-year later with 72-hours of right iliac fossa pain. Abdominal ultrasound was inconclusive, but magnetic resonance suggested ovarian ischemia. Exploratory laparoscopy revealed a 540-degree adnexal torsion and redundant fallopian tube, without evidence of prior oophoropexy. Following detorsion, she was discharged for oocyte cryopreservation and scheduled for elective oophoropexy. Recurrent adnexal torsion occurred one month later and underwent oophoropexy that day. We present the video (<https://mega.nz/file/Z6QRRCoB#H2uv7NbOzDSII1F6mGgr6PKCruda4-76lZPO2VecHKw>) of the laparoscopic three-point round ligament oophoropexy. Four trocars were used (10mm camera on the umbilicus, two 5mm at previous scar sites at left and right lateroumbilical region and another 5mm at the suprapubic region). Intraoperative findings revealed: normal sized uterus, left ovary absent, and an enlarged right ovary with 1080-degree torsion of the vascular pedicle (infundibulopelvic ligament). Laparoscopic adnexal detorsion was performed, followed by ovarian fixation to the round ligament using three U-stitches with prolene. No intraoperative or postoperative complications occurred, nor adnexal torsion recurrence at one year follow-up.

Conclusion: This case highlights the complex management of recurrent adnexal torsion in pre-pubertal patients with solitary ovary and previously failed oophoropexy. The successful application of a laparoscopic three-point oophoropexy to the round ligament, without recurrence, highlights the viability and potential durability of this approach.

VP136

CRUCIAL STEPS IN ROBOTIC ADNEXAL PATHOLOGY APPROACH TO FACILITATE OVARIAN SPARING SURGERY IN CHILDREN

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Abstract

Introduction

Every effort should be undertaken to support the salvage of pediatric ovaries. A loss of ovary in the childhood may result in fertility impairment, premature ovarian failure and increased risk for trisomy in offsprings in the future. Since up to 15 % of adnexal pathology may be bilateral, castration constitutes a real risk with the procedure performed without a maximal effort for using sparing surgery. The purpose of this study was to identify and present crucial steps of robotic surgical technique facilitating the maximal sparing of the ovaries and blood supply to the adnexa.

Methods

We retrospectively reviewed the medical data and video recorded in girls subjected to the robotic approach for adnexal pathology with intention to maximize ovarian tissue and blood supply preservation. Three and four arms docking technique for the da Vinci XI surgical system, robotic vessel sealer, fenestrated bipolar forceps, bipolar Maryland forceps, monopolar curved scissors and robotic ultrasound probe were used for exposure, dissection, coagulation and ovary inspection, respectively. Ovarian cortex or mesosalpinx bivalving incision with subsequent intact cystectomy for benign lesion were done. Ovariectomy was reserved to malignant lesion only.

Results

Ten girls aged 12 - 17 years were operated between May, 2024 and April, 2025. The longest diameter of the lesions was 3-10 cm. The removed pathologies were mature teratoma (5) cystadenoma (1), juvenile granulosa cell tumor (1) paraovarian cyst (2), and rete ovarii cyst (1). All benign intraovarian cysts were enucleated with maximal volume of the ovary left. All paraovarian cyst enucleations left the intact adnexal blood supply.

Conclusion

Robotic approach allows for precise inspection of adnexal pathology in magnified 3D view, with superb exposition and inspection providing the possibility for maximal sparing surgery in benign intraovarian and paraovarian pathology.

VP14

LAPAROSCOPIC RADICAL NEPHRECTOMY WITH LYMPH NODE SAMPLING OF WILMS TUMOR- VIDEO PRESENTATION

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Abstract

Introduction:

Surgery is crucial for managing pediatric renal tumors like Wilms tumor. Open nephroureterectomy is the standard approach, but with advancing expertise, minimally invasive surgery (MIS) is becoming viable. While MIS is common for adult renal malignancies, its use in pediatric Wilms tumor lacks standardization. A laparoscopic approach is acceptable only if oncological guidelines are strictly followed. We hereby present the case of a four-year old boy who was managed successfully using a minimally invasive surgical approach.

Method:

The patient presented with a left abdominal lump, noticed incidentally a week prior. Initial evaluation suggested a left renal tumor, and imaging revealed a $9.4 \times 8.3 \times 8.6$ cm mass with retroperitoneal lymphadenopathy and a small right lung nodule (Stage IV).

Following six weeks of DD4A neoadjuvant chemotherapy, the renal mass reduced to $5.0 \times 4.2 \times 4.1$ cm, with complete resolution of lung nodules. The patient underwent laparoscopic nephroureterectomy with lymph node sampling, with no tumor spill or capsular breach. Postoperative recovery was uneventful, and adjuvant chemotherapy resumed on POD-7.

Result:

Histopathology confirmed Wilms tumor (Local Stage I) with favorable histology, <33% viable tumor, and negative margins. Lymph nodes were uninvolved. Flank RT was given as per the DD4A regimen. The patient completed 24 weeks of chemotherapy and remains disease-free after two years of follow-up.

Conclusion:

We conclude that laparoscopic nephroureterectomy is safe and feasible for pediatric renal tumors. Proper patient selection and adherence to oncological principles are crucial.

VP33

THORACOSCOPIC LOBECTOMY IN AN INFANT; VIDEO PRESENTATION OF THE SURGICAL TECHNIQUE

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Abstract

Aim: To present a case of an infant operated thoracoscopically for CPAM

Methodology: A 7-month-old male with recurrent lower respiratory tract infections over 2.5 months was diagnosed with right lower lobe macrocystic CPAM on CECT thorax.

Result: Thoracoscopic right lower lobectomy was performed, and the anatomic delineation of the pulmonary vessels and bronchus is demonstrated in this video. The child was extubated on-table and ICD was removed on POD 4 after drainage reduced. Histopathology confirmed CPAM. At 4-month follow-up, he remains asymptomatic.

Conclusion: We conclude that thoracoscopic lobectomy is a safe and effective surgical approach for CPAM in infants, offering advantages such as early extubation, reduced post-operative pain, and shorter recovery time. Increasing surgical expertise and advancements in minimally invasive techniques continue to enhance outcomes in pediatric thoracic surgery.

ORAL SESSION 5 - UROLOGY II

LO154

REESTABLISHING URETERAL PATENCY AND FLOW: MINIMALLY INVASIVE URETEROURETEROSTOMY IN CHILDREN- A CASE SERIES

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Abstract

Introduction

Laparoscopic/robotic ureteroureterostomy (LUU/RUU) demonstrates growing utility for pediatric ureteral pathologies, though evidence remains limited for diverse indications. This case series evaluates LUU/RUU outcomes in four pediatric patients with distinct etiologies: one with acquired mid-ureteral stricture secondary to retroperitoneal fibrosis and three with complete ureteral duplication complicated by symptomatic upper-pole obstruction.

Methods

Four patients (6 months–18 years) underwent LUU/RUU (March 2022– Jan 2025):

1. Stricture case: 20-year-old female with left ureteric stricture post left pyelolithotomy (with right Non-Functional Kidney)
2. Duplication cases: Complete duplex systems with either upper-pole obstruction or ectopic ureter.

Out of these 4 cases, one case underwent Trans-Ureteroureterostomy while other 3 underwent Ipsilateral Ureteroureterostomy. Transperitoneal approach included intraoperative stenting & spatulated anastomosis. DJ stents remained 2–6 weeks postoperatively.

Results

The operative outcomes demonstrated a mean operative time of 170 minutes, with minimal blood loss. DJ stent in one of the duplication patient accidentally came out while removing the catheter, however no intervention was required. At a mean follow-up of 24.5 months, patients exhibited with reduction of hydronephrosis & remained free of symptoms.

Conclusion

LUU/RUU effectively addressed both congenital and acquired ureteral obstructions. Compared to open procedure, LUU/RUU offered shorter hospitalization with equivalent functional outcomes. These findings support LUU/RUU as a versatile minimally invasive option for complex pediatric ureteral reconstruction. With MIS, both proximal and distal anastomosis is possible, ureteral anastomosis obviates the need to work around the renal hilum and avoids injury.

LO217

WHY DOES PYELOPLASTY FAIL? AN ANALYSIS OF 40 CASES OF LAPAROSCOPIC REDO PYELOPLASTY

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Abstract

Introduction

Pyeloplasty is the standard treatment for Pelvi-Ureteric Junction Obstruction (PUJO). About 3-7% require re-operation due to failure. We aim to elucidate the causes of recurrent PUJO through our experience with redo laparoscopic pyeloplasty.

Materials and Methods

We retrospectively analysed the data and medical records of 40 patients who underwent redo laparoscopic pyeloplasty over 13 years. The pre-operative investigations and operative findings during redo-pyeloplasty were analyzed to identify the causes of obstruction.

Results

40 cases were analysed. 27 were left-sided. 33 redo pyeloplasties had a previous history of open pyeloplasty. The median gap between the initial failed operation and redo operation was 9 months (2-48). Median age at redo operation was 14 months (3-144). All cases were approached laparoscopically. All underwent an RGP before laparoscopy. The most common cause for re-obstruction was Pelvi-ureteric junction (PUJ) stricture (24). Other causes included non-dependent anastomosis (5), ureteric twist (4), malrotated kidney (3), missed crossing vessel (2), and a suture granuloma (2). Recurrent PUJO was corrected with redo-Pyeloplasty (37) & 3 patients underwent Uretero-calicostomy (UC). DJ stent was inserted in all the patients and 33% required a nephrostomy. Median follow-up was 4 years (6 months- 9 years). Reoperation was successful in 38 patients (95%). 2 cases that failed had a poorly functioning kidney and underwent Nephrectomy.

Conclusion

The most common cause of recurrent PUJO in our series was PUJ stricture. Laparoscopic redo-pyeloplasty is a safe and feasible approach to correct Recurrent PUJO.

L073

NO RING: AN UNUSUAL VARIANT OF PRIMARY OBSTRUCTED MEGAURETER (POM) AND ITS OUTCOME AFTER ENDOSCOPIC BALLOON DILATATION (EBD)

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Abstract

Introduction: EBD is a minimally treatment for management of POMs. The Ring is considered a sign of obstruction. Some patients, show No Ring during EBD. We aim to detail characteristics and outcomes of such patients.

Material and Method: Retrospective study of 142 cases treated. Demographic characteristics and outcomes of No Ring cases were assessed, and compared to ring patients.

Results: No Ring was observed in 16 out of 142 (11.2%) EBD. Preoperative characteristics were not different between patients (Table). Of the 16 No Ring patients, the first 5 cases were scheduled for ureteral reimplantation (UR) straightaway for surgeon/family preference. The subsequent 11 patients were followed up after EBD. Of these, 5 required UR after a median of 15 (8-26) months from EBD due to worsening dilatation associated with symptoms in 1; the remaining 6, instead, are asymptomatic, with improving dilatation [ureteral diameter of 8.5 (0-12) mm] and unchanged differential renal function [50 (25-52) %] after a follow-up of 84 (24-96) months. Clinical characteristics before EBD were not different between patients with either outcome (Table).

	Male gender n (%)	Right sided n (%)	Symptoms n (%)	Median (range) Ureteral diameter (mm)	Median (range) Differential function (%)	Median (range) Age at EBD (months)
Ring pts (n=126)	109 (86.5%)	39 (31%)	39 (31%)	15 (8-27)	48 (15-56)	14 (4-240)
No Ring pts (n=16)	13 (81%)	6 (37.5%)	2 (12.5%)	16.5 (9-28)	45 (15-53)	11.5 (6-160)
No ring pts worsening on follow-up (n=5)	5 (100%)	2 (40%)	1 (20%)	15 (9-28)	45 (15-50)	9 (8-28)
No ring pts improving on follow-up (n=6)	5 (83%)	2 (33%)	1 (17%)	17 (13-20)	47.5 (24-53)	11.5 (6-160)

Conclusion: No Ring was observed in 11%. We could not identify characteristic to select these patients. About half of the No Ring patients improved during follow-up, whereas the other half required reimplantation. No ring patients might be a unique subset of POM patients with a peculiar obstructive mechanism.

LO97

OPEN VS. ROBOT-ASSISTED LAPAROSCOPIC PYELOPLASTY IN CHILDREN: OUR PRELIMINARY EXPERIENCE

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Abstract

Introduction

Robotic surgery has been performed in pediatric patients at our center since early 2022. The aim of this study is to analyze the feasibility and safety of robot-assisted laparoscopic pyeloplasty (RALP) by comparing it with the open surgical technique.

Methods

We retrospectively analyzed data from patients who underwent pyeloplasty at our center between February 2022 and December 2024. Collected variables included patient sex, age and weight at the time of surgery, operative time, length of hospital stay, and complication rate. Patients were divided into two groups: Group O (open pyeloplasty) and Group R (RALP).

Results

A total of 25 patients underwent pyeloplasty during the study period—13 via the open approach (Group O) and 12 via the robot-assisted approach (Group R). The mean age was 0.8 years in Group O and 12 years in Group R. The mean operative time was 191 minutes for Group O and 239 minutes for Group R. The average hospital stay was 4 days for open surgery and 3 days for RALP. Only one minor complication (Clavien-Dindo Grade I) was recorded, in Group O.

Discussion and Conclusions

Despite a longer operative time for RALP, the outcomes are comparable—and potentially superior—to those of open surgery. RALP was associated with a shorter hospital stay, potentially reducing overall costs. No complications were observed in the RALP group. These preliminary results suggest that RALP is a safe and feasible option for pediatric patients.

LO129

RETROPERITONEAL ROBOT-ASSISTED LAPAROSCOPIC PYELOPLASTY IN INFANTS BELOW 10 KG: BREAKING A NEW FRONTIER?

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Abstract

Purpose

In recent years, robotic-assisted laparoscopic pyeloplasty (RALP) has been gaining acceptance among pediatric urologists, even in small children. The aim of the study is to analyze our experience of retroperitoneal RALP (R-RALP) in infants below 10 kg.

Material and Methods

Prospective study (NCT03274050) including all children below 10 kg who had R-RALP at our center since June 2021, using the DaVinci Xi® robot. Procedures were performed by 1 senior surgeon and 1 fellow.

Results

Fourteen children underwent R-RALP (6-32 months). The youngest child was 7.5-month-old, weighing 5.5 kg. Operative time was 228min (199-249). Aberrant anterior crossing vessels were present in two patients.

A transabdominal 14G catheter was inserted almost systematically to evacuate the pneumoperitoneum, due to an augmented permeability of the peritoneum to CO₂ in this population.

No intraoperative complications occurred. No conversion to open surgery was necessary. A magnetic-end double-J ureteral stent was inserted in 9, with one failure of non-surgical magnetic removal.

In 4 cases, an external ureteropelvic stent was inserted.

In one case, the smallest of the series, no stenting was used.

Mean hospital stay was 1.7 days (1-5).

At a mean follow up of 10 months, two febrile urinary tract infections occurred (Clavien-Dindo 2) and one failure (III b).

Conclusion

This is the first study that demonstrate the feasibility and safety of retroperitoneal robot-assisted laparoscopic pyeloplasty in infants below 10 kg. Despite the challenges associated with this patient population, in particular for the approach, R-RALP can be successfully performed.

SO105

PARATESTICULAR INJECTION OF ICG FOR LYMPHATIC-SPARING LAPAROSCOPIC PALOMO PROCEDURE: PROSPECTIVE REPORT OF 19 CONSECUTIVE CASES

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Abstract

Introduction

Sparing lymphatic vessels during Palomo varicocelectomy significantly reduces the rate of postoperative hydrocele. According to current literature, intratesticular lesions are reported to occur in 4.1 to 19% of cases following intratesticular injection of dyes. We describe the first case series of paratesticular injection of indocyanine green (ICG) for lymphatic-sparing Palomo procedure on 19 consecutive patients.

Material and Methods

In July 2021, we transitioned from using patent blue to ICG in our standard lymphatic-sparing technique. All patients scheduled for ICG-lymph sparing Palomo Procedure were enrolled in this prospective study. Surgical treatment was recommended if testicular size difference exceeded 20% or patients reported long-term complaints after detailed counselling about the pathology. After laparoscopy was installed, 2ml of ICG was injected paratesticularly at three different locations.

Results

Visualization was successful in 18 of the 19 patients within seconds of the injection, and lymphatic sparing was achieved in all these cases. The one patient with failed visualization had a history of perforated appendicitis with extensive intraperitoneal adhesions and scarring. While ICG injection facilitated the identification of the testicular vessels, selectivity was lost by the time the vessels were dissected. A non-lymphatic-sparing Palomo procedure was performed.

Regression of the varicocele was observed in 18 cases, one patient showed persistent varicocele but reduced peak flow three months postoperatively. No patient developed a hydrocele. All testes grew postoperatively with the majority demonstrating catch-up growth three months postoperatively.

Conclusion

Our preliminary data suggest that paratesticular injection of ICG enables reliable visualization of lymph vessels. Considering the reported incidence of intratesticular lesions following intratesticular injection, we believe that paratesticular injection should be the treatment of choice.

SO156

KEEPING IT CONNECTED: LAPAROSCOPIC SIDE-TO-SIDE NON-DISMEMBERED PYELOPLASTY FOR LOWER MOIETY OBSTRUCTION IN INFANT PARTIAL DUPLEX KIDNEY

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Abstract

Introduction

Pelvic-ureteric junction (PUJ) obstruction in infants with partial duplex renal systems presents unique surgical challenges. While minimally invasive approaches such as laparoscopic pyeloplasty are increasingly utilized in pediatric surgery, there remains limited data regarding specific techniques for duplex systems, particularly non-dismembered approaches in early infancy.

Methods

We present the case of a 4-month-old male infant diagnosed antenatally with left hydronephrosis. Postnatal imaging and evaluation revealed a left partial duplex kidney system with significant hydronephrosis affecting the lower moiety. Due to the development of a palpable abdominal lump and progressive hydronephrosis, surgical intervention was indicated. A transperitoneal laparoscopic lower moiety side-to-side non-dismembered pyeloplasty was performed using a three-port technique.

Results

The laparoscopic procedure was completed without any intraoperative complications. The patient's post-operative course was uneventful, characterized by minimal pain, early return to feeding, and a short hospital stay. Structured selection of cases in duplex systems might benefit from the non-dismembered technique because it helps decrease operative time while maintaining renal anatomical integrity.

Conclusion

Laparoscopic lower moiety side-to-side non-dismembered pyeloplasty is a viable and effective option for managing lower moiety PUJ obstruction in infants with partial duplex systems. This minimally invasive technique provides a safe and effective surgical option in appropriately selected complex cases in early infancy, offering the benefits of reduced morbidity associated with laparoscopic surgery. Further experience is valuable to refine the indications and outcomes of this approach in complex pediatric urological conditions.

ORAL SESSION 6 - ROBOTICS AND INNOVATION I

LO31

SEVEN-YEAR EXPERIENCE WITH PEDIATRIC ROBOTIC-ASSISTED SURGERY: OUTCOMES, TRAINING, AND EVOLVING TRENDS FROM 105 CONSECUTIVE CASES

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Abstract

Purpose: Robotic-assisted surgery (RAS) has increasingly gained ground in pediatric care. We conducted a retrospective analysis of 105 pediatric RAS procedures performed over a seven-year period (2017–2024) to assess clinical outcomes, procedural efficiency, and surgical training.

Methods: A total of 105 children (58 boys, 47 girls) aged 2 to 15 years underwent operations using the Da Vinci Xi system. The most frequent indications included ureteropelvic junction obstruction ($n = 33$), varicocele ($n = 29$), and primary obstructive megaureter ($n = 16$). All procedures were carried out by two senior surgeons who concurrently trained seven junior surgeons using a dual-console setup. Statistical analyses involved paired t-tests to compare docking times and operative durations, along with Fisher's exact test for categorical variables.

Results: Docking time significantly improved over the years, decreasing from 45 to 15 minutes (median 25 min, $p = 0.001$), while total operative time also significantly declined (median 125 min, range 50–250; $p = 0.001$). Robotic system-related technical issues occurred in 3 cases (2.8%), with 1 conversion to laparoscopy (0.9%). Postoperative complications (Clavien–Dindo grade 3b) requiring reintervention were observed in 2 patients (1.8%). The median length of hospital stay was 2 days (range 1–7), and monthly case volume increased from 1–2 to 4–7 procedures.

Conclusion: Our seven-year experience confirms that pediatric RAS is a safe and effective technique, particularly in pediatric urology. It enhances ergonomics and facilitates surgical training, though challenges remain due to high costs, larger instrument sizes (8 mm), and longer setup times compared to traditional laparoscopy. Innovations such as smaller robotic tools and single-port systems may help overcome current limitations and broaden the use of RAS in younger and smaller pediatric patients.

LO216

ADVANTAGE OF ICG-GUIDED LAPAROSCOPY IN THE MANAGEMENT OF NONPARASITIC SPLENIC CYSTS IN CHILDREN: A RETROSPECTIVE CASE SERIES

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Abstract

Purpose: Indocyanine green (ICG)-guided surgery is increasingly used in pediatric procedures for its ability to enhance anatomical visualization. While commonly applied in hepatobiliary and urogenital surgeries, its use in splenic surgery is rare. Nonparasitic splenic cysts (NPSC) are uncommon, usually asymptomatic, and often diagnosed incidentally. We aim to present outcomes from our ICG-guided laparoscopic approach a novel technique in the management of pediatric NPSC.

Methods: All patients who underwent laparoscopic surgery for NPSC in our department between January 2015 and April 2025 were retrospectively included in the study. Demographic and clinical data of the patients including sex, age, size of cyst, presenting symptoms, partial or total splenectomy, duration of surgery, postoperative complications, pathologic diagnosis and recurrence were analyzed.

Results: During the study period, 15 patients underwent laparoscopic partial or total splenectomy due to NPSC. ICG was used in 10 of these cases. Cystectomy was performed in 3 patients, and preoperative chemoembolization was applied in 2 patients. Among the 10 patients included in the study, the mean age was 14years (range 6-17) (median: 15), with 4 males and 6 females. The presenting symptoms were abdominal pain (n=6) and incidental diagnosis (n=4). Cyst sizes ranged from 5 to 27cm. Partial splenectomy was performed in 5 patients, while other 5 underwent total splenectomy. The mean operative time was 168min. (range: 75–240min). No intraoperative or postoperative complications occurred, and conversion to open surgery was not required in any case.

Conclusion: Laparoscopic spleen-preserving surgery is the preferred approach in the current management of NPSC. A thorough understanding of the splenic vascular anatomy which can be highly variable is essential for the safety and feasibility of spleen-preserving procedures. The use of ICG is highly beneficial in facilitating vascular anatomy for spleen preservation and in minimizing the risk of complications during partial or total splenectomy.

L038

FROM LAPAROSCOPIC TO ROBOT-ASSISTED EXTRAVESICAL URETERAL REIMPLANTATION: ESTABLISHING A NEW STANDARD OF CARE FOR PEDIATRIC VESICoureTERAL REFLUX.

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Abstract

Purpose: This study aimed to compare laparoscopic versus robot-assisted extravesical ureteral reimplantation (LEVUR vs REVUR) in pediatric patients diagnosed with moderate to high-grade vesicoureteral reflux (VUR).

Methods: We retrospectively analyzed the medical records of all children with grade III–V VUR who underwent LEVUR or REVUR between 2014 and 2024. Patients were categorized based on surgical approach and the side of the pathology (unilateral or bilateral).

Results: Seventy-six children (40 females, 36 males) with a median age of 5.7 years (range: 2–11) were included. The median operative time (OT) for unilateral non-dismembered ureteral reimplantation (UR) was comparable between LEVUR (65 minutes) and REVUR (50 minutes) [$p = 0.56$]. However, REVUR was significantly faster in unilateral dismembered UR (90 vs 120 minutes) and in bilateral UR (105 vs 160 minutes) [$p = 0.001$ for both]. Radiographic resolution of VUR was achieved in 97.8% of REVUR and 96.7% of LEVUR cases [$p = 0.89$]. Two patients (2.6%) presented persistent low-grade reflux, with no need for further intervention. Mild bladder dysfunction occurred in 2 of 21 patients (9.5%) who underwent bilateral procedures (Clavien-Dindo grade II).

Conclusion: REVUR offers improved ergonomics and shorter operative times compared to LEVUR, while ensuring equally high success rates and favorable long-term outcomes. Complications were limited and associated only with bilateral cases in patients with prior bladder dysfunction. Where robotic platforms are available, REVUR should be preferred in all bilateral and dismembered cases, while LEVUR may remain suitable for simple unilateral procedures. Cost and trocar size remain LEVUR's main advantages.

SO93

SURGICAL DATA SCIENCE: A SYSTEMATIC REVIEW ONE DECADE AFTER INTRODUCTION IN THE OPERATING ROOM

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Abstract

Introduction

The Operating Room Black Box (ORBB) is a multi-modal recording platform that captures team interactions and environmental factors in the operating room. A decade after its initial implementation, a systematic review is needed to synthesize its diverse applications and to propose a framework for future research.

Methods

We registered this review with PROSPERO and searched PubMed and Web of Science for articles published from January 1, 2013, to December 31, 2023. Searches were performed in February 2024 using the keywords “surgical black box,” “operating room black box,” “operating room data capture,” “operating room video,” and “operating room workflow.”

Results

Following PRISMA guidelines, 22 studies were included from an initial yield of 1 447 records. Eighty-two percent of these studies were published between 2019 and 2023, marking a pronounced increase in ORBB research since 2019. The majority (82 %) originated from the

Americas, predominantly Canada. Seventeen studies (77 %) used the ORBB to assess and analyze operating room processes, while five studies (23 %) focused on debriefing and education. Among process-analysis studies, 65 % (11/17) examined technical and non-technical skills, and 53 % (9/17) investigated distractions and device-related interruptions. Only three studies addressed intraoperative adverse events.

Conclusion

After these ten years that the Black Box has effectively provided surgical data, the most important challenge is how to deal with this data. Successfully addressing this challenge will elevate surgical safety management to a higher level.

SO72

PRACTICAL GUIDELINES FOR THE USE OF INDOCYANINE GREEN IN VARIOUS BRANCHES OF MINIMALLY INVASIVE PEDIATRIC SURGERY: A NATIONAL MULTICENTER STUDY

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Abstract

Purpose:

Minimally invasive pediatric surgery demands exceptional precision due to the unique anatomical and physiological characteristics of children. Innovations that enhance surgical accuracy, shorten operative times, and improve postoperative outcomes are of great value. Indocyanine green (ICG) has emerged as a promising tool in achieving these objectives. The aim of this study was to evaluate the clinical applications of ICG across various domains of pediatric surgery.

Methods:

Data were retrospectively collected from 67 patients aged 3 to 15 years, who underwent laparoscopic or thoracoscopic procedures in four pediatric surgical centers in Poland. The patients were categorized into three primary surgical groups: oncological (n = 24), gastrointestinal (n = 32), and urological (n = 11). Statistical analysis was conducted using Statistica 13 (TIBCO) and PQStat v.1.8.6.120 (PQStat Software), with descriptive statistics also performed.

Results:

The dosage of ICG varied depending on the procedure, ranging from 1 mg per procedure to 1.5 mg/kg body weight per procedure. ICG proved to be both effective and safe across the entire cohort. In 84% of cases, intraoperative findings guided by ICG fluorescence were confirmed by postoperative histopathological evaluation. No complications related to ICG use were observed.

Conclusions:

This multicenter study supports the efficacy and safety of ICG fluorescence imaging in minimally invasive pediatric surgery. By enhancing intraoperative visualization and contributing to improved surgical outcomes, ICG represents a valuable advancement in the field. The establishment of standardized protocols and the implementation of specialized training will be essential to fully leverage the benefits of this technique.

SO111

ROBOTIC SURGERY FOR HIRSCHSPRUNG DISEASE: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Abstract

Introduction: Although robotic-assisted surgery (RAS) has been reported to have advantages over laparoscopy in adult pelvic surgery, its role in Hirschsprung's disease (HD) remains unclear. In infants, RAS could facilitate rectal dissection in challenging cases but could be limited by working space and instrument size. This review aimed to assess the current indications and limitations of RAS in management of HD.

Methods: A systematic review (PROSPERO CRD420251014922) was conducted using PubMed, Embase, Cochrane Library, and Scopus. Studies reporting RAS for HD in children or adults were included. Data synthesis followed PRISMA-2020 guidelines and was organized into three groups: primary pull-through in infants, pull-through in late-diagnosed cases (age >1 year), and redo-surgeries. Outcomes included mortality, perioperative morbidity and long-term functional results. A meta-analysis was performed for the infant group, comparing main outcomes in RAS to laparoscopic approach.

Results: Since 2000, 36 studies reported on RAS for HD, of which 16 met inclusion criteria, totalling 515 cases. Primary pull-through in infants was reported in 8 studies (n=390), with no conversions or intraoperative complications. Five studies compared RAS to laparoscopy, showing a lower blood loss, and higher costs with RAS, but no differences in operative time, postoperative complications or functional outcomes. Five studies reported late pull-through procedures (n=91; ages 1–18). While operative time tended to be longer with RAS, anal dissection was reported as faster in one study. No difference in hospital stay was observed, though one study reported fewer anastomotic complications with RAS (0% vs 17%). Regarding redo-surgery (n=34), no intraoperative complication or conversion occurred.

Conclusion: Robotic-assisted surgery may improve pelvic dissection in selected cases of HD, particularly in older children with delayed diagnosis or requiring redo procedures. Its superiority in primary pull-through for infants remains unproven, but it appears beneficial in complex or challenging cases.

SO128

ROBOTIC-ASSISTED LAPAROSCOPIC REMOVAL OF GASTRIC BEZOARS IN ADOLESCENTS USING HIDES APPROACH

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Abstract

Purpose

Gastric bezoars are rare entities predominantly affecting adolescent females, often associated with underlying psychiatric conditions. Traditional surgical management consist in an open gastrotomy, but minimally invasive techniques are now emerging. This study aims to evaluate the feasibility and benefits of robotic-assisted laparoscopic removal of gastric bezoars, focusing in particular on the use of the Hidden Incision Endoscopic Surgery (HIdeS) approach.

Methods

Between 2018 and 2024, four adolescent girls were treated at our center. In two cases, trocars were placed along the transumbilical plane, while in the other two, the HIdeS technique was adopted. This approach involves the initial placement of a transumbilical port for the camera, allowing the positioning of four 8-mm robotic-trocars along a low suprapubic line. Once the suprapubic ports are positioned, the umbilical port is repurposed as an accessory port. Surgical procedure consisted of a gastrotomy for bezoar extraction, with one patient also requiring an enterectomy due to jejunal extension. A 'false' Pfannenstiel incision was used for specimen retrieval with an endobag. In patients treated with the HIdeS technique, this incision connects the suprapubic port sites.

Results

There were no intraoperative complications. The robotic system provided enhanced visualization and dexterity, allowing meticulous dissection and secure closure of the gastrotomy and enterectomy sites. The HIdeS approach resulted in minimal visible scarring, addressing aesthetic concerns pertinent to the adolescent demographic.

Conclusion

Robotic-assisted laparoscopic removal of bezoars using the HIdeS approach is a safe and effective technique in adolescents. This method offers the advantages of minimally invasive surgery, including reduced postoperative pain and superior cosmetic outcomes, which are particularly beneficial for the psychological well-being of adolescent patients.

SO80

FLUORESCENCE-GUIDED ANASTOMOTIC PERFUSION ASSESSMENT DURING THORACOSCOPIC CORRECTION OF ESOPHAGEAL ATRESIA: A PILOT STUDY OF QUALITATIVE ASSESSMENT AND CASE SERIES OF PRELIMINARY QUANTITATIVE ANALYSIS

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Abstract

Introduction. Esophageal atresia (EA) repair can be complicated by anastomotic complications such as stenosis and leakage. Indocyanine green fluorescence angiography (ICG-FA) may improve accuracy of intraoperative assessment of anastomotic vitality, which could decrease anastomotic complications. This pilot study describes the first experiences using ICG-FA for thoracoscopic esophageal anastomosis perfusion assessment to evaluate its usefulness for intraoperative decision-making.

Methods. A monocenter retrospective analysis of patients undergoing thoracoscopic EA repair from February 2024 to March 2025 was conducted. Patients who underwent EA repair without utilization of ICG-FA imaging for perfusion assessment were excluded. A qualitative esophageal anastomosis perfusion assessment score (EAPAS) was developed. Usefulness of ICG-FA imaging for intraoperative decision-making was present if the EAPAS correlated with anastomotic outcome.

Results. Seventeen patients underwent thoracoscopic EA repair within the study period, of which three were excluded since they did not receive ICG intraoperatively. In the other fourteen patients, ICG-FA was intraoperatively used for anastomosis perfusion assessment. No ICG-related adverse events occurred. EAPAS was high (>50%) in five patient and low in nine patients. Correlation between the EAPAS and anastomotic outcome was present in 64% of patients (n=9). In the last twelve patients, the width of hypoperfusion was measured. Distal tip resection of the esophagus was performed in one patient, which resulted in an uncomplicated anastomotic outcome. Additionally, quantification of ICG images was attempted in the final six patients, resulting in four reliable quantified perfusion assessments.

Conclusion. The results of this pilot study seem to show a correlation between esophageal anastomosis perfusion assessment score and anastomotic outcome. Further research with quantitative interpretation and additional standardization measures is necessary and warranted to objectify and optimize the perfusion assessment score and confirm correlation between the esophageal anastomotic perfusion and anastomotic outcome.

SO51

A CASE SERIES OF PEDIATRIC FRANTZ TUMORS: ARE RECURRENCES RELATED TO SURGICAL TECHNIQUE?

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Abstract

Aim: Solid pseudopapillary tumors (SPTs) are the most common pancreatic neoplasms in pediatric population. Generally, SPTs present low malignancy and slow growth but relapse can occur. The treatment of choice is surgical resection that is curative in more than 95% of localized tumors. Recently an increasing number of patients have been treated by laparoscopy or robotic-assisted surgery reducing postoperative complications and recovery time

Material: Our retrospective study reviewed the records of 6 patients diagnosed with SPT in the last 10 years. 4 (67%) were girls and the mean age at Surgery was 12 years old. The tumor was located in 3 cases (50%) in the head of pancreas and in 3 cases (50%) the tail. The tumor size was > 8 cm in three children.

Results: 3 (50%) patients received open surgery while the following three were treated with a robotic approach, we had 1 conversion for bleeding (18%), no post operative complications. 2 patients (33%), both operated with robotic approach, presented a recurrence of the primitive tumor, respectively 5 and 3 years after surgery.

Conclusion: Although, there are evidences that recurrence is related to many intrinsic factors as tumor size >8cm, lymph node involvement, age >13 years old, histological and molecular aspects as positive status for Ki-67(>4%) or an overexpression of MYC and EMT genes, We believe, that surgical technique could be considered , perhaps, as an affecting factor for relapse, even though the safety and efficacy of robotic pancreaticoduodenectomy is spready reported in literature as resulting either equivalent or superior to open surgery without significant differences in complications, mortality or recurrence, the high volume of air insufflation could cause a tumor-cells spread in peritoneum. Further studies need to understand if robotic approach is safe in these types of tumours.

SESSION 7 – GASTROINTESTINAL (GIT) II

LO122

WORLDS YOUNGEST UNDERGOING LAPAROSCOPIC WHIPPLE FOR SOLID PSEUDOPAPILLARY NEOPLASM: A CASE REPORT OF PUSHING THE BOUNDARIES

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Abstract

Background: Pancreaticoduodenectomy (PD), or Whipple procedure, is one of the most complex abdominal surgeries. Its laparoscopic execution in pediatric patients is rare due to technical challenges and the need for intricate anastomoses. We present the case of an 11-year-old girl—possibly the youngest globally—to undergo laparoscopic, transperitoneal, pylorus-preserving PD (LPPPD) for solid pseudopapillary carcinoma (SPC) of the pancreas.

Case Report: An 11-year-old female presented with a two-month history of intermittent, non-radiating abdominal pain without associated gastrointestinal or constitutional symptoms. The examination was unremarkable. Imaging via ultrasonography revealed a heterogeneous lesion in the pancreatic head, corroborated by CECT and PET-CT, showing a 4-4.5cm mass abutting the duodenum, with preserved fat planes with major vessels. Biopsy confirmed solid pseudopapillary neoplasm.

Intervention: LPPPD was successfully performed a week after the diagnosis was confirmed. Intraoperative findings included a 5x5 cm tumor in the pancreatic head. Key surgical steps included division of the jejunum distal to the ligament of Treitz, pancreatic neck transection, duodenal and common bile duct transection followed by three critical intracorporeal anastomoses: pancreatojejunostomy, hepaticojejunostomy, and gastrojejunostomy. The specimen was extracted without spillage. The resected specimen confirmed solid pseudopapillary neoplasm with tumor-free margins and uninvolved lymph nodes.

Outcome: Postoperative recovery was uneventful. The patient was extubated on postoperative day 1, resumed feeding via a feeding jejunostomy on postoperative day 5, and transitioned to oral feeds by postoperative day 6. Drains were removed after a normal contrast study on postoperative day 8. She was discharged in stable condition on postoperative day 12.

Conclusion: This case highlights the feasibility and safety of advanced laparoscopic pancreatic surgery in children, provided that careful patient selection and expert execution are used. It may represent the youngest patient worldwide to undergo this procedure for SPC, setting a benchmark for pediatric minimally invasive surgical oncology.

LO74

LAPAROSCOPIC APPROACH IN THE STAGED TREATMENT OF CLOACA: A CASE SERIES

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Abstract

Purpose: Cloaca is part of the anorectal malformation spectrum, occurring when rectum, urethra and vagina converge in a common distal channel. Surgical treatment is complex and requires a multistep approach. Our aim is to present our experience with minimally invasive digestive tract reconstruction in cloaca patients.

Patients and Methods: During a 6-year period, we treated five girls affected by cloaca (two from our Center and three referred from other hospitals). After creation of a divided colostomy at birth, we proceeded with the abdominal-perineal corrective stage when patients were 3 - 4 months old. We performed preoperative cystovaginoscopy to evaluate the genitourinary anatomy and to place a catheter in the rectal fistula. We used a 5 mm 30° camera, inserted through a transumbilical access, and two 5 mm operative trocars, positioned on the right and left flanks. Internal genitalia were suspended through a transparietal stitch to enhance visualization of the rectal pouch. We carried out the recto-colic dissection. Then, we identified and ligated the rectal-cloacal fistula. After the muscle sphincter had been identified through electric stimulation, we placed 5- and 12-mm bladeless trocars at the neo-anus level under direct visualization before completing the rectocolic pull-through. We completed the anorectoplasty through the perineal approach. Finally, we verified the correct colonic orientation and perfusion before removing trocars.

Results: Mean operative time was 180 minutes. There were no intraoperative nor postoperative complications. Mean hospital stay was 8 days. Three patients completed common channel correction through a perineal approach, while the remaining two have it scheduled at one year of age. All patients are currently under follow-up.

Conclusion: Minimally invasive surgery is a safe and feasible approach in the management of anorectal malformations when performed in high-expertise centers. It enhances visualization during intraabdominal dissection, avoids collateral injuries, reduces postoperative pain and improves aesthetic long-term results.

LO77

WIRELESS CAPSULE AND SINGLE-BALLOON ENTEROSCOPY IN PEUTZ-JEGHERS SYNDROME: A NEW STANDARD FOR RISK REDUCTION

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Abstract

Purpose:

To assess the role of wireless capsule endoscopy (WCE) and single-balloon enteroscopy (SBE) in the long-term surveillance of Peutz-Jeghers syndrome (PJS) patients with small bowel polyps, aiming to minimize surgical interventions.

Methods:

A single-center retrospective study was conducted on all PJS patients followed our Endoscopic Unit over the last 20 years (2005-2025). Data collected included surgical history, endoscopic findings (gastroscopy, colonoscopy, WCE) and the need for polypectomy using single-balloon enteroscopy (SBE, Olympus SIF Q180). Moreover, genetic mutations, family history, and follow-up outcomes were analyzed.

Results:

Twenty-three patients (age 8–36 years) were included; 8 of them (35%) had mutation in STK11 and 1 in SMAD4; 5 (21%) had a positive paternal family history. Surgery at presentation was required in 7 patients (30%), primarily for polyp-related intussusception. During follow-up, 5 patients (21%) underwent surgery: 2 lacked prior SBE surveillance, 2 required emergency surgery despite prior monitoring one year after the last examination, and 1 underwent laparotomy for non-resectable polyps, identified through SBE and WCE. All patients received WCE, upper endoscopy, and ileocolonoscopy biennially. WCE detected significant polyps (>15 mm) in 14 cases (60%), with 11 (47%) undergoing SBE polypectomy because of polyps > 15mm. No surgical complications occurred. Prophylactic SBE prevented gastrointestinal bleeding, and no gastrointestinal malignancies were observed during follow-up.

Conclusion:

Regular surveillance with WCE and prophylactic resection of large small bowel polyps (>15 mm) via SBE constitutes an effective conservative strategy in the management of PJS, reducing surgical risk and preventing complications.

LO121

MINIMALLY INVASIVE SIGMOIDECTOMY IN CHILDREN WITH SIGMOIDVOLVULUS: MONOCENTRIC RETROSPECTIVE STUDY

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Abstract

Purpose:

Minimally invasive sigmoidectomy (MIS) has been widely described in adults with low complication rate. Pediatric sigmoidectomy for volvulus is carried out by laparotomy, due to the colonic distension. Only few pediatric cases of MIS have been reported. This study aimed to describe the safety and feasibility of this procedure in children.

Methods:

This retrospective single-center study included children that underwent MIS for sigmoid volvulus (2010-2024). We collected demographics data, surgical details, early (<30 days) and late complications including reintervention, clinical examination at last follow-up.

Results:

Nine children underwent MIS at a median age of 13 [10-17] years old, median follow-up was 24 [1-151] months. Four children (44%) presented with chronic constipation, 4 (44%) underwent a rectal biopsy which excluded Hirschsprung's disease. As emergency management: seven patients (7/9, 78%) had endoscopic exsufflation allowing sigmoid detorsion, one was managed with enema (1/9, 11%) and the last one had laparoscopic detorsion (1/9, 11%). Five had recurrence involving a second exsufflation. Seven patients underwent robot-assisted surgery (78%), without conversion to laparotomy. Two (25%) had laparoscopic approach with one conversion (50%). Operative time was 200 [155-265] minutes. Colo-rectal anastomosis was mechanical in 8 (89%). One patient (11%) required early intra sphincteric botulinum toxin injection. Median length-of-stay was 4 [3-39] days. Two patients (22%) required late surgical reintervention for colorectal anastomosis dysfunction. Two other patients had colonic volvulus recurrence managed endoscopically. At last follow-up: 4 patients (44%) are receiving laxatives: 2 (22%) still present constipation, overall, 7 patients (78%) are asymptomatic.

Conclusion:

Sigmoidectomy for sigmoid volvulus in children may be challenging by laparoscopy but facilitated by the robotic assistance. Immediate post-operative course is often uneventful, with short length-of-stay, but long-term follow-up is necessary as half of the patients require laxatives, and 22% present

LO150

3B FOR BURGERS, BILE AND BABY GALLSTONES: A MODERN EPIDEMIC?

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Abstract

Introduction: The dramatic rise in pediatric gallstone disease in recent years raises concerns about the role of modern dietary habits as a potential new epidemic. This study evaluates the impact of maternal high-fat diet and physical activity levels during pregnancy on the development of gallstones in children, highlighting the metabolic imprint of maternal health.

Methods: The study included 54 children (n=54), aged 0–17 years, who underwent laparoscopic cholecystectomy for gallstones between January 1, 2017, and December 31, 2023. Maternal dietary patterns during pregnancy were retrospectively recorded and categorized as Mediterranean diet or high-fat diet, along with reported levels of physical activity. Children’s medical records, including hematological, biochemical, and imaging data, were reviewed to assess risk profiles.

Results: A high-fat maternal diet was reported in 42.6% of cases, while 31.5% reported adherence to a Mediterranean diet. Sedentary lifestyle during pregnancy was recorded in 28.8% of mothers. Children of mothers with high-fat diets had a 4.1-fold increased risk of developing gallstones (p=0.001). The risk was further elevated when children were exposed to ceftriaxone. In contrast, maternal adherence to the Mediterranean diet showed a protective trend. Regarding the children’s own diet, 29.6% followed a balanced diet prior to diagnosis, while only 1.9% reported regular fast-food consumption.

Conclusions: This study demonstrates a strong association between high-fat maternal diet and the development of pediatric gallstones, suggesting a new metabolic threat driven by modern lifestyle patterns. The combination of adverse maternal nutrition and pharmacologic exposure in the child appears to amplify risk, emphasizing the need for targeted preventive strategies focused on maternal health.

SO233

LAPAROSCOPIC PYLOROMYOTOMY: A CRUCIAL FIRST STEP IN NEONATAL MINIMALLY INVASIVE SURGICAL TRAINING FOR PEDIATRIC SURGERY RESIDENTS

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Abstract

Introduction:

Laparoscopic pyloromyotomy (LP) for hypertrophic pyloric stenosis (HPS) is a standardized and widely accepted minimally invasive procedure in neonatal surgery. Since its first description in 1991 by Alain et al., it has demonstrated high efficacy and safety, while offering advantages such as reduced recovery time and improved cosmetic outcomes. Given its relatively low complexity and reproducibility, LP is frequently considered an ideal introductory procedure for pediatric surgery residents beginning training in neonatal minimally invasive surgery (MIS). This study aimed to evaluate the safety, feasibility, and surgical outcomes of LP when performed by residents under supervision.

Methods:

A retrospective review was conducted on 72 infants who underwent LP for HPS between June 2011 and 2024. Clinical data collected included age, sex, operative duration, intra- and postoperative complications, time to full feeding, and hospital stay. Surgical outcomes were stratified by operator status—attending surgeon versus resident—and compared using appropriate statistical methods.

Results:

Among the 72 infants (60 male, 12 females; median age 31 days), 40% of surgeries were performed by residents. Median operative time was slightly longer in the resident group (47 vs 40 minutes, $p=0.017$). There were no significant differences in postoperative complications (0% in resident group vs 5% in attending group, $p=0.077$), time to full feeding (median 24 hours in both groups, $p=0.985$), or length of hospital stay (36 vs 24 hours, $p=0.3$). Notably, all complications occurred during the first half of the study period and in procedures performed by attendings.

Conclusions:

Supervised LP is a safe, effective, and appropriate procedure for training pediatric surgery residents in neonatal MIS. Despite longer operative times, comparable clinical outcomes reinforce its value as a foundational component in minimally invasive pediatric surgical education.

ORAL SESSION 8 – UROLOGY II

LO28

PNEUMOVESICOSCOPIC GLENN-ANDERSON URETERONEOCYSTOSTOMY IN CHILDREN; A PRACTICAL MINIMALLY INVASIVE OPTION FOR SELECTED PATIENTS

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Abstract

Although Glenn-Anderson reimplantation is a well-known technique for correction of ureterovesical junction anomalies, it's not the most popular one. The major reason is that every patient are not good candidates for it. Here we present our limited experience with pneumovesicoscopic Glenn-Anderson technique.

A total of 24 patients (36 ureters) are enrolled in the study (12 boys and 12 girls) with 12 unilateral and 12 bilateral ureters. Mean age of the patients was $73,208 \pm 9,284$ years. Mean duration of surgery was $120 \pm 8,039$ minutes in unilateral cases and $171,416 \pm 5,571$ minutes in bilateral cases. Original technique was performed in 21 ureters while a combination with Politano-Leadbetter technique was performed in the rest 15. Indications of surgery were vesicoureteral reflux (n=15), megaureter (n=6), and bladder diverticulum (n=3). One patient needed a redo reimplantation for residual VUR and procedure was regarded successful in %95,833 of patients (1/24 patient) and %97,222 of ureters (1/36 ureters) within a median follow up duration of 17 months (3-50).

Distal tunnel advancement technique described by Glenn and Anderson is an anatomical and relatively less demanding technique with lower complication rates. Major disadvantage is the limited length of the submucosal tunnel which makes the patient selection critical. Cranially located ureters, conditions that don't require long tunnel and combination with Politano-Leadbetter technique may serve as proper indications. Pneumovesicoscopy may provide additional benefits of better tissue exposure, magnification, lesser tissue trauma and pain.

LO135

ROBOT ASSISTED NEPHRON SPARING SURGERY FOR RENAL CYSTS CHILDREN

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Abstract

Introduction: Complex renal cysts in children are rare and with higher risk of malignancy. There are no consensus treatment protocols for cystic renal lesions in children, but modified Bosniak classification may be a reliable source for a malignancy prediction assessment. Our aim was to describe the feasibility and safety of minimally invasive surgery in nephron.sparing surgery in the treatment of Bosniak class II-IV lesions using the Da-Vinci Xi robotic-system.

Methods: Medical records of patients undergoing robotic-assisted nephron-sparing surgery for renal cyst enucleation from 2021-2025 were retrospectively collected. Data on preoperative workup, surgical aspects, complications, pathology records and follow-up evaluations were taken.

Results: Four patients between the ages of 7-17 years old underwent robot-assisted nephron-sparing surgery for renal cyst enucleation. All patients underwent ultrasound, MRI and CT scan before surgery and modified Bosniak classification was used for risk assessment. Selective arterial clamping was achieved in two patients and a warm ischemia of 26 and 46 minutes was performed in the other two cases. No intraoperative or postoperative complications were recorded. Pathology reports revealed benign cysts in two cases (modified Bosniak class III), Wilms intermediate risk tumor (Bosniak II) and tubulocystic renal carcinoma (Bosniak IV). At follow-up, DMSA scan revealed preserved ipsilateral renal function in all cases.

Conclusions: In order to standardize treatment, the use of the Da-Vinci Xi robotic-system in nephron.sparing surgery for the treatment of renal cysts in children is feasible and safe. The mini-invasiveness permits a complete removal of the cystic lesions together with preservation of the renal function. More widespread use of modified Bosniak classification in children with renal cysts is warranted.

LO259

THE PEDFIX TECHNIQUE: A NEW MINIMALLY INVASIVE METHOD OF PERITONEAL DIALYSIS CATHETER INSERTION WITH SECURE FIXATION TO THE ABDOMINAL WALL

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Abstract

Purpose: Various open and laparoscopic techniques for the placement of peritoneal dialysis (PD) catheter with or without intra-abdominal fixation have been described. The incidence of catheter migration after PD is 5-35% of which 85.9% occurs in the first 2 weeks after catheter insertion. We present a new modified technique which minimize the risk of catheter migration and blockage.

Methods: For 18 years a laparoscopic assisted PD catheter insertion has been used by the senior author with a single 5 mm Port at the umbilicus using a J incision and a Seldinger technique, with either a 14 or 16 Fr introducer kit. Since Jan 2024, we introduced a modification to the technique which include a fixation of the catheter to the lower anterior abdominal wall using a 2-0 Vicryl suture with an Endoclose device (Autosuture, Covidien).

Results: Four patients, 3 boys, age 1, 2, 9 and 10 years, underwent PD catheter insertion with the modified technique described. All patients were in End Stage Kidney Disease due to posterior urethral valves and renal dysplasia (2), nephronophthisis (1) and renal dysplasia (1) All 4 cases underwent successful placement PD catheter with no complications at a mean follow up of 11 months.

Conclusion: The Pedfix technique gives excellent cosmetic result, superb view of the pelvis and a fixation of the PD catheter to the lower anterior abdominal wall which minimize the risk of catheter migration and blockage. These encouraging results need to be confirmed by a prospective study with longer follow up.

LO155

BEYOND THE NARROW PASSAGE: COMPARATIVE OUTCOMES OF LAPAROSCOPIC AND ROBOTIC PYELOPLASTY IN INFANTS- A SINGLE-CENTER EXPERIENCE

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Abstract

Introduction:

Pelviureteric junction obstruction (PUJO) is a common cause of pediatric hydronephrosis, often necessitating surgical intervention. Minimally invasive techniques such as laparoscopic and robotic pyeloplasty have emerged as effective alternatives to open surgery. This study aims to evaluate the outcomes of laparoscopic and robotic pyeloplasty in infants with PUJO.

Methods: A retrospective analysis of 37 infants who underwent pyeloplasty at our institution was conducted. Twenty-eight infants (median age: 4.5 months) underwent laparoscopic pyeloplasty, while nine infants (median age: 4 months) underwent robotic-assisted pyeloplasty. Clinical presentation, surgical technique, complications, and outcomes were analyzed.

Results: Among the 28 infants who underwent laparoscopic pyeloplasty, two presented with palpable abdominal lumps, while the remainder had antenatally detected hydronephrosis. Bilateral PUJO was identified in two infants, necessitating sequential bilateral pyeloplasty. Postoperative complications included anastomotic leaks in two infants, managed by percutaneous nephrostomy in one and surgical exploration in the other. (Clavien-Dindo Grade IIIa and IIIb) Recurrent PUJO was observed in two infants, requiring open redo pyeloplasty in one and DJ stenting in the other (Grade IIIb). The overall complication rate for laparoscopic pyeloplasty was 14.3%. In the robotic pyeloplasty group, nine infants underwent surgery, with one infant requiring sequential bilateral pyeloplasty for bilateral PUJO. One infant developed an anastomotic leak, successfully managed with percutaneous nephrostomy (Grade IIIa). One infant experienced recurrent PUJO, treated with redo robotic pyeloplasty (Grade IIIb).

Conclusion: Both laparoscopic and robotic pyeloplasty are safe and effective techniques for managing PUJO in infants. Robotic pyeloplasty offers enhanced dexterity and precision, particularly beneficial in small infants. The complication and recurrence rates were comparable between the two approaches, underscoring the need for individualized surgical decision-making.

LO221

COMPARISON OF MANAGEMENT OF VESICO-URETERAL REFLUX BY ENDOSCOPIC INJECTION VERSUS TRANSVESICOSCOPIC COHENS RE-IMPLANTATION IN UNILATERAL VESICoureteric REFLUX AND ITS EFFECT ON INCIDENCE OF CONTRALATERAL VESICO-URETERAL REFLUX

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Abstract

Background

Minimally invasive techniques are popular for the surgical correction of vesicoureteric reflux (VUR). The benefits and disadvantages are unique for each technique. Endoscopic treatment (ET) using dextranomer/hyaluronic acid copolymer has the advantage of being simple and quick, but may not be successful in high-grade reflux. Transvesicoscopic Cohen ureteric reimplantation (TVUR) may offer high success but is technically demanding and carries a theoretical higher risk of new onset contralateral VUR. In this study, we compared the results of antireflux surgery for unilateral VUR using ET versus TVUR including the incidence of new onset contralateral VUR

Methods

After institutional review board approval, the data of all children that underwent ET (group 1) and TVUR (group 2) for unilateral VUR over a 6-year period was reviewed. Various parameters were compared between the two groups. Children with bilateral VUR, duplex kidneys, secondary VUR and lack of post-operative follow-up imaging were excluded.

Results

Ninety-eight children were included (42 group 1, 56 group 2). Table 1 shows the results and comparison between both groups. The mean age at surgery was comparable in both groups. Compared with group 2, Group 1 had significantly lower mean initial reflux grade, lesser number of ureters with paraureteric diverticulae and lower success for eliminating the VUR. The overall incidence of new-onset contralateral VUR was 6% without significant difference between both the groups.

Conclusions

Compared to ET, TVUR was preferred for higher grade of VUR and in the presence of paraureteric diverticulum. TVUR had higher success for eliminating the VUR than ET. The overall incidence of new-onset contralateral VUR was low. TVUR did not increase the risk of new onset contralateral VUR compared to ET.

SO23

TRANSURETHRAL INCISION OF URETEROCELES: OUR EXPERIENCE

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Abstract

Aims: Ureterocele is a great clinical challenge because of variations in anatomy and clinical presentations. We present our experience of 5 cases with primary transurethral incision (TUI) of ureterocele in children.

Methods: Electronic medical records of the patients undergoing TUI for Ureterocele were reviewed from December 2021 to December 2024. Preoperative investigations included ultrasonography (USG), Micturating cystourethrogram (MCU), MR Urography and Renal Dynamic scan.

Results: Out of total 5 patients, 3 were female and 2 were male with mean age of 11 months (3-18month). 4 patients had intravesical ureterocele and 1 patient had cecoureterocele. 3 patients had duplex system on right side, 4 patients had associated hydronephrosis. One patient had poorly functioning right side upper moiety. All the patients underwent primary TUI for Ureterocele. All 5 patients are on regular follow up and with preserved renal function.

Conclusion: Though the approach of managing a patient with ureterocele should be individualized, transurethral incision remains valuable as a primary intervention with regular follow up. It may even prove to be the only intervention required in most of the patients.

Link for video Abstract:

https://drive.google.com/file/d/1iMV24_L_FvlpnilGZkEkPK3zYAifGhiJ/view?usp=sharing

SO130

ROLE AND LIMITATIONS OF LAPAROSCOPY IN THE MANAGEMENT OF UNDESCENDED TESTIS

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Abstract

Background:

Laparoscopy is the gold standard in evaluation and treatment of non-palpable undescended testis. However, treatment of the high undescended testis remains controversial and challenging.

Methods:

We conducted a retrospective analysis of all children who underwent laparoscopic management for non-palpable testes at our center between 2019 and 2024. Twenty children (24 testes) received a two-stage laparoscopic Fowler-Stephens orchidopexy (FSO). Mean age at first-stage surgery was 24 months (median: 12 months), with a mean interval of 7 months between stages.

In addition, six children (seven testes) initially underwent open inguinal orchidopexy, but the spermatic vessels intraoperatively proved too short to perform primary orchidopexy which led to the intraoperative decision of simultaneous open ligation of the spermatic vessels. In four of these cases, diagnostic laparoscopy was initially performed and the testes were either found in the inguinal channel or could be placed there.

Results:

Among the laparoscopic FSO group testicular atrophy occurred in 3 children (12.5%). In the open vessel ligation group, one testis was clinically hypoplastic at follow-up 6 months postoperatively. In both groups, no cases of recurrent undescended testes were observed. All children were followed up clinically at 6 months postoperatively.

Conclusion:

Laparoscopy remains an indispensable diagnostic and therapeutic tool in the management of intra-abdominal testes. The two-stage laparoscopic Fowler-Stephens procedure demonstrated a high success rate with a low rate of atrophy, although our sample size was small. However, in cases where vessel length is borderline, the predictive value of diagnostic laparoscopy regarding feasibility of open orchidopexy appears limited. A tailored approach remains essential to optimize outcomes.

ORAL SESSION 9 – MISCELLANEOUS

LO8

CHOOSE OF LAPAROSCOPIC APPROACH FOR THE TREATMENT OF HORMONALLY ACTIVE ADRENAL TUMORS IN CHILDREN

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Abstract

Adrenal glands are ideally suitable for laparoscopic surgery due to its small size and relatively infrequent malignancy. For today, laparoscopy is now being recognized as the standard approach for the treatment of adrenal lesions. However, the route of laparoscopic approach may differ, depending on the pathology, tumor's size, and surgeon's preference.

The aim of the study was summarizing own experience of laparoscopic adrenalectomy for the hormonally active tumors in children.

For 1997-2024 years laparoscopic adrenalectomy was performed in 18 patients with different hormonally active adrenal tumors: in 9 children with Cushing's syndrome, in 8 – with pheochromocytoma, in one – with aldosterone producing adrenal cortical adenoma, and in one – with corticoandrosteroma. The lateral retroperitoneal approach was applied in 11 patients and in 7 – the transperitoneal approach was used.

There were 11 left-side and 7 right-side tumors. Mean duration of transperitoneal approach was shorter than lateral retroperitoneal (79.6 ± 2.9 min, range, 68-90 min vs. 87.3 ± 3.2 min, range, 60-96 min, correspondingly), but this difference not significant ($p=0.11898$). The blood loss did not depend on type of approach – 73.3 ± 4.6 mL in case of transperitoneal and 74.9 ± 3.3 mL via retroperitoneal ($p=0.77314$).

Retroperitoneal approach provides a direct access to the adrenal gland and avoids mobilization of splenic flexure and descending colon that decreased risk of pancreatic tail injury. A disadvantage of retroperitoneal approach is the relatively small space to work in, so preparing the vascular pedicle may be difficult, when the lesion is more than 5 cm in size. The main advantage of transperitoneal approach is familiar anatomy, large working space, and possibility of early ligation of the main adrenal vein coming directly from the v. cava inferior.

Thus, for the left-side adrenal tumors preferable the lateral retroperitoneal, while in right-side tumors – transperitoneal approach.

LO40

QUALITY OF LIFE IMPROVEMENT IN PEDIATRIC PATIENTS TREATED FOR PILONIDAL SINUS DISEASE WITH PEDIATRIC ENDOSCOPIC PILONIDAL SINUS TREATMENT (PEPSiT)

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Abstract

Purpose: This study aimed to assess the quality of life (QOL) outcome in pediatric patients with pilonidal sinus disease (PSD) undergoing endoscopic treatment (PEPSiT).

Methods: This retrospective review includes 177 patients who underwent PSD surgery from 2008 to 2021. Twenty patients underwent open surgery (G1) and 157 PEPSiT (G2). We analyzed QOL using as criteria: hospital stay (HS), healing time (HT), return to sport (RTSp) and school (RTSc), social life's resumption (RSL), and recurrence rate and reoperation (RRR). Furthermore, we used Pediatric Quality of Life Enjoyment and Satisfaction Questionnaire (PQ-LES-Q) for a more subjective evaluation of satisfaction.

Results: We encountered significant differences ($p < 0.001$) in all the analyzed criteria: HS varied from 3 to 7 days in G1 and from 1 to 2 days in G2; HT from 40 to 75 days in G1 while from 20 to 41 days in G2; RTSp from 50 to 80 days in G1 while from 7 to 21 days in G2; RTSc from 9 to 15 days in G1 while from 2 to 4 days in G2; RSL from 13 to 20 days in G1 while from 2 to 5 days in G2; RRR was 25% in G1 and 4.4% in G2.

Conclusion: PEPSiT significantly improves the life's quality of patients operated for PSD. It presents shorter hospital stay, faster healing time, return to scholastic and sport activities and resumption of a normal social life, and lower RRR. In addition, PQ-LES-Q demonstrated a good overall quality of life and life satisfaction.

LO58

MINI-INVASIVE SURGICAL TREATMENT OF PERSISTENT MÜLLERIAN DUCT SYNDROME (PMDS) IN PEDIATRIC POPULATION: CASE SERIES AND SYSTMATIC LITERATURE REVIEW

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Abstract

Purpose: The aim is to the describe the diagnostic and therapeutic approach of Persistent Müllerian duct syndrome (PMDS) through a retrospective analysis of the experience of a third level center and a systematic literature review in order to show the effectiveness and safety of the minimally invasive approach in terms of short and long-term results.

Methods: Patients younger than 18 years with diagnosis of PMDS treated at the Department of Pediatric Surgery of Siena from 2019 to 2023 were included in this retrospective monocentric study. Demographic data, clinical presentation, surgical data, short and long-term outcome were evaluated with a focus on complications, success rate, recurrence and need of re-do surgery.

Results: 5 boys with a mean age at diagnosis of PMDS of 7.6 months [6–14], 4/5 XY and 1/5 45 X0 (36%) / 46 XY (64%) were included. Associated comorbidities: penoscrotal hypospadias in 4 (80%), inguinal cryptorchidism in 1 (20%), non-palpable testis in 1 (20%), retro-vesical reflux in 1 (20%) and recurrent epididymitis in 1 (20%). Diagnosis of PMSD was based on US (100%), cystoscopy (100%) and on histological examination (100%). MRI was performed in 3 cases. 4/5 children underwent minimally invasive surgical excision of PMSD at a mean age of 13 months [9-18]. No intraoperative complications, just 1 postoperative recurrent epididymitis treated with right inguinal vasectomy. Mean hospital stay was 14.2 days [10-25]. No re-do surgery. Success rate was 100%. Mean length of follow-up was 28 months [14-41].

Conclusions: in all cases of proximal hypospadias and recurrent epididymitis it is mandatory to suspect PMSD whose diagnosis is confirmed by cystoscopical evaluation. Surgical excision of Mullerian duct remnants is always recommended because of their malignant evolution. Minimally invasive surgery is a safe and effective therapeutic option for pediatric PMSD thanks to a low complication rate and a 100% success one.

LO63

A NOVEL APPROACH TO RECURRENT OVARIAN TORSION CAUSED BY A LONG UTERO-OVARIAN LIAGMENT: OOPHOROPEXY BY MEDIAL UMBILICAL LIGAMENT FIXATION

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Abstract

Introduction: Recurrent ovarian torsion is rare in children. We report a previously undescribed ovarian fixation method.

Case Report: A 12-year-old female patient presented with abdominal pain, nausea and vomiting. On palpation, there was tenderness in the left suprapubic region. She had undergone 6 previous laparoscopic left ovarian detorsion surgeries within the last three years. A utero-ovarian ligament (UOL) plication had been done in addition to detorsion in two of these previous surgeries because her left UOL was very long. Color Doppler ultrasonography (D-USG) revealed minimal vascularization in the left ovary. A 90-degree torsion was detected in the left ovary during laparoscopy and it was detorsioned. Although the previous UOL plication was intact, the ligament was still long enough to allow for torsion. The ovary was fixed by hanging it on the left medial umbilical ligament with a polyester suture passing through the ovarian suspensory ligament. The infundibulopelvic axis of the uterus was visually evaluated and no disruption was observed. D-USG performed at the postoperative 4th and 10th months and MRI at the 5th month showed that the left ovary maintained its suspended position, had normal blood supply and contained follicles. She is in her 12th month after surgery and event free.

Conclusion: Generally, ligament plication is the preferred surgical technique in cases with recurrence or presence of a long UOL for ovarian torsion. Alternatively, an oophoropexy can be done by fixation of the ovary to the pelvic side wall, broad ligament, or uterosacral ligament. Fixation of the ovary to the medial umbilical ligament has not been reported previously. It is quite simple and proved to be effective. It should be considered as a technical option in recurrent cases when the anatomy is feasible.

LO79

UNEXPECTED DIAGNOSIS OF ROKITANSKY SYNDROME IN PATIENTS TREATED FOR INGUINAL HERNIA WITH LAPAROSCOPIC SURGERY: CASE SERIES, OUR EXPERIENCE AND REVIEW OF THE LITERATURE.

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Abstract

Purpose

The Mayer-Rokitansky-Kuster-Hauser is a rare pathology of the female genital system characterized by congenital aplasia of the vagina and uterus, with an incidence of approximately 1:4500 female newborns. We present you our experience on 3 cases, with unknown diagnosis, who came to our department for indication laparoscopic treatment of inguinal hernia.

Methods

This is a case series of 3 patients treated in our department, came to our attention for inguinal hernia. Average age, surgical technique used, imaging diagnosis, intra and postoperative complications, postoperative outcomes, short and long-term follow-up (endocrinological genetic framework) were evaluated.

Results

All patients were all phenotypically female, karyotype 46 xx, mean age 9 years (range 7-11 years). All came to our attention for reducible inguinal hernia. Minimally invasive laparoscopic exploration showed: unilateral inguinal hernia in 3 cases, uterine agenesis in 2 cases and 1 hemi-uterus at the inguinal ring in a case, in all cases intraoperative biopsy was performed positive for gonadal tissue. In 2 cases we performed hernia's repair. External genitalia's exploration showed: vaginal bud in 2 cases, complete vaginal atresia in a case. We had non-intraoperative complications. Postoperative follow up included: MRI, with confirmation of the intraoperative findings (Type 2 congenital malformations association in a case), genetic assessment and prepubertal endocrinological follow-up.

Conclusion

Our aim is to focus attention on the role of laparoscopy which in our experience has allowed us to treat a rare pathology such as Rokitansky syndrome, improving the future quality of life of patients, with a minimally invasive approach proving to be effective and possibly diagnostic.

SO163

LAPAROSCOPIC INTRAPERITONEAL ONLAY MESH REPAIR OF RECURRENT SPIGELIAN HERNIA IN THE PAEDIATRIC PATIENT – A NOVEL TECHNIQUE

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Abstract

Introduction

This paper demonstrates the feasibility of laparoscopic repair of a recurrent Spigelian hernia (SH) with the use of OviTex mesh (TelaBIO, ovine rumen-derived/polymer mesh hybrid) in the paediatric patient.

Case Description

A previously healthy 10-year-old male patient presented with a bicycle handlebar injury to the lower abdomen. CT scan demonstrated soft-tissue swelling of the left anteroinferior abdominal-wall with evidence of (likely acute) herniated bowel. Following observation, they were discharged from hospital without follow-up.

The patient was referred 20 months later, due to symptomatic left abdominal swelling. Ultrasound confirmed SH at the same site as identified in original CT scan.

The patient underwent primary repair of SH defect with interrupted non-absorbable suture (Ethibond 2/0) aged 12-years-old.

9 months post-operatively, SH recurrence was noted. The patient was referred to another surgeon for consideration of laparoscopic repair, performed at 14-years-old.

Technique

Open Hasson technique for 12mm supraumbilical port, with left and right flank 5mm working ports. A 5mm 30° camera was used to identify the hernia defect, sized 5x3cm. A 10x6cm OviTex mesh was introduced supraumbilically, and secured in an intraperitoneal onlay fashion, using SecureStrap (Ethicon) absorbable tacks. Port sites were closed with 1° Vicryl. Operative time was 39 minutes.

The patient has since returned to full activities, including weight-lifting, with no recurrence at follow-up.

Conclusion

This study reports spigelian hernia, likely secondary to trauma, which recurred following open repair. To our knowledge, the laparoscopic approach to re-do operation with biosynthetic mesh and self-securing tacks, aiding technical feasibility, is novel for recurrent paediatric spigelian hernia repair.

SO201

MULTICENTER, RETROSPECTIVE EVALUATION OF THE EFFECTIVENESS OF INGUINAL HERNIA REPAIR AMONG ADOLESCENTS, DEPENDING ON THE SURGICAL TECHNIQUE

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Abstract

Inguinal hernia surgeries in children are mostly performed on small children aged 0-8 years. Adolescents are rare and are subject to many doubts regarding the selection of the appropriate surgical technique.

Assessment of effectiveness of surgical treatment of inguinal hernia in adolescents depending on the surgical technique used and other parameters in pediatric surgery centers.

Study included a group of 162 patients aged 11-18 years, operated for inguinal hernia in 2020-2023 in 6 pediatric surgery centers in Poland - Grudziądz, Katowice, Kielce, Olsztyn, Wrocław and Zielona Góra. The average age of patients was 14 years, ranging from 11 to 17 years. Patients were compared due to three different surgical techniques.

79 (49%) children underwent PIRS surgery, 64 (40%) underwent classic hernioplasty, and hernioplasty surgery using external material (mesh) was performed in 19 (11%) patients. 9 recurrences (5%) were observed, including 6 (7.6%) after PIRS and 3 (4.7%) after classical surgery, no recurrence was observed among patients operated using polypropylene mesh. Among the recurrences were 5 (5/47 - 10.5%) girls, including 4 (4/33 - 12%) after PIRS surgery, and 4 boys, including 2 (2/46 - 4%) after PIRS. Complications were also assessed, after PIRS, hematoma in the wound area was found twice, iliac vessels were punctured once, and the small intestine was perforated once. After the classic procedure, a systemic infection was found once. The procedure time was compared, we observed that in the case of mesh implantation, the time was significantly longer. The average postoperative follow-up time was 18 months (1 to 46 months). During the follow-up, 5 (6%) patients after PIRS reported pain in the groin area, 2 (3%) after the classic procedure and 2 (10%) after the mesh implantation.

Only in techniques using polypropylene mesh, no recurrences were shown, however, further studies on a larger group of patients are necessary.

SESSION 10 – ROBOTICS AND INNOVATION II

LO167

ARTIFICIAL INTELLIGENCE (AI) COMPETENCY AND EDUCATIONAL NEEDS: RESULTS OF AN AI SURVEY OF MEMBERS OF THE EUROPEAN SOCIETY OF PEDIATRIC ENDOSCOPIC SURGEONS (ESPES)

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Abstract

Background: Advancements in artificial intelligence (AI) and machine learning (ML) are set to revolutionize healthcare, particularly in fields like endoscopic surgery that heavily rely on digital imaging. However, to effectively integrate these technologies and drive future innovations, pediatric surgeons need specialized AI/ML skills. This survey evaluated the current level of readiness and educational needs regarding AI/ML among members of the European Society of Pediatric Endoscopic Surgeons (ESPES).

Methods: A structured survey was distributed via LimeSurvey to ESPES members via email before and during the 2024 Annual Conference. Responses were collected over four weeks with voluntary, anonymous participation. Quantitative data were analyzed using descriptive statistics.

Results: A total of 125 responses were received. Two-thirds (65%) of respondents rated their AI/ML understanding as basic, with only 6% reporting advanced knowledge. Most respondents (86%) had no formal AI/ML training. Some respondents (31%) used AI/ML tools in their practice, mainly for diagnostic imaging, surgical planning, and predictive analytics; 42% of the respondents used these tools weekly. The majority (95%) expressed interest in further AI/ML training, preferring online courses, workshops, and hands-on sessions. Concerns about AI/ML in pediatric surgery were high (85%), especially regarding data bias (98%). Half of respondents (51%) expect AI/ML to play a significant role in advancing robotic surgery, oncology, and minimally invasive techniques. A strong majority (84%) felt that the ESPES should lead AI education in pediatric surgery.

Conclusions: This survey presents the ESPES with a unique opportunity to develop a competency map of its membership's AI/ML skills and develop targeted educational programs, thus positioning the society to take the lead in AI education and the advancement of AI solutions in pediatric endosurgery.

LO176

ROBOTIC SPLENECTOMY IN CHILDREN: A COMPARATIVE STUDY WITH LAPAROSCOPY

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Abstract

Background:

Laparoscopic splenectomy (LS) is the gold standard surgery for splenectomy in the pediatric population with hematological disorders. In the last decade, robotic surgery has been developed in many specialties, but the advantage of robot-assisted approach over laparoscopy remains controversial in pediatrics. This study aims to compare the efficacy of robot-assisted splenectomy (RAS) with LS.

Methods:

A retrospective cohort of pediatric patients (<18 years old) with hematological disorders who underwent LS and RAS between 2019 and 2023 was examined. A chart review of patients' demographics, clinical data, operative time, length of stay (LOS), postoperative transfusion, conversion to laparotomy, and postoperative complications was performed. Data were analyzed with descriptive statistics and a p-value < 0.05 was considered significant.

Results:

Eighty-one patients were identified (LS: 38 patients, RAS: 43). The median age and weight were smaller in the laparoscopy group [[LS: 3.4 yrs (2.5-5) vs RAS: 6.1 yrs (3.2-11.2), p=0.009], [LS: 15.5kg (13-20) vs RAS:19kg (14.5-32), p=0.014]]. Seventy-one patients (88%) had sickle cell disease, and 10 patients (12%) had hereditary spherocytosis, with no significant difference between groups. All cases were completed successfully with no conversion to open surgery. The median operative time was significantly longer in RAS 127 mins (100-165) vs 104 mins (70-125) in LS, p= 0.004. The LOS was similar in both groups [RAS: 2 days (2-3), vs LS: 2 days (2-4), p=0.058]. No significant difference in the complication rate between both groups (RAS: 7%, vs LS:16%, p=0.183). No reintervention was necessary during the post-operative period.

Conclusion:

This study showed that there is no difference between RAS and LS. Further studies are required to evaluate the efficacy of RAS in pediatrics.

LO42

SINGLE-CENTER EXPERIENCE WITH ICG-GUIDED FLUORESCENCE IMAGING IN PEDIATRIC LAPAROSCOPIC AND ROBOTIC SURGERY FOR UROLOGICAL INDICATIONS: A CASE SERIES

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Abstract

Purpose: This study aimed to present our institutional experience with the use of indocyanine green (ICG) fluorescence imaging technology in pediatric robotic and laparoscopic procedures for urological indications.

Methods: A retrospective review was conducted on 282 pediatric patients (196 males and 86 females) who underwent urological surgeries assisted by intraoperative ICG near-infrared fluorescence (NIRF) imaging over a seven-year period (2018–2025). Laparoscopic procedures included pyeloplasty (n=11), varicocelectomy (n=118), adnexal mass resection (n=33), partial nephrectomy (n=10), nephrectomy (n=6), and urachal cyst excision (n=3). Robot-assisted procedures included pyeloplasty (n=22), varicocelectomy (n=34), adnexal mass resection (n=17), partial nephrectomy (n=4), nephrectomy (n=4), excision of periureteral diverticulum and dismembered extravesical ureteral reimplantation (n=13), renal cyst excision (n=2), urachal cyst excision (n=3), and excision of prostatic utricle or seminal vesicle cyst (n=2). ICG was administered intravenously for all indications except varicocele, prostatic utricle, urachal remnant, and periureteral diverticulum, where local injection was employed. The ICG dosage ranged from 0.2 to 0.5 mg/mL/kg.

Results: No allergic or anaphylactic reactions to ICG were reported. Adequate visualization of target anatomical structures was achieved in all cases without intraoperative complications. The median hospital stay was 2.7 days (range: 1–7 days). Postoperative complications occurred in 4 out of 282 patients (1.4%), all requiring reoperation (Clavien-Dindo grade IIIb).

Conclusion: Our experience demonstrated the usefulness and versatility of ICG fluorescence imaging in pediatric laparoscopic and robotic urological surgery. This technique significantly enhances the visualization of anatomical landmarks and pathological tissues, contributing to improved oncological safety and functional outcomes. ICG-enhanced fluorescence imaging is a safe, non-toxic, versatile, and easily applicable tool in pediatric minimally invasive surgery.

LO250

ROBOTIC-ASSISTED THORACOSCOPY FOR SECONDARY SURGERY (RATSS) IN CONGENITAL ESOPHAGEAL MALFORMATIONS: A SINGLE-CENTER EXPERIENCE IN CHILDREN UNDER 15 KG

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Abstract

Introduction

Robotic-assisted thoracoscopic surgery (RATS) in small children is technically challenging and not yet routinely performed, especially after previous thoracic access. Our aim is to report our robotic approach to conditions associated with already operated congenital esophageal malformations (CEM).

Methods

Data from CEM patients robotically operated were retrospectively collected, including age, weight at surgery, operative details and intra/postoperative complications.

Results

Over the past 6 months 3 CEM cases were managed robotically: two congenital esophageal stenosis (CES) associated with esophageal atresia and one recurrent tracheoesophageal fistula (TEF). All patients had previously undergone unsuccessful endoscopic treatments. The median age and weight at surgery were 5 years and 15 Kg respectively. All procedures were successfully completed using three access RATS with Da-Vinci-Xi platform.

All three cases required intraoperative endoscopy for stricture site location and fistula highlighting. In the two cases previously operated by thoracotomy, massive adhesiolysis was necessary. One of the CES cases had iuxta-diaphragmatic resection and tension-free end-to-end anastomosis. In the other, preoperative balloon dilation caused a large tear at the site of the congenital narrowing, then repaired by robotic stricturoplasty. In Re-TEF case, indocyanine green was esophagoscopically injected to facilitated closure, reinforced with fascia lata. Post-operatively the median in intensive care unit was 7 days. Esophageal patency was restored in the CES cases, while the Re-TEF subsequently was diagnosed with a missed broncho-esophageal component of the fistula.

Conclusion

RATSS is potentially feasible in children under 15 kg. Based on our experience, it should be considered in patients with CEM, particularly if it involves peri-diaphragmatic esophagus. Thoracoscopic surgery in an already operated thorax can be long and demanding, leading to frustration the minimally invasive surgeon. Robotic approach can mitigate this hassle. Robotic approach to CEM and in particular RATSS should be considered after robust training in both CEM surgery and Pediatric Robotic Surgery.

LO114

INTRAPERITONEAL CO2 INSUFFLATION IN A NOVEL NEONATAL MODEL OF NECROTIZING ENTEROCOLITIS

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Abstract

Necrotizing enterocolitis (NEC) is a leading cause of intestinal and neurological morbidity in preterm neonates, related to a high inflammatory state. Previous reports have suggested CO₂ as having anti-inflammatory properties. We hypothesize that intraperitoneal CO₂ insufflation could decrease intestinal and neurological morbidity related to NEC. This pilot study aimed to assess the feasibility of intraperitoneal CO₂ insufflation in low-weight neonatal mice using a novel NEC model.

NEC was induced in pups by gavage-feeding twice daily using 50µl of Esbilac formula, with 7% Dextran-Sodium Sulfate (DSS) or without (control) from P3 to P8. Pneumoperitoneum by CO₂ insufflation was performed under general anaesthesia (isoflurane) at P6 placing an intraperitoneal 24G catheter with pressures of 1-3 mmHg, flow rate of 0.1-1 ml/min for 10 minutes. Mice were sacrificed at P8, and intestines and brains were harvested. Clinical and histological signs of NEC and cerebral lesions were evaluated. Immunohistochemistry was performed on brain section, using Iba-1, GFAP, Caspase 3, and NeuN.

NEC model: DSS administration was associated with rectal bleeding in 100% from P7 and decrease in daily weight gain from P6, compared with control. DSS was associated with reduced intestinal villus length ($p<0.01$) and number ($p<0.01$). Cortical thickness was decreased with DSS compared with controls ($p=0.037$). There was a tendency towards a decrease in Iba-1 in several cerebral areas.

CO₂ insufflation: Fifteen pups were insufflated (median weight:4.3g). Two pups died during anaesthesia before insufflation. All pups survived until P8. No complication related to the positioning of a trocar within a solid or hollow organ were observed.

This neonatal NEC model is reproducible, easy to perform, and induces clinical signs and histological lesions of NEC, associated with cerebral alterations. Intraperitoneal insufflation of this model is feasible and safe. Assessment of the effect of CO₂ insufflation on intestinal and neurological lesions is currently ongoing.

SO107

MODELING AND SIMULATION OF SURGICAL PROCEDURES WITH AN APPLICATION TO LAPAROSCOPIC CHOLECYSTECTOMY

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Abstract

Background

Current surgical workflow models, limited to fewer than 20 activity classes, fall short of providing real-time decision support. We introduce a comprehensive framework that represents any surgery as an event log of phases, gestures (instrument–verb–target triplets), errors, and adverse events, preprocesses these logs to derive a clear workflow ; and validates the method through process mining and simulation of laparoscopic cholecystectomy.

Methods

We defined mathematical constructs for surgeries, phases, gestures, errors, and adverse events and transformed the 50-case CholecT50 video dataset into fine-grained event logs. Preprocessing steps merged transitional and auxiliary gestures, retained primary triplets, and eliminated redundancies. We applied Process Discovery (Flexible Heuristics Miner in Disco) and Conformance Checking (fitness, precision, simplicity, generalization metrics in PM4Py) to generate and validate workflow models at varying granularities. Finally, we simulate the surgery to assess the reliability of our process map

Results

Pre-processing reduced model complexity and improved fitness (≥ 0.82), precision (≥ 0.75), simplicity, and generalization, experts selected the 25% Activity/0% Path model as most representative. Simulations from this model closely matched observed procedure durations and gesture distributions.

Conclusions

We deliver a rigorous, generalizable event-log framework for surgical workflows, an effective preprocessing to simplify annotations, and validated process-mined and simulated models of laparoscopic cholecystectomy. This foundation paves the way for real-time decision-support systems that detect errors, predict events, and ultimately enhance surgical safety and quality.

SO43

ROBOT-ASSISTED SURGERY IN PEDIATRIC PATIENTS: ANALYSIS OF FACTORS AFFECTING ROBOTIC PERFORMANCE INDICATORS TO IMPROVE OPERATIVE EFFICIENCY.

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Abstract

Purpose: Robot-assisted surgery (RAS) represents a major innovation in pediatric minimally invasive surgery, offering enhanced dexterity and precision. However, prolonged operative times—particularly during non-console phases—pose a barrier to its widespread adoption. This study aimed to analyze the factors influencing operative efficiency in pediatric RAS and identify strategies to optimize workflow.

Methods: A retrospective review was conducted on 31 consecutive pediatric RAS cases performed between March 2024 and March 2025. Data collected included patient demographics, procedure type, operative times (trocar placement, docking, console, total), surgeon and nurse experience, robot settings, and intraoperative complications. Statistical analysis, including multivariate regression, was used to identify independent predictors of operative efficiency.

Results: The mean patient age was 12.67 ± 3.82 years and mean weight was 55.06 ± 18.69 kg. Bedside surgeon experience significantly reduced docking time ($p=0.015$), while nurse team coordination was independently associated with shorter console time ($p=0.024$). Trocar placement time was significantly longer in patients >70 kg ($p=0.001$), who also exhibited higher complication rates ($p=0.007$). Pelvic procedures were associated with shorter total operative times ($p=0.001$). Interestingly, surgeon experience—measured by years of practice and robotic case volume—was not linked to complication rates.

Conclusion: Efficiency in pediatric RAS is multifactorial, driven by surgeon and nurse experience, procedure type, and patient-specific factors. Targeted training for bedside assistants and nursing teams, coupled with standardized workflows and improved preoperative planning, can significantly reduce operative times, and improve consistency. Further multicenter studies with larger cohorts are needed to validate these findings and support the development of evidence-based protocols for enhancing robotic surgical performance.

SESSION 12 – GASTROINTESTINAL (GIT) III

LO134

GASTRIC OUTLET OBSTRUCTION IN CHILDREN: BEYOND THE PYLORUS

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Abstract

Aim: To analyze the clinical presentation, surgical management, and outcomes of pediatric patients diagnosed with gastric outlet obstruction (GOO).

Materials and Methods: A retrospective review of pediatric patients diagnosed with GOO was conducted by accessing hospital records. The study included cases from June 2022 to December 2024, documenting patient demographics, clinical symptoms, diagnostic findings, surgical procedures performed, and postoperative outcomes.

Results: Pediatric patients (n = 9) were included in the study, with an age range of 2 to 16 years. The most common presenting symptoms were corrosive ingestion (n = 4), pain abdomen (n = 5), abdominal distension (n=3) and vomiting (n = 3). The etiology of GOO varied, including pyloric stricture (n = 6), gastric trichobezoar (n = 2) and mesenterico-axial gastric volvulus (n = 1).

Feeding jejunostomy was done for 5 patients and 5 were kept on UGIE dilatation. Definitive surgical interventions included Heineke-Mikulicz procedure (n = 2), laparoscopic gastrojejunostomy (n = 2), laparoscopic-assisted gastrostomy (n = 1), and bezoar removal (n=2). 1 of 5 patients with pyloric stricture on endoscopic dilations did not require any further surgery however 2 had perforation during the procedure. On follow up, symptomatic improvement was noted for all patients.

Conclusion: The management of GOO in pediatric patients requires a tailored approach based on etiology. Minimally invasive techniques have demonstrated efficacy reducing postoperative morbidity. Long-term follow-up is crucial to assess functional recovery and complications.

LO255

LAPAROSCOPIC-ASSISTED TRANSANAL PULL-THROUGH FOR ONE-STAGE CORRECTION OF LONG-SEGMENT HIRSCHSPRUNG'S DISEASE: OUTCOMES AND CHALLENGES IN 25 PATIENTS

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Abstract

Background/Purpose: Long-segment Hirschsprung's disease (HD) traditionally required multistage repair, but single-stage laparoscopic-assisted transanal pull-through (LATP) has emerged as a promising alternative. This study evaluates the feasibility, outcomes, and limitations of one-stage LATP in 25 patients, including cases requiring conversion to open surgery.

Methods: We retrospectively analyzed 25 consecutive patients with long-segment HD who underwent attempted one-stage LATP. The cohort included infants as young as 3 months (median age: 8 months, range: 3–24 months). Data included operative details, reasons for conversion, complications, and functional outcomes at follow-up.

Results: Twenty-two patients (88%) successfully underwent LATP, while three (12%) required conversion to open surgery due to technical challenges (two cases of extensive bowel distension and one due to small abdomen dimensions in a young infant). Median operative time was 175 minutes (LATP) vs. 210 minutes (converted cases). Early complications included postoperative enterocolitis (n=4, 16%) and anastomotic stenosis (n=1, 4%), all managed conservatively. At a median follow-up of 30 months, 90% of patients achieved normal bowel function, with no fecal incontinence. One patient required dilation for anastomotic stricture.

Conclusion: One-stage LATP is feasible for most patients with long-segment HD, including infants ≥ 3 months, offering good functional outcomes without stoma-related morbidity. However, bowel distension or anatomical constraints in very young infants may necessitate conversion to open surgery. Careful patient selection and surgeon experience are critical for success.

LO169

ADVANTAGES OF LAPAROSCOPY IN PEDIATRIC SURGICAL EMERGENCIES OF THE ABDOMEN

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Abstract

Introduction

Acute abdominal pain is a leading symptom in many surgical emergency patients. Laparoscopy allows for accurate diagnosis and immediate therapy of many intraabdominal pathologies. Generally, laparoscopy is well suited for the therapy of the majority of diseases that cause acute abdominal pain in children.

Methods

In our Emergency Hospital for Children, we created a retrospective 25 years study regarding the minimally invasive surgical interventions performed for abdominal surgical emergencies and we searched for the advantages of this technique, comparable with the open way.

Results

Emergency laparoscopy is widely used to identify the causative pathology of acute abdominal pain, followed by laparoscopic treatment of the detected abdominal disorder. The causes of these abdominal emergencies include inflammation and ischaemia of abdominal organs, obstruction and perforation of a hollow organ, and gastrointestinal bleeding. In our Emergency Hospital for Children, the main surgical abdominal emergencies approached by minimally invasive surgery were: acute appendicitis, bowel obstruction, acute cholecystitis, incarcerated hernia, Meckel diverticulum perforation, intussusception, traumatic acute abdomen, acute pancreatitis, adnexal torsion, haemoperitoneum, renal abscess, intussusception, jaundice etc.

68% of all laparoscopic procedures performed in our clinic were done for acute abdominal pathologies. Of all abdominal minimally invasive procedures performed for emergencies, 38% were performed for acute appendicitis, 23% for adnexal torsions, 17% for acute cholecistitis, 22% others.

Conclusion

Pediatric laparoscopic surgery for emergency conditions provides excellent results, including better exposure and cosmetic outcomes than laparotomy.

With an experienced surgical team, a minimally invasive approach could be used safely in children, with low rates of morbidity and mortality

Laparoscopy must be considered a safe, extremely versatile and prompt surgical approach, through which we could achieve a quicker diagnosis, avoiding large preoperative studies, minimizing morbidity and requiring shorter hospital stay.

We consider it to be a feasible and reproducible method.

SO147

CEFTRIAXONE'S SILENT TRAP: HOW MATERNAL CHOICES AND A COMMON ANTIBIOTIC SHAPE CHILDHOOD GALLSTONES

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Abstract

Introduction: Pediatric gallstone disease is emerging as a modern health challenge, with ceftriaxone exposure and maternal lifestyle during pregnancy forming a concerning dual risk. This study investigates the combined influence of these factors on gallstone formation in children.

Methods: This retrospective study included 54 children (n=54), aged 0–17 years, who underwent laparoscopic cholecystectomy for gallstones between January 1, 2017, and December 31, 2023. Data collected included demographics, blood group, family history, and ceftriaxone administration (dosage and duration). Detailed maternal history during pregnancy (diet, physical activity, smoking) was also recorded. Each child's medical record was reviewed for hematological, biochemical, and imaging findings.

Results: The majority of patients were female (51.2%), with a mean age of 10.5 years and a mean BMI of 19.86 ± 5.81 . Blood group A+ was the most common (38.9%). Ceftriaxone was administered in 35.4% of children and was associated with a 2.8-fold increased risk of gallstones ($p=0.003$), which rose to 3.5-fold when use exceeded 10 days ($p=0.007$). When ceftriaxone exposure was combined with a high-fat maternal diet (42.6%), the risk increased by 4.1-fold ($p=0.001$). Maternal sedentary lifestyle (28.8%) and smoking (17.5%) showed borderline significance ($p=0.052$). A family history of gallstones was identified in 11.1% of mothers and 5.6% of fathers. Breastfeeding for six months or more was associated with a 22% lower risk of gallstone formation.

Conclusions: Ceftriaxone appears to act not only as a risk factor but as a key catalyst in pediatric gallstone development. When combined with adverse maternal habits during pregnancy, the risk is significantly amplified. These findings support the need to reevaluate antibiotic prescribing practices and promote maternal health interventions as part of gallstone prevention strategies in children.

SESSION 13 – THORAX II

LO108

EVALUATION OF THORACOSCOPIC RESECTION FOR CONGENITAL LUNG MALFORMATIONS IN INFANTS AND CHILDREN

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Abstract

Background: Thoracoscopy is now widely accepted as a treatment for Congenital lung malformations (CLM) in pediatric patients. However, there is a paucity of literature regarding its safety and efficacy, especially in neonates and early infancy. This study aimed to evaluate the safety and efficacy of thoracoscopic resection of CLMs in early infancy and children.

Patients and Method:

A prospective study was conducted from 2021 to 2024. Pediatric patients diagnosed with any type of CLM were included in this study. Patients who had undergone surgery before or had contraindications to thoracoscopy were excluded from this study. All patients were operated on using 3 ports video assisted thoracoscopy (VAT). Intraoperative complications were the primary outcome of this study, while operative time, postoperative complications, and the need for secondary intervention were the secondary outcomes.

Results: 40 patients with CLMs, 24 males (60%) and 16 females (40%), with a mean age of 11.10 ± 15.24 months, were operated thoracoscopically without conversion. These included (50%) congenital pulmonary airway malformation (CPAM), (20%) extra-lobar bronchopulmonary sequestration (BPS), (15%) congenital lobar overinflation (CLO), (15%) bronchogenic cysts. Mean Operative time was 91.50 ± 35.88 minutes. There were no intraoperative complications other than some blood loss, which was controlled thoracoscopically. Patients were discharged from the hospital on an average 4th - 5th day. Air leak occurred in (5%). It was managed conservatively. No late postoperative chest infections were recorded during follow up visits.

Conclusion: thoracoscopic resection of CLMs is a safe, feasible and effective option for the management of CLMs in early infancy and childhood. It may offer comparable intraoperative difficulties and acceptable early and late post-operative complications.

LO245

RIGHT-SIDED THORACOSCOPIC REPAIR OF ESOPHAGEAL ATRESIA AND TRACHEOESOPHAGEAL FISTULA: FEASIBILITY AND OUTCOMES IN PATIENTS WITH ACCOMPANYING CONGENITAL VASCULAR ANOMALIES

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Abstract

Introduction: This study aims to analyze the occurrence of congenital vascular anomalies (CVAs) in patients with esophageal atresia and tracheoesophageal fistula (EA/TEF), assessing their impact on clinical presentation, surgical management, and outcomes.

Methods: A retrospective review of type C or D EA/TEF patients treated between 2005 and 2023 was conducted. Demographics, clinical characteristics, CVA presence and type, associated major cardiac defects, surgical treatment and outcomes were compared.

Results: Among 161 patients with type C or D EA/TEF we identified 22 patients (13.7%) with congenital vascular anomalies (CVAs), including: right aortic arch–11/161 (6.8%), hypoplastic/absent azygos vein–8/161 (5%), additional aortic arch vessel–3/161 (1.9%), aortic coarctation–2/161 (1.2%), persistent left superior vena cava–2/161 (1.2%). Patients with CVAs had a significantly higher prevalence of associated anomalies (16/22, 72.7%), particularly major cardiac defects (8/22, 36.4%). The entire population underwent a preoperative echocardiography. All consecutive patients were treated only thoracoscopically as primary esophageal anastomosis. Right-sided thoracoscopic approach was performed in all newborns except for two cases (situs inversus with hypoplastic right chest cavity and right lung agenesis). There was no surgery-related mortality. Early mortality in patients with CVAs was related to more frequent associated malformations. Anastomotic leakage concerned 4/22 (18.2%) patients and was treated conservatively in all cases. There was no recurrent TEF among the analyzed population. Native esophagus was preserved in all patients.

Conclusions: Right-sided thoracoscopic approach for EA/TEF patients with congenital vascular anomalies is feasible. This approach enables safe esophageal anastomosis. Preoperative diagnostic imaging may influence the choice of surgical approach. Right aortic arch should not be considered a contraindication to right-sided thoracoscopy.

LO200

ENHANCING RECOVERY AFTER NUSS PROCEDURE FOR PECTUS EXCAVATUM: THE IMPACT OF EARLY PREOPERATIVE INTERCOSTAL CRYOANALGESIA

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Abstract

Background and Aims

Despite advancements in minimally invasive techniques, enhanced recovery after surgery (ERAS) protocols for pectus excavatum correction still require enhancement. Intercostal cryoablation has emerged as a promising strategy for improving perioperative pain control, a crucial determinant of hospital length of stay. We aimed to investigate the impact of percutaneous intercostal cryoanalgesia at different preoperative times on postoperative recovery, focusing on surgical duration, need for intensive care admission, mobilization time, analgesic drugs requirements, and length of stay.

Methods

A retrospective analysis was conducted on 58 patients who underwent the Nuss procedure at a single pediatric institution from 2021 to 2025. Patients were allocated into four consecutive groups. Group 1 (n=18): thoracic epidural analgesia. Group 2 (n=11): percutaneous cryoanalgesia on the day of surgery, with epidural as a bridge until cryoanalgesia onset. Group 3 (n=14): preoperative percutaneous cryoanalgesia 6 days (IQR=3–6) before surgery. Group 4 (n=15): shorter cycles of preoperative percutaneous cryoanalgesia 6 days (IQR=5–6) before surgery, combined with an analgesic peripheral nerve block.

Results

Length of stay (days) decreased among groups: 7 (IQR=6–7), 6 (IQR=5–7), 4 (IQR=4–5), 3 (IQR=3–4), respectively. Time to mobilization (days) improved: 2 (IQR=1–3), 1 (IQR=1–2), 1 (IQR=0–1), 1 (IQR=0–1). Postoperative incidence of intensive care admissions declined: 67%, 9%, 0%, 0%. Mean procedural duration (minutes) decreased, except when cryoanalgesia was performed on the day of surgery: 245 (±24), 272 (±30), 179 (±34), 155 (±17). Opioid requirements decreased among groups.

Conclusion

Our findings suggest that early cryoanalgesia may be pivotal in enhancing recovery after pectus excavatum surgery. This approach was associated with improvements in surgical duration, need for intensive care, mobilization, analgesic requirements, and length of stay. Shorter cryoanalgesia cycles yielded comparable results, while the introduction of a peripheral nerve block led to further improvements.

LO247

SURGICAL STRATEGIES AND OUTCOMES IN NEWBORNS WITH ESOPHAGEAL ATRESIA AND TRACHEOESOPHAGEAL FISTULA ASSOCIATED WITH DUODENAL ATRESIA

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Abstract

Introduction: This study aims to review the management and outcomes of esophageal atresia and tracheoesophageal fistula (EA/TEF) associated with duodenal atresia (DA) and to determine the optimal surgical strategy.

Methods: A retrospective analysis was conducted on EA/TEF patients treated between 2005 and 2023 at high-volume center. Demographic data, clinical characteristics, surgical interventions and outcomes were collected and compared.

Results: A total of 11 patients with EA/TEF and accompanying DA were included. All patients presented with type C EA/TEF. Median birth weight was 1850 g. All patients were diagnosed preoperatively with EA/TEF and DA. 2/11 patients had VACTERL association. EA/TEF repair was performed thoracoscopically in all cases. DA repair was performed laparoscopically in 9/11 patients and as open approach in 2/11 newborns. Surgical management strategies included:

One-stage EA/TEF and DA repair in 2/11

A multi-stage approach in 9/11 patients, which involved:

Strategy 1: TEF closure and esophageal anastomosis in the first stage, followed by laparoscopic duodenal anastomosis in the second stage (7/11)

Strategy 2: TEF closure and open duodenal anastomosis in the first stage, followed by esophageal anastomosis in the second stage (2/11).

Gastrostomy was performed in 2/11 patients: in one later due to feeding difficulties and in another low-birth-weight newborn during the initial surgery to facilitate early enteral feeding. The median interval between stages was 4,5 days. There was no surgery-related mortality. There were no duodenal and esophageal leakage and no need for fundoplication among the analyzed patients

Conclusions: Staged minimally invasive repair appears to be a safe, feasible and preferred surgical strategy for neonates with EA/TEF and associated DA

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SESSION 14 – SYSTEMATIC REVIEWS AND META-ANALYSES BY PESMA GROUP

LO195

MUSCULOSKELETAL OUTCOMES FOLLOWING THORACOSCOPIC VERSUS CONVENTIONAL OPEN REPAIR OF ESOPHAGEAL ATRESIA: A SYSTEMATIC REVIEW AND META-ANALYSIS FROM PEDIATRIC SURGERY META-ANALYSIS (PESMA) STUDY GROUP

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Abstract

Introduction: Thoracic musculoskeletal deformities following surgical treatment of esophageal atresia represent significant long-term problems. Even though there is limited evidence, the alleged benefits of minimally invasive esophageal atresia repair include earlier recovery, decreased pain, smaller scars and lower risk for long-term musculoskeletal problems. This systematic review and meta-analysis aimed to compare the incidence of musculoskeletal deformities following esophageal atresia (EA) repair via thoracoscopic (TR) versus conventional open repair (COR) approaches, with a focus on their clinical implications for long-term patient outcomes.

Method: The protocol for this review was registered in PROSPERO(CRD42024576044). A comprehensive literature search was conducted across Ovid Medline, Cochrane, PubMed, Web of Science, EMBASE, SCOPUS, and Google scholar from inception to January 2025. The primary outcomes assessed were scoliosis, rib anomalies, chest wall anomalies, and scapula alata. Statistical analysis was performed using Review Manager (RevMan) version 5.4.

Results: Four studies, including 96 patients who underwent TR and 187 who underwent COR, met the inclusion criteria. Patients in the TR group had a significantly lower incidence of scoliosis compared to those in the COR group ($I^2=36\%$) (RR:0.35, 95%CI:0.14-0.84; $p=0.02$), with overall scoliosis rates of 3.1% and 16%, respectively. Rib anomalies, encompassing deformity, fusion, and adhesions, were also significantly less frequent in the TR group ($I^2=0\%$) (RR:0.05, 95%CI:0.01-0.25; $p=0.0002$), with 0% in the TR group versus 41.5% in COR. No significant differences were noted between groups for chest wall anomalies ($I^2=54\%$) (RR:0.65, 95%CI:0.23-1.81; $p=0.41$) or scapula alata (RR:0.37, 95%CI:0.05-2.46; $p=0.30$).

Conclusion: TR for EA appears to offer significant benefits over COR, particularly in reducing scoliosis and rib deformities. However, due to small sample sizes and study variability, these findings should be interpreted cautiously. Further research with larger cohorts is needed to confirm these potential advantages and explore alternatives like muscle-sparing thoracotomy.

LO203

LAPAROSCOPIC VERSUS OPEN KASAI PORTOENTEROSTOMY FOR BILIARY ATRESIA: A SYSTEMATIC REVIEW AND META-ANALYSIS BY THE PEDIATRIC SURGERY META-ANALYSIS STUDY GROUP (PESMA)

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Abstract

Introduction: Biliary atresia (BA) is a rare but life-threatening neonatal liver disease requiring timely surgical intervention. The Kasai portoenterostomy (KPE) is the standard treatment, traditionally performed via laparotomy. Recently, laparoscopic approach has been introduced, but its efficacy remains debated. This systematic review and meta-analysis compared laparoscopic and open KPE in patients with BA.

Methods: A comprehensive literature search of PubMed, Scopus, EMBASE, and Web of Science was conducted through April 2025. Primary outcomes were jaundice clearance, cholangitis, overall complications, 2-year native liver survival rate, and postoperative intestinal obstruction. Pooled odds ratios (OR) and 95% confidence intervals (CI) were calculated using Mantel–Haenszel methods under fixed- or random-effects models, based on heterogeneity (I^2). We used RevMan 5.4 software meta-analysis statistic program.

Results: A total of 26 studies were included. Jaundice clearance (17 studies; OR=1.10; 95%CI: 0.76–1.59; $p=0.61$; $I^2=42\%$) and cholangitis (15 studies; OR=1.17; 95%CI: 0.87–1.59; $p=0.30$; $I^2=0\%$) rates showed no significant differences between laparoscopic and open groups. No significant differences were observed in overall complication rates (8 studies; OR=0.71; 95%CI: 0.24–2.09; $p=0.54$; $I^2=57\%$). Postoperative intestinal obstruction (7 studies) and 2-year native liver survival (8 studies) also showed comparable outcomes (OR=0.91; 95% CI: 0.36–2.27; $p=0.83$; $I^2=0\%$ and OR=0.74; 95% CI: 0.49–1.10; $p=0.13$; $I^2=30\%$ respectively).

Conclusion: Laparoscopic KPE appears to be a safe and feasible alternative to the open approach, with comparable outcomes across major clinical parameters. While current evidence supports its feasibility, further high-quality prospective studies are needed to validate these findings and inform surgical practice.

LO243

LAPAROSCOPIC-ASSISTED ANORECTOPLASTY (LAARP) VERSUS POSTERIOR SAGITTAL ANORECTOPLASTY (PSARP) IN ARMS: A SYSTEMATIC REVIEW AND META-ANALYSIS BY THE PEDIATRIC SURGERY META-ANALYSIS STUDY GROUP (PESMA)

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Abstract

Introduction: Anorectal malformations (ARMs) are a spectrum of congenital anomalies requiring early surgical correction. Posterior sagittal anorectoplasty (PSARP) has long been the standard approach. However, laparoscopic-assisted anorectoplasty (LAARP) has emerged as an alternative, especially for high and intermediate ARMs. This systematic review and meta-analysis aimed to compare outcomes of LAARP versus PSARP.

Methods: A systematic literature search was performed in PubMed, EMBASE, Web of Science, and SCOPUS up to April 2025. Studies comparing LAARP and PSARP in patients with ARMs were included. Primary outcomes included anal stricture, mucosal prolapse, residual fistula, urethral diverticulum, and wound infection. Pooled odds ratios (ORs) with 95% confidence intervals (CI) were calculated using fixed- or random-effects models based on heterogeneity (I^2). Statistical analysis was performed using RevMan 5.4.

Results: No significant differences were found between LAARP and PSARP in residual fistula rate (OR=1.39; 95%CI: 0.63–3.09; $p=0.41$; $I^2=0\%$), mucosal prolapse (OR=1.53; 95%CI: 0.94–2.48; $p=0.09$; $I^2=42\%$), or anal stricture (OR=1.09; 95%CI: 0.75–1.58; $p=0.64$; $I^2=41\%$). LAARP was associated with a significantly lower risk of wound infection (OR=0.15; 95%CI: 0.07–0.35; $p<0.00001$; $I^2=0\%$) but a significantly higher risk of urethral diverticulum (OR=7.90; 95%CI: 2.69–23.16; $p=0.0002$; $I^2=0\%$).

Conclusions: LAARP and PSARP demonstrate comparable efficacy in terms of fistula, prolapse, and stricture rates. However, LAARP offers the benefit of reduced wound infection risk, at the expense of an increased risk of urethral diverticulum. These findings highlight distinct complication profiles that should inform surgical decision-making.

LO206

THORACOSCOPIC VERSUS CONVENTIONAL OPEN ESOPHAGEAL ATRESIA REPAIR: A SYSTEMATIC REVIEW AND META-ANALYSIS BY THE PEDIATRIC SURGERY META-ANALYSIS STUDY GROUP (PESMA)

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Abstract

Introduction: Minimally invasive surgery has gained popularity for the repair of esophageal atresia (EA) in neonates, though its safety and effectiveness compared to open thoracotomy remain debated. This systematic review and meta-analysis aimed to compare thoracoscopic and open approaches, focusing on anastomotic stricture, leak, and postoperative mortality rates.

Methods: A systematic search was conducted using PubMed, EMBASE, Scopus, and Web of Science through April 2025. Studies comparing thoracoscopic and open EA repair were included. Primary outcomes were anastomotic stricture, anastomotic leak, and mortality. Pooled odds ratios (OR) with 95% confidence intervals (CI) were calculated using a fixed-effects model. Heterogeneity was assessed using the I^2 statistic. Statistical analyses were conducted using RevMan 5.4.

Results: A total of 32 studies involving 5608 patients (1302 thoracoscopic and 4306 thoracotomy) were included. Anastomotic leak was reported in 26 studies, with no significant difference between the two groups (OR=1.02, 95%CI: 0.81–1.29, $p=0.84$; $I^2=0\%$). Anastomotic stricture, reported in 25 studies, was significantly more common in the thoracoscopic group (OR=1.53, 95%CI: 1.24–1.88, $p<0.0001$; $I^2=32\%$). Mortality was assessed in 21 studies and was significantly lower in the thoracoscopic group (OR=0.63, 95%CI: 0.40–0.99, $p=0.05$; $I^2=0\%$).

Conclusion: Thoracoscopic EA repair is associated with a higher risk of anastomotic stricture but a lower mortality rate compared to open repair, with no significant difference in leak rates. These findings support the safety and viability of thoracoscopy, while highlighting the need for strategies to reduce stricture risk.

LO215

THORACOSCOPIC VERSUS OPEN CONGENITAL DIAPHRAGMATIC HERNIA REPAIR: A SYSTEMATIC REVIEW OF COMPLICATIONS AND META-ANALYSIS BY THE PEDIATRIC SURGERY META-ANALYSIS STUDY GROUP (PESMA)

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Abstract

Introduction: Congenital diaphragmatic hernia (CDH) is a rare, life-threatening condition requiring surgical correction via open or thoracoscopic approaches. Despite growing use of minimally invasive techniques, the optimal surgical method remains debated. This study aimed to compare the efficacy and safety of thoracoscopic versus open CDH repair.

Methods: A systematic literature search was conducted across PubMed, EMBASE, SCOPUS, and Web of Science through April 2025. Studies comparing thoracoscopic and open CDH repair were included. Primary outcomes were recurrence and technique's related complications. Meta-analysis was performed using RevMan 5.4. Odds ratios (OR) with 95% confidence intervals (CI) were calculated using fixed- or random-effects models. Heterogeneity was assessed using the I² statistic.

Results: Thirty-three studies reported recurrence rates: 12% in the thoracoscopic group and 6% in the open group. Thoracoscopic repair was associated with higher recurrence (OR=1.69; 95% CI: 1.22–2.35, p=0.002; I²=32%). Pneumothorax was reported in nine studies, with rates of 8.3% in thoracoscopy and 4.9% in open group; the difference was not statistically significant (OR=1.58, 95% CI: 0.74–3.40, p=0.24; I²=0%). Eleven studies assessed bowel obstruction, showing a significantly lower rate in the thoracoscopic group (4.3% vs. 14.5%; OR = 0.33; 95% CI: 0.16–0.68; p = 0.003; I² = 0%).

Conclusion: Thoracoscopic repair of CDH is linked to a higher recurrence rate but a lower incidence of postoperative bowel obstruction compared to open repair. These findings highlight the need for well-designed prospective studies to guide surgical decision-making in CDH management.

LO211

MINIMAL INVASIVE APPROACH FOR CHOLEDOCHAL CYSTS IN CHILDREN: A SYSTEMATIC REVIEW AND META-ANALYSIS BY THE PEDIATRIC SURGERY META-ANALYSIS STUDY GROUP (PESMA)

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Abstract

Introduction: Hepaticojejunostomy is the standard biliary-enteric reconstruction following choledochal cyst (CC) excision. Minimally invasive techniques—especially laparoscopic and robotic-assisted approaches—have increasingly replaced open surgery. However, the comparative safety and efficacy of these techniques remain debated. This systematic review and meta-analysis aimed to compare perioperative and postoperative outcomes among laparoscopic, robotic, and open hepaticojejunostomy for pediatric CCs.

Methods: A systematic search was performed in PubMed, EMBASE, Web of Science, and SCOPUS through April 2025. Studies comparing laparoscopic vs. open (LA-OP) and laparoscopic vs. robotic (LA-RO) hepaticojejunostomy were included. Primary outcomes included anastomotic stricture, bile leak, postoperative bowel obstruction, postoperative bile stone formation, ascites, and cholangitis. Pooled odds ratios (OR) and 95% confidence intervals (CI) were calculated using the Mantel-Haenszel fixed-effect model. Heterogeneity was assessed with the I² statistic.

Results: In the LA-OP comparison, no significant differences were found in ascites (OR=3.26; 95%CI:0.50–21.27; p=0.22; I²=0%), cholangitis (OR=0.94; 95%CI:0.27–3.36; p=0.93; I²=77%), bile leak (OR=1.65; 95%CI:0.57–4.76; p=0.35; I²=0%), stone formation (OR=0.68; 95%CI:0.18–2.62; p=0.58; I²=0%), bowel obstruction (OR=0.99; 95%CI:0.42–2.33; p=0.99; I²=0%), or anastomotic stricture (OR=1.03; 95%CI:0.44–2.40; p=0.95; I²=44%). Similarly, in the LA-RO comparison, no significant differences were observed in ascites (OR=1.95; 95%CI:0.31–12.41; p=0.48; I²=0%), cholangitis (OR=0.73; 95%CI:0.23–2.28; p=0.59; I²=0%), stone formation (OR=3.55; 95%CI:0.81–15.69; p=0.09; I²=0%), bowel obstruction (OR=0.90; 95%CI:0.41–2.00; p=0.80; I²=0%), or anastomotic stricture rate (OR=1.40; 95%CI:0.70–2.82; p=0.34; I²=0%). However, robotic-assisted surgery showed a significantly lower bile leak rate than laparoscopy (OR=2.26; 95%CI:1.18–4.32; p=0.01; I²=18%).

Conclusions: Minimally invasive hepaticojejunostomy offers comparable outcomes to open surgery for pediatric CCs. Robotic-assisted techniques may reduce bile leak rates, suggesting a potential advantage in select cases.

SESSION 15 – ONCOLOGY

LO238

LAPAROSCOPIC ADRENALECTOMY IS SAFE AND EFFICIENT IN THE PEDIATRIC POPULATION - OWN EXPERIENCE.

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Abstract

Introduction:

Adrenal masses are rare in the pediatric population, and when they occur, they encompass a spectrum of pathologies. Since the first laparoscopic adrenalectomy in 1992, minimally invasive surgery (MIS), with its numerous benefits, has become the treatment of choice for pediatric patients as well.

Materials and methods:

The material included patients (n=21) treated for adrenal tumours in a single center in 2018-2025.

Aim of the study:

Analysis of the endoscopic treatment for adrenal lesions with the assessment of the course of surgery, its duration and treatment results in relation to the size of the lesion and histopathological findings.

Results:

In the years 2018-2025, 21 patients aged 13 days to 16.5 years, were treated for adrenal tumors. Laparoscopy was the method of choice with conversion to open surgery do to extensive bleeding in one case. The procedures lasted from 50 to 265 minutes with the mean time of 111 minutes. 17 lesions were removed completely, 2 subtotally, 2 masses were biopted. The size ranged from 0,65 ml to 81,64 ml with the mean size of 24,6 ml. The duration of the child's hospitalization depended on the age and histopathological findings with average length of stay 8 days. The histopathological finding included lesions of 6 types.

Conclusions:

In our experience, laparoscopy is a safe and effective technique with no limitation based on the age of the patient.

LO173

APPLICATION OF ICG-GUIDED FLUORESCENCE IMAGING IN PEDIATRIC MINIMALLY INVASIVE SURGERY FOR SUPRARENAL MASSES.

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Abstract

Purpose

Suprarenal pathologies in pediatric population present a low incidence and are characterized usually by a disproportion between masses and children's size. Laparoscopic management is not standardized and sometimes very challenging. The aim is to highlight the advantages coming from ICG-guided fluorescence application in mass resection avoiding major complications.

Patients and Methods

Children who underwent laparoscopic asportation of suprarenal masses performed at our Department of Pediatric Surgery between 2021 and 2024 were included in this study.

Results

3 patients were included. Mean age was 29 months (5-48). Median lesions diameter was 50mm (40-60mm). Laterality was left in all patients. The diagnosis was an incidentaloma in two cases, prenatal in one. Preoperative imaging includes ultrasound and abdominal MRI. Surgical access was transperitoneal in all patients. ICG was injected intravenously in all patients. The ICG-dosage was 0.2mg/mL/kg. All procedures were performed laparoscopically. Mean operative time was 150minutes. Mean hospital stay was 3 days. No major intraoperative complications or conversion were observed. No episodes of allergy or anaphylaxis to ICG were recorded. Histological examination revealed: 1) adrenocortical tumor; 2) intermixed ganglioneuroblastoma; 3) extralobar subdiaphragmatic lung sequestration/CPAM.

Conclusions

Laparoscopic treatment of suprarenal masses is a safe and effective procedure. ICG application allowing surgeons to reduce the rate of complications enhancing the identification of critical anatomical elements and pathological structures and positively impacting both oncological and functional outcomes. It should be considered as the first-line treatment for selected masses in centers with good experience in minimally invasive surgery.

SO13

LAPAROSCOPIC NEPHROURETERECTOMY FOR PEDIATRIC RENAL TUMORS; A RETROSPECTIVE REVIEW

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Abstract

Introduction:

Surgical resection is central to the management of pediatric renal tumors, particularly Wilms tumor (WT), where complete excision is a key prognostic factor. While laparoscopic nephrectomy is gaining popularity, it lacks uniform guidelines for technique and patient selection. Its safe application depends on strict adherence to oncologic principles.

Materials and Methods:

We retrospectively reviewed pediatric patients who underwent laparoscopic nephroureterectomy for renal tumors at our center between January 2023 and December 2024, using electronic medical records. Data collected included demographics, tumor size, staging, histopathology, treatment protocols, surgical details, lymph node sampling, and complications.

Results:

Ten children (mean age: 5.5 years) were included. The average tumor size was 7.12 cm.

Six underwent successful laparoscopic nephroureterectomy.

Four required conversion to open surgery due to bleeding, adhesions, or anatomical challenges.

Eight received neoadjuvant chemotherapy; two had upfront surgery followed by adjuvant therapy.

There were no intraoperative tumor ruptures or spillage.

Lymph node sampling was completed in four cases; others had no palpable/enlarged nodes.

Postoperative recovery was smooth in all patients.

Histopathology revealed Wilms tumor in 8 cases, RCC, and clear cell sarcoma in one each.

All patients received adjuvant chemotherapy, and those with WT also underwent radiotherapy. No recurrence was observed on follow-up.

Conclusion:

We conclude that laparoscopic radical nephroureterectomy is a safe and feasible option for selected pediatric renal tumors. Careful case selection and adherence to oncologic standards are crucial. Conversion to open surgery should be readily considered to avoid incomplete resection or tumor spill, ensuring optimal outcomes

SO205

LAPAROSCOPIC VS. OPEN SURGERY FOR SUSPECTED ADNEXAL TORSION IN CHILDREN AND ADOLESCENTS: A RETROSPECTIVE COMPARATIVE STUDY WITH CONSIDERATION OF MALIGNANCY RISK IN SURGICAL DECISION-MAKING

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Abstract

Introduction:

Adnexal torsion in children and adolescents lies at the crossroads of paediatric emergency surgery, gynecology, and oncology. Timely surgery is essential to preserve ovarian function. Although malignancy risk is low, imaging or intraoperative findings may influence the surgical approach. Laparoscopy is often preferred for its minimally invasive benefits, but surgeon preference and suspicion of malignancy can affect decision-making. This study reviews our emergency management of suspected adnexal torsion.

Methods:

We retrospectively analyzed surgically treated suspected adnexal torsion cases from March 2020 to March 2025. Surgical approach was primarily based on surgeon preference, influenced by imaging or suspicion of malignancy and intraoperative findings. Data included patient age, operative findings, ovarian preservation, hospital stay, complications, recovery, histopathology, and procedures performed.

Results:

Forty-one patients were included: 15 laparoscopic, 26 open. Mean age was 12.5 years (range 40 days–16 years). Two cases converted to open due to suspected malignancy. Torsion was confirmed in 35 patients (85.4%), while 6 had no torsion. Among torsed cases, functional ovarian cysts predominated (n=24), followed by spontaneous torsion (n=6), paraovarian cysts (n=5), cystadenomas (n=2), and a benign teratoma (n=1). Non-torsed cases included hemorrhagic cysts (n=4), normal adnexa (n=1), and one malignant sex cord-stromal tumor in an infant. Procedures included ovarian detorsion, cyst or mass excision, and oophorectomy. Ovarian preservation was achieved in 35 patients (82.9%). Laparoscopy was associated with fewer oophorectomies, shorter hospital stays (median 3 vs. 4 days), and faster recovery. Operative times were similar between groups. No major complications were recorded.

Conclusion:

In paediatric and adolescent patients with suspected adnexal torsion, malignancy is rare, and ovarian-sparing management is often feasible. Laparoscopy offers diagnostic clarity, reduced morbidity, and functional preservation. While vigilance is warranted when malignancy is suspected, our findings support laparoscopy as the preferred emergency approach.

SO196

SYSTEMATIC REVIEW AND NATIONAL CANCER DATABASE ANALYSIS OF MINIMALLY INVASIVE LIVER SURGERY IN CHILDREN

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Abstract

Introduction: We aimed to describe the available evidence on minimally invasive liver surgery in children given its limited application.

Methods: We systematically reviewed PubMed, Scopus, Web of Science, and Cochrane Library databases by the Preferred Reporting Items For Systematic Reviews statement for children (<18 years) undergoing minimally invasive liver surgery (end-of-search date: 03/03/2024). The National Cancer Database was queried for children (<18 years) undergoing minimally invasive liver surgery (2010-2019).

Results: Forty-one articles with 211 patients were identified. The approach was laparoscopic in 93.1%, hand-assisted in 4.1%, and robotic in 2.8%. The mean age was 5.4±4.4 years, mean lesion size was 6.2±3.4 cm, while the most common surgical indications were hepatoblastoma (28.9%) and hydatid cyst (27.0%). Most underwent cyst resection/aspiration/unroofing (40.7%), followed by lobectomy (17.1%). Five (2.4%) had conversion to open. The mean operative time was 162.1±99.1 minutes and mean length of stay was 6.4±4.9 days. Over a mean follow-up of 22.9±24.6 months, recurrence amongst patients with malignancy was seen in two (3.1%), and one of them experienced death (0.5%). Thirty-nine children underwent laparoscopic liver resection in National Cancer Database (none robotic). The mean age was 4.0±5.5 years and mean tumor size was 1.1±1.4 cm. Most underwent wedge/segmental resection (48.7%), followed by lobectomy (30.8%). Three (7.7%) had conversion to open, mean length of stay was 6.4±5.3 days, and 5-year overall survival was 89.2%.

Conclusion: Both benign and malignant liver lesions are amenable to minimally invasive liver surgery. Minimally invasive liver surgery is associated with favorable outcomes with 2-8% conversion rate and mean length of stay of 6 days. Future research should focus on standardization and broader adoption of minimally invasive liver surgery across centers.

SO257

LAPAROSCOPIC OOPHORECTOMY FOR OVARIAN TISSUE CRYOPRESERVATION IN A 14-YEAR-OLD POSTPUBERTAL GIRL WITH HODGKIN'S LYMPHOMA: A NEWLY STARTED PROTOCOL

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Abstract

Purpose:

In postpubertal girls undergoing gonadotoxic treatment, fertility preservation must be performed swiftly and safely to avoid delaying cancer therapy. This case highlights the surgical approach and urgency of ovarian tissue cryopreservation (OTC) in a 14-year-old postpubertal girl newly diagnosed with Hodgkin's lymphoma.

Methods:

A 14-year-old postpubertal girl was referred for urgent fertility preservation prior to the initiation of chemotherapy. The procedure was conducted under a newly established institutional protocol for fertility preservation in paediatric cancer patients. A laparoscopic right oophorectomy was performed under general anesthesia, aiming for minimal operative time and rapid recovery. The removed ovary appeared healthy and was immediately processed. The entire process was carefully coordinated to meet the tight timeline before chemotherapy.

To our knowledge, this is the first reported case in Greece using a structured institutional protocol for OTC in a paediatric oncology patient.

Results:

The procedure was completed in under 30 minutes without complications. A total of 24 vials, each containing two ovarian cortical fragments, were successfully cryopreserved and stored in liquid nitrogen. The time from referral to the start of chemotherapy was 8 days. The patient was discharged the same day and started treatment as scheduled. As of now, the girl has completed her therapy with no signs of disease recurrence.

Conclusion:

Ovarian tissue cryopreservation via laparoscopic oophorectomy can be performed quickly and safely in postpubertal girls requiring urgent fertility preservation. This case demonstrates that with effective interdisciplinary collaboration and a structured hospital protocol, fertility preservation can be achieved without delaying cancer therapy.

SESSION 16 – MY WORST COMPLICATION

LO183

MY FIRST, MY WORST, MY VICTORY: A CHALLENGING THORACOSCOPIC ESOPHAGEAL ATRESIA REPAIR IN A PRIVATE HOSPITAL SETTING

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Abstract

Aim:

This report presents the first thoracoscopic esophageal atresia repair performed in a private hospital setting, early in the pediatric surgeon's career, along with the complications and challenges encountered during the procedure.

Case presentation:

A term female infant, born with a birth weight of 3200 grams, was diagnosed with esophageal atresia without associated major cardiac or other anomalies. On postnatal day 3, baby was taken to the operating room for thoracoscopic repair. The procedure was performed in full prone position using three 5 mm ports.

As the only pediatric surgeon in the hospital, I was assisted by a general surgeon with advanced endoscopic surgical skills, who managed the camera throughout the operation. The operation was completed thoracoscopically without intraoperative or anesthesia-related complications. However, shortly after surgery, I noticed that the nasogastric (NG) tube was positioned just above the anastomosis, raising concern that it had been inadvertently included in the suture line. I opted for a conservative wait-and-see approach. A significant anastomotic leak developed, effectively managed through the thoracic drain placed during surgery. Remarkably, the infant remained clinically stable and showed no signs of sepsis.

As I deliberated on the potentially sutured NG tube, the unexpected happened: the tube dislodged spontaneously, allowing free passage again. The anastomotic leak also resolved on its own. The baby was discharged in excellent condition after a single endoscopic dilatation with a great response.

Conclusion:

This case underscores the complexity of early surgical experiences and the importance of multidisciplinary teamwork—even in unconventional settings. The outcome reinforces the value of thoughtful decision-making, clinical patience, and the courage to persevere despite complications. Even in the face of near-complete complication lists, perseverance and trust in the clinical course can lead to successful outcomes.

LO198

RARE CASE OF IATROGENIC ESOPHAGEAL PERFORATION DURING DIAGNOSTIC EGD: CLINICAL CHALLENGES AND MANAGEMENT

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Abstract

Introduction:

Esophageal perforation is a rare but potentially life-threatening condition if not promptly recognized and managed. Its etiology includes spontaneous rupture, trauma, ingestion of foreign or caustic substances, and iatrogenic injuries—the latter being the most common cause. Despite its low incidence, iatrogenic esophageal perforation carries a reported mortality rate of up to 28%, making its management a significant clinical challenge. This report presents a case of iatrogenic esophageal perforation occurring during a diagnostic esophagogastroduodenoscopy (EGD) and discusses potential therapeutic strategies based on a literature review.

Materials and Methods:

We describe the case of a patient undergoing diagnostic EGD with duodenal biopsies for suspected celiac disease, complicated by an esophageal perforation identified post-procedure. An initial conservative management approach was attempted but ultimately failed, requiring intervention. Endoscopic guidance allowed precise localization of the defect, which was managed with direct thoracotomic closure. Postoperative management and the patient's recovery leading to discharge in good general condition are also detailed.

Results:

The literature highlights numerous cases of iatrogenic esophageal perforation, with an estimated incidence of 0.03% during diagnostic endoscopy using a semi-rigid endoscope. This risk increases significantly with therapeutic procedures, such as esophageal dilation (2%–6%), sclerotherapy for variceal bleeding, or nasogastric tube placement in neonates. Management guidelines are not standardized and must therefore be tailored to the clinical context, taking into account perforation size, location, time to diagnosis, and patient comorbidities.

Conclusions:

Despite its rarity, esophageal perforation demands high clinical suspicion and rapid action. This case underlines the importance of early diagnosis, appropriate use of endoscopic imaging for defect localization, and a multidisciplinary approach to treatment. Surgical repair remains a valid and effective option when conservative strategies are insufficient.

SO166

PORT-SITE COMPLICATIONS IN PEDIATRIC ROBOTIC SURGERY: LESSONS FROM TWO CASES AND HOW TO PREVENT THEM

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Abstract

Purpose: Robotic-assisted surgery (RAS) has gained widespread adoption in pediatric patients for various indications over the last years. Nevertheless, complications related to trocars' insertion and port-site management can occur, occasionally leading to life-threatening situations. We herein present two cases of postoperative hemoperitoneum following RAS Palomo varicocelectomy, aiming to identify risk factors and prevention strategies.

Case presentation: One-hundred and 15 patients underwent RAS in our pediatric surgery division over the period 2018-2025. Two patients (1,7%) developed Clavien-Dindo grade 3b complications following ICG-fluorescence-guided lymphatic sparing Palomo varicocelectomy. The first patient, a 17-year-old male, developed abdominal pain, vomiting, a large hematoma in the right flank and a hemoglobin drop to 7.0 g/dl, needing blood transfusion. Emergency laparoscopy was performed 48 hours postoperatively and it showed a large hemoperitoneum (1000 ml), evacuated via suction. A blood dripping from the right robotic port-site was identified and sealed. The second patient, a 13-year-old male, presented similar symptoms and a hemoglobin drop from 15.5 to 9.5 g/dL on postoperative day one. Emergency laparoscopy revealed hemoperitoneum and large blood clots removed using retrieval bags. Blood leakage from the left robotic port-site was identified and controlled. The following day, hemoglobin level further declined to 6.8 g/dL, though the patient remained hemodynamically stable. Parents refused blood transfusion due to religious beliefs, and conservative medical management was successfully performed. Both patients had no coagulation disorders and fully recovered after surgery.

Conclusion: Our experience showed that RAS, despite its benefits, carries a notable risk of vascular injury at port access-sites. Therefore, prevention strategies should routinely include careful trocar insertion using abdominal wall transillumination, trocar removal under direct vision as well as meticulous hemostasis and closure of port-site incisions.

SO157

LUPUS ERYTHEMATOSUS AND OVARIAN TERATOMA MIMICKING MALIGNANT OVARIAN TUMOR

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Abstract**Introduction:**

Ovarian-sparing surgery is the preferred surgical management for benign ovarian tumours, yet preoperative diagnosis can be challenging. We report a case where late diagnosis of systemic lupus erythematosus in a child with an ovarian tumour and metastatic-like bone lesions led to an avoidable overtreatment. Our aim is to underscore the importance of considering autoimmune etiologies in pediatric patients with systemic symptoms and ovarian masses.

Methods: A 14-year-old female with a medical history of autoimmune thyroiditis, presented with persistent fever, bone pain, and night sweats for 15 days. Initial infectious and hematologic workup was unremarkable. Imaging studies revealed a large ovarian mass with characteristics of teratoma and multiple mediastinal lymph nodes. Further investigation with bone scintigraphy demonstrated increased activity at sternum, left ankle and lumbar spine. A multidisciplinary meeting led to the decision for a radical surgical intervention for a possibly malignant metastatic ovarian tumour. The operation involved laparoscopic salpingo-oophorectomy, peritoneal fluid sampling, lymph node biopsy and bone marrow sampling.

Results: The child remained well until the 7th postoperative day when she presented with a relapse of fever and limitation of movement of the upper limbs. Histopathology revealed a benign ovarian teratoma and a negative bone marrow sampling thus a re-evaluation was required. Laboratory testing revealed elevated autoantibodies, such as ANA, anti-dsDNA and positive Coombs test, guiding to the diagnosis of systemic lupus erythematosus. Corticosteroid treatment was initiated, with rapid improvement of symptoms. Follow-up MRI imaging showed stable bone lesions. The patient was discharged with a rheumatologic follow-up plan.

Conclusion: This case highlights a diagnostic pitfall; SLE and ovarian teratoma can mimic metastatic malignancy that can mislead to overtreatment. Autoimmune serology should be considered in pediatric patients with systemic symptoms and history of autoimmunity before assuming malignancy.

POSTER SESSION 1

P34

THORACOSCOPIC MANAGEMENT OF ESOPAGEAL ATRESIA-TRACHEOESOPHAGEAL FISTULA: OUR INITIAL EXPERIENCE

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Abstract

Introduction:

Tracheoesophageal fistula (TEF) is a rare congenital anomaly that necessitates prompt surgical intervention to ensure survival and reduce complications. Here we present our early experience of thoracoscopic repair of TEF.

Methodology:

Retrospective analysis of the neonates who have undergone thoracoscopic TEF repair was done and surgical technique, patient details, and post-operative outcome were analysed. Neonates were positioned in a modified left lateral position, utilizing two 3 mm ports for instrumentation and one 5 mm port for the camera. Double lung ventilation was employed. The fistula was identified after meticulous dissection around the lower esophageal pouch, doubly ligated with silk, and divided near the trachea. The proximal esophageal pouch was circumferentially dissected till the thoracic inlet to achieve adequate length for anastomosis. End-to-end anastomosis of proximal and distal pouches was performed over a 6 Fr infant feeding tube (IFT).

Results:

A total of seven, term neonates underwent thoracoscopic TEF repair, out of which, conversion to thoracotomy was done in two neonates since the patients had episodes of desaturation with pneumothorax. The average weight of the neonates was 2.47kg, with the minimum weight where thoracoscopic repair was done was 2.2kg. Only one patient had post-operative anastomotic leak, requiring re-exploration (CD IIIb). All the other neonates had no complications and have been discharged and are on regular follow-up.

Conclusion:

We conclude that our early experience in thoracoscopic repair of tracheo-esophageal fistula is encouraging. It is a safe and effective approach in experienced hands and offers the advantages of minimal access surgery, including reduced postoperative morbidity and quicker recovery.

P172

ADNEXAL TORSION IN PEDIATRIC PATIENTS: A SINGLE-CENTER EXPERIENCE

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Abstract

Introduction:

Adnexal torsion is a surgical emergency in pediatric females, requiring prompt diagnosis and intervention to preserve gonadal function. This **Abstract** presents a single-center retrospective review of adnexal torsion cases in a pediatric population.

Methods:

A retrospective analysis was conducted on pediatric patients with surgically confirmed adnexal torsion at Department of Pediatric Surgery between January 2020 and January 2025. Data collected included clinical presentation, imaging findings, surgical approach, intraoperative findings.

Results:

A total of 37 patients with surgically confirmed adnexal torsion were included in the study. Four cases were identified as perinatal torsion. The majority of procedures (33/37) were performed laparoscopically, with 3 cases requiring an open approach, and 1 conversion. Torsion predominantly affected the right adnexa (22 cases), followed by the left (14 cases), and bilateral torsion occurred in 1 case. The patients' median age was 50 days for perinatal torsion and 8 years for non-perinatal torsion. One patient required reoperation. The mean operative time was 53 minutes. The average length of hospital stay was 4 days. Analysis of the affected structures revealed the ovary was involved in 20 cases, the fallopian tube in 10 cases, both ovary and fallopian tube in 6 cases, and the fallopian tube with a cyst in 1 case. Associated findings included an ovarian cyst in 13 cases and an ovarian tumor in 2 cases. On average, the adnexa were twisted twice.

Conclusion:

Adnexal torsion often presents as an acute surgical emergency. Laparoscopy is the preferred surgical approach in most cases. While the right adnexa are more commonly affected, bilateral involvement can occur. Associated ovarian pathology, such as cysts or tumors, should be considered. A history of prior adnexal twisting may be a risk factor. Prompt recognition and surgical intervention are crucial for optimal outcomes and potential preservation of adnexal viability.

P45

SINGLE-PORT TRANSUMBILICAL LAPAROSCOPIC APPENDECTOMY COMBINED WITH LADD PROCEDURE FOR ACUTE APPENDICITIS IN A PATIENT WITH INTESTINAL MALROTATION

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Abstract

Purpose:

Acute appendicitis in the setting of intestinal malrotation presents a diagnostic and therapeutic challenge. We report the first documented case of single-port transumbilical laparoscopic appendectomy combined with a Ladd procedure.

Patients and Methods:

A 9-year-old girl presented with a history of chronic recurrent abdominal pain and early satiety. She was admitted with persistent vomiting, fever (38.5°C), and hypogastric abdominal pain. Physical examination revealed localized tenderness and peritoneal signs, along with relative neutrophilia (83%) and an elevated C-reactive protein level (2.1 mg/dL). Ultrasound showed an inflamed appendix in a supramesic position and inversion of mesenteric vessels, suggestive of intestinal malrotation without volvulus. A single-port transumbilical laparoscopic approach was used. An inflamed appendix adjacent to the bladder dome and Ladd's bands were identified. Appendectomy and Ladd's procedure were performed.

Results:

The surgery was uneventful. The patient was discharged on postoperative day 1 and remains asymptomatic with excellent cosmetic results after 8 months of follow-up.

Conclusion:

This is the first reported case of single-port transumbilical laparoscopic appendectomy combined with a Ladd procedure in a patient with acute appendicitis and intestinal malrotation. This minimally invasive approach appears to be safe and effective, optimizing surgical management and cosmetic outcomes. Further studies are needed to evaluate long-term results and refine the technique for similar cases.

P70

THORACOSCOPIC EXCISION OF MEDIASTINAL BRONCHOGENIC CYST LOCATED AT ARTOPULMONARY WINDOW IN SEVEN-YEAR-OLD BOY

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Abstract

Introduction:

The most common location of a bronchogenic cyst is in the mediastinum (70%). Thoracoscopic excision of a mediastinal bronchogenic cyst is gaining popularity. Conversion to open may be due to limited operative space, inadequate ventilation, or intraoperative bleeding and bronchial injury.

Patient:

A seven-year-old boy, 21kg, suffered from intermittent cough with shortness of breath for one and a half years. A 3.5cm pure cystic lesion in the middle mediastinum, just at the aortopulmonary window, was found on CT scan. It also compressed the left main bronchus, leading to nearly total collapse of the left bronchus and inferior ventilation of the left lung. No fistula opening was noted by bronchoscopy. During thoracoscopic excision, we also found the ligamentum arteriosum lying just on the lesion, increasing the difficulty of surgery. Without ligating the ligamentum arteriosum, thoracoscopic excision of the middle mediastinal bronchogenic cyst was managed successfully without the requirement of conversion to open.

Discussion:

We developed the multidisciplinary care of patients undergoing thoracoscopic surgery in our institute, and it became our standard of care. The team includes a pediatric surgeon, a pediatrician, a cardiothoracic surgeon, a radiologist, and an anesthesiologist. In this case, the lesion located in the aortopulmonary window remains challenging. Besides, we did not expect the ligamentum arteriosum to still exist, making surgery more difficult. We did the excision of this bronchogenic cyst without ligation of ligamentum arteriosum concerning to the bleeding risk. Once the patient is hemodynamically stable with adequate ventilation during operation, the intraoperative difficulty could be dealt with thoracoscopic instruments and skill to avoid conversion.

Conclusion:

Thoracoscopic surgery is safe and feasible in children. Under the premise that the patient is hemodynamically stable with adequate ventilation, any anatomical or technical difficulty faced may be overcome without conversion to open, to reach the advantages of thoracoscopy.

P37

UNWINDING THE TWIST: LAPAROSCOPIC CORRECTION OF REVERSE ROTATION OF INTESTINE IN AN INFANT

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Abstract

Introduction:

Reverse intestinal rotation is a rare variant of midgut malrotation that can present in infancy with recurrent non-bilious vomiting and feeding intolerance. If left untreated, it may lead to complications like volvulus and bowel ischemia. Early diagnosis and prompt surgical intervention are essential. Laparoscopic correction offers a minimally invasive alternative with faster recovery, minimal postoperative pain, and reduced hospital stay. This video-based case study highlights the laparoscopic management of reverse intestinal rotation in an infant.

Methods:

A one-month-old, full-term infant presented with persistent non-bilious vomiting and poor feed tolerance. A contrast gastrointestinal (GI) study demonstrated delayed dye transit. Further evaluation with contrast-enhanced CT scan revealed a retro-arterial type of reverse intestinal rotation, with the cecum on the right side and suspicion of congenital bands. Laparoscopy confirmed the diagnosis: the duodenum was lying anterior to the superior mesenteric vessels (SMV), while the colon tunneled beneath the SMV. Surgical correction involved division of congenital bands causing duodenojejunal obstruction, mobilization of the duodenum, straightening of the duodenojejunal junction, and careful separation of the transverse colon from the overlying duodenum and vessels.

Results:

The surgery was completed successfully without complications. The infant tolerated feeding well in the postoperative period. A follow-up contrast study on postoperative day 10 showed prompt dye passage across the DJ junction within two minutes. The patient recovered completely with the resolution of symptoms and established normal feeding.

Conclusion:

We conclude that laparoscopic correction of reverse intestinal rotation in infants is a feasible, safe, and effective approach. It provides excellent visualization, minimizes tissue trauma, and supports rapid recovery. With increasing surgical expertise and advancements in minimally invasive techniques, laparoscopy is becoming the preferred modality for complex neonatal gastrointestinal conditions like reverse intestinal rotation.

P209

ENDOSCOPIC PILONIDAL SINUS TREATMENT WITH CYSTOSCOPE(EPSIT-C) IN CHILDREN: A MINIMALLY INVASIVE AND PAIN-FREE SURGERY

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Abstract

Purpose:

Pilonidal Sinus disease (PNS) is a very common pathology, affecting mainly adolescents and young adults. The traditional open procedure is linked with high incidence of complications along with an extended recovery period accompanied by significant discomfort. According to the current literature, endoscopic pilonidal sinus treatment (EPSiT) is a promising approach in the management of this condition. We present our initial experience with this method using a cystoscope, while elaborating on technical aspects and postoperative outcomes.

Method:

A total of nine pediatric patients, with a mean age of 14.6 years (five boys and four girls), underwent endoscopic treatment in our department. The study period was between October 2024 and April 2025. Using a pediatric 9.5 Fr cystoscope, debridement and cauterisation of the cavity were performed under vision. A paraffin gauze was left inside the cavity, and a short antibiotic regimen was implemented. Daily dressing changes combined with wound irrigation were performed until complete healing.

Results:

The mean operative time was 53 min. All children were discharged on the first postoperative day. Patients did not require analgesics during their hospital stay or following discharge. We observed complete wound healing in approximately three weeks along with minimal scarring. Patients and caregivers reported negligible discomfort concerning wound care. To date, no recurrences or further complications have been recorded.

Conclusions:

Our preliminary results support current evidence suggesting that EPSiT-C is a feasible, pain-free and relatively simple approach for the management of pilonidal sinus disease in children. Moreover, it offers exceptional aesthetic results and allows rapid wound closure along with minimal wound care, improving considerably overall patient satisfaction.

P249

HISTOPATHOLOGICAL FINDINGS OF GASTRIC SPECIMENS AFTER LAPAROSCOPIC SLEEVE GASTRECTOMY IN PEDIATRIC PATIENTS

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Abstract

Introduction:

Laparoscopic sleeve gastrectomy (LSG) is an effective and safe alternative for the treatment of obesity in pediatric age. Histopathological changes in gastric tissue and their possible relationship with weight loss have been documented in the adult population. The aim of this study was to evaluate the histopathological findings in adolescents undergoing LSG.

Methods:

Adolescents who underwent LSG between August 2014 and December 2024 at a tertiary center were evaluated. Data on histopathology, demographic information, and anthropometric parameters preoperatively, at 6 months, and at 12 months were collected from the electronic medical records. Statistical analysis was performed using SPSS®.

Results:

A total of 63 cases were included, of which 39 (61.9%) had histopathological changes: inactive chronic gastritis (27), active chronic gastritis (11), lymphoid hyperplasia (5), and adipose metaplasia (5). These findings were present in 73.9% of boys and 60% of girls ($p=0.73$). Patients with histopathological changes had an average age of 17 years and a BMI of 45.36 kg/m². Patients with one year of follow-up were evaluated ($n=44$). No statistically significant differences in weight loss were found between the groups with and without histological changes (% excessive weight loss (EWL) at 6/12 months: $p=0.416/p=0.254$).

Conclusion:

We conclude that the rate of histological changes is comparable to that of adults (16.5–52%), and the prevalence of chronic gastritis in adolescents is similar to the national rate (66.2%). The results do not support a possible relationship between gastric histological changes and weight loss after LSG.

P124

COMPARATIVE EVALUATION OF SURGICAL STRESS IN OPEN AND LAPAROSCOPIC INGUINAL HERNIOPLASTY IN CHILDREN.

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Abstract

Purpose

Inguinal hernioplasty is a common pediatric procedure, and the choice of surgical technique may influence the extent of stress the patient experiences. The aim of this study was to examine the surgical stress response in children undergoing open inguinal hernioplasty (OIH) versus laparoscopic inguinal hernioplasty (LIH), hypothesizing that laparoscopic repair induces less operative stress.

Methods

Between March 2021 and January 2023, 32 consecutive children with unilateral inguinal hernia were randomized in two groups; OIH group (n=16) and IHG group (n=16). Statistical processing of demographic data was carried out using SPSS (Statistical Package for the Social Sciences) v.26 (SPSS, Inc. Chicago IL, USA). The level of surgical stress was measured using biomarkers. Blood samples were taken at 5 different time points to measure levels of White Cell Blood Count (WBC), Albumin (ALB), C-Reactive Protein (CRP), Malondialdehyde (MDA), cortisol (COR), and ferritin (FER). The two-way repeated measures ANOVA was used to examine the effects of time and surgical method on inflammation biomarkers. The study was approved by the Local Ethical Committee (#4.295/4/26.01.2021), and informed written consent was obtained from each patient's parent or legal guardian. This is the first study in the literature that compares surgical stress between OIH and LIH in children of both sexes.

Results

Slight differences in the mean levels of inflammatory markers were observed across the five different time points of measurement. However, there was no statistically significant difference in the mean values of the counted biomarkers between the open and laparoscopic hernioplasty groups.

Conclusion

Our study demonstrates that LIH and OIH in children have a comparable impact on the inflammatory response. This indicates that LIH is a safe and effective alternative to the traditional open repair method. To validate these findings and assess the long-term implications of each surgical approach, further research is warranted.

P25

DAY CASE LAPAROSCOPIC CHOLECYSTECTOMY IN CHILDREN: OPTIMIZING DISCHARGE WITHOUT STANDARDIZED PROTOCOLS

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Abstract

Introduction

Day-case laparoscopic cholecystectomy (DCLC) is well-established in adult surgical practice, yet its implementation in paediatric patients has been relatively limited due to concerns around post-operative recovery, patient selection, and lack of evidence-based standardized protocols. This study assesses the feasibility, safety, and key factors influencing successful same-day discharge in children, highlighting how individualized care can enable successful discharge without adhering to standardized protocols.

Methods

A retrospective review was conducted on paediatric patients who underwent laparoscopic cholecystectomy between January 2017 and December 2024. Patient demographics, surgical outcomes, and variables impacting the length of hospital stay were evaluated. The primary outcomes included rates of same-day discharge, factors contributing to delayed discharge, and post-operative complications. Statistical analysis was performed to evaluate associations between clinical factors and prolonged admission.

Results

A total of 59 paediatric patients underwent laparoscopic cholecystectomy, with a median age of 14 years (range: 12.5–17) and median weight of 74.3 kg (range: 28–128). Same-day discharge was achieved in 36% (21/59), while 54% (32/59) required an overnight stay due to post-operative pain requiring opiate analgesia (n=15), post-operative nausea and vomiting (PONV, n=11), or both (n=6). Five patients (8%) required a second night for symptom management, and one patient with cystic fibrosis had a prolonged stay for unrelated medical optimization. The median length of stay was 25.5 hours (range: 7.6–145). One patient (1.7%) was readmitted 22 days post-operatively with a persistent biliary leak. No conversions to open surgery or other major complications were recorded.

Conclusion

Day-case laparoscopic cholecystectomy in children is a safe and feasible option, with no intraoperative conversions and minimal complications. Effective pain control management and nausea control measures are the key determinants of successful same-day discharge. This study supports shifting the focus from protocol dependency to patient-centered discharge planning in paediatric surgical care.

P16

BILIARY COMPLICATION UNDER NONOPERATIVE MANAGEMENT IN HIGH-GRADE LIVER INJURY: A CASE REPORT

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Abstract

Introduction

In children, nonoperative management (NOM) of (isolated) blunt solid organ injury is an established treatment method in hemodynamically stable patients. Though, close monitoring and meticulous reevaluation is mandatory, as complications may occur and may need diagnostic or therapeutic adjuncts. Traumatic bile leak (TBL) is a rare but serious complication after blunt abdominal trauma and requires a multidisciplinary approach.

Case presentation

We report a 13-year-old male with AAST grade IV liver injury after blunt abdominal trauma qualifying for NOM after initial hemodynamic stabilization. The clinical course was complicated on day 8 with increasing amount of intra-abdominal free fluid. Laparoscopic exploration later confirmed diagnosis of biliary leak. Biliary stenting and iterative endoscopic retrograde cholangiopancreatography (ERCP) procedures had to be performed, finally documenting a successful management of the biliary leak.

Conclusion

Pediatric trauma surgeons must be aware of possible complications in patients with high-grade liver injuries under nonoperative management. Traumatic bile leak is a rare but serious complication in blunt liver injury. There is little scientific evidence on the best management of TBL, so an individualized and interdisciplinary strategy is crucial. ERCP may be considered as adjunct in the NOM in appropriate cases.

P7

COMPARISON OF LAPAROSCOPIC AND CONVENTIONAL TREATMENT OF PERFORATED GASTRO-DUODENAL ULCER IN CHILDREN

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Abstract

Gastro-duodenal perforation is the well-known cause of peritonitis in adult, but it is uncommon in children. Due to the severity of pathology, the development of diffuse peritonitis eventually can lead to life-threatening complications. The emergent surgery strongly recommended for the patients with perforated gastro-duodenal ulcer. However, the type of surgery, conventional or laparoscopic still under discussion.

The aim of this study was to compare results of laparoscopic and conventional repair of perforated gastro-duodenal ulcer in children.

This study was based on results of retrospective analysis of medical files of 26 patients who were operated due to perforated gastro-duodenal ulcer at two distinct hospitals from 2016 till February 2025.

Among these patients, 15 were operated by the laparotomic and 11 – by the laparoscopic approach. All these patients were the boys with the mean age of 11.9 ± 0.7 years in open group and 13.1 ± 0.8 years in laparoscopic group ($p=0.2533$). Perforated ulcer localized on great curvature of stomach in 7 (26.9%) patients, on lesser curvature – in 6 (23.1%) patients, in prepyloric region – in 6 (23.1%), and in 7 (26.9%) patients ulcer localized on the front wall of superior part of duodenum. It was one case of conversion due to the technical difficulties. Duration of open repair was 61.9 ± 2.8 min and laparoscopic – 53.5 ± 1.8 min ($p=0.0276$). Enteral feeding started at 33.8 ± 1.3 hours after open and at 26.7 ± 1.1 hour after laparoscopic surgery ($p=0.0004$). Surgical site infection, including intra-abdominal abscess formation, was noted in 4 (26.7%) patient that operated by laparotomic approach and in one (9.1%) patient after laparoscopic repair ($p=0.2795$). The hospital stay was significantly shorter in laparoscopic group – 8.3 ± 0.4 vs. 12.1 ± 0.5 days ($p=6.54470E-6$).

Thus, with appropriate skills in mini-invasive surgery, laparoscopic repair of perforated gastro-duodenal ulcer may be real alternative conventional surgery.

P26

ENDOSCOPIC FULL-THICKNESS RESECTION FOR THE DIAGNOSIS OF MOTILITY DISORDERS IN CHILDHOOD

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Abstract

Endoscopic full-thickness resection (eFTR) is widely used in adults for the removal of gastrointestinal tumors and for diagnostic purposes, and has proven to be an efficient and safe procedure.

To date, however, no publications are available regarding the use of the full-thickness resection device (FTRD) in pediatric patients.

We report on three children in whom eFTR was performed for the diagnostic evaluation of intestinal motility disorders. In all cases, the procedure was carried out without complications.

Despite certain technical limitations, we consider eFTR to be a promising diagnostic and potentially therapeutic method in pediatric patients as well.

P41

LAPAROSCOPIC INTERVAL APPENDECTOMY AS SAFE AND EFFECTIVE TREATMENT OF COMPLICATED APPENDICITIS AFTER FAILED INITIAL CONSERVATIVE APPROACH: A SINGLE-CENTER EXPERIENCE

Ciro Esposito, Fulvia Del Conte, Vincenzo Coppola, Francesco Tedesco, Claudia Di Mento, Maria Luisa Pirone, Benedetta Cesaro, Roberta Guglielmini, Valerio Mazzone, Maria Sofia Caracò, Maria Escolino

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Abstract

Purpose:

Following the COVID-19 pandemic, antibiotic therapy has become the first-line treatment for acute appendicitis (AA) in many centers. Interval appendectomy is often needed later due to symptoms recurrence. This paper aimed to report our experience with early, unplanned laparoscopic interval appendectomy (LIA) over the past two years.

Methods:

All patients, with previous AA initially managed with antibiotics, who underwent LIA due to symptoms recurrence over the period January 2022-March 2024, were enrolled. Parameters assessed included patients' characteristics and operative outcomes.

Results:

The patient cohort included 40 girls and 31 boys, with median age of 13.3 years (range 9-17). All LIA were accomplished laparoscopically without conversions or intra-operative complications. The median operative time was 27 minutes (range 15-48). The appendix was ligated using two endoloops in 28/71 (39.4%) and resected using automatic stapler in 43/71 (60.6%). Retrocecal appendix was found in 25/71 (35%) and adhesions between the appendix and the surrounding tissues in 31/71 (43%). Parasitic helminths were found in the lumen of the appendix in 5/71 (7%). Meckel's diverticulum was negative in all cases. The median hospitalization was 32 hours (range 26-50). No postoperative complications occurred. Pathology confirmed intramural inflammation with peri-appendiceal fibrosis in all patients.

Conclusion:

Our study confirms that early laparoscopic appendectomy is a safe and feasible option after failed nonoperative management of complicated appendicitis. All procedures were completed laparoscopically without complications. Given the presence of adhesions and retrocecal appendix in many cases, further studies are needed to refine optimal treatment strategies and timing.

P50

TREATMENT OF MECKEL'S DIVERTICULITIS IN CHILDREN WITH THE OPEN, LAPAROSCOPIC, AND LAPAROSCOPIC-ASSISTED APPROACH

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Abstract

Meckel's diverticulum (MD) is one of the most common congenital malformations of small intestine. Its inflammation due to nonspecific symptoms often mimics other acute abdominal conditions. In the absence of advanced imaging, accurate preoperative diagnosis remains challenging.

The aim of this study was summarized own experience in the management of MD in children with the applying of open and laparoscopic technique. We retrospectively evaluated results of management of 89 patients with MD that treated at our hospital for 2010-2024 years.

The open laparotomy approached in 67 (75.3%) patients, while laparoscopy and laparoscopic-assisted procedures was applied in 22 (24.7%) patients. In laparoscopically treated patients two technics were applied: three port laparoscopic procedure with the use of endoscopic linear stapler-cutting device (9 patients) and transumbilical laparoscopic-assisted procedures (13 patients). Among all patients intraoperatively the simple MD was diagnosed in 53 (59.6%) and complicated MD – in 36 (40.4%) of patients.

At open surgery, segmental ileal resection with anastomosis was applied in 18 (26.9%) cases of complicated MD; wedge-shaped resection of MD in 7 (10.4%) case of complicated MD without inflammatory changes of adjacent intestine and in 23 (34.3%) patients in case of simple MD with the wide base, and simple diverticulectomy in 19 (28.4%) patients with the simple or incidentally found MD with the narrow base.

Laparoscopic diverticulectomy by the endoscopic linear stapler-cutting device was performed in 9 (40.9%) patients with the simple MD, transumbilical laparoscopic-assisted diverticulectomy in 11 patients with complicated MD (segmental ileal resection), and in 2 patients with simple MD but with wide edematous base (wedge-shaped resection). It was 4 cases of conversion due to severe bowel enlargement.

Thus, laparoscopy is useful as both a diagnostic and therapeutic modality. Laparoscopic-assisted approach appears to be safe, feasible, and produces similar results to open laparotomy.

POSTER SESSION 2

P29

COMPARING OPEN AND LAPAROSCOPIC MANAGEMENT URETEROPELVIC OBSTRUCTION IN NEWBORNS

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Abstract

Introduction:

To present our experience on laparoscopic or open pyeloplasty in newborns.

Materials And Methods:

The newborns (<31 days) who underwent pyeloplasty for ureteropelvic junction obstruction between 2007 and 2025 are enrolled in the study. The demographics and clinical data are retrospectively evaluated.

Results:

A total of 15 patients with 18 renal moieties are enrolled in the study but only 15 moieties are enrolled as 3 moieties of 3 bilateral patients were operated after the newborn period. Eight patient underwent open, 7 underwent laparoscopic pyeloplasty. Male/female rate was 12/3. Median age at operation was 27 days (5-30). Six patients underwent preoperative nephrostomy and creatinine clearance evaluation to confirm a functional kidney. Mean postoperative DFR of these patients was 35.33 (± 17.02). Mean preoperative and postoperative pelvic diameters were 37.8 (± 31.72) mm and 11,4 (± 10.83) mm, respectively. Nine patients underwent preoperative MAG3 scan with a median DFR of 44.77% (11-69%) which increased to 50% (1-56%). The DFR of involved renal moiety reduced in 3 patients but none are regarded failed as USG parameters improved. In median follow up of 28 months (3-171 months), none was regarded as surgical failure.

Conclusion:

Severe hydronephrosis with suspected UPJO is hard to handle in newborns. Achieving a correct diagnosis is hard as the kidney function cannot be reliably evaluated in this age group. Furthermore, technique of choice is also controversial. Depending on the patient, combinations of USG, nephrostomy and scintigraphy may help the diagnosis and, both open and laparoscopic technique can be performed with outstanding success in experienced hands.

P35

LAPAROSCOPIC PYELOPLASTY IN CHILDREN: AN EIGHT-YEAR EXPERIENCE OF SINGLE INSTITUTERahul Saxena¹, Arvind Sinha², Manish Pathak², Kirtikumar Rathod², Avinash Jadhav², Shubhalaxmi Nayak²¹Jodhpur, Jodhpur, India. ²All India Institute of Medical Sciences, Jodhpur, India**Abstract****Introduction:**

Laparoscopic pyeloplasty has emerged as the preferred surgical approach for ureteropelvic junction (UPJ) obstruction in children. This study evaluates a single-center experience over an eight-year period, focusing on clinical indications, surgical outcomes, and complications.

Methods:

A retrospective analysis was performed on 131 pediatric patients who underwent pyeloplasty between January 2017 and December 2024. Of these, 122 underwent laparoscopic surgery, while 9 required conversion to open procedures. Clinical, intraoperative, and postoperative parameters were reviewed.

Results:

Unilateral obstruction was observed in 125 patients and bilateral in 6. The median age was 60 months (IQR: 12–120), with a male predominance (M:F = 108:23). The youngest patient was 2 months old. Antenatal hydronephrosis was detected in 43 cases (32.8%). Surgery was indicated in 88 symptomatic patients (67%), including 29 (22%) with an abdominal lump. Asymptomatic patients accounted for 20.9%.

Crossing vessels were identified in 16 patients. A DJ stent was placed in 125 cases, with 3 accidental removals. The median catheterization and hospital stay were 2 and 3 days, respectively.

The overall complication rate was 13.7%. Anastomotic site leaks occurred in 5 patients, of whom 4 required percutaneous nephrostomy (PCN) and 1 underwent diagnostic laparoscopy. DJ stent reinsertion was needed in 9 cases, redo-pyeloplasty in 3, and 1 patient required nephrectomy due to a non-functioning kidney. A 93% symptom resolution rate was achieved, with a follow-up rate of 77.3%. Significant improvement in anteroposterior pelvic diameter (APD) was noted, decreasing from 35 mm preoperatively to 16 mm postoperatively ($p = 0.001$).

Conclusion:

We conclude that laparoscopic pyeloplasty offers excellent outcomes in pediatric UPJ obstruction, with a high success rate, low morbidity, and significant radiological and symptomatic improvement. Our experience with laparoscopic pyeloplasty indicates that it is a versatile procedure with applicability in structural and duplex anomalies.

P86

LAPAROSCOPIC-ASSISTED APPROACH FOR CONGENITAL PREPUBIC SINUS: A MINIMALLY INVASIVE APPROACH FOR A RARE CONDITION - CASE REPORT

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Abstract

Introduction

Congenital prepubic sinus is an extremely rare anomaly, most commonly presenting in infancy with a pus excreting sinus tract that starts blindly at the retrovesical space, transverses through or over the pubic symphysis and ends to the pubic skin. We aim to present a case of recurrent congenital prepubic sinus due to repeatedly inadequate imaging work-up and treatment.

Methods

A 10-year-old boy presented in our clinic with recurrent purulent discharge from a pubic orifice. The history of the pathology starts one year earlier when the child developed purulent discharge, dysuria and abdominal pain and was treated with superficial surgical debridement and orifice closure at another center. In our clinic preoperative ultrasound and MRI confirmed the diagnosis of congenital prepubic sinus without urethral or bladder communication. The child underwent open surgery with excision of the sinus wall up to the anterior pubic symphysis.

Two months later the patient presented with recurrence. Watchful waiting was decided and at one year without improvement new surgical intervention was decided. Fistulography and new MRI revealed the tract's proximal extension through the symphysis and into the prepubic space with a blind ending on the bladder wall. Laparoscopic-assisted approach was performed. The meticulous resection of the proximal sinus off the bladder wall up to the pubic symphysis was performed laparoscopically and the distal tract was excised openly. No intraoperative complications occurred.

Results

Recovery was uneventful. A postoperative surgical site infection occurred that was treated successfully with antibiotics for 15 days. At 1-year follow-up, the patient remains asymptomatic.

Conclusion

We conclude that clinical suspicion and preoperative imaging with fistulography and/or MRI are essential for diagnosis and accurate surgical planning. Complete excision of the fistulous tract is mandatory to prevent recurrence and laparoscopy can be used to minimize the abdominal trauma.

P96

LAPAROSCOPICALLY ASSISTED RESECTION OF AN URACHAL DIVERTICULUM IN AN 8-YEAR-OLD CHILD

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Abstract

Introduction:

Urachal remnants are rare congenital anomalies which refer to the persistence of embryological structures between the bladder and the umbilicus. It has been reported as 1/5,000 live births and may manifest as urachal cyst, patent urachus, urachal sinus or urachal diverticulum. The traditional approach to the total excision of urachal lesions in children has been via an infraumbilical transverse or midline vertical incision. Open surgery in such cases has the disadvantage of difficulty in recognizing anatomy and increased pain and hospital stay, while laparoscopic surgery is technically more demanding with longer operative times.

Methods:

We report a case of an 8-year-old boy with horseshoe kidney that underwent laparoscopically assisted excision of an 3x1 cm urachal diverticulum. A single 5mm camera port was inserted in the right upper quadrant and the abdomen was insufflated. The bladder dome and diverticulum were identified, and a small 1,5 cm midline transverse suprapubic incision was used to resect the true diverticulum and close the bladder mucosa and muscle in a two-layer fashion. The remnant was further dissected towards the umbilicus and excised.

Results:

After completion of the procedure, a 12fr indwelling foley catheter was left in situ for 48 hours. VCUG confirmed successful excision and leak-free repair. Common pain relief was adequate. The catheter was removed, the patient was discharged and remains well after six months of follow-up.

Conclusion:

Complete excision of urachal remnants is necessary in the case of persistent symptoms but is also recommended in asymptomatic patients due to the associated risk of malignant degeneration, urolithiasis or infection. Laparoscopically assisted approach is safe, decreases postoperative pain and hospital stay. It also combines several advantages of open and laparoscopic surgery and seems to be ideal for children, after careful and meticulous case selection and planning.

P104

MODERN APPROACHES TO CRYPTORCHIDISM SURGERY: COMPARISON OF LAPAROSCOPIC AND OPEN METHODS**AUTHORS**

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Abstract

Purpose:

The study aims to analyze the effectiveness and advantages of laparoscopic versus open surgical methods for the treatment of cryptorchidism, a common congenital anomaly in boys requiring surgical intervention.

Methods:

A total of 131 patients diagnosed with cryptorchidism were operated on between 2023 and 2024. The cohort included 104 patients (79.4%) with unilateral cryptorchidism and 27 patients (20.6%) with bilateral cryptorchidism. Among these, 43 patients (32.8%) presented with abdominal cryptorchidism, of whom 31 (72.1%) underwent two-stage surgery and 12 (27.9%) one-stage surgery. The inguinal form was observed in 72 patients (55%), and ectopic testis in 16 patients (12.2%). The age range of patients was from 8 months to 3 years. Laparoscopic orchidopexy was performed using a standard technique with three ports: one for optics at the umbilicus and two working ports on the left and right sides. Testicular vessels and the spermatic duct were mobilized through a circular incision around the internal inguinal ring, preserving the gubernaculum to ensure maximal mobility of the vaginal process. Following mobilization, the testis was easily descended through a scrotal incision. In cases of abdominal cryptorchidism, the testis was fixed without tension on the vessels, typically at the external inguinal ring or at the entrance to the scrotum, while in inguinal cases, fixation was performed in the scrotum. Laparoscopic procedures were conducted in 61 cases (46.5%), while open surgery was performed in 70 cases (53.5%). Complications were observed in 2 patients (1.5%), including recurrence of cryptorchidism. The laparoscopic method demonstrated a lower complication rate and superior cosmetic outcomes.

Conclusion:

Laparoscopic surgery for cryptorchidism presents significant advantages, including ease of mobilization, absence of inguinal incision, better cosmetic results, and visualization of contralateral pathologies. The findings support the laparoscopic approach as a primary method for treating cryptorchidism. The average length of hospital stay is 1 day.

P138

NAVIGATING COMPLEXITY: PYELOPLASTY IN STRUCTURALLY ANOMALOUS KIDNEYS – A CASE SERIES

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Abstract

Aim:

To showcase the technical challenges encountered during pyeloplasty in kidneys with structural anomalies and how these were effectively addressed.

Introduction:

Pelvic ureteric junction obstruction (PUJO) in structurally anomalous kidneys presents technical difficulties due to altered renal orientation, aberrant vasculature, and anatomical variations. Tailored surgical strategies are essential to achieve optimal outcomes.

Materials and Methods:

We present a case series of three pediatric patients with structurally anomalous kidneys and PUJO, diagnosed via ultrasonography and diuretic renography.

Case 1:

An 8-year-old female with symptomatic PUJO (48% differential function, APD 4 cm) was found intraoperatively to have a posteromedially malrotated kidney with a crossing vessel. Anderson-Hynes dismembered pyeloplasty with anterior pelvic repositioning and vessel transposition was performed.

Case 2:

A 1-year-old female with antenatal hydronephrosis (Left non-functioning kidney, Right PUJO with Grade II VUR) presented with pyelonephrosis. Intraoperative findings revealed a posteriorly malrotated kidney, managed with Anderson-Hynes pyeloplasty and double pelvic hitch.

Case 3:

A 4-month-old female with antenatal hydronephrosis and a palpable mass was diagnosed with lower moiety PUJO in a duplex system. A side-to-side non-dismembered pyeloplasty was performed, carefully preserving upper moiety drainage.

All patients had DJ stent placement. Postoperative recovery was uneventful. On follow-up (1 month–1.5 years), all showed symptomatic improvement, reduction in APD, and improved drainage on renography.

Conclusion:

Laparoscopic pyeloplasty in structurally anomalous kidneys is safe and effective when individualized surgical modifications are applied. Preoperative imaging and intraoperative adaptability are vital for success in these complex scenarios.

P151

TUNNELING TO SUCCESS: MINIMAL ACCESS PEDIATRIC EXTRA VESICAL URETERIC REIMPLANTATION – A SINGLE CENTER EXPERIENCE

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Abstract

Introduction

Ureteric reimplantation serves as the definitive surgical intervention for pediatric patients with refractory vesicoureteral reflux (VUR), vesicoureteric junction obstruction (VUJO), and ectopic ureter insertion. Robotic-assisted (RALUR) & laparoscopic (LUR) are becoming more widely used as a viable minimally invasive therapeutic option. We aim to review our experience with both RALUR & LUR and study its outcomes.

Methods

A retrospective review was conducted on 46 patients aged 1–16 years undergoing ureteric reimplantation for VUR between 2018 and 2025. The cohort comprised 24 robotic cases utilizing the Da Vinci Xi platform and 22 laparoscopic procedures. The considered variables included duration of surgery and hospital stay, intra-operative and post-operative complications, the outcome of surgery, and re-surgeries, if any.

Results

46 cases were included, out of this 34 were male while rest 12 were females. There was no correlation between age or weight and operative time or the length of stay. Primary indication was breakthrough UTI with VUR. The mean operative time was 186 minutes and the mean length of hospital stay was 4.2 days. One child had an intra-operative ileal injury requiring surgical repair, and there were 4 episodes of transient urinary retention and post-operative ileus each. The overall success rate (including significant down gradation of the reflux), was 93% with 3 cases (7%) demonstrating high-grade reflux even after the surgery in a mean follow-up of 15 months.

Conclusion

Robotic and laparoscopic ureteric reimplantation in pediatric patients demonstrated high success rates in resolving vesicoureteral reflux, with rare major complications and transient postoperative issues. The efficiency of these minimally invasive techniques, coupled with reduced hospitalization, supports their role as safe and effective alternatives to traditional open surgery.

P184

DEXTRANOMER/HYALURONIC ACID VERSUS POLYACRYLATE POLYALCOHOL COPOLYMER FOR ENDOSCOPIC TREATMENT OF VESICoureTERAL REFLUX: A RETROSPECTIVE SINGLE-CENTRE COMPARATIVE STUDY.

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Abstract

Purpose: This retrospective comparative study evaluates the overall efficacy and complications of endoscopic injection of dextranomer/hyaluronic acid (Dx/HA) and polyacrylate polyalcohol copolymer (PPC) for vesicoureteral reflux (VUR) treatment, performed in our department over the last decade.

Patients and Methods: 103 patients (7 months–15 years, median age 5,5 years old) with symptomatic primary or complex VUR (Grade II-V) were treated endoscopically with Dx/HA or PPC between January 2014 and December 2024. 4 patients were excluded due to insufficient data, leaving 99 patients with 147 refluxing ureters. All procedures were performed by two surgeons, using the combined HIT/STING technique. Resolution of VUR was confirmed with radionuclide cystography, performed 3 months after injection. Fisher's exact test was used for statistical analysis ($p_{value} < 0,05$).

No conflict of interest to declare.

Results: Of the 147 refluxing ureters, 70 were treated using Dx/HA and 77 with PPC. Resolution of reflux in all grades, after 1st injection, was achieved in 37/70 (52,8 %) ureters treated with Dx/HA and in 68/77 (88,3%) ureters treated with PPC ($p < 0,00001$). Resolution rates after 2nd injection showed no statistically significant difference between the two groups (Dx/HA: 18/22 (81,8%) vs PPC: 7/9 (77,7%) ureters, $p = 0,5963$). 2 ureters required 3rd injection in the Dx/HA group and 1 in the PPC group with total resolution. 9 ureters, 3 treated with PPC and 6 with Dx/HA, underwent ureteral reimplantation. 2 ureters in the PPC group, after the 1st and 2nd injection respectively, developed vesicoureteral junction obstruction managed with double-J catheter insertion.

Conclusion: Polyacrylate polyalcohol copolymer compared to dextranomer/hyaluronic acid appears to have significantly higher efficacy in the treatment of vesicoureteral reflux of all grades, even in complex cases. However, the increased risk of postoperative ureteral obstruction should be taken into consideration in the follow up period.

P220

DOES INFANT LAPAROSCOPIC PYELOPLASTY AFFECT THE DEVELOPING BRAIN? – A PROPENSITY MATCHED-COHORT ANALYSIS.

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Abstract

Introduction:

Laparoscopic pyeloplasty is commonly done advanced pediatric surgical procedure and is successful when performed even during infancy. However, emerging literature has raised concerns about potential neuro-developmental impact of early exposure to general anaesthesia and laparoscopy, in infants. We thus conducted a prospective, cohort study to determine any such association.

Aim & Objectives:

To assess neurodevelopmental outcomes in children who underwent laparoscopic pyeloplasty during infancy and compare them with cohorts—one with conservatively managed hydronephrosis and another comprising healthy children attending the well-baby clinic.

Materials And Methods:

A single centre, prospective, cohort study conducted where children between 12-60 months age were prospectively included into three groups: Group A: Those with hydronephrosis that are being managed expectantly, Group B: Those that underwent laparoscopic pyeloplasty during infancy and Group C: All those who are otherwise well and attended the well-baby clinic. All those with history of prematurity, low birth weight, birth asphyxia, more than level II NICU care, bilateral hydronephrosis, associated urological anomalies VUR, VUJO etc., and other major systemic anomalies were excluded. All these children were assessed for their neurodevelopment in 5 domains as per the Ages and Stages Questionnaire (ASQ-3).

Results:

Propensity score matching done to improve balance and enhance comparability among three groups. Total sample size 272, of which 250 (91.9%) boys and 22 (8.1%) girls; mean age of assessment was 34.5 ± 15.62 months. The overall prevalence of developmental delay as per ASQ-3 scoring across three groups was – Group A: 8 out of 49 (16.32%), Group B: 15 out of 104 (14.4%) and Group C: 16 out of 119 (13.4%). One-way ANOVA analysis did not reveal statistically significant differences ($p > 0.05$) among three groups across all of five domains of neurodevelopment evaluated.

Conclusion:

Infant laparoscopic pyeloplasty is thus safe, and does not lead to any neurodevelopmental delay in children.

P225

LAPAROSCOPIC PEDIATRIC NEPHRECTOMY FOR NON-FUNCTIONING KIDNEYS. TIME TO SHAKE THE LAST SKEPTICS.

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Abstract

Purpose (or Introduction):

Over the past years, laparoscopic techniques have become increasingly common in pediatric renal surgery. Since the first pediatric laparoscopic nephrectomy in 1992 by Kavoussi and Koyle, both transperitoneal and retroperitoneal approaches have been shown to be safe and effective alternatives to open surgery. We present our initial experience with laparoscopic renal surgery in the pediatric population.

Methods:

Between 2022 and 2024, five consecutive pediatric patients with benign, non-functioning kidneys underwent transperitoneal laparoscopic nephrectomy. All procedures were performed by a single surgeon at a tertiary pediatric hospital with no previous experience. Patient demographics, operative details, perioperative outcomes, and complications were analysed.

Results:

Five pediatric patients (3 males, 2 females; mean age 4.4 years) underwent laparoscopic nephrectomy for benign, non-functioning kidneys. Indications included ureteropelvic junction obstruction (n=2), vesicoureteral reflux (n=2), and nephrolithiasis (n=1). Three nephrectomies were performed on the left side and two on the right. The mean operative time was 148 minutes. All procedures were completed laparoscopically without the need for conversion to open surgery. Renal vein was ligated with 5mm stapler at the first two cases. Thereafter clips and Hemolock are used. No intraoperative complications were reported. All patients resumed oral intake within 12 hours postoperatively. Postoperative analgesia was managed with paracetamol and NSAIDs in all cases, with no need for opioid administration. The mean length of hospital stay was 4.2 days (range:3-5 days). No postoperative complications or readmissions occurred during the follow-up period.

Conclusion:

Laparoscopic nephrectomy is a safe and effective surgical approach for managing benign, non-functioning kidneys in pediatric patients. In this small series, the procedure was associated with minimal postoperative pain, rapid recovery, shorter hospital stay, perfect cosmetic outcome and no intraoperative or postoperative complications. These findings support the use of laparoscopic nephrectomy as the preferred approach for the majority of pediatric cases.

P30

PNEUMOVESICOSCOPIC REPAIR OF BLADDER DIVERTICULUM IN CHILDREN; A MINIMALLY INVASIVE OPTION FOR AN ANNOYING CONDITION

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Abstract

Isolated bladder diverticulum is rare in children. Commonly, they are pseudo-diverticula characterized by protrusion of bladder mucosa through a detrusor muscle defect.

Pneumovesicoscopy is a relatively novel minimally invasive technique of performing intravesical procedures.

A total of 13 patients are enrolled in the study with 10 boys and 3 girls. Diverticulum was on the left (n=7), right (n=4) side or was bilateral (n=2). Diverticulum was paraureteral in 10 cases and outside the trigone in 3. Three patients had co-existing vesicoureteral reflux. Ureteroneocystostomy was performed in 7 patients (3 GA 4 PL) but not deemed necessary in 6. Mean age of the patients was $8,884 \pm 1,241$ years.

Duration of surgery was $139,818 \pm 13,395$ minutes in unilateral cases and $185,000 \pm 10,000$ minutes in bilateral cases. Median duration of follow up was 11 months (3-70). Control cystogram was performed in 3 patients with reflux and 1 patient who had postoperative urinary tract infection and all were normal. Other patients were followed up clinically and by ultrasonography and all were regarded successful. A mild to moderate type I posterior urethral valve was found in 4 boys and a urethral polyp in 1 boy as an underlying condition. Two girls and 1 boy had overactive bladder.

Pneumovesicoscopic repair of bladder diverticulum appears as successful as open surgery. It provides lesser tissue trauma, better vision, exposure and cosmesis. Magnification provided by laparoscopy obviated the need for ureteroneocystostomy in 3 patients with paraureteral diverticulum.

P256

LAPAROSCOPIC DISCONNECTION OF THE HERNIAL SAC: IS IT ENOUGH FOR THE TREATMENT OF CONGENITAL INGUINAL HERNIA IN CHILDREN?

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Abstract

Background

Laparoscopic repair of congenital inguinal hernia (CIH) has evolved with various techniques. Some advocate for sac disconnection alone, while others emphasize the addition of peritoneal closure or internal ring narrowing to prevent recurrence. This study evaluates the efficacy of laparoscopic sac disconnection alone versus disconnection with iliopubic tract repair (IPTR) for CIH, stratified by internal ring diameter (IRD), analyzing recurrence rates and postoperative complications.

Methods

This study, conducted from April 2021 to December 2023, included 208 children with CIH in the age range of 3 months to 12 years. IRD stratified patients: Group A (≤ 1 cm, $n = 142$) underwent sac disconnection alone, and Group B (> 1 cm, $n = 66$) received additional IPTR. Outcomes assessed included recurrence rates, operative time, and postoperative complications.

Results

No hernia recurrences were observed in either group during the one-year follow-up. Group A had significantly shorter operative times (mean: 21.17 ± 5.42 min for unilateral cases) compared to Group B (37.61 ± 5.79 min). Postoperative scrotal edema occurred in 1.4% of Group A patients and 12.1% of Group B patients, but all cases were resolved spontaneously. No intraoperative injuries to the vas deferens or testicular vessels

Conclusion: Laparoscopic sac disconnection alone is sufficient for CIH with $IRD \leq 1$ cm, offering shorter operative times with excellent outcomes. For larger defects (> 1 cm), IPTR provides durable repair despite longer operative times. This IRD-based algorithm optimizes outcomes while maintaining procedural simplicity.

P17

ROBOTIC PROXIMAL URETEROURETEROSTOMY FOR ECTOPIC URETER WITH RECURRENT PYELONEPHRITIS

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Abstract

Introduction:

There are several alternatives for treatment of ectopic ureter in girls with urinary incontinence. If renal function of the half-kidney persists, many authors advocate performing a proximal ureteroureterostomy to reduce the length of the ectopic ureter. However, the minimally invasive technique is difficult, so some authors prefer laparo-assisted or open distal techniques.

Clinical case:

We present a 5-year-old girl with urinary incontinence caused by an ectopic ureter that drained into the vagina and recurrent infections. Urinary MRI showed renal duplication with severe ureterohydronephrosis of the upper moiety (3 cm). The ureter emptied into the vagina and was filled with cloudy contents. DMSA showed preserved renal function.

We performed a robotic proximal uretero-ureterostomy, with drainage of purulent fluid from the ectopic ureter and excision of remaining ureteral segment. Surgical time was 180 minutes, and console time was 150 minutes. The patient was admitted for three days. There were no intraoperative or postoperative complications. The patient is currently asymptomatic and dry.

Conclusion:

Robotics allows us to "facilitate" complex surgical techniques, making them accessible. Furthermore, by facilitating the technique, it can reduce surgical complications.

POSTER SESSION 3

P204

FIVE YEARS OF THORACOSCOPY FOR PEDIATRIC EMPYEMA: OUTCOMES, COMPLICATIONS AND LESSONS FROM A SINGLE CENTER

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Abstract

Purpose:

Empyema thoracis remains a significant cause of morbidity in children. The advent of video-assisted thoracoscopic surgery (VATS) has revolutionized its management, offering reduced morbidity compared to thoracotomy. While the benefits are well documented, understanding procedure related complications and the importance of early intervention is crucial for improving outcomes. We aim to present the range of complications and their management from a tertiary referral center.

Methods:

We performed a retrospective review of children treated with VATS for empyema as a complication of pneumonia, between January 2020 and April 2025. Patients ranged from 3-16 years old. The data reviewed consisted of imaging and operative findings, duration of symptoms, length of stay after intervention and perioperative complications.

Results:

A total of 60 patients were managed with VATS over the five-year period. The majority presented in the fibrinopurulent or organized stage. Complete lung expansion was achieved in 95 per cent of cases. The mean operative time was 90 minutes and the average length of stay after intervention was 17 days. It was noted that patients who presented early to our center had a shorter hospital stay than late presenters. Postoperative fever as well as residual pleural collections, were presented in seven patients and treated with a second thoracoscopy. No procedure related mortality was noted. Conversion to open-thoracoscopy was required in one patient, due to prolonged air leak while another patient was treated for this complication with a thoracic tube.

Conclusion:

Thoracoscopic management of pediatric empyema is a safe and effective modality with favorable outcomes and low morbidity. Complications such as prolonged air leaks and residual collections are not uncommon. Our experience underscores the importance of early recognition and intervention as well as skilled thoracoscopic technique in order to provide optimal treatment.

P218

THE UNDERESTIMATED COEXISTENCE OF TYPE 1 CPAM WITHIN INTRA- AND EXTRALOBAR LUNG SEQUESTRATION IN CHILDREN

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Abstract

Introduction/Purpose

There is lack of knowledge on the presence and significance of CPAM subtypes within sequestrations. Particularly CPAM type 1 and 4 have been discussed as possible precursors for malignancies such as mucinous adenocarcinoma (formerly bronchioloalveolar carcinoma) in type 1 and pleuropulmonary blastoma in type 4 but their occurrence in hybrid lesions remains poorly discovered.

Patients/Materials

All records of patients treated for congenital pulmonary malformations (CPM) between January 1995 and May 2025 were analyzed. Endpoints CPAM type, sequestration type and location, and hybrid-lesion rate.

Results

Out of 96 CLM cases 52 (54.2%) were diagnosed as PS, 32 (33.3%) as CPAM, 9 (9.4%) as pulmonary emphysema (one with coexisting CPAM type 2), 3 (3.1%) as bronchogenic cysts (one associated with CPAM type 2), and 3 (3.1%) as bronchial atresia.

Out of 52 PS cases 29 were intralobar (55.8%) and 23 extralobar (44.2%) of whom 2 were right sided intrathoracic, 19 left sided intrathoracic, while 2 were infradiaphragmatic located).

Twenty-three out of 52 sequestrations had coexistent type 2 CPAM (44.2%), including one case (1.9%) with coexisting type 1 and type 2 features. Type 1 CPAM components were found in 5 cases (9.6%): one extralobar (1.9%; left;), three intralobar (5.8%; 3 left, 1 right-sided). One case could not be subtyped. Twenty-nine cases were pure sequestrations. No CPAM type 4 components were identified.

Conclusion

In contrast to the current literature Type 1 CPAM components in hybrid lesions with sequestrations are with nearly 10% much more frequent than expected. Their presence in both intra- and extralobar lesions across both lung sides underscores their heterogeneous presentation and this should be included in the decision-making process whether to operate or not while there could be a potentially underestimated oncological relevance.

P32

THORACOSCOPIC LOBECTOMY FOR CPAM USING FISSURE-FIRST APPROACH; A CASE SERIES

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Abstract

Aim:

To present three pediatric cases of CPAM managed with thoracoscopic lobectomy using the fissure-first approach.

Materials and Methods:

Three patients underwent thoracoscopic lobectomy in 2024. Perioperative details and outcomes were analyzed.

Results:

Case 1: 10-month-old female with Down's syndrome and antenatal diagnosis of left upper lobe CPAM. Post-op chylothorax was managed conservatively. ICD was removed on POD 20. Asymptomatic at 4-month follow-up.

Case 2: 10-month-old female with antenatal left upper lobe CPAM. Thoracoscopic lobectomy performed; extubated on-table. ICD removed on POD 3. Histopathology: CPAM Type II. Asymptomatic at 4-month follow-up.

Case 3: 6-year-old male with symptomatic left lower lobe CPAM. Thoracoscopic lobectomy and on-table extubation. ICD was removed on POD 8. Histopathology: CPAM Type II. Asymptomatic at 2-month follow-up.

Conclusion:

we conclude that thoracoscopic lobectomy using the **fissure-first approach** is a safe and effective technique for CPAM. It allows early extubation, minimal postoperative pain, and faster recovery. This approach improves the visualization of pulmonary vessels and bronchus, supporting precise anatomic dissection. Surgical outcomes continue to improve with growing expertise and minimally invasive advances.

P69

THORACOSCOPIC BOCHDALEK DIAPHRAGMATIC HERNIA REPAIR IN CHILDREN: DOES MESH REPAIR IMPROVE THE OUTCOME? A 7-YEAR SINGLE INSTITUTION EXPERIENCE

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Abstract

Introduction:

Neonatal Bochdalek diaphragmatic hernia (CDH) repair remains a challenge in pediatric surgical practice. Thoracoscopic repair has emerged as an alternative approach; however, many published reports associate it with higher recurrence rates. This study presents a 7-year single institution experience with thoracoscopic Bochdalek hernia repair utilizing mesh reinforcement.

Patients and Methods:

A retrospective cohort review of electronic medical records was conducted for all patients who underwent thoracoscopic Bochdalek diaphragmatic hernia repair at our institution from January 2017 to December 2023. Data collected included the type of ventilatory support preoperatively, presence of pulmonary hypertension, defect site and size, the need for mesh repair, conversion to open surgery, and postoperative follow-up outcomes. Surgical technique details will be discussed.

Results:

Fifteen patients underwent thoracoscopic Bochdalek hernia repair during the study period: 13 had left-sided hernias and 2 had right-sided hernias. The age range was 3 days to 9 years. There were 10 males and 5 females. Preoperative ventilatory status included 2 patients on high-frequency ventilation, 10 on conventional ventilation, and 2 breathing room air. Mesh repair was performed in 11 patients: among them, one patient (9%) experienced recurrence. In the 4 patients who did not receive mesh repair, 2 (50%) had recurrence. Follow-up duration ranged from 15 months to 7 years.

Conclusion:

In this limited series with relatively short follow-up, thoracoscopic tension-free mesh repair for Bochdalek diaphragmatic hernia in children appears to be associated with a significantly lower recurrence rate and excellent overall outcomes.

P76

COMPARISON OF TWO NON-OPERATIVE TREATMENT PROTOCOLS FOR PECTUS CARINATUM

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Abstract

Objective:

Pectus carinatum (PC) is a chest wall deformity that causes significant cosmetic discomfort. PC can be corrected by wearing a compression system, an effective alternative to surgical treatment. The objective of this study was to compare the results of two orthopedic treatment protocols for PC.

Method:

This is a retrospective study including all patients with PC treated orthopedically between 2011 and 2023 in two centers with different protocols. The indications were CP causing aesthetic discomfort. In center 1, patients wore a thermoformed corset and in center 2, patients wore a dynamic compression system. The PC was measured by 3D imaging at each consultation. Compliance corresponds to the duration of use of the system each day. Treatment was stopped once the PC disappeared or at the patient's choice. Data from each center were compared by non-parametric univariate statistical tests.

Results:

44 patients were included in center 1 and 297 in center 2. The proportions of boys (93%) and asymmetric PC (60%) were comparable. In center 1, the mean age of patients was lower (12.7 years vs 14.9, $p<0.0001$), the external Haller index higher (1.37 vs 0.75, $p<0.0001$), the compliance lower (12.2 hours/day vs 19.0, $p<0.0001$), the duration of treatment longer (23.5 months vs 14.9, $p=0.002$) and the mean decrease in PC height lower (2.8 mm vs 10.7 mm, $p=0.003$). The recurrence rate was comparable (17.9 vs 11.3%, NS).

Conclusion:

This study shows better results in one of the two centers despite more severe PC. Biases related to retrospective multicenter studies do not allow us to determine whether this difference is related to the age of patients, the orthopedic system used, or to compliance.

P85

ROBOTIC ASSISTED THORACIC SURGERY (RATS) LUNG RESECTION IN PEDIATRIC POPULATION – A RETROPESECTIVE NATIONAL FRENCH COHORT STUDY

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Abstract

Aim of the study

Robotic assisted thoracic surgery in pediatric population has been relatively limited in use and development due to specific limitations and indications.

Some studies have demonstrated its feasibility for mediastinal surgery, but data are still reduced on lung surgery. The aim of this study is to share our experience focusing only on lung surgery and its specificity.

Method

This study is a multicentric prospective cohort, including all the patients operated by robotic approach for lung surgery between 2016 and 2024 in France. This observation study (NCT03274050) was approved by our institutional review board (IRB). We collected all demographic characteristics, intraoperative data and postoperative outcome.

Main results

Thirty patients were included, with various operative indications: bronchiectasis in 50%(n=15), tumor in 16.6%(n=5), pulmonary aspergillosis in 6.7%(n=2), lung malformations in 20%(6) and nodule suspect of metastasis in 6.7%(n=2). Median patient age was 10 years [range: 8.3-13], and median weight was 32.5 kg [range: 27.3-48.8].

Surgical procedures included lobectomy in 14 cases (46.7%), wedges in 4 cases (13.3%), segmentectomy in 10% (n=3), bi-segmentectomy in 16.7%(n=5), two bi-lobectomies, one lobectomy associated to a segmentectomy and one pneumonectomy. Two lobectomies required bronchial resection-anastomosis.

Median console time was 211 minutes [range: 179-269.5], no conversion occurred. Postoperatively, 2 patients (6.7%) had Clavien-Dindo grade ≥ 3 complications: immediate revision surgery for intercostal artery bleeding and drainage for hydro-pneumothorax 46 days postoperative. Median hospital stay was 5 days [range: 3.3-8.5], and median follow-up was 30 months [range: 9.3-50.5] with no secondary respiratory complications or redo-surgery.

Conclusions

Robotic-assisted lung resection is a reliable option in pediatric surgery in a selected population. It appears as a good alternative to thoracotomy approach. Its place in relation to thoracoscopy remains to be defined.

P112

SALVAGE THORACOSCOPY AFTER THORACOTOMY: INDICATIONS AND OUTCOMES

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Abstract

Aim:

Thoracoscopy after previous thoracotomy is considered challenging due to postoperative adhesions and altered anatomy. Nevertheless, with increasing surgical experience and technological advances, secondary thoracoscopic interventions have become a feasible and effective alternative for selected patients. This study aims to evaluate the indications, feasibility, and outcomes of thoracoscopic surgery following prior thoracotomy in children.

Methods:

A retrospective review was conducted of pediatric patients who underwent thoracic minimally invasive surgery between 2020 and 2024. Patients with a history of prior thoracotomy were included in the study. Data collected demographics, indications for primary and secondary surgeries, intraoperative and postoperative outcomes, and the need for conversion to thoracotomy.

Results:

Conventional (n=10) and robot-assisted thoracoscopy (n=3) were performed as salvage procedures to 13 patients with previous history of ipsilateral thoracotomy (F/M:7/6, Median age:48 months (12 days-21 years). Indications were esophageal complications (6 esophageal atresia, 1 corrosive stricture), or thoracic masses (2 mediastinal benign masses, 1 neurogenic tumor, 1 hilar carcinoid tumor, 2 osteosarcoma lung metastasis). Two out of 13 patients had multiple thoracotomies earlier. Median ages of patients with esophageal complications and thoracic masses were 5 months (12 days-22 months) and 183 (48-250) months respectively. Esophageal leakage occurred in 3/7 of the patients after esophageal reconstruction that resolved with conservative management. Thoracoscopic excisions were performed for two osteosarcoma lung metastases and two mediastinal tumors (neuroblastoma and carcinoid) whereas decortication for empyema and ductus thoracicus ligation for chylothorax were performed in remaining two patients. The only complication that occurred in patients with thoracic masses was intraoperative bleeding from the subclavian artery in the carcinoid tumor patient during robotic excision that required conversion.

Conclusion:

Previous thoracotomy is not a contraindication for salvage thoracoscopy in children. Complications may occur in complementary thoracoscopic esophageal reconstructions and mass excisions around fibrotic vascular tissues.

P160

ENDOSCOPIC LASER COAGULATION TREATMENT OF AN ESOPHAGO-BRONCHIAL FISTULA

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Abstract

A 3 years old patient with a history of complicated type B esophageal atresia, after multiple surgical and endoscopic interventions, was diagnosed with a fistula from the esophageal anastomotic site to the right intermediate bronchus. Endoscopic FiLaC (Fistula Laser Closure) procedure was performed with adjunctive application of a fibrin matrix over the fistula site. Esophageal stent was placed due to concomittant esophageal stenosis. Recovery was uneventful and over the follow up period of 3 months the patient presented no signs of recurrence.

Conclusion:

Endoscopic FiLaC may present a minimally invasive alternative to operative treatment in high-risk patients with aerodigestive fistula.

P223

MINIMALLY INVASIVE MANAGEMENT OF SPONTANEOUS PNEUMOTHORAX IN ADOLESCENTS: A SINGLE-CENTER EXPERIENCE

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Abstract

Introduction:

Spontaneous pneumothorax (SP) is defined as the presence of air in the pleural space without trauma or iatrogenic cause. Video-assisted thoracoscopic surgery (VATS) has become a preferred minimally invasive treatment. This study evaluates outcomes of adolescent SP cases managed initially with chest drainage followed by VATS at our center.

Methods:

A retrospective review was conducted on adolescents patients diagnosed with SP and treated at our center between 2020 and 2025. Data collected included demographics, presenting symptoms, age at operation, side of pneumothorax, diagnostic methods, follow-up durations, treatment modalities, recurrence and complication rates.

Results:

Thirty-one adolescents (24 males, 7 females) with mean age 16.7 years (range 14–17) were included. Presenting symptoms were sudden chest pain and dyspnea. Pneumothorax was right-sided in 14, left-sided in 16, and bilateral in 1 patient. Initial evaluation was performed with posteroanterior chest X-ray, followed by a CT scan. Five patients were managed conservatively; 26 underwent chest tube insertion and among them, 19 subsequently received VATS after a mean 6.5 days (3–10) post-drainage. Mean postoperative hospital stay was 5.3 days (4–17). Bilateral apical bullae were detected on CT scan in 5 patients, none requiring bilateral surgery. One patient required re-VATS due to postoperative bleeding. No major complications or early recurrences were observed in surgically managed cases.

Conclusion:

Our findings support that VATS is a safe and effective minimally invasive option for managing SP in adolescents, especially when performed after initial stabilization with chest tube drainage. Early surgical intervention may reduce hospital stay and recurrence risk, supporting its role as a valuable treatment strategy in pediatric thoracic surgery.

P240

INNOVATING WITH SIMPLICITY: LOW-COST, HANDMADE MODELS FOR PEDIATRIC THORACOSCOPIC SKILL TRAINING

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Abstract

Background:

Advanced thoracoscopic procedures such as esophageal atresia (EA) and congenital diaphragmatic hernia (CDH) repair require high-level technical skills. Simulation-based training is essential, but most existing models depend on 3D printing or biological materials, which are often costly and not easily available. To address this, we developed low-cost, handmade, and easy-to-produce models specifically for pediatric thoracoscopy. This study aimed to evaluate their educational impact during thoracoscopy training.

Methods:

Three different models—Type A EA, Type C EA, and CDH—were created using simple materials. Participants practiced on each model. They then completed a structured form using a 5-point Likert scale (1 = Poor, 5 = Excellent), rating aspects such as anatomical accuracy, usefulness for training, and technical realism.

Results:

A total of 18 pediatric surgeons evaluated three handmade simulation models: Type A and C esophageal atresia (EA) and congenital diaphragmatic hernia (CDH). Most participants (61%) had more than 5 years of surgical experience. The Type A EA model was rated positively for anatomical resemblance (mean: 4.14) and dissection guidance (3.86), though anastomosis simulation scored moderately (3.71). The Type C model received high scores for anatomical accuracy (4.50) and improved fistula management understanding (5.00), confidence (4.50), and planning (4.50). The CDH model had the highest ratings overall, including anatomical accuracy (4.64), thoracoscopic access (4.45), and training suitability (4.82). It was considered effective for both primary and patch repairs (4.36). Overall, the models were perceived as valuable, low-cost training tools with strong educational impact and high potential for transfer to real surgical practice.

Conclusion:

These low-cost, handmade models represent a practical and accessible option for pediatric thoracoscopic training. Participant feedback highlighted their educational value. Further studies with larger cohorts are planned to validate their effectiveness and guide future improvements.

P246

THERAPEUTIC CHALLENGES IN PULMONARY ANOMALIES

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Abstract

Introduction

Pulmonary abnormalities (PA) and lung malformations are among the most prevalent and deadly abnormalities in newborns. Substantial data support high infant morbidity and mortality rates globally, pertaining to these conditions.

Aim:

to highlight the clinical importance of PA correlated to their relatively high frequency in neonatal pathology and the challenges related to their treatment, which is long lasting and expensive, placing a burden on the affected families and the health care system.

Methods:

We conducted a retrospective study on 149 PA patients that had been admitted and treated in our tertiary pediatric surgery service during a 14-year period.

Results:

There were 97 cases of congenital diaphragmatic hernias, 15 cases of congenital lobar emphysema, 6 cases of pulmonary adenomatosis and 31 cases with other pulmonary abnormalities. Only 61% of the patients were treated surgically, with minimal invasive surgery in 45% of them. More than half (58%) were neonates and another 25% were under one year old. The length of hospitalization and costs were significantly higher in the neonate lot of patients, compared with the lot of infants and the toddlers lot. The overall mortality rate was 33%. Mortality rate for neonates was 55%, which is statistically significant.

Conclusions:

Despite significant advancements in recent decades, the death rate for these patients is still between 30% and 40% globally, and it is significantly higher during the neonatal period.

P48

THE MINIMALLY INVASIVE APPROACH IN A PATIENT WITH MASSIVE TRUE THYMIC HYPERPLASIA - A CASE REPORT

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Abstract

Aim of the study

Massive thymic hyperplasia is a very rare type of true thymic hyperplasia that occurs mainly in paediatric patients. Due to its rarity, there are no specific guidelines for the management of this condition. Further studies and case reports are needed to establish optimal management strategies.

Case description

We present the case of a 4-month-old patient who presented to our hospital with dyspnea caused by the presence of a large mass in the mediastinum. Due to the massive thoracic involvement and associated superior vena cava syndrome a suspicion of lymphoma was raised. The patient was given a life-saving course of steroid therapy and subsequently underwent a surgical biopsy which revealed the presence of normal thymic tissue. On this basis, the patient was diagnosed with massive thymic hyperplasia and qualified for further steroid therapy. Due to the recurrence of symptoms when steroids were discontinued, the patient was qualified for total thymectomy. After steroid preparation and reduction of the glandular mass, a thoracoscopic thymectomy was performed. Post-operatively, imaging studies showed that the right diaphragmatic dome was elevated, probably due to paralysis of the right phrenic nerve. However, this condition was asymptomatic. The postoperative course was otherwise uneventful. The patient is currently in outpatient care and remains asymptomatic 3 months after surgery and is slowly recovering from steroid therapy.

Conclusions

The case described here is an example of a very rare disease of significant severity in a very young patient, which could be cured in a minimally invasive manner thanks to interdisciplinary treatment and accurate preoperative management.

P94

THE ROLE OF 3D RECONSTRUCTION IN PLANNING ANATOMICAL SUBLOBAR RESECTIONS FOR CONGENITAL LUNG MALFORMATIONS IN CHILDREN

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Abstract

Background:

Congenital lung malformations (CLM) often require resection; lobectomy sacrifices healthy parenchyma. Anatomical segmentectomy preserves parenchyma but is technically challenging in children.

Objective:

To evaluate the feasibility of 3D-planned segmentectomy versus lobectomy in pediatric congenital lung malformations (CLM), focusing on perioperative safety and early outcomes.

Methods:

Between 2023–2025 eight children (mean age 11.4 yr, 4–17 yrs) underwent 3D-planned VATS segmentectomy. Contrast CT was segmented in 3D Slicer to visualize segmental vessels, bronchi and lesion margins and was displayed intra-operatively. Operative time, complications, chest-tube duration and hospital stay were recorded prospectively and compared with a retrospective (2020–2023) thoracoscopic lobectomy cohort of eleven children (mean age 5.8 yr, 1–17yrs).

Results:

A) Segmentectomy (n = 8). Planned procedure completed in 6/8 cases (75%); arterial injury in one child and dense pleural adhesions in another necessitated thoracoscopic atypical wedge resections. Mean operative time was 193 min (range 95–315 min). Early morbidity was 25% (segmental atelectasis; infarction-pneumonia). Mean chest-tube duration and hospital stay were 6.5 days (4–8) and 9.6 days (6–18). Follow-up CT (1.5–6 mo) confirmed complete resection and maximal parenchyma preservation in all patients. **B) Lobectomy (n = 11).** Mean operative time 153 min (90–240); conversion for hemorrhage 18.2%; early morbidity 36.4%. Chest-tube duration and hospital stay averaged 11 days (2–30) and 14 days (6–35). Retrospective 3D modelling suggested segmentectomy would have been feasible in 54.5% of these children.

Limitations:

Small cohorts and age mismatch.

Conclusion:

Patient-specific 3D-planned VATS segmentectomy is feasible in children with CLM and provides lung preservation, with comparable short-term safety to lobectomy (or even safer). Prospective studies with larger groups are needed to confirm long-term benefits.

P95

MORGAGNI HERNIA LAPAROSCOPIC REPAIR USING A FACIAL CLOSURE DEVICE IN A TWO-YEAR OLD CHILD WITH DOWN SYNDROME AND RECURRENT PNEUMONIA

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Abstract**Introduction:**

Morgagni hernia (MH) is a congenital diaphragmatic anterior hernia with a low incidence in children. Association with Down, Turner or Noonan syndromes has been noted. MH may present with recurrent respiratory infections or dyspnea, while it may be asymptomatic and found incidentally. We report a case of an 18-month-old patient with MH and Down syndrome that presented with recurrent pneumonia and was successfully treated laparoscopically using a facial closure device.

Methods:

An 18-month-old patient presented in the emergency department with acute worsening respiratory distress, fever and malaise. Pneumonia and MH were diagnosed with a chest x-ray and hernia repair was deferred until resolution of pneumonia. The patient required non-invasive ventilation and oxygen therapy in the ICU for three days and was hospitalized in the pediatric department afterwards. Unfortunately, the child had recurrent respiratory infections for the following 3 months and surgery had to be postponed. After recovery, laparoscopic hernia repair was conducted.

Results:

The patient had a large 10 x 5 cm mainly left anterior defect extending to the right anterior diaphragm. Laparoscopic MH repair was conducted using a 5-mm infraumbilical camera port and one 5-mm port in the left upper abdominal quadrant. A reusable facial closure device was used via multiple 1mm incisions in the costal margin. Prolene 3-0 sutures between the diaphragm and abdominal wall were tied subcutaneously. The hernia sack was not excised, and on-lay polypropylene mesh was used for reinforcement. Post-operative course was uneventful; the patient was extubated after 24 hours and recovered fully. One year later, no infectious or other complications have been noted on follow-up.

Conclusion:

MH repair via laparoscopy using a facial closure device is a minimally invasive procedure that is useful even for large defects that do not need formal mesh repair and can alleviate grave respiratory complications associated with MH.

POSTER SESSION 4

P44

ROBOT-ASSISTED MANAGEMENT OF COMPLEX OBSTRUCTIVE MEGAURETER REQUIRING URETERAL DISMEMBERING AND/OR TAPERING IN THE PEDIATRIC POPULATION: A SINGLE-CENTER CASE SERIES

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Abstract

Purpose:

Robot-assisted extravesical ureteral reimplantation (REVUR) has emerged as a valuable alternative to open ureteral reimplantation in the pediatric population. This study aimed to evaluate the outcomes of REVUR in children with complex obstructive megaureter (COM) requiring ureteral dismembering and/or tapering.

Methods:

A retrospective review was conducted of all pediatric patients diagnosed with COM who underwent REVUR with ureteral dismembering and/or tapering between 2021 and 2024 at a single institution. Inclusion criteria for COM encompassed prior surgical intervention, presence of paraureteral diverticula, or ectopic megaureter.

Results:

Sixteen patients (15 males) with a median age of 7.8 years (range: 2-16) underwent the procedure during the study period. COM was associated with paraureteral diverticula (n=6), previous failed endoscopic balloon dilation (n=4), ectopic megaureter (n=2), and iatrogenic ureteral obstruction following bulking agent injection (n=4). Presenting symptoms included febrile urinary tract infections (n=8), flank pain (n=4), hematuria (n=2), and pseudo-incontinence (n=2). All procedures were successfully completed robotically, with no conversions or intraoperative complications. Ureteral tapering was required in 7 of 16 cases (43.7%). The median operative time, including robotic docking, was 220 minutes (range: 155-290), and the median length of hospital stay was 3.8 days (range: 3-7). Double-J ureteral stents were removed 4 to 6 weeks postoperatively. Two patients (12.5%) experienced Clavien-Dindo grade II postoperative complications. At a median follow-up of 34.5 months, all patients were asymptomatic, with improved hydroureteronephrosis on ultrasound and enhanced drainage observed on diuretic renography.

Conclusion:

Robot-assisted extravesical ureteral reimplantation proved to be a safe and effective approach for treating primary obstructive megaureter and other complex ureteral anomalies in the pediatric population. The procedure demonstrated low complication rates, high clinical success, and favorable long-term outcomes, reinforcing its role as a viable surgical option for these challenging cases.

P47

SHORT-INTERVAL INTRAVENOUS INDOCYANINE GREEN ADMINISTRATION IN PEDIATRIC LAPAROSCOPIC CHOLECYSTECTOMY: A PROSPECTIVE EVALUATION OF VISUALIZATION AND SAFETY

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Abstract

Introduction

Indocyanine green (ICG) fluorescence imaging is increasingly used in pediatric laparoscopic cholecystectomy (LC) to enhance intraoperative visualization of the biliary tree, particularly in identifying anatomical variants and preventing bile duct injury. Although pediatric surgical studies often suggest ICG administration 16–24 hours preoperatively, such timing may be impractical. This study aimed to prospectively assess the effectiveness and safety of short-interval preoperative ICG administration.

Methods

We conducted a prospective single-center study (October 2024–April 2025) in pediatric LC patients receiving preoperative intravenous Verdy®. Visualization of extrahepatic biliary anatomy was rated intraoperatively using a 5-point Likert scale, alongside HELPFUL (subjective usefulness) and DISTURBED (liver fluorescence interference) scores. Data included indication, ICG timing, operative time, and complications according to the Clavien-Dindo classification (CDc). The study was approved by the Institutional Review Board.

Results

Ten pediatric patients (70% female), median age 14 years (IQR 12–15), median weight 53 kg (IQR 46–78), were included. Four had BMI > 25 kg/m²; 4 (40%) underwent preoperative ERCP. The median ICG dose was 0.35 mg/kg (IQR 0.33–0.36), administered at a median interval of 251 minutes (IQR 208–323) preoperatively. The median operative time was 63.5 minutes (IQR 57–69). Biliary visualization was rated positively (Likert score: median 5, IQR 3–5). The HELPFUL score had a median of 3 (IQR 2–3), and DISTURBED was low (median 1, IQR 1–2). No ICG-related or CDc complications occurred within 30 postoperative days.

Conclusion

Short-interval ICG administration was safe, feasible, and effective in enhancing biliary visualization during pediatric LC. This approach was well tolerated and provided high-quality imaging without complications.

P53

FROM ROUTINE TO REMARKABLE: THE SWIFT EVOLUTION OF AN ATYPICAL OVARIAN MASS CASE.

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Abstract

Introduction:

Granulosa cell tumors (GCT) are uncommon ovarian neoplasms, accounting for less than 5% of all ovarian tumors. The juvenile variant predominantly affects adolescents. We present a rare case of juvenile GCT diagnosed in a teenage patient.

Case report:

A 14-year-old girl referred to our unit in October 2024 with a 5-month history of abdominal discomfort, vaginal bleeding, and menstrual disturbances. Serum tumor markers were within normal limits. Pelvic ultrasound and MRI identified a 5-cm solid mass in the left ovary. During preoperative evaluation, repeated serum testing showed an elevated CA125 level of 99.6 U/ml, while ultrasonography confirmed the presence of the 5-cm lesion. Surgical intervention was initially postponed due to anesthetic contraindications linked to a pre-existing respiratory condition. At new admission in November, clinical examination revealed palpable abdominal mass. Repeat US showed a significantly enlarged mass measuring 18x10 cm. Robotic-assisted surgery was planned. Trocar placement was meticulously performed to prevent intraoperative rupture. The mass, along with the ipsilateral fallopian tube, was excised using a robotic vessel sealer. Safe removal of the specimen was achieved through Pfannenstiel incision and peritoneal lavage was performed. Pathology confirmed the diagnosis of GCT. Cytological analysis of collected peritoneal fluid was negative for malignancy. The patient was subsequently referred to oncologists to plan the follow-up.

Conclusion:

Although juvenile GCTs are rare, they should be included in the differential diagnosis of adnexal masses in adolescents, particularly due to their potential for rapid progression. Robotic surgery represents a viable and safe approach for managing large ovarian masses, provided strict adherence to oncologic principles is maintained to prevent rupture and intra-abdominal dissemination.

P64

DEVELOPMENT OF AN ANATOMICALLY ACCURATE NEONATAL SIMULATOR FOR MINIMALLY INVASIVE SURGERY TRAINING USING 3D PRINTING AND SYNTHETIC TISSUESPetra Zahradnikova¹, Zdeno Špitalsky², Jozef Babala¹¹Pediatric Surgery Department, Faculty of Medicine, Comenius University, National Institute of Children's Diseases, Bratislava, Slovakia. ²Polymer Institute of the Slovak Academy of Sciences, Bratislava, Slovakia**Abstract****Purpose:**

Training in neonatal minimally invasive surgery (MIS) is severely limited. Current commercial simulators are not tailored for newborns, lacking anatomical fidelity and appropriate instrument compatibility. The aim of this study was to develop and validate a novel neonatal simulator (NS) that replicates the anatomy, size, and mechanical properties of a term neonate for safe and effective MIS training.

Methods:

CT data from a term neonate were segmented using 3DSlicer, and anatomical models were processed in Blender3D. The skeletal structure and abdominal cavity were 3D printed (Prusa i3 MK3S) using PLA and cast with Ecoflex 00-30 silicone. Internal organs were replicated using biomechanical measurements from dissected rabbit tissues (weight-matched to neonates), assessed with a Texture Analyser (TA-2Xi) to determine Young's modulus and tensile properties. Equivalent synthetic tissues were fabricated using Gelatin Methacryloyl (GelMA) and Polyacrylamide (PAAm) hydrogels at tailored concentrations. Pathological modules, including duodenal atresia, were designed through CT segmentation and silicone casting. Organs were magnetically fixed within the simulator for modularity.

Results:

The resulting simulator closely mirrors the size and anatomical features of a term neonate. Synthetic organs demonstrated comparable mechanical properties to rabbit tissue. The modular design allows for both physiological and pathological

training scenarios. The simulator prototype is currently in the validation phase at both national and international levels. Validation will be conducted using standard methods, including the validated Likert scale. By the time of the conference, the validation will be completed and results on the use of the neonatal simulator (NS) in training will be available.

Conclusion:

This novel, anatomically accurate neonatal MIS simulator fills a critical gap in pediatric surgical training. It allows for repeated, safe, and realistic practice of delicate procedures, and introduces a scalable, reproducible model with potential for wide adoption and future integration of sensor-based AI assessment.

P87

TEACHING THE SHEHATA TECHNIQUE: THE FIRST EXPERIMENTAL MODEL IN PIG

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Abstract

Introduction:

The Shehata technique, or staged laparoscopic traction-orchiopexy, is a well-documented surgical method for treating intra-abdominal testis. It enables gradual elongation of the spermatic vessels via controlled tension, thereby preserving them—unlike the Fowler–Stephens technique. The lack of reliable hands-on experimental models may hinder wider adoption of this method among the pediatric surgery community.

Materials and methods:

Our video presentation demonstrates the first reported high-fidelity analogue of the Shehata technique in a porcine model suitable for hands-on training. The unique idea of the model was implemented during a hands-on laparoscopic training workshop. The procedure was reproduced by trainees in four female pigs. The pig ovary can serve as a suitable analogue of the human intra-abdominal testis due to anatomical similarities in position, size and vascular anatomy. Using standard laparoscopic instruments, key operative steps are demonstrated that closely simulate the original human procedure. These include trocar placement, ovary identification, transabdominal suture placement, suture exteriorization, peritoneal dissection under controlled traction and final fixation of the ovary to the abdominal wall under controlled suture tension. All experimentation was conducted in accordance with national and European legislation on animal experimentation.

Results:

The model that was tested by trainees of both basic and advanced laparoscopic skills, precisely simulated all the major features of the Shehata procedure making it highly suitable for surgical training and practical application. In the video, invaluable tips and insights are shared, drawn from 16 years of experience with the original technique.

Conclusion:

We conclude that this pig model serves as a reproducible, ethical and high-fidelity analogue for pediatric surgeons unfamiliar with the technique to gain hands-on experience before transitioning to clinical practice.

P162

MINIMIZING THE MINIMALLY INVASIVE: 5MM SINGLE-PORT SINGLE-INSTRUMENT THORACOSCOPIC SYMPATHOTOMY FOR PRIMARY HYPERHIDROSIS

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Abstract

Introduction/Aims

Primary hyperhidrosis is a common condition with severe impairment in the quality of life. Bilateral thoracoscopic sympathectomy (BTS) is a safe and effective procedure, allowing complete and immediate resolution of symptoms. Among various techniques, a tendency towards minimally invasive methods is noted. Single-port BTS has been described before with a 10-mm incision. In this series and video, we review the use of a 5-mm single-port single-instrument approach for BTS in our department and the technical aspects of the procedure.

Materials and Methods

We reviewed the cases of BTS in our department using this technique from 2022-2025, collecting demographics, clinical data and procedures performed. The surgical procedure was performed with a 5-mm incision in each armpit. A 5-mm 6° device with a 3-mm working channel was introduced through a proper access sheath (HOPKINS Wide-Angle Straight Forward Telescope 6, product number 27092 AA; Karl Storz). With alternate single lung ventilation, the sympathetic chain was identified over the third and fourth ribs (T3 -T4) and the sympathectomy with lateral extension to Kuntz fibers was performed using monopolar cautery through a 3mm 36 cm-long dissector. After lung re-expansion, the wound was closed with absorbable suture.

Results

Four patients (75% female) were submitted to this procedure with a median age of 16 [13-17] years. All patients complained of severe palmar hyperhidrosis; three had moderate plantar hyperhidrosis. All procedures were performed as day cases with overnight surveillance. There were no immediate or delayed complications. The median operative time was 65 [47-97] minutes. The result of the surgery was immediately noticeable, with complete resolution of palmar sweating and improvement of plantar complaints.

Conclusion

Single-port single-instrument bilateral thoracoscopic sympathectomy is possible and safe. It allows the same efficacy, with rapid recovery, less postoperative pain and a minimal scarring.

P99

INSIGHT AND LESSONS LEARNED FROM 13 YEARS OF ROBOTIC PROCEDURES AT A SINGLE PEDIATRIC SURGERY

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Abstract

Introduction:

Robotic-assisted laparoscopic surgery (RALS) is being increasingly adopted in pediatric surgery, although its unique challenges due to small size of patients, rarity of certain conditions, high costs, and limited machine availability. This study aims to evaluate feasibility and outcomes of RALS within the Pediatric Surgery Department of a General University Hospital.

Materials and Methods:

Retrospective analysis of consecutive RALS procedures performed over a 13-year period (2011–2025). The robotic platforms used were Da Vinci Si and, since 2021, Da Vinci Xi systems. Data about techniques and procedures, operative time (OT), conversion, complications and hospital stay (LS), costs were analyzed.

Results:

A total of 121 patients (57 males, 64 females; aged 4 months–23 years; mean weight 36.5 ± 22.7 kg, minimum 8 kg) underwent RALS. Procedures included urology (40.5%), gynecology (23.1%), hepatobiliary surgery (16.5%), anti-reflux surgery (12.4%), and others (7.4%). The most common were pyeloplasty (n=36), adnexal surgery (n=25), and cholecystectomy (n=19). Conversion was required in 11 cases (9%): 10 with the Si system, and 1 with the Xi system. Mean operative time was 203.8 ± 84.2 minutes, with reductions in docking and console times as surgeon experience increased, particularly among younger surgeons. Upgrading to the Xi system enabled the use of four robotic arms even in small cavities. Minor complications (Clavien-Dindo I–II) occurred in 11 patients (9%), unrelated to robotic use. Average hospital stay was 4.7 ± 2.5 days. Costs ranged from €2,500 to €3,000 per procedure.

Conclusions:

RALS has proven both feasible and effective in the pediatric population. The Da Vinci Xi System allowed the successful completion of all procedures, even in smaller children and using four robotic arms, thus overcoming previous limitations related to patient size and weight. In a general hospital setting, access remains limited by the multidisciplinary use of the robotic system.

P109

MINIMALLY INVASIVE, MAXIMALLY EFFECTIVE: TWO-PORT ENTIRELY LAPAROSCOPIC APPENDICECTOMY IN CHILDREN

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Abstract

Background:

Laparoscopic appendicectomy is the gold standard for treating appendicitis in children and is typically performed using two 5-mm ports and one 10-mm port. In recent years, efforts to minimize invasiveness and improve cosmetic outcomes have led to techniques that reduce the number and size of ports. This study presents our initial experience with a two-port technique using the Mini Lap® system in pediatric patients, a variation previously described in adults but not yet documented in children.

Materials and Methods:

A retrospective review was conducted of pediatric patients who underwent laparoscopic appendicectomy between October 2024 and March 2025 using one 10-mm port, one 5-mm port, and the 2.4-mm Teleflex MiniLap® Alligator forceps with MiniGrip® Handle.

Results:

Ten patients (6 boys and 4 girls) underwent appendicectomy using this technique during the study period, selected based on clinical and laparoscopic findings. All procedures were performed by the same surgical team. The mean age was 11.7 years (range 8–15 years), and the mean operative time was 75.4 minutes (range 55–98 minutes). There was no need for additional instruments or conversions to open surgery. The average length of hospital stay was 2.6 days. No wound infections or other complications were observed. All patients reported satisfaction with their cosmetic outcomes both immediately postoperatively and at follow-up.

Conclusions:

This early experience suggests that two-port laparoscopic appendicectomy using the Mini Lap® system with the MiniGrip® Handle is a safe and feasible alternative in selected pediatric patients, offering comparable clinical outcomes to the conventional technique with the added benefit of improved cosmesis.

P178

OUR INITIAL EXPERIENCE WITH THE SENHANCE SURGICAL SYSTEM

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Abstract

Introduction

Robotic surgery has emerged as a groundbreaking advancement in modern medicine providing precision, enhanced visualization and dexterity, reducing complications and improving patient outcome. Robotic surgery is now at the forefront of a new era in healthcare innovation. The aim of the study is to assess the ease, feasibility, and safety of using Senhance system in robotic pediatric surgery

Material and Methods.

The Senhance Surgical system was introduced in our clinic in November 2024 and has since then offered improved precision, reduced postoperative recovery time and has enhanced surgeon ergonomics. We identified all pediatric patients who underwent robotic surgery from November 2024 to May 2025 and we assessed feasibility, safety and ease of using the robotic system by looking at set up time, operative time, conversion rate, complications and outcomes.

Results.

Twenty-two patients, with ages ranging from 2 to 17 years and weighing between 13 kg and 86 kg were identified. These patients underwent various surgical procedures, including cholecystectomy (n=6), resection of cystic tumors (n=5), varicocelelectomy (n=4), inguinal herniorrhaphy (n=2), appendicectomy (n=1), diaphragmatic herniorrhaphy (n=1), pyeloplasty (n=1), lymph node biopsy (n=1) and resection of mesenteric cyst (n=1).

No intraoperative complications were identified in our study group. There was one conversion to laparoscopy noted in the case of a 10-year-old with anterior diaphragmatic hernia, where the diaphragmatic defect was closed with percutaneous sutures after mobilization of the ascended transverse colon and partial division of the falciform ligament.

Conclusion

Our experience with the Senhance robotic system was successful, suggesting that this is an effective tool for pediatric patients, offering ease of use and promising outcomes. These findings warrant continued evaluation and further investigation into the system's potential.

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ROBOTIC SPLEEN-PRESERVING DISTAL PANCREATECTOMY FOR SOLID PSEUDOPAPILLARY TUMOR IN A PEDIATRIC PATIENT: A CASE REPORT

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Abstract

Introduction

Laparo-assisted robotic surgery is gaining increasing importance in the management of abdominal tumors even in pediatric patients. We present a case of robotic distal pancreatectomy with spleen preservation performed for a pancreatic solid pseudopapillary tumor (SPT).

Case Description

A 15-year-old girl was referred to our unit following the incidental discovery of a neoplasm located in the body-tail region of the pancreas. MRI revealed a well-circumscribed lesion measuring 79×64×68 mm, situated anteriorly to patent and non-compressed splenic vessels. Further evaluation with endoscopic ultrasound and biopsy confirmed the diagnosis of an SPT. The patient was scheduled for robotic tumor resection, with intraoperative assessment of spleen preservation feasibility.

The procedure was performed using Da Vinci Si-multi-port Robotic Surgical System and lasted 240 minutes (150 minutes console time). Four 8 mm robotic trocars and one 12 mm accessory trocar were placed. Intraoperatively, a thorough assessment of the relationship between tumor and splenic pedicle was conducted, aided by intravenous injection of indocyanine green. After meticulous dissection of the splenic artery and vein, spleen-preserving distal pancreatectomy was deemed feasible and successfully carried out. The pancreas was transected using a robotic stapler, which was fired 15 minutes after clamping the parenchyma. The specimen was extracted in an endobag through a 5-cm Pfannenstiel incision.

Postoperative pain was easily controlled. Oral intake was gradually reintroduced and well tolerated starting on postoperative day three. The abdominal drain was removed on postoperative day six, and the patient was discharged the following day.

Conclusion

Laparo-assisted robotic distal pancreatectomy with spleen preservation is a safe and feasible approach for pediatric patients with benign tumors of the pancreatic body-tail. The use of indocyanine green may play a pivotal role in assessing the anatomical relationship between the tumor and splenic vessels, potentially preventing unnecessary splenectomy and its associated infectious and hematologic complications.

P91

LAPAROSCOPIC SUTURING LEARNING CURVE VERSUS ROBOT-ASSISTED USING SIMULATOR

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Abstract

Introduction

Robot-assisted surgery is expected to offer greater potential than traditional laparoscopy, particularly in challenging areas and tasks requiring advanced technical skills, such as minimally invasive suturing. This study aims to compare the learning curves of laparoscopic suturing and robot-assisted suturing.

Methods

Novice participants completed two suturing tasks using either the laparoscopic simulator or the Robotic DaVinci SimNow simulator. The tasks included intracorporeal suturing and an anastomosis needle transfer. To assess the learning curve, participants repeated each task up to ten times. Key parameters related to time, movements, and safety were recorded.

Results

Twenty participants completed the learning curve using laparoscopy, while 20 used robot-assisted surgery. The median time for the first knot was 640 seconds for laparoscopy compared to 281 seconds for robot-assisted surgery ($p < 0.001$). For the sixth knot, the times were 351 seconds for laparoscopy and 189 seconds for robot-assisted surgery ($p < 0.001$), and for the tenth knot, they were 242 seconds and 141 seconds, respectively ($p < 0.001$). The percentage of 'adequate surgical knots' was higher in the laparoscopic group: 71% versus 60% for the first knot, 100% versus 83% for the sixth knot, and 100% versus 73% for the eleventh knot. Regarding the 'instrument out of view' parameter, the robot-assisted group had a median of 0% after the fourth repetition. In the laparoscopic group, the percentage of time the instrument was out of view increased from 3.1% to 3.9% on the left side, and from 3.0% to 4.1% on the right side, between the first and tenth knot ($p > 0.05$).

Conclusion

The learning curve for minimally invasive suturing demonstrates a shorter task time with robotic assistance compared to laparoscopy. However, laparoscopic procedures still yield strong outcomes, with quick improvements in performance.

P127

ROBOTIC-ASSISTED LAPAROSCOPIC LADD'S PROCEDURE USING HIDDEN INCISION ENDOSCOPIC SURGERY (HIDES) TROCAR PLACEMENT IN A 5-YEAR-OLD BOY

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Abstract

Purpose

To describe the feasibility, technique, and advantages of performing a robotic-assisted laparoscopic Ladd's procedure in a child using Hidden Incision Endoscopic Surgery (HIdES) trocar placement.

Methods

A 5-year-old child diagnosed with incomplete intestinal malrotation underwent a robotic-assisted laparoscopic Ladd's procedure. A robotic 8 mm trocar was placed at the umbilicus, while three additional 8 mm robotic trocars were inserted through suprapubic incisions along the Pfannenstiel line - one to the left of the midline, one at the midline, and one to the right. The central suprapubic trocar was used as the camera port, the lateral trocars served as robotic working arms, and the umbilical port was used as an accessory trocar. Intraoperatively, Ladd's bands were divided and the duodenum was mobilized. The mesenteric root was broadened, the gastrocolic ligament was sectioned and the cecum was transferred to the left iliac fossa to complete the repositioning. We chose not to perform an appendectomy.

Results

HIdES configuration offered excellent exposure of the entire mesenteric root and optimal visualization of both upper and lower quadrants without the need for redocking. The robotic system allowed fine dissection and precise tissue handling. There were no intraoperative complications. The aesthetic outcome was excellent due to the hidden suprapubic trocar sites. The patient had an uneventful recovery and was discharged on postoperative day 3.

Conclusion

Robotic-assisted Ladd's procedure using HIdES trocar placement is a feasible and safe option. It provides optimal visualization, ergonomic comfort for the surgeon, and facilitates complete mesenteric mobilization without the need for redocking. Moreover, it achieves excellent cosmetic results, making it a valuable approach in selected cases of intestinal malrotation.

P132

LATE DIAGNOSIS OF INCOMPLETE DUODENAL WEB IN CHILDREN: A CASE SERIES AND SYSTEMATIC REVIEW.

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Abstract**Introduction:**

Duodenal web is a rare congenital anomaly caused by incomplete recanalization of the duodenum typically presenting in neonatal period. When obstruction is incomplete, diagnosis may be delayed, leading to prolonged morbidity. We report three cases of late-diagnosed incomplete duodenal web and present a systematic review of Literature.

Materials and Methods:

Three pediatric cases of incomplete duodenal web diagnosed beyond infancy were retrospectively reviewed, focusing on clinical features, diagnostic workup, surgical management and outcomes. A systematic literature review was conducted in accordance with PRISMA guidelines across Embase, Scopus, PubMed, and Web of Science, identifying reports of incomplete duodenal web diagnosed after the neonatal period.

Results:

The Patients aged from 19 months to 9 years presented with non-bilious vomiting, feeding intolerance and failure to thrive. Initial diagnostic workup (ultrasound, contrast studies) was inconclusive. Endoscopy led to the diagnosis of intrinsic duodenal obstruction due to an incomplete web within the second portion of duodenum in all cases. Two patients underwent successful web resection, one via laparotomy, one via robotic-assisted surgery. The third patient, with a non-obstructive duodenal pocket, was managed conservatively and remained asymptomatic. Postoperative outcomes included symptom resolution and catch-up growth. Systematic review identified 172 records; after screening, 19 studies were included, reporting on pediatric patients with late diagnosis of incomplete duodenal web (66 patients). Notably, no prior reports of robotic-assisted treatment were found.

Conclusion:

Incomplete duodenal web, although rare, should be considered in children with persistent upper gastrointestinal symptoms beyond infancy. Its subtle presentation often leads to delayed diagnosis. Appropriate imaging and early endoscopic evaluation are crucial. From Literature review, surgery remains the definitive treatment, with excellent outcomes. Raising awareness among pediatric surgeons can reduce diagnostic delays. Given its precision and accuracy, robotic surgery may represent a promising future standard for managing this condition.

P148

COMPLEX DIAPHRAGMATIC MALFORMATIONS BEYOND BOCHDALEK: THE ROLE OF VIRTUAL REALITY IN ANATOMICAL INSIGHT AND SURGICAL PLANNING

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Abstract**Background:**

While Bochdalek hernias remain the most common form of congenital diaphragmatic defects, pediatric surgeons increasingly encounter rare and anatomically complex malformations. In these cases, Virtual Reality (VR) has emerged as a valuable adjunct for enhancing three-dimensional anatomical comprehension and refining personalized surgical strategies, particularly when minimally invasive approaches are considered.

Methods:

In 2025, three pediatric patients with rare and complex diaphragmatic malformations underwent surgical correction at our institution. Preoperative planning included patient-specific 3D reconstructions derived from CT or MRI imaging, viewed via head-mounted VR displays. VR was employed to evaluate spatial relationships between the diaphragmatic defect and adjacent vascular and cardiac anomalies, with the goal of determining the feasibility of a laparoscopic approach.

Results:

The first case involved a neonate with agenesis of the ductus venosus, bilateral Morgagni hernia, hepatic hypoplasia, and intestinal malrotation. VR confirmed the feasibility of laparoscopy, which was successfully performed on day 8 of life. The second case, a 16-month-old girl with a paraesophageal hernia and total herniation of the stomach and colon, presented a mega-atrial heart, a large liver and narrow hiatus access on VR. Laparoscopy was attempted but converted to open surgery. The third case involved a neonate with a right diaphragmatic hernia, hepatic lobe herniation, pulmonary hypoplasia, Scimitar syndrome, and a mega-atrial heart. Due to limited access to the paravertebral space, VR guided a laparoscopic attempt, which was also converted to open repair. All defects were closed primarily without mesh, and all postoperative courses were uneventful.

Conclusion:

VR-assisted planning provides valuable anatomical insight in rare and complex diaphragmatic malformations. Its integration into surgical planning may facilitate more precise, patient-specific decisions, particularly regarding the suitability and limitations of minimally invasive approaches in pediatric surgery.

P161

THE USE OF ROBOTIC TECHNOLOGY FACILITATES MEDIASTINAL MASS RESECTION AND ALLOWS FOR MINIMAL ACCESS IN THORACOABDOMINAL TUMORS

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Abstract

Between May 2024 and May 2025 nine mediastinal tumors were resected in our center with the use of daVinci XI robotic system. Histology included 4 ganglioneuroblastomas, 1 ganglioneuroma and 4 lymphomas. Patient weight ranged from 14 to 65 kilograms. Two tumors extended to the retroperitoneal area, behind the crus of the diaphragm. All tumours were resected via thoracoscopic approach solely. There were no intraoperative complications. There was one case of transient postoperative chylothorax and one case of prolonged air leak. Both complications were managed by prolonged pleural drainage.

Robotic approach yielded excellent visualization and improved instrument reach in limited operative space, thus improving operation safety and in some patients avoiding a combined thoracoabdominal approach.

POSTER SESSION 5

P88

GIANT CONGENITAL PANCREATIC CYST: CASE REPORT AND REVIEW OF THE LITERATURE

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Abstract

Introduction:

Congenital pancreatic cysts are extremely rare benign lesions, with only ~30 cases ever reported. They are usually detected incidentally by prenatal ultrasound. Their rarity, large size, and lack of pathognomonic imaging make preoperative diagnosis difficult, forcing the surgeon to manage an unforeseen pathology during surgery with total excision not being always feasible. We present a giant congenital pancreatic cyst diagnosed intraoperatively and treated laparoscopically.

Materials and Methods

We present a case of a 1-month-old female that was prenatally diagnosed with a cystic lesion mimicking an ovarian cyst. Postnatally the child was transferred to our hospital for further evaluation and treatment. Laboratory tests were normal, except for a highly elevated IRT on the routine newborn screening. The clinically palpable mass was evaluated with ultrasound and subsequent MRI revealing a 7,8*6,6*7,9 cm unilocular fluid-filled cyst misdiagnosed as a mesenteric cyst. The infant underwent exploratory laparoscopy. After transabdominal emptying and meticulous dissection of the adhesions, the cystic wall was found to be tightly adherent to the pancreas and the splenic artery. A laparoscopic subtotal excision was performed with a residual less than 15% of the cystic wall.

Results

The fluid examination revealed only elevated lipase and the pathology confirmed the diagnosis of pancreatic cyst. The postoperative course after 6 months is uneventful, with normal follow-up imaging and biochemical markers.

Conclusion

Congenital pancreatic cysts are a rare pediatric entity that pose both diagnostic and therapeutic challenges. This is the first time that elevated IRT has been associated with this pathology therefore should be further evaluated as a potential marker. We performed a subtotal excision with good results at 6 months follow-up; however, the family has been informed of the risk of recurrence, which may require more aggressive surgical intervention in the future, according to existing literature.

P100

A MULTICENTER STUDY OF PAIN CONTROL POST VIDEOLAPAROSCOPIC APPENDECTOMY IN THE PEDIATRIC PATIENT: ULTRASOUND-GUIDED TAP BLOCK VS PORT-SITE INFILTRATION.

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Abstract

Introduction

Laparoscopic appendectomy is one of the most frequent emergencies in pediatric age. An optimal management of post-surgery pain is essential. This study aims to evaluate the efficacy of the ultrasound-guided transversus abdominis plane block (U-TAP block) compared to port-site infiltration (PSI) to manage post-operative pain in pediatric patients who underwent laparoscopic appendectomy.

Methods

A prospective randomized study was conducted on patients aged between 4 and 15 years who underwent laparoscopic appendectomy due to acute appendicitis, both complicated and non complicated. Patients were assigned to one of the two groups: the first group composed by 12 patients received a bilateral U-TAP block performed by anesthesiologist, the second one (12 patients) received a port-site infiltration performed by surgeon at the end of the surgery; in both cases ropivacaine, bupivacaine or lidocaine were used under the anesthesiologist decision. All patients were prescribed with paracetamol 3 or 4 times/day and the need of an extra patient-required therapy was monitored. The pain evaluation was performed using the VAS-scale before the surgery, 24 hours and 48 hours after the surgery.

Results

Pain intensity at 6 hours was similar between the two groups ($p = 0.16$), with a mean difference in pain scores of 0.94 (95% CI: -0.13 to 2.02). No significant differences were found at other time points or in terms of analgesic use, bowel function recovery, postoperative complications, or hospital stay duration.

Conclusion

U-TAP block is a safe and reproducible procedure for management of post-operative pain of laparoscopic appendectomy. Although the differences in extra patient-required therapy and reduction of pain in VAS scale between U-TAP block versus PSI emerged to be not always significant, U-TAP block represents a valid option. Multimodal approach to preventive analgesia and a systematic evaluation confirm to be necessary to grant the correct post-operative comfort in pediatric patients.

P106

STRETTA FOR PEDIATRIC GER: A NOVEL APPLICATION IN A 12-YEAR-OLD WITH PERSISTENT SYMPTOMS

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Abstract

Gastroesophageal reflux (GER) is a common pediatric condition, but in some cases, symptoms persist despite conventional treatment. We present the case of a 12-year-old boy with GER since infancy, who experienced persistent daily retrosternal burning, recurrent otitis media, and upper respiratory tract infections over the year prior to our intervention. Upper gastrointestinal endoscopy revealed pangastritis and duodenitis, refractory to medical management.

Given the severity and persistence of symptoms, STRETTA, a minimally invasive endoscopic procedure, was performed. STRETTA uses radiofrequency energy delivered to the lower esophageal sphincter (LES) and gastric cardia to remodel the tissue, enhance LES function, and reduce transient relaxations. It is well-documented as an effective, low-risk treatment for adult GERD, but its use in pediatric populations remains unexplored. To the best of our knowledge, this is the first documented case of STRETTA being utilized to treat GER in a pediatric patient.

At follow-up, the patient demonstrated marked symptomatic improvement, with resolution of retrosternal burning and a significant reduction in respiratory and otologic infections. Endoscopic findings post-treatment also showed a notable improvement in mucosal inflammation.

This case highlights the potential for STRETTA as a safe and effective option in select pediatric patients with refractory GER, expanding the therapeutic toolkit for this challenging population. Further studies are warranted to establish its efficacy and safety profile in children.

P126

LAPAROSCOPIC GASTROPEXY FOR NEONATAL GASTRIC VOLVULUS: A MINIMALLY INVASIVE APPROACH FOR A RARE CONDITION

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Abstract

Purpose:

Neonatal gastric volvulus (GV) is a rare and potentially life-threatening condition. When not associated with congenital anomalies, diagnosis may be delayed due to nonspecific symptoms. Although laparoscopic gastropexy is well established in older children, only one neonatal case has been previously reported in the literature. This study aims to present two additional cases.

Methods:

We reviewed two neonatal cases of GV managed with laparoscopic gastropexy at our institution. Clinical presentation, diagnostic imaging, surgical technique, and postoperative outcomes were analyzed.

Results:

Case 1: A 15-day-old term male neonate (37 weeks, 3520g) presented with intermittent non-bilious vomiting and concerning weight loss. Abdominal radiography showed a distended stomach in a horizontal plane. An upper gastrointestinal (UGI) contrast study confirmed an organoaxial gastric volvulus (**Video1**).

Case 2: A preterm male neonate (34 weeks, 1970g) developed feeding intolerance and vomiting on the first day of life. On day 2, nasogastric tube placement failed to pass beyond 12 cm, with signs of abdominal discomfort. Imaging revealed a gastric double bubble, and a subsequent UGI study confirmed GV (**Video2**).

Both patients underwent laparoscopic gastropexy. Intraoperative findings included absence of key gastric ligaments and no associated anomalies (**Video3**). The surgical approach involved intracorporeal suture of the gastric fundus to the diaphragm (**Video4**) and two additional sutures fixing the gastric body to the anterior abdominal wall, adapting the percutaneous internal ring suturing (PIRS) technique (**Video5**). Postoperative recovery was uneventful. Case 1 was discharged on postoperative day 8, and Case 2 on day 14, both with good oral intake and weight gain.

Conclusion:

These two cases demonstrate the feasibility and safety of laparoscopic gastropexy in neonatal gastric volvulus, even in premature infants. Despite its rarity in the literature, this minimally invasive technique may offer effective treatment with low morbidity and should be considered in selected neonatal patients.

P145

COMBINED LAPAROSCOPIC FUNDOPLICATION - ENDOFLIP STUDY TO ADAPT ANTIREFLUX PROCEDURE IN NEUROLOGICALLY IMPAIRED CHILD

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Abstract

Background:

Gastroesophageal reflux disease (GERD) in pediatric patients with congenital anomalies, neurological impairment, or refractory disease presents unique challenges due to altered esophagogastric junction (EGJ) physiology. Standardized minimally invasive surgical techniques may not always be effective in this heterogeneous population.

Objective:

To evaluate the impact of intraoperative EndoFLIP use in tailoring anti-reflux surgery based on individual EGJ characteristics in pediatric patients.

Methods:

EndoFLIP measurements were obtained before and after anti-reflux procedures. Surgical techniques, including the type and calibration of fundoplication, were adapted according to the distensibility index (DI) and EGJ geometry findings.

Results:

EndoFLIP was performed in 10 patients (mean age 8 years) with infant cerebral palsy (60%), tetraplegia (10%), refractory GERD (20%), and other neurologic disease (10%). EndoFLIP enabled precise intraoperative characterization of the EGJ: at 40 mmHg, the mean pre and postoperative distensibility were respectively 2.5 and 1.4 mmHg with a mean diameter reduction of 5.9 mm. In neurological patients, the presence of a gastrostomy determined lower preoperative distensibility (p 0.046) with comparable values after surgery (p 0.69). Postoperative outcomes showed improvement in reflux control with no adverse events.

Conclusion:

Combined laparoscopic-EndoFLIP procedure in pediatric anti-reflux surgery may improve postoperative outcomes, particularly in patients whose EGJ function is altered by neurological disorders. Valuable functional information during laparoscopic procedure might lead to adopt a tailored surgical strategy in pediatric “fragile” patients.

P153

TYPE O OR TYPE "OH NO"? A POSSIBLE CONNECTION BETWEEN BLOOD GROUPS AND GALLSTONES

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Abstract

Introduction:

The association between blood groups and various diseases has long intrigued the scientific community; however, their potential role in pediatric gallstone formation remains underexplored. This study aims to determine whether blood groups represent an underestimated factor in the pathogenesis of gallstones in children.

Methods:

A retrospective analysis was conducted including 54 children (n=54), aged 0–17 years, who underwent laparoscopic cholecystectomy for gallstones between January 1, 2017, and December 31, 2023. Blood group data were collected along with relevant clinical information, including transfusion history and comorbidities. Descriptive statistics (percentages and frequencies) were used to present blood group distribution, and results were compared to general population data. Due to the small sample size, no multivariate analysis was performed. All analyses were conducted using SPSS 29.0.

Results:

The most prevalent blood group was A+ (38.9%), followed by O+ (25.9%), B+ (18.5%), AB+ (5.6%), and O– (1.9%). No cases of AB– were identified. A+ and O+ combined accounted for 64.8% of the cohort, indicating a potential predisposition to gallstone formation in these groups. The underrepresentation of O– may suggest a protective effect, though this could also reflect statistical variation.

Conclusions:

We conclude that this analysis suggests a possible link between specific blood groups and pediatric gallstone formation, with A+ and O+ being the most commonly observed. Although causality cannot be established, the findings raise the hypothesis that hematological profiles may act as latent risk factors, highlighting the need for further investigation into personalized preventive strategies in pediatric gastroenterology.

P170

LESS IS MORE: MINIMALLY INVASIVE SURGERY FOR PEDIATRIC LIVER LESIONS

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Abstract

Purpose /introduction

Focal liver lesions are uncommon in pediatric patients; however, their incidental detection is increasing due to widespread use of imaging. Although advances in imaging techniques have improved the ability to differentiate benign from malignant lesions, clinical management may still necessitate surgical intervention for definitive management. This case highlights the role of laparoscopic liver resection as an effective therapeutic strategy in children, emphasizing anatomical precision and the use of intraoperative tools such as laparoscopic ultrasound to optimize surgical outcomes.

Methods

We conducted a retrospective review of a 17-year-old male adolescent with incidental findings of two focal hepatic lesions. Clinical presentation, imaging studies, histopathological results, treatment, and follow-up were analyzed. The surgical procedure was recorded and edited to emphasize key technical steps and highlight critical anatomical landmarks.

Results

Imaging revealed two hepatic lesions: one located in segment V (40×24×53 mm) and a second, subcapsular, in segment IVB (14×12 mm). The initial MRI could not reliably differentiate between hepatic adenoma and focal nodular hyperplasia. A second MRI with Primovist contrast suggested the larger lesion was highly suspected to be an adenoma, while the smaller was more compatible with focal nodular hyperplasia. Following multidisciplinary discussion, surgical intervention was recommended. A minimally invasive segmental hepatectomy was performed, resulting in complete excision of both nodules. Histopathological analysis confirmed the imaging-based diagnoses.

Conclusions:

This case underscores the pivotal role of minimally invasive surgery in the management of pediatric liver lesions. It demonstrates that laparoscopic resection is a definitive and safe therapeutic option, offering reduced morbidity and enhanced surgical precision.

P171

INDOCYANINE GREEN INFUSION IMMEDIATELY PRIOR TO LAPAROSCOPIC CHOLECYSTECTOMY: A CASE REPORT

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Abstract

Introduction:

The use of indocyanine green (ICG) is expanding across various surgical fields, including laparoscopic cholecystectomy. In pediatric surgery, the most widely adopted protocol involves the administration of ICG at a dose of 0.35 mg/kg, 12 to 16 hours before the procedure. This timing necessitates overnight hospitalization, increasing both healthcare costs and unnecessary hospital stays. The aim of this case report is to evaluate the feasibility of administering ICG only one hour before surgery, as done in adult protocols, while maintaining optimal fluorescent visualization of the biliary anatomy without significant hepatic background fluorescence.

Methods:

The patient was admitted on the morning of the surgery. Vascular access was established in the preoperative holding area, and a dose of 0.15 mg of ICG was administered one hour prior to surgery, followed by prophylactic antibiotics. Fluorescence imaging during surgery was performed using the STORZ® ICG camera system and the IMAGE1 S™ Rubina® – 4K, 3D, NIR/ICG video monitor. Intraoperatively, the gallbladder, cystic duct, bile ducts, and hepatic ducts were clearly visualized with no background hepatic fluorescence.

Results:

No adverse reaction to ICG infusion were observed. The critical biliary structures, including the gallbladder, cystic duct, and hepatic ducts, were clearly delineated intraoperatively. The procedure last 110 minutes with no intraoperative complications. The patient was discharged postoperative day two, in accordance with institutional protocols.

Conclusions:

This case demonstrates that ICG administration one hour prior to laparoscopic cholecystectomy is effective and produces high-quality visualization of biliary anatomy, comparable to traditional 12–16 hours preoperative infusion protocols. Further studies are warranted to validate these findings and potentially revise pediatric protocols to eliminate unnecessary preoperative hospitalizations.

P174

SUBMUCOSAL TRIAMCINOLONE INJECTION AS A TREATMENT FOR ESOPHAGEAL STRICTURES FOLLOWING GASTRIC TRANSPOSITION IN CHILDREN WITH ESOPHAGEAL ATRESIA

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Abstract

Introduction

Submucosal injection of Triamcinolone Acetonide (TA) may offer a promising therapeutic option for managing esophageal strictures in pediatric patients with esophageal atresia who have undergone gastric transposition.

Purpose

This report presents two pediatric cases in which intralesional steroid injections were administered to treat post-gastric transposition esophageal strictures. These cases demonstrate the potential benefits of the use of triamcinolone acetonide (TA), including improved anastomotic diameter beyond what is achieved with dilation alone and a reduction in the frequency of required endoscopic dilations.

Materials and methods

We reviewed clinical and endoscopic data from two children who developed esophageal strictures after gastric transposition. Each patient underwent balloon dilation combined with submucosal and intralesional injections of triamcinolone acetonide (maximum dose: 12–14 mg), administered in four quadrants directly into the fibrotic tissue and surrounding mucosa at the stricture site. All steroid injections were performed concurrently with balloon dilation during a single procedure.

Results

We analyzed the intervals between endoscopic dilations and the frequency of procedures before and after the steroid injections. Follow-up assessments included monitoring for changes in the severity of esophageal stenosis, recurrence of strictures, and evaluation of postoperative complications or adverse reactions.

Conclusions

Submucosal injection of triamcinolone acetonide appears to be a promising adjunct to dilation in the treatment of esophageal strictures following gastric transposition in children with esophageal atresia. Nonetheless, further studies are necessary to confirm its long-term safety and efficacy in improving patient outcomes and quality of life.

P192

ADVANCING PEDIATRIC BOWEL MANAGEMENT: LAPAROSCOPIC MALONE ANTEGRADE CONTINENCE ENEMA (MACE) – A MINIMALLY INVASIVE ALTERNATIVE TO OPEN SURGERY.

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Abstract

Introduction

Anorectal malformations (ARM) often require staged surgical interventions, with some patients experiencing refractory constipation and pseudo-incontinence post-repair. The Malone Antegrade Continence Enema (MACE) procedure provides an effective bowel management strategy, particularly for those unresponsive to conventional therapies. We present a case of a 10-year-old male with ARM (rectovesical fistula) who underwent laparoscopic MACE after failing medical management.

Methods

The patient had undergone staged correction for ARM, with stoma closure completed in 2020. Postoperatively, he developed severe constipation and pseudo-incontinence, unresponsive to oral laxatives and enemas. A laparoscopic MACE was performed, creating an antegrade colonic irrigation channel via an appendicostomy at the right iliac fossa (RIF). The procedure was completed successfully with minimal intraoperative complications.

Results

The patient had an uneventful postoperative recovery and was discharged on postoperative day 1 (POD1). At a 9-month follow-up, he demonstrated significant improvement in bowel control, successfully performing regular colonic washes through the appendicostomy, and achieving continence.

Conclusion

Laparoscopic MACE is a safe and effective minimally invasive alternative for patients with ARM-related refractory constipation. It offers multiple benefits over open surgery, including reduced postoperative pain, faster recovery, and improved quality of life. Advancements in laparoscopic techniques continue to enhance outcomes in pediatric bowel management, emphasizing the role of minimally invasive approaches in complex colorectal cases.

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COMPLICATED ACUTE APPENDICITIS LEADING TO SECONDARY INFECTION OF A URACHAL REMNANT: CASE REPORT AND SYSTEMATIC LITERATURE REVIEW

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Abstract

Introduction:

Concomitant acute appendicitis and infection of a urachal remnant is an extremely rare clinical event, with only sporadic reports in literature. Their simultaneous occurrence can pose significant clinical and technical challenges, particularly in emergency settings. This paper aims to present a case of coexisting appendiceal and urachal inflammation and to conduct a systematic review of the existing literature on this association.

Materials and Methods:

We report the case of a two and a half-year-old child referred to our department with suspected acute appendicitis. During exploratory laparoscopy, a gangrenous appendix was identified along with an inflamed urachal remnant in close anatomical contiguity. Surgical management and favorable postoperative outcomes are described. Additionally, a systematic literature review was performed, including studies reporting concurrent infection of the appendix and a urachal remnant.

Results:

Five case reports published between 1956 and 2024 were identified. Among these, one case (20%) was managed conservatively, while the remaining four (80%) underwent either primary surgical intervention (75%) or delayed surgery following antibiotic treatment (25%). All cases resulted in favorable outcomes, regardless of the therapeutic approach.

Conclusions:

Although extremely rare, the coexistence of acute appendicitis and urachal remnant infection is possible and must be considered, particularly in atypical presentations. Diagnosis is often established intraoperatively. Laparoscopy plays a pivotal role, offering both diagnostic clarity and therapeutic benefit.

P208

SIMPLE AND COMPLEX LAPAROSCHISIS: EVALUATION OF SURGICAL APPROACHES AND POST-OPERATIVE RESULTS IN A RETROSPECTIVE ANALYSIS.

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Abstract

Laparoschisis is a congenital anomaly of the abdominal wall, consisting of a ventral defect with a diameter of generally less than four centimeters. The incidence is three to nine cases per 10,000 live births. The etiology is unknown but probably multifactorial. Laparoschisis is divided into simple and complex according to the presence or absence of associated digestive tract anomalies. Treatment is surgical and consists of primary or secondary closure, with or without sutures - currently without consensus when to peruse which method.

We are currently performing a retrospective study to compare surgical techniques according to the characteristics of the laparoschisis concerned. Children born with simple or complex laparoschisis and treated at the Queen Fabiola Hospital (with possible extension to all Belgian centers) between 2004 and 2024 will be included in the study. Exclusion criteria are all other abdominal wall anomalies, incomplete records or different post-natal diagnosis. We collect antenatal data such as the gestational age at the time of diagnosis, background data of the mother, defect size and distension of the intestines. Post-natal data include timing and mode of delivery, sex, birth weight, post-natal diagnosis, appearance of the intestines, and the presence or absence of other digestive or extra-digestive anomalies. Finally, we will compare the different surgical techniques of abdominal wall closure and their post-operative results and complications, as well as their morbidity during short and long-term follow-up.

Currently being analyzed. We would like to enlarge our cohort by including more centers during the ESPES congress.

The aim of this study is to determine the impact of different surgical techniques on post-operative results and complications, length of hospitalization, time required for oral re-feeding and post-operative morbidity in children treated for simple or complex laparoschisis and to take the first steps to facilitate potential evidence-supported consensus for choice of treatment.

POSTER SESSION 6

P229

TECHNICAL AND TACTICAL CHALLENGES IN LAPAROSCOPIC CHOLEDOCHAL CYST SURGERY

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Abstract

Introduction:

Choledochal cyst (CDC) is a rare congenital anomaly requiring surgical excision and bilioenteric reconstruction. Laparoscopic techniques have gained traction for their superior visualization, minimal postoperative pain, and cosmetic benefits.

Materials And Methods:

A retrospective review of 41 pediatric CDC excisions and repair performed laparoscopically at a tertiary care center in India from July 2018 to February 2024 was conducted. Patient data included demographics, Todani classification, surgical technique, intraoperative challenges, and conversion to open surgery.

Results:

The median age at surgery was 6 years. Intraoperative challenges included dense adhesions (requiring conversion to open surgery in 17% of cases) and vascular injuries, notably two cases involving the right hepatic artery. Managing giant cysts required decompression to improve access. Anatomical anomalies, such as anomalous portal vein positioning, further complicated dissections. Despite these challenges, laparoscopic approaches resulted in favorable outcomes, with a median operative time of 240 min and minimal postoperative complications.

Conclusions:

Laparoscopic excision of CDCs, while technically demanding, is a feasible and effective approach in experienced hands. Key factors for success include preoperative imaging for detailed anatomical understanding, meticulous dissection, and preparedness for intraoperative complications.

P230

LAPAROSCOPIC-ASSISTED DUHAMEL PULL-THROUGH IN PEDIATRIC HIRSCHSPRUNG DISEASE: EARLY EXPERIENCE WITH A MODIFIED EX-ANAL APPROACH

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Abstract

Introduction

Hirschsprung disease (HD) management has evolved significantly, with the Duhamel procedure remaining the preferred technique in our pediatric surgical department due to its reliable functional and anatomical outcomes. Recently, we have transitioned toward a minimally invasive approach, adopting the one stage laparoscopic-assisted Duhamel pull-through to reduce postoperative pain and hospital stay, while preserving the core principles of the original operation. This report presents our early experience with five pediatric patients of varying ages. Three of these underwent the Modified Laparoscopic Duhamel Procedure (MLDP) with ex-anal rectal transection. We highlight the feasibility and short-term outcomes of both techniques.

Methods

This is a retrospective study of five pediatric patients, aged 3 months to 4 years, treated within one year at our institution. All were diagnosed with HD based on full thickness rectal biopsy. All patients underwent laparoscopic-assisted Duhamel pull-through. Frozen biopsies were taken either intracorporeal either transumbilical. Three were managed with MLDP, which included ex-anal rectal stump transection aiming to shorten the aganglionic rectal pouch. In two cases, Intracorporeal stapling was performed with technical modifications according to age and pelvic anatomy. In all cases, side to side colorectal anastomosis using a linear stapler was done.

Results

All procedures were completed laparoscopically without conversion. Operative time was similar across both techniques. No intraoperative complications occurred. Oral feeding resumed within 48–72 hours; the average hospital stay was 5 days. No cases of anastomotic leak, pelvic infection, or pouchitis were recorded. During 6–12 months of follow-up, all patients had satisfactory bowel function, without enterocolitis or further interventions.

Conclusions

Laparoscopic-assisted Duhamel pull-through, including MLDP, is a safe and effective option for HD. Despite technical variations, outcomes were uniformly favorable. The modified approach may reduce rectal pouch-related risks.

P248

LAPAROSCOPIC MANAGEMENT OF PEDIATRIC INTUSSUSCEPTION

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Abstract

Introduction:

Intussusception in children can cause severe complications if not promptly managed. When enemas or pneumatic/hydrostatic reductions fail, surgery is necessary. In this study we aimed to evaluate operative outcomes of patients underwent laparoscopic intussusception reduction.

Methods:

We retrospectively evaluated pediatric patients with intussusception who underwent laparoscopic surgery. patients' age, gender, symptoms, and operative /postoperative outcomes were enrolled from patients' files. All patients initially underwent ultrasound after applying enema or pneumatic/hydrostatic reduction prior to surgery. Surgical intervention was decided upon in patients with persistent findings on ultrasound or after failed reduction attempts. Patients who underwent primary open surgery were excluded from the study.

Results:

A total of 32 patients included. On preoperative ultrasonography, the mean length of the intussuscepted bowel segment was 37.65mm. Intraoperatively, ileocolic intussusception was observed in 27 patients, jejunojejunal in 2 patients and ileoileal in 3 patients and there is no colocolic. Three-ports laparoscopic surgery was performed in all patients. No additional port insertion was required in any case. Conversion to open surgery was necessary in 5 patients due to technical difficulties, 2 of them were due to tumour suspicion. Two patients experienced recurrence. A pathological leading point was identified Meckel's diverticulum in 2 patients, tumor in 1 patient, polyp in 1 patient and bezoar in 1 patient. 4 patients who were converted to open surgery, had resection with anastomosis was performed. Appendectomy was also performed in 16 patients. Pathological examination of the tumor case revealed an Burkitt Lymphoma lesion. No intraoperative bowel injuries occurred. During postoperative follow-up, no cases of small bowel obstruction were observed.

Conclusion:

Laparoscopic reduction is a safe and effective surgical option for children with intussusception unresponsive to non-operative management. Our findings demonstrate favorable intraoperative and postoperative outcomes, with minimal complications, low conversion rates, and good recovery profiles. Given these advantages, laparoscopic surgery may be considered a first-line operative approach in patients failed non-operative reduction techniques.

P252

KEEPING HANDS WARM AND SKILLS SHARP: LAPAROSCOPIC APPENDECTOMY IN A PRIVATE PEDIATRIC SURGICAL CENTER

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Abstract

Purpose:

Laparoscopic appendectomy is not only the most common pediatric emergency procedure but also a technically versatile operation that keeps pediatric surgeons in operative training and readiness. This study presents our experience from a private pediatric surgical center, highlighting its value as both a clinical mainstay and a continuous skills platform.

Patients and Methods:

A retrospective analysis was conducted of all children treated for appendicitis between 2020 and 2024 at a Private Children's Hospital. All procedures were carried out by a single experienced pediatric surgeon, ensuring uniformity in surgical technique and decision-making. All patients underwent standard clinical assessment, laboratory evaluation, and abdominal-pelvic ultrasound.

Laparoscopic appendectomy was performed via an open Hasson technique with a 10 mm umbilical port and two 5-mm working ports. The mesoappendix was dissected using either an ultrasonic scalpel or a cautery hook. The base of the appendix was managed with endoloops, intracorporeal sutures or knots, or a linear stapler, depending on tissue condition. The specimen was extracted through the umbilical port, either directly or using a retrieval bag. Peritoneal lavage was routinely performed in cases of peritonitis; drains were rarely used. The operation uses four instruments: graspers, an ultrasonic scalpel or hook, scissors, and, if needed, needle holders. This setup enables suturing, knot tying, and varied tissue handling, adding educational value.

Results:

Out of 272 laparoscopic procedures, 204 (75%) were appendectomies. Patients (ages 3–16, 62.7% male) had a 29.8% perforation rate; 6% had a normal appendix. No conversions occurred. Minor complications included five wound infections and three intra-abdominal abscesses. Average hospital stay was 2.6 days.

Conclusion:

In private pediatric surgical settings, laparoscopic appendectomy is the operation that keeps surgeons' hands sharp. Its high frequency, safety, and variability make it an indispensable procedure for maintaining laparoscopic readiness and training young surgeons in practical, real-world settings.

P254

PERORAL ENDOSCOPIC MYOTOMY (POEM) FOR ACHALASIA IN PEDIATRIC PATIENTS: A THREE-CASE SERIES

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Abstract

Achalasia is an uncommon esophageal motility disorder and even more uncommon in children. Although Heller myotomy has long been the standard surgical approach, peroral endoscopic myotomy (POEM) has gained recognition as a minimally invasive alternative with promising results. POEM offers important advantages, particularly in reducing postoperative pain and hospitalization in young patients.

Methods:

We report a series of three pediatric patients who underwent POEM since January 2025.

Case 1: A 14-year-old male with progressive vomiting and 20 kg weight loss was diagnosed with type II achalasia.

Case 2: A 7-year-old girl with Down syndrome and long-standing dysphagia was diagnosed with type II achalasia.

Case 3: A 16-year-old female was incidentally diagnosed with type I achalasia after aspiration during anesthesia induction.

All underwent POEM using the same technique as in adults: Submucosal elevation, mucotomy, posterior submucosal tunneling and myotomy with TT Knife, myotomy closure with clips under general anesthesia. In pediatric patients, the procedure was adapted to narrower anatomical spaces when necessary.

Results:

All procedures were completed successfully without complications. Oral feeding was reinitiated within 2 – 24 hours in all patients, who were discharged 72 hours post-procedure. All reported significant improvement in dysphagia symptoms, with a marked decrease in Eckardt scores. The minimally invasive nature of POEM contributed to excellent tolerance, minimal pain, and rapid recovery.

Conclusion:

POEM is a safe, effective, and well-tolerated therapeutic option for pediatric achalasia, replicating the adult technique with adaptations for pediatric anatomy. Its minimally invasive nature is especially advantageous in children, allowing early oral intake, short hospital stays, and prompt symptom relief. POEM should be considered as a first-line approach in selected pediatric cases within experienced centers.

P24

THE SAFETY AND FEASIBILITY OF SINGLE-STAGE VERSUS STAGED LAPAROSCOPIC APPROACH FOR ACUTE APPENDICITIS WITH INGUINAL HERNIA IN PEDIATRIC PATIENTS: A COMPARATIVE STUDY

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Abstract

Purpose:

The aim of this study is to evaluate the safety and efficacy of a simultaneous laparoscopic approach for acute appendicitis and inguinal hernia in a pediatric population.

Methods:

The case records of 2254 pediatric patients who underwent appendectomy at our institution between January 1, 2012, and January 1, 2025, were reviewed. Finally, 44 patients who met the inclusion criteria and had an inguinal hernia at the time of laparoscopic appendectomy were selected for further analysis. The patients who underwent single-stage surgery (simultaneous laparoscopic appendectomy and hernia repair) were assigned to group I ($n=25$), while the patients who underwent delayed laparoscopic hernia repair were assigned to group II ($n=19$). Groups were compared for final outcome, complications, rate of readmissions within 30 days of index surgery, duration of surgery, and length of hospital stay.

Results:

The mean age of all included patients was 11.5 ± 4.0 years, with males slightly outnumbering females ($n=25$, 56.8%). A major difference between the two methods was the operation time, which was significantly longer in the single-stage group (53.5 ± 11.2 min vs. 41.5 ± 10.9 min; $p=0.001$). Despite the difference in operative time, the length of hospital stay (3.5 ± 2.0 vs. 3.5 ± 2.2 days; $p=0.899$) was almost identical between the two groups, suggesting that the additional intraoperative time was not reflected in a prolonged recovery time. In addition, postoperative complications were rare and evenly distributed between both surgical strategies ($n=2$ (8%) vs. $n=2$ (10.5%); $p=0.772$). All complications were minor and were treated conservatively. Importantly, there was no recurrence of hernia in either group during the follow-up period.

Conclusion:

From a clinical perspective, these results suggest that a single-stage approach may be a practical alternative to the traditional two-stage strategy in patients with acute appendicitis and inguinal hernia, particularly in cases where postponement of hernia repair is not desirable.

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LAPAROSCOPIC-ASSISTED DUHAMELL PULL-THROUGH FOR RECTO-SIGMOID HIRSCHSPRUNG'S DISEASE. HOW TO MAKE OUR LIFE EASY?

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Abstract

Purpose:

We aim to discuss the technical details and tips that we perform in laparoscopic-assisted Duhamell. Our goal is to minimize any postoperative complications and improve the long-term results.

Materials-Methods:

Our study is based on a single-center experience over the last consecutive years, with the laparoscopic-assisted Duhamell procedure. There is a follow-up of 3 patients treated for recto-sigmoid Hirschsprung's disease, without colostomy. The mean age was 4 months. Also, there are 2 boys and 1 girl. We analyze the incidence of postoperative intrabdominal abscess, trocar side infection, constipation and need for diverting colostomy.

Results:

From our data, we couldn't find any postoperative abscess or trocar-side infection. No patient needed a postoperative diverting colostomy. One of these patients developed mild constipation, which was treated conservatively.

Conclusion:

It seems that small tips during laparoscopic-assisted Duhamell pull-through minimize postoperative major complications. Despite our small number of patients, the combination of proposed technical tips may improve the postoperative period of these patients. Also, this technique is easily reproducible, and the young Pediatric Surgeons can perform it easily.

P89

CYSTIC DUCT STENOSIS WITH BILIARY OBSTRUCTION AND LIVER FIBROSIS IN AN INFANT: SURGICAL MANAGEMENT AND LONG-TERM OUTCOME

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Abstract**Introduction:**

Cystic duct stenosis is an exceedingly rare cause of biliary obstruction in infancy, with only a handful of cases reported. The coexistence of bile duct gallstone obstruction, liver fibrosis, and cystic duct stenosis is even rarer—if ever reported in infancy. We present this case to expand the understanding of such a complex condition.

Methods:

A previously healthy 10-month-old female presented with vomiting and low-grade fever. Initial workup showed elevated transaminases, γ GT, ALP and bilirubin. Abdominal ultrasound revealed a distended gallbladder with sludge and bile duct dilation. Infectious, hematological, and other causes were excluded. Was treated with intravenous antibiotics and ursodeoxycholic acid and was discharged after 7 days. Fifteen days later, was readmitted with pruritus and acholic stools. Pancreatic enzymes were elevated, shear wave elastography was abnormally high and MRCP revealed bile duct obstruction. Laparoscopic cholecystectomy with intraoperative bile duct exploration was attempted but, despite normal appearance of the extrahepatic biliary tract, significant cystic duct stenosis was encountered while attempting laparoscopic cholangiography. Inability to advance the wire through the cystic duct necessitated conversion to open surgery. After transecting the stenotic part, saline lavage was performed and a normal cholangiogram was depicted. The operation was completed with cholecystectomy and liver biopsy.

Results:

Postoperatively, the patient improved progressively. Histopathology revealed cystic duct fibrosis, chronic cholecystitis and early hepatic fibrosis. Over a 4-year follow-up, she remained asymptomatic. Serial abdominal ultrasound and elastography showed resolution of liver fibrosis. No underlying etiology has yet been identified.

Conclusion:

This case highlights a rare coexistence of biliary pathology in an infant where timely surgical intervention reversed liver fibrosis. Biliary gallstone obstruction in infancy may be associated with cystic duct stenosis, undetectable with routine imaging. Open exploration remains critical when minimally invasive approaches fail.

P90

WHEN LAPAROSCOPY FALLS SHORT: EXPERIENCE-BASED INSIGHTS FROM CONVERSIONS IN MECKEL'S DIVERTICULITIS

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Abstract

Laparoscopic surgery is considered the method of choice for diagnosing and treating urgent abdominal conditions in children. Meckel's diverticulitis remains a frequent intraoperative finding, as establishing a correct preoperative diagnosis without advanced imaging modalities poses a significant challenge. Due to the wide range of clinical presentations and possible complications, a laparoscopic approach may sometimes prove insufficient, requiring conversion to open surgery for adequate management.

This study aims to analyze cases of conversion from laparoscopy to midline laparotomy in pediatric patients with Meckel's diverticulitis and to identify the main factors limiting the feasibility of minimally invasive management.

Over the period 2015–2024, 59 children underwent surgery for Meckel's diverticulitis. Conversion from laparoscopy to midline laparotomy was required in 11 patients (3 females, 8 males; mean age 5.4 years, range 1–15 years). In five patients (45.5%), strangulated obstruction with massively distended bowel loops impaired laparoscopic visualization and manipulation. In four cases (36.4%), intussusception involving a Meckel's diverticulum could not be safely reduced due to risk of iatrogenic injury. Additional reasons included macroscopic perforation at the diverticular base (1 case; 9.1%) and bleeding from an inflamed diverticular origin (1 case; 9.1%). The majority of conversions (7 out of 11 patients) were performed in children whose clinical presentation was consistent with acute bowel obstruction. No significant difference in age was observed between patients requiring conversion and those managed laparoscopically ($p = 0.153$). None of the patients who underwent conversion required reoperation.

We conclude that conversion from laparoscopy to open surgery in pediatric Meckel's diverticulitis was primarily due to limited visualization caused by bowel distension or the presence of a dense intussusception, where laparoscopic reduction posed a risk of iatrogenic injury. Despite the advantages of minimally invasive techniques, certain intraoperative limitations necessitate a change in surgical strategy to ensure safe and effective management.

P92

LAPAROSCOPIC-ASSISTED HYDROSTATIC INTRAOPERATIVE REDUCTION (LAHIRI) FOR ILEOCECO-COLIC INTUSSUSCEPTION IN AN INFANT: CASE REPORT AND LITERATURE REVIEW

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Abstract

Introduction

Intussusception is one of the most common abdominal emergencies in children under three years of age. Pneumatic or hydrostatic reduction is the first-line treatment, while refractory cases often require surgical intervention. Laparoscopy has emerged as a minimally invasive alternative and, in selected cases, can be combined with intraoperative enema using the LAHIRI technique (Laparoscopic-Assisted Hydrostatic Intraoperative Reduction). However, the literature on this technique is limited: a review identified only 44 patients treated with LAHIRI since 1998 in six different scientific studies.

This report describes our experience using LAHIRI in a rare and extensive case of ileoceco-colic intussusception extending to the sigmoid colon in a 2.5-month-old infant referred from a peripheral hospital.

Materials and Methods

The patient presented with inconsolable crying, vomiting, and rectal bleeding. Ultrasound imaging performed both at the referring center and at our institution confirmed a diagnosis of extensive intussusception.

Exploratory laparoscopy was performed with a transumbilical 5 mm trocar and 30° optics. The leading edge of the intussusception was visualized near the sigmoid colon. Two additional 5 mm trocars were placed (suprapubic and epigastric). Reduction was achieved by combining a low-pressure warm saline enema administered via rectal tube with gentle laparoscopic manipulation using atraumatic graspers.

Results

The intussusception was successfully reduced without the need for bowel resection. Postoperative recovery was uneventful: the patient resumed oral feeding, passed stools normally, and surgical wounds healed well. No recurrence was observed during follow-up.

Conclusion

The LAHIRI technique proved to be a safe and effective minimally invasive option for the management of an unusually extensive intussusception. This case contributes to the limited but growing body of evidence supporting LAHIRI as a valuable tool in pediatric

P101

SAFETY AND EFFICACY OF PERCUTANEOUS GASTROSTOMY IN CHILDREN

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Abstract

Introduction:

Percutaneous gastrostomy is a widely used method for providing long-term enteral nutrition in pediatric patients. While generally considered safe, certain complications may arise and require careful evaluation.

Objective:

To assess the safety and efficacy of percutaneous gastrostomy placement in children over a four-year period.

Materials and Methods:

A retrospective review was conducted of 100 pediatric patients who underwent percutaneous gastrostomy between 2020 and 2024. The main indication for gastrostomy placement was the need for prolonged enteral feeding. Data regarding procedural outcomes and complications were analyzed.

Results:

All 100 procedures were performed successfully with no intraoperative or early postoperative complications. The most frequent complication was bumper syndrome, observed in 25% of patients. This condition was more commonly encountered when the gastrostomy tube diameter exceeded 20 French. Management of bumper syndrome involved replacing the gastrostomy tube with a low-profile device. Prolapse at the gastrostomy site occurred in 2 cases.

Conclusions:

Percutaneous gastrostomy is a safe and effective method for ensuring long-term enteral nutrition in children. Although bumper syndrome is a relatively frequent complication, especially with larger tube diameters, it is manageable through tube replacement. No major complications were associated with the procedure itself.

P117

OUR EXPERIENCE WITH DISK BATTERY INGESTION IN CHILDREN: FROM EMERGENCIES TO HIDDEN DANGERS

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Abstract

Introduction

Disk battery ingestion is an increasingly common occurrence in paediatric patients. In most cases, it is managed uneventfully; however, it must always be considered an emergency due to life-threatening complications. We present our experience from 2016 to 2025.

Materials and Methods

A single-centre case series study was conducted involving 21 patients (9 male, 12 female) treated between 2016 and 2025. Anamnestic data and all demographics, clinical and laboratory data imaging, operative and follow up results were collected from medical records and outpatient's clinic visits.

Sixteen patients were admitted to the ER for a known ingestion. Three patients were evaluated for non-specific symptoms, and the diagnosis was made months later the presumed ingestion. In one patient, the ingestion was confirmed post-mortem. In another, the battery was not found, but the lesions were highly suggestive of battery ingestion. All patients underwent a chest X-ray. Twelve patients underwent a preoperative CT scan.

Results

The disk battery was found in 13 patients in the oesophagus, 2 in the stomach, 2 were expelled by the patients, 1 was located in the retro-tracheal posterior mediastinum, and 1 in the posterior pharynx. Fourteen patients underwent endoscopic removal, and one required a sternotomy for surgical removal.

Two patients developed an aorto-oesophageal fistula: one died from haemorrhagic shock, and the other was successfully treated with endovascular placement of aortic stents.

Seven patients developed oesophageal stenosis, which was treated with endoscopic dilations. In one patient, an oesophageal stent was placed.

At a median follow-up of 4.7 years (range: 6 months to 9 years), 20 patients are alive without major gastrointestinal complications.

Conclusion

Disk battery ingestion can lead to severe complications if not treated promptly. Based on our experience, we recommend that patients be referred to tertiary care centres equipped with paediatric surgery and an experienced haemodynamics unit.

P102

MANAGEMENT OF SPLENIC INJURIES IN CHILDREN: A SINGLE-CENTER EXPERIENCE

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Abstract

Introduction:

Splenic trauma is one of the most common solid organ injuries in pediatric patients, primarily resulting from blunt abdominal trauma. Due to the spleen's vital immunological function, organ-preserving strategies are preferred whenever possible.

Objective:

To analyze the clinical course, treatment approaches, and outcomes in children with splenic injuries managed at a single pediatric surgical center.

Materials and Methods:

A retrospective review of pediatric patients treated for splenic trauma between 2020 and 2024 was conducted. Data on mechanism of injury, injury grade (according to AAST), management strategies, complications, and outcomes were collected and analyzed.

Results:

A total of 38 children with splenic injuries were included. The majority of cases were caused by blunt trauma. Non-operative management (NOM) was successful in the majority of hemodynamically stable patients, including those with high-grade injuries. Surgical intervention was required in 2 cases due to ongoing bleeding or hemodynamic instability. No mortality was recorded. Complications were rare and included transient hypotension and low-grade fever.

Conclusions:

Non-operative management remains the gold standard for pediatric splenic injuries, even in high-grade trauma, provided that the patient is hemodynamically stable and closely monitored. Early recognition and proper grading of the injury are key to optimizing outcomes while preserving splenic function.

POSTER SESSION 7

P120

AORTO-ESOPHAGEAL FISTULA FOLLOWING BUTTON BATTERY INGESTION: CASE REPORT AND COMPREHENSIVE REVIEW

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Abstract

Introduction: Aorto-esophageal fistula is a rare but life-threatening condition in children following foreign body ingestion, with button batteries being the most dangerous. These batteries involve severe tissue necrosis due to chemical and electrical reactions, often leading to fistula formation and catastrophic hemorrhage. The aim of this work is to present a novel case of aorto-esophageal fistula closure using a covered stent in a 4-year-old boy, complemented by a systematic review of 36 reported pediatric aorto-esophageal fistula cases from 1988 to 2024.

Methods: A systematic review was conducted using PubMed, Embase, ICTRP, ClinicalTrials.gov, CINAHL, and Scopus in February 2024, adhering to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. The research was conducted by using the term “aorto esophageal fistula” in any search field. In our review we included papers published from 1988 to 2024. The search criteria were limited to children who ingested a FB, English language and studies over human subjects.

Results: The review revealed that button batteries ingestion accounted for 67% of aorto-esophageal fistula cases, with a high mortality rate of 43%, underscoring the critical nature of this condition. Early symptoms are often nonspecific, leading to delayed diagnoses, which worsen outcomes. Diagnostic imaging, primarily X-rays and CT scans, plays a key role in identifying FBs and complications. While surgical repair remains the mainstay of treatment, minimally invasive techniques, such as endovascular approaches, are emerging as viable options.

Conclusions: This study highlights the need for heightened public awareness, safer battery designs, and prompt, multidisciplinary interventions to improve patient outcomes. Future research should focus on refining diagnostic protocols, evaluating innovative management strategies, and establishing comprehensive registries to inform evidence-based guidelines and optimize care.

P141

LAPAROSCOPIC PRIMARY SWENSON'S PULL THROUGH

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Abstract

Aim: To present a case of Hirschsprung's disease managed with Laparoscopic Primary Swenson's Pull Through

Materials and Methods: A 7-month-old male infant with a history of chronic constipation in the past four weeks of life was evaluated with a barium enema and rectal biopsy, confirming the absence of ganglion cells. Since the child responded well to rectal washouts, he was scheduled for primary surgery.

Results: Laparoscopically, three seromuscular biopsies were obtained at the peritoneal reflection, as well as 5 cm and 7.5 cm proximal to it. The presence of ganglion cells was confirmed on frozen section by a pathologist. The sigmoid colon was mobilized and aganglionic segment was excised at the perineal end following which coloanal anastomosis was completed. The child passed stools on POD 1 and was allowed orally on POD 5 which was well tolerated.

Conclusion: This video demonstrates the feasibility of a primary pull-through in a case of Hirschsprung disease in an infant. At our center, 13 patients have undergone laparoscopic primary surgery for HD, including 10 Swenson's and 3 Soave procedures. Infants comprised 83% of the cohort. Postoperatively, one patient developed a rectovaginal fistula requiring a diversion stoma, while two developed HAEC, which was managed conservatively. With early diagnosis, availability of frozen section pathology, and surgical expertise, laparoscopic primary pull-through for HD is a safe and feasible option.

P224

CHOLECYSTECTOMY IN PEDIATRIC AGE: A 10-YEAR EXPERIENCE

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Abstract

Purpose

Pediatric cholelithiasis—either associated with hematological disorders or of other etiology—is an increasingly recognized condition. We aimed to present our 10-year experience in its surgical management, evaluating multiple parameters including clinical presentation, coexisting conditions, and postoperative outcomes.

Methods

From January 2014 to May 2024, we performed 65 laparoscopic cholecystectomies in pediatric patients. Of these, 9 had underlying hematological disorders, and 56 presented with cholelithiasis of other causes. All patients underwent preoperative imaging to confirm the diagnosis and rule out choledocholithiasis. We retrospectively analyzed operative data, co-pathologies from the medical history, associated medical treatments, clinical presentation, intraoperative and postoperative complications, postoperative pain, duration of hospitalization, and follow-up.

Results

All procedures were performed laparoscopically using a four-trocar technique with a 10 mm camera. The mean operative time was 110 minutes. In two cases, intraoperative bleeding necessitated conversion to open surgery. Both of these cases were performed by residents under the supervision of consultants with limited laparoscopic experience. One patient developed a postoperative intra-abdominal abscess, likely due to a retained gallstone, which was managed conservatively. The mean patient age was 11.2 years (range: 2–16 years). Intraoperative cholangiography was performed in two cases. In three patients with hereditary spherocytosis, splenectomy was conducted following cholecystectomy. All other patients received intravenous cephalosporins throughout their hospital stay. The average length of hospitalization was 2.8 days, and the mean follow-up period was 6 months.

Conclusion

Cholelithiasis in the pediatric population is a multifactorial disease, often associated with systemic conditions. Laparoscopic cholecystectomy remains the gold standard for its treatment. A solid learning curve plays a significant role in reducing operative times and hospital stay, even in patients with complex medical backgrounds.

P110

THE VALUE OF LAPAROSCOPY IN VP SHUNT PATIENTS: A CASE OF ABDOMINAL PAIN WITH AN UNEXPECTED CAUSE

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Abstract

Aim of study: Ventriculoperitoneal (VP) shunts are widely used for hydrocephalus management but can lead to abdominal complications, including pseudocysts. When pediatric patients with a VP shunt present with abdominal pain, distinguishing between shunt-related issues and other conditions is crucial. We hereby present an interesting case of an 8-year-old girl with a VP shunt, whose abdominal pain led to an unexpected surgical discovery.

Case description: An 8-year-old girl with a VP shunt since the age of three presented to the Emergency Department with abdominal pain, low-grade fever, and an ultrasound finding of a cystic mass in the left ovarian region. A CT scan confirmed a 4.1 × 2.6 cm ovoid cyst in direct contact with the peritoneal end of the VP shunt. A head CT scan revealed hydrocephalus and neurosurgical consultation was requested. The girl underwent a diagnostic laparoscopy, which confirmed an intact and functional VP shunt without entrapment and cerebrospinal fluid samples were obtained for cytology and culture. A left ovarian cyst was identified and deroofed. She had an uneventful postoperative course and was discharged on the 3rd postoperative day with a recommendation for neurosurgical follow-up.

Conclusions: This case emphasizes the importance of considering both VP shunt-related complications and other abdominal pathology in pediatric patients with VP shunts who present with abdominal pain. In cases of suspected pseudocyst in females, differential diagnoses, including ovarian cysts must be carefully assessed. Close collaboration between pediatric surgeons and neurosurgeons is crucial for accurate diagnosis and management.

P159

ENDOSCOPIC INCISION OF DUODENAL WEB – INITIAL EXPERIENCE WITH 2 PATIENTS

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Abstract

In 2025 two patients with incomplete duodenal obstruction due to a duodenal web underwent endoscopic treatment. Both children were diagnosed with Down syndrome. The first patient was 10 months old and the second was 17 years old. In both cases, the web was located in the second portion of the duodenum and the major duodenal papilla was located at the base of the distal surface of the web. Intraoperative contrast X-ray assessment and pneumatic balloon dilation were used to assess the anatomy of the web prior to incision. Endoscopic electrocoagulation needle was used and the web was incised radially away from the aperture in the lateral direction. There were no intraoperative complications and in both cases the signs of obstruction resolved with both patients tolerating full oral diet.

Conclusion: endoscopic incision seems to present a feasible, safe and effective treatment option in duodenal web.

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AN EXPERIMENTAL MODEL OF LAPAROSCOPIC APPENDECTOMY IN THE RABBIT

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Abstract

Introduction. The application of the laparoscopic technique for appendectomy offers a number of advantages over the open technique. Yet, research is still required to investigate the pathogenic mechanisms responsible for the benefits of the technique.

Purpose: To describe an animal model for laparoscopic appendectomy research purposes.

Results: The rabbit offers a practical animal model, suitable for experimental purposes in this field. Its small size allows low-cost breeding in limited space. In terms of anatomy, the rabbit has ample size of abdominal cavity for laparoscopic manipulations to be conducted, a distinct vermiform appendix to be resected and ear blood vessels suitable for catheterization that facilitates repeated blood sampling. After endotracheal intubation and mechanical ventilation, CO₂ pneumoperitoneum is established and the tips of three 5 mm trocars are inserted into the abdominal cavity. The appendices' artery is cauterized and the appendix is resected employing a three-point loop ligation or clip placement technique followed by stump cauterization. The appendix is then placed into a specimen retrieval bag for safe extraction from the abdominal cavity. Antibiotics and analgesics are administered at the post-operative period.

Conclusions: The rabbit model of laparoscopic appendectomy is a practical small-in-size animal model that simulates the technique applied in humans and it is, therefore, recommended for experimental research purposes.

P210

LAPAROSCOPIC MANAGEMENT OF PERITONITIS IN CHILDREN

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Abstract

Background: Peritonitis in children is a life-threatening condition requiring prompt diagnosis and surgical intervention. Traditionally managed via open surgery, the laparoscopic approach has emerged as a viable alternative, offering diagnostic clarity and therapeutic intervention with reduced morbidity.

Objective: To evaluate the role, safety, and outcomes of laparoscopy in the management of pediatric peritonitis, and to highlight its advantages over conventional laparotomy.

Methods: A review of pediatric patients diagnosed with peritonitis and managed laparoscopically was conducted in our Emergency Hospital for Children. Key outcomes measured included sex ratio, operative time, intraoperative findings, postoperative complications, hospital stay and recovery time. We also analyzed the indications for conversion to open surgery and criteria for patient selection.

Results: Laparoscopy allowed accurate diagnosis and effective management in a majority of cases, including appendiceal perforation, Meckel's diverticulitis and secondary peritonitis of unknown origin. Advantages included shorter hospital stays, earlier return to oral feeding and reduced postoperative pain. Conversion rates remained low and were primarily associated with diffuse fecal contamination or hemodynamic instability.

Conclusion: The laparoscopic approach to peritonitis in children is a safe and effective modality, offering significant benefits in appropriately selected cases. It provides both diagnostic insight and therapeutic capability, reinforcing its role as a frontline option in pediatric emergency surgery.

P214

MINIMALLY INVASIVE MANAGEMENT OF POSTOPERATIVE ANAL STENOSIS FOLLOWING LAPAROSCOPIC REPAIR OF RECTAL ATRESIA: A CASE REPORT

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Abstract

Background:

Rectal atresia is a rare congenital anorectal malformation, and its management has evolved to include minimally invasive techniques. Postoperative anal stenosis remains a significant complication, particularly when postoperative dilation protocols are not followed. We present a case of a 4-year-old boy with severe anal stenosis following laparoscopic repair of rectal atresia at 6 months of age.

Case Presentation:

The patient presented with severe constipation and overflow incontinence. Clinical examination revealed a markedly narrowed neo-anus, with a maximum Hegar size 6 achievable. History revealed non-adherence to the prescribed postoperative dilation regimen. Examination under anesthesia confirmed a skin-level stenosis, predominantly on the dorsal aspect. A Heineke-Mikulicz-like anoplasty was performed, necessitating an incision through the dorsal sphincter complex due to the extent of the fibrosis. The neo-anus was reconstructed transversely, preserving sphincteric alignment.

Results:

Postoperative recovery was uneventful. At follow-up, the patient was able to tolerate Hegar size 14 dilators. Bowel function normalized, with complete resolution of constipation and incontinence. Continence was preserved, and no further surgical intervention was required.

Conclusion:

Postoperative anal stenosis remains a challenging complication following laparoscopic repair of rectal atresia, particularly in cases of poor adherence to dilation protocols. In selected patients with skin-level stenosis and good sphincter development, a Heineke-Mikulicz-type anoplasty can be a safe and effective minimally invasive solution. Even when the stenosis involves the sphincter complex, careful surgical planning can preserve continence and restore normal bowel function. This technique offers a valuable approach to managing this rare but significant complication and may reduce the need for more extensive perineal reconstruction.

P231

LAPAROSCOPIC VERSUS OPEN INGUINAL HERNIA REPAIR IN CHILDREN: DO TECHNICAL BENEFITS REFLECT IN FAMILY-CENTERED OUTCOMES?Sofia Martinho^{1,2,3}, Miguel Vivas³, Catarina Barroso^{1,2,3}, Jorge Correia-Pinto^{1,2,3}¹Hospital of Braga, Braga, Portugal. ²Instituto de Investigação em Ciências da Vida e da Saúde (ICVS), School of Medicine, Braga, Portugal. ³School of Medicine of the University of Minho, Braga, Portugal**Abstract****Introduction:**

Inguinal hernia repair is among the most common pediatric surgical procedures. Open herniotomy with high ligation remains the gold standard in many institutions, while laparoscopic techniques such as Percutaneous Internal Ring Suturing (PIRS) are increasingly adopted due to reported benefits in operative time, cosmesis, and the ability to assess contralateral patency. Although recurrence rates and clinical outcomes appear equivalent, less is known about how these surgical approaches affect patient-centered and family-centered outcomes in the early postoperative period.

Methods:

A prospective, longitudinal observational study was conducted across two centers with distinct surgical practices—one routinely performing PIRS, the other standard open herniotomy. Pediatric patients undergoing elective inguinal hernia or hydrocele repair between May 2024 and March 2025 were included based on strict clinical criteria. Parent-reported health-related quality of life (HRQOL) and family burden were evaluated 6–10 weeks postoperatively using validated translated versions of the Pediatric Quality of Life Inventory™ (PedsQL™) Infant Scales 1.0, Generic Core Scales 4.0, and Family Impact Module 2.0.

Results:

Ninety-one patients were included: 45 underwent PIRS and 46 open repairs. The majority were male (72.5%), with right-sided hernias being most common. Questionnaire completion occurred at a mean of 6.87 weeks (PIRS) and 8.96 weeks (open). While the PIRS group showed slightly higher HRQOL scores and the open group higher Family Impact scores, no statistically significant differences were found between groups. The only significant finding was a moderate positive correlation between time since surgery and physical health scores in the open group ($\rho = 0.341$, $p = 0.020$).

Conclusions:

Although laparoscopic techniques provide recognized technical and cosmetic benefits, this study found no significant differences in early parent-reported quality of life or family impact. These findings emphasize the need to integrate family-centered outcomes into surgical decision-making, alongside traditional metrics and institutional practice patterns.

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COMBINED ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP) AND LAPAROSCOPIC CHOLECYSTECTOMY (LC) IN A PAEDIATRIC INTESTINAL PSEUDO-OBSTRUCTION (PIPO) PATIENT WITH BILIARY COLIC AND "WHITE BILE": A CASE REPORT

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Abstract

Introduction

Paediatric Intestinal Pseudo-Obstruction (PIPO) is a rare, severe gastrointestinal motility disorder. Biliary complications in these patients are uncommon and may present atypically. "White bile" is a rare finding typically associated with chronic biliary obstruction, previously described mostly in adults. We report the case of a 5-year-old girl with known PIPO who developed biliary colic with evidence of "white bile."

Patients and Methods

During hospitalization for an exacerbation of her underlying disease, the patient developed colicky abdominal pain and a marked reduction in stoma output, which turned clear and non-green. Laboratory tests showed elevated liver enzymes. Abdominal ultrasound and magnetic resonance cholangiopancreatography (MRCP) revealed biliary tree dilatation and gallstones. A combined procedure was performed: endoscopic retrograde cholangiopancreatography (ERCP) with biliary sphincterotomy, followed by laparoscopic cholecystectomy (LC). During ERCP, a translucent, clear-to-white fluid was observed draining from the biliary system.

Results

The atypical biliary content was consistent with "white bile," a phenomenon linked to the decolorization of stagnant bile in an obstructed system, where the biliary epithelium continues to secrete mucus. In this case, the pre-existing intestinal diversion due to PIPO may have disrupted enterohepatic circulation and favored the formation of "white bile." The combined minimally invasive approach resulted in the complete resolution of the obstruction, with no complications, and a rapid restoration of green bile output via the stoma.

Conclusions

This case highlights the diagnostic and therapeutic challenges of biliary disease in children with PIPO. The presence of "white bile" and the temporary absence of bile output reflect a rare but clinically relevant disturbance in bile dynamics. While well-documented in adults, this phenomenon may be underrecognized in the paediatric population. A combined ERCP and laparoscopic approach proved safe and effective, underscoring the value of multidisciplinary, minimally invasive management in complex paediatric cases.

P55

PEDIATRIC INGUINAL HERNIA RECURRENCE AFTER LAPAROSCOPIC REPAIR: ETIOLOGICAL CONSIDERATIONS AND SURGICAL IMPLICATIONS

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Abstract

Purpose: Laparoscopic inguinal hernia repair (LIHR) has gained widespread acceptance in pediatric surgery due to its minimally invasive nature, excellent cosmetic outcomes, and the opportunity for simultaneous contralateral patency exploration and repair. Despite these advantages, hernia recurrence remains a potential postoperative complication. This study aimed to identify the underlying causes of recurrence and propose potential preventive strategies.

Methods: Between 2015 and 2024, a total of 613 pediatric LIHR procedures were performed at our institution. All hernia defects were repaired using purse string non absorbable suture. A retrospective analysis of clinical records and intraoperative video documentation was conducted to investigate possible risk factors for recurrence. Variables evaluated included patient age, anatomical characteristics, surgeon experience, suture technique, and postoperative course.

Results: Twelve patients (10 males, 2 females), aged between 1 month and 7 years, experienced hernia recurrence following LIHR, representing an overall recurrence rate of 1.96%. In 7 cases, recurrence was attributed to technical failures, such as incomplete closure of the internal inguinal ring or insecure knot placement. In 2 cases, recurrence was associated with tissue fragility in premature babies. In the remaining 3 patients, chronic constipation and straining were identified as contributing to elevated intra-abdominal pressure, potentially leading to recurrence. All patients underwent successful laparoscopic reoperation. No further recurrences were observed during a median follow-up of 12 months.

Conclusion: Although laparoscopic purse-string closure represents a standardized and effective approach for pediatric inguinal hernia repair, recurrence remains a potential risk. Meticulous surgical technique, including accurate dissection and secure suture placement, along with appropriate postoperative management, are critical to minimizing hernia recurrence. Further prospective studies are warranted to validate these findings and optimize surgical protocols.

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COMBINED LAPAROSCOPIC SPLENECTOMY AND CHOLECYSTECTOMY FOR RECURRENT BILIARY DISEASE IN HEREDITARY SPHEROCYTOSIS: A CASE REPORT

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Abstract

Background: Hereditary spherocytosis (Hs) is the most common inherited red blood cell membrane disorder in children, frequently complicated by hemolytic anemia, splenomegaly, and premature cholelithiasis. recurrent cholecystitis and gallstone formation are common sequelae, often necessitating surgical intervention. laparoscopic techniques offer potential advantages in reducing morbidity compared to open surgery.

Case Presentation: A 16-year-old female with a confirmed diagnosis of hereditary spherocytosis presented with recurrent episodes of acute cholecystitis and symptomatic cholelithiasis. imaging studies revealed significant gallstones and splenomegaly. previous attempts at conservative management had failed. given the recurrent nature of her biliary symptoms and ongoing hemolytic crises, a combined laparoscopic cholecystectomy and splenectomy was performed.

Method: Preoperative optimization included appropriate vaccinations and blood product availability. the spleen and gallbladder were extracted via a small abdominal incision, minimizing surgical trauma and promoting rapid recovery.

Result: The procedure was completed successfully without conversion to open surgery. intraoperative blood loss was minimal (<50 ml). the patient experienced an uneventful postoperative course. this case highlights the safety and efficacy of the combined laparoscopic approach in pediatric patients with Hs and coexisting cholelithiasis, offering the benefits of reduced morbidity, shorter hospital stay, and effective long-term management of both hematologic and biliary complications,

Conclusion: Laparoscopic cholecystectomy and splenectomy is a safe and effective approach for managing recurrent cholecystitis and cholelithiasis in patients with hereditary spherocytosis. this combined approach allows for definitive treatment of both conditions in a single procedure, minimizing the need for multiple hospitalizations and potentially improving patient outcomes.

P182

ULTRA-THIN URETEROSCOPE AS A LIFESAVING TOOL IN NEONATAL AIRWAY EMERGENCY

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Abstract

Aim: The aim of this **Abstract** is to present a rare and life-threatening case of tracheal rupture in an extremely low birth weight (ELBW) premature infant and to highlight the emergency use of a flexible ureteroscope as a life-saving tool when conventional bronchoscopy is not feasible.

Case Presentation: A 750-gram male infant, born at 25 weeks of gestation, developed progressive respiratory distress on postnatal day five and required intubation. Following the procedure, a massive right-sided pneumothorax with ongoing air leak was detected. Despite placement of multiple chest drains, the infant's condition deteriorated with cardiac arrest. After resuscitation, imaging revealed continued air leakage, raising concern for a tracheal injury.

Due to the patient's extreme prematurity and clinical instability, emergency thoracotomy was initially postponed. Conventional pediatric bronchoscopes were too large for the neonate's airway. As an alternative, a 2.8 mm flexible ureteroscope was used for bedside bronchoscopy via the endotracheal tube. A longitudinal tracheal laceration just above the carina was clearly visualized. The endotracheal tube was repositioned beyond the defect under direct visualization, and the infant was temporarily stabilized.

On the third day, clinical decompensation recurred. Emergency right posterolateral thoracotomy confirmed a large tracheal tear, which was repaired with primary sutures. Intraoperative cardiac massage was required due to severe instability. Postoperatively, the air leak resolved and healing was confirmed by follow-up bronchoscopy. Despite these interventions, the infant succumbed to respiratory failure on postoperative day 10.

Conclusion: This case emphasizes the value of interdisciplinary innovation in neonatal critical care. In emergencies involving ELBW infants, off-label use of ultra-thin instruments such as ureteroscopes may enable crucial airway access and stabilization when conventional tools are not viable. This technique can serve as a time-saving bridge to definitive surgical management.

POSTER SESSION 8

P19

KIDNEY HYDATID CYST IN WESTERN COUNTRIES: IS MINIMALLY INVASIVE SURGERY SAFE IN CHILDREN?

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Abstract

Aim of the study

Hydatid disease is a rural zoonotic parasitic infection. It predominantly affects liver and lungs, rarely kidneys (1.9% in children). The main treatment is surgery, either open or MIS (minimal invasive surgery). We reported our experience in treating a kidney upper pole cyst by laparoscopic excision in a western paediatric patient.

Case description

This is a case report of a 10-year-old boy who was found to have one hydatid cyst located in the upper pole of the left kidney and one in the lower pole of ipsilateral lung.

The patient initially underwent left lower lobectomy for pulmonary cyst. Three months later he underwent a laparoscopic transperitoneal cystectomy during which the intact germinal membrane and daughter cysts were suctioned. This technique allowed us to preserve the renal parenchyma and safely removed the membrane without contamination or anaphylaxis. Pre-operative albendazole therapy was started to reduce the risk of cyst spillage and recurrence. This was continued for four weeks post-operatively.

The post-operative course was uneventful. Follow-up imaging at eight months confirmed resolution without recurrence.

Conclusions

Minimally invasive laparoscopic techniques, either transperitoneal or retroperitoneal, offer excellent exposure, reduced recovery time and minimised morbidity. This case highlights the safety and efficacy of laparoscopic management. It demonstrates its potential as the treatment of choice even in regions with limited experience in the management of echinococcosis

P27

PNEUMOVESICOSCOPIC URETERONEOCYSTOSTOMY FOR OBSTRUCTING MEGAURETER IN A 2 MONTHS OLD BOY

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Abstract

To report pneumovesicoscopic ureteral reimplantation in a 57 days old boy with solitary kidney.

Material and Methods

Two weeks old boy referred for hydroureteronephrosis of his solitary kidney. AP diameter was 27 mm and parenchymal thickness was between 1-6mm with mild dilation of the ureter. Cystogram revealed grade-V reflux in the solitary kidney. control ultrasonography on 55th day of life revealed deterioration with AP diameter of 33mm, parenchymal thickness between 1-2 mm and ureteral dilation of 24mm. The patient was regarded as refluxing and obstructing megaureter and urgent intervention was decided (preferably stent insertion). During surgery, guidewire could not be introduced to ureter and reimplantation was deemed necessary. the procedure was converted to pneumovesicoscopy and 3 ports were employed. After dissection of the ureter, a limited Glenn-Anderson reimplantation was performed. Postoperative course was uneventful and patients discharged postop day-7.

Results

On postoperative follow-up, the patient did not experience any morbidity. Hydronephrosis recovered gradually and AP diameter of the pelvis regressed to 11 mm and ureter was not visible by ultrasonography on 28th month after the operation and final cr level was 0,4 mg/dL.

Conclusions

Pneumovesicoscopic approach can help managing ureterovesical conditions even in young infants as young as 2 months. Although vesicoureteral reflux is not a good indication in these patients and we strongly hesitate, intervention may be inevitable due to obstruction. Obstruction can be relieved satisfactorily but long term outcomes regarding vesicoureteral reflux needs close surveillance. In the unfavorable scenario of residual or de novo reflux, the procedure may be regarded as a refluxing ureteroneocystostomy performed in a minimally invasive manner, and give the patient time to grow up and become a better candidate for a successful procedure.

P46

LAPAROSCOPIC WOODRUFF URETERAL REIMPLANTATION WITH SHANFIELD MODIFICATION IN AN INFANT WITH SINGLE-SYSTEM ECTOPIC URETER

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Abstract

Purpose:

Single-system ectopic ureters (SSEU) are rare congenital anomalies that can lead to ureterohydronephrosis, recurrent urinary tract infections (UTIs), and renal deterioration. We report a laparoscopic Woodruff ureteral reimplantation with Shanfield modification in an infant with SSEU.

Patients and Methods:

A 7-month-old female (5 kg) presented with a left SSEU inserting into the vaginal introitus, progressive ureterohydronephrosis (distal ureter diameter 2 cm), and decreased ipsilateral renal function (DRF 34%). Functional studies revealed a severe obstructive pattern.

The procedure began with urethrocystoscopy and vaginoscopy in lithotomy position, confirming the diagnosis. Laparoscopic dissection of the ureter and bladder was performed with three ports in a supine position. The ureter was divided distally, and proximal tapering was performed using the Hendren technique. Reimplantation was carried out through a modified extravesical submucosal tunnel (Shanfield modification) to optimize the length-to-diameter ratio, using interrupted sutures.

Results:

Operative time was 130 minutes with minimal blood loss. Postoperative recovery was uneventful, with oral intake on day one and discharge on day two. At six-month follow-up, hydronephrosis had resolved, renal function remained stable, and no further UTIs were reported.

Conclusion:

Laparoscopic Woodruff ureteral reimplantation with Shanfield modification is a feasible, safe, and effective option for treating SSEU in infants. This minimally invasive technique allows precise ureteral tailoring and secure reimplantation, promoting early recovery and excellent outcomes, even in very small patients.

P164

ENDOSCOPIC HIGH PRESSURE BALLOON DILATION OF THE URETER IN PRIMARY OBSTRUCTIVE MEGAURETER: A 16-YEAR REVIEW

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Abstract

Introduction

Primary obstructive megaureter (POM) is a common condition, mostly caused by ureterovesical junction obstruction. There are several treatment options for POM. Endoscopic high pressure balloon dilation (HPBD) is a minimally invasive technique that can be considered, although its results and indications are still debatable. In this case series we aim to review the cases of HPBD performed in our hospital and to address its results and possible complications.

Materials and Methods

A retrospective review of all the cases of endoscopic HPBD performed in our hospital in a 16-year period (2009-2025). Data collected included demography, clinical presentation, diagnosis, exams, procedures performed and follow-up.

Results

Eight patients with nine renal units (RU) were submitted to HPBD in the study period, with a median age of seven-months [1-76]. All cases had obstructive non-refluxing megaureter; one case had a concomitant ureteropelvic junction obstruction. The surgical indications were loss or worsening of renal function and ureterohydronephrosis, and/or infection. The procedure was performed with an angioplasty balloon, with a median pressure of 15 atmospheres [8-20]. Few cases had the duration or number of attempts recorded, with a median duration of 1.5 minutes and a median of 2.5 attempts. In all cases a double-J stent was placed after the procedure. There were no perioperative complications. There was resolution of obstructive pattern on the renogram in 6/9 cases; in two cases, the renogram was not performed yet and patients are still under follow-up. One case had a urinary tract infection five months after HPBD and was submitted to ureteral reimplantation 6 months after the primary procedure.

Conclusion

High pressure balloon dilation of primary obstructive megaureter is an endoscopic alternative technique, with few series reporting its indications and results. In our series, it was a safe and feasible procedure, allowing improvement of the condition without relevant complications.

P180

FIVE-YEAR EXPERIENCE ON LAPAROSCOPIC REPAIR OF INTRA-ABDOMINAL TESTIS

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Abstract

Introduction

Undescended testis is one of the most common congenital conditions pediatric surgeons come across. Intra-abdominal testis is undoubtedly more challenging to address, and laparoscopic approach offers a minimally invasive alternative to open surgery.

Over the past five years, our department has made a significant effort to employ the laparoscopic approach for the investigation and treatment of intra-abdominal testis (IAT). We aim to summarize the key clinical findings and success rates noted during this period, highlighting the importance of correct timing for improved patient outcomes.

Materials and Methods

We treated 9 patients with a mean age of 4.4 years at the time of surgery. A three-port technique, starting with abdominal exploration to locate the testis was used. Once a viable testis was identified, single-stage or two-stage Fowler-Stephens orchiopexy, was employed based on the testis's position and cord length. In cases of insufficient testicular volume or absent testis, excision and biopsy of cord remnant were performed.

Results

Our overall success rate in the presence of a viable testis was 100%. Success was defined as the testis being positioned in the scrotum, maintaining adequate volume upon 6 month or more follow-up. No intraoperative complications were reported.

Out of 5 patients who underwent any orchiopexy, 4 exhibited satisfactory testicular development upon follow-up assessments and 1 had an undeveloped testis located but orchiopexy was decided due to complete remission of the contralateral testis. No viable testis on the side of exploration was found in 2 patients. Excision was chosen for 1 patient due to excessive atrophy of the testis in question.

Conclusion

Our five-year experience with laparoscopic repair of intra-abdominal testis has taught us its undisputable diagnostic and therapeutic benefits, standing as a superior alternative to traditional surgical methods for the management of cryptorchidism.

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HIGH-FLOW PRIAPISM IN PEDIATRIC AGE: AN UNCOMMON EMERGENCY RESOLVED THROUGH ENDOSCOPIC EMBOLIZATION

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Abstract

Introduction

Priapism is defined as a persistent and abnormal penile erection unrelated to sexual stimulation, often accompanied by pain and tension. It is an extremely rare condition in the pediatric population. Based on its pathophysiology, priapism is categorized into low-flow (veno-occlusive), high-flow (arterial), and mixed forms. The most common cause in children is sickle cell disease, followed by chronic myeloid leukemia. Traumatic causes are rare.

Materials and Methods

We report two cases of boys aged 11 and 14 who presented with priapism and dysuria lasting 36 hours. One patient had a history of a right lower limb bimalleolar fracture. Both patients had experienced trauma to the bulbar-membranous urethral area—one following a bicycle fall, the other during orthopedic manipulation for fracture reduction under general anesthesia using a pelvic support device.

Blood tests excluded hematological disorders. Physical examination revealed perineal tenderness without visible ecchymosis. Color Doppler ultrasound and selective angiography of the iliac and internal pudendal arteries identified a left-sided arteriocavernous fistula between the deep and dorsal arteries and the corpus cavernosum.

Results

During angiography, embolization of the fistula was performed, achieving closure of the fistula, reduction of arterial inflow, and facilitation of venous drainage. Antiplatelet therapy was administered. Rapid detumescence and resolution of pain followed, with full recovery observed within days.

Discussion and Conclusion

Post-traumatic high-flow priapism in pediatric patients is rare and can manifest hours to days after injury. Diagnosis requires detailed clinical history, Doppler ultrasound, and superselective angiography. Embolization is the treatment of choice, preserving erectile function. In contrast, surgical arterial ligation often leads to irreversible erectile dysfunction. In both reported cases, follow-up at one and two years confirmed normal nocturnal erections, indicating preserved erectile physiology.

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OBSTRUCTED DOUBLE-J CATHETER – HOW TO AVOID SURGERY WHEN WE CAN'T REMOVE IT?

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Abstract

DJ catheter encrustation is a significant complication in urological patients, leading to difficulty in removing it. In the period from December 2024 to February 2025, at the Clinical Department of Pediatric Surgery and Urology in Zielona Góra, the occurrence of cases of DJ catheter obstructions by newly formed deposits were observed. In response, an original method of catheter removal was developed.

The analysis included 5 patients aged 9-17 years. During planned cystoscopy, they encountered difficulties in removing DJ catheter implanted for urolithiasis for 2 - 8 months. Cystoscopy was performed with an unsuccessful attempt to remove them due to encrustation and blockage. Therefore, an innovative and original technique was introduced, consisting in placing a second, identical or thicker DJ catheter parallel to the encrusted one, leaving both for a period of 2 weeks to 2 months, depending on the availability of the surgical date.

During this time, respiratory movements, ureteral peristalsis and patient activity caused the catheters to move relative to each other, which resulted in a gradual separation of the stone from the originally inserted DJ catheter. Another cystoscopy was performed, during which both catheters were removed without difficulty.

None of the patients experienced complications.

The original technique proved effective in all cases, enabling safe removal of the encrusted DJ catheter without the need for additional surgical interventions. The mechanical action of two parallel catheters allows for gradual release of the jammed catheter, which makes the method attractive and an innovative form of treatment. The phenomenon of a sudden increase in cases of DJ catheter encrustation requires further research into the potential aetiological factors of this problem. It is also necessary to analyze the chemical composition of the deposits formed and the influence of the catheter material on their encrustation to better understand the mechanisms leading to this complication.

P227

LAPAROSCOPIC ADRENALECTOMY IN INFANTS: A CASE SERIES OF THREE PATIENTS

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Abstract

Introduction:

Adrenal masses in infancy and early childhood are rare and encompass a wide spectrum of histological entities, ranging from benign vascular lesions to malignant neuroblastic tumors. While laparoscopic adrenalectomy is well established in older children and adults, its application in infants and toddlers remains limited due to technical and anatomical challenges. We present a case series of three pediatric patients under the age of two who underwent laparoscopic adrenalectomy for adrenal masses of varying etiology.

Methods:

A retrospective review was conducted of three patients (ages 4, 18, and 22 months) who underwent laparoscopic adrenalectomy between January 2025 and April 2025. All procedures were performed via a lateral transperitoneal approach. Clinical presentation, imaging findings, operative technique, histopathological diagnosis, and postoperative course were documented and analyzed.

Results:

All three patients underwent successful laparoscopic adrenalectomy with no intraoperative or postoperative complications. None of the patients required intraoperative blood transfusion. Operative time ranged from 1.5 to 2.5 hours. The underlying pathologies included: (1) a $1.4 \times 0.9 \times 1.3$ cm benign mixed hemangiomatous lesion with cavernous features and intravascular papillary endothelial hyperplasia; (2) a well-differentiated peripheral neuroblastoma ($2.95 \times 2.95 \times 2.7$ cm) and (3) poorly differentiated neuroblastoma ($2.11 \times 1.15 \times 2.02$ cm). All patients tolerated early oral feeding and were discharged on the second postoperative day. No recurrences or late complications were observed during follow-up.

Conclusions:

Laparoscopic adrenalectomy using a lateral transperitoneal approach appears to be a safe and effective technique even in infants and toddlers with adrenal masses. This minimally invasive technique is particularly promising for the excision of small adrenal tumors, offering minimal blood loss, fast postoperative recovery, and favorable surgical outcomes, regardless of the histological diagnosis.

P232

OUTCOMES OF URETERAL BALLOON DILATION AFTER FAILED PYELOPLASTY: A CASE SERIES OF FOUR PATIENTS

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Abstract

Introduction: Pyeloplasty is the standard surgical treatment for ureteropelvic junction obstruction (UPJO) in children, but failure rates may reach up to 10%, making revision surgery more complex. This study evaluates the outcomes of ureteral balloon dilation as a secondary treatment following failed pyeloplasty.

Methods: A retrospective review was performed on pediatric patients treated with balloon dilation for recurrent UPJO after failed pyeloplasty between January 2020 and May 2025. Collected data included demographic information, imaging modalities, Society of Fetal Urology (SFU) hydronephrosis grades, and duration of follow-up. Success was defined as either improvement in hydronephrosis on ultrasound and no need for further surgery.

Results: Four patients (2 females, 2 males; ages 7–18) were included. Three patients had prior open and one had laparoscopic pyeloplasty. Preoperative hydronephrosis ranged from SFU grade 2 to 4. Postoperatively, hydronephrosis improved in two patients but worsened in one. No complications occurred. Hospital stay was 1 day in all cases. The follow-up period ranged from 15 to 34 months. Three patients required secondary surgery; one remains under follow-up.

Conclusion: Ureteral balloon dilation is a minimally invasive method with low complication rates and short hospital stay. However, based on our small case series, its efficacy following failed pyeloplasty appears limited. We do not currently recommend it as a standard secondary treatment without stronger supporting evidence.

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CLINICAL OUTCOMES OF LAPAROSCOPIC PYELOPLASTY IN CHILDREN WITH URETEROPELVIC JUNCTION OBSTRUCTIONSerkan Arslan¹, Mustafa Azizoglu^{2,3}, Hakkari Aydogdu¹, Erol Basuguy¹, Mehmet Hanifi Okur⁴¹Dicle University, Diyarbakir, Turkey. ²Esenyurt Necmi Kadioglu State Hospital, Istanbul, Turkey. ³Istinye University, Istanbul, Turkey. ⁴Balikesir University, Balikesir, Turkey**Abstract**

Introduction: Ureteropelvic junction obstruction (UPJO) is the most common cause of congenital hydronephrosis. In the literature, the recurrence rate following laparoscopic pyeloplasty is generally reported to be between 2% and 10%, depending on patient selection and surgical experience. In recent years, laparoscopic pyeloplasty (LP) has become increasingly favored as a treatment option. This study aims to evaluate the clinical outcomes of patients who underwent laparoscopic pyeloplasty at our institution.

Methods: In our study, we only included patients who underwent laparoscopic surgery. A retrospective analysis was conducted on 17 patients who underwent laparoscopic pyeloplasty (3-port) in our clinic between 2017 and 2025. Patient data were collected from medical records. Variables analyzed included age, gender, affected side, length of hospital stay, surgical success, and recurrence rates.

Results: Seventy percent of the patients (n=12) were male and 30% (n=5) were female. The mean age was 6 years (min-max: 2 months – 16 years). In 70% of the patients (n=12), the left kidney was affected. All patients underwent antegrade placement of a 4 Fr double-J (DJ) catheter. One patient had a rotational anomaly of the kidney, with the right kidney being affected. No intraoperative complications occurred in any of the patients. All surgeries were completed laparoscopically without conversion to open surgery. The mean operation time was 2.5 hours (min-max: 1.5 – 4.5 hours). The mean length of hospital stay was 3.6 days (min-max: 2 – 5 days). The recurrence rate was 6%. However, that patient required open surgery.

Conclusion: Laparoscopic pyeloplasty is a safe, effective, and minimally invasive surgical option for the treatment of ureteropelvic junction obstruction in pediatric patients. In our series, the procedure was successfully completed in all cases without intraoperative complications or need for conversion to open surgery.

P241

LAPAROSCOPIC-ASSISTED EXCISION OF ADNEXAL CYSTS IN ADOLESCENTS: A CASE SERIES OF SEVEN PATIENTS

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Abstract

Background:

Ovarian and paraovarian cysts are not common in adolescents but can be discovered incidentally with ultrasound imaging during the investigation of abdominal pain. Surgical excision or aspiration may be necessary in some cases where the symptoms are intense or the cysts are larger in size.

It is important to preserve the function of the ovaries and use minimally-invasive techniques that are highly beneficial for the young patients. This case series presents seven adolescent girls who underwent laparoscopic-assisted removal of adnexal cysts at our clinic.

Methods:

Between 2020 and 2025, seven patients aged 8 to 15 years were treated for ovarian and paraovarian cysts using a laparoscopic-assisted technique. All patients had imaging (ultrasound) confirming the diagnosis and lab examinations differentiating the cysts from malignancy. The approach involved laparoscopic stabilization followed by aspiration of the content of the cysts and complete removal through a small suprapubic incision. The aspiration occurred either from the aforementioned incision using a purse string suture and foley catheter or by laparoscopic needle-apparatus. Fluid for cytologic examination was sampled before and after cystectomy.

Results:

The size of the cysts that were laparoscopically-assisted excised ranged from 6 to 20 cm in diameter. All cases were managed successfully with no complications intraoperatively or postoperatively. The histology reports described benign cysts in all cases and hospital stay ranged from 2 to 4 days. The follow-up of all patients included clinical examination and ultrasound imaging, with no recurrence or alteration in the ovarian tissue.

Conclusion:

Laparoscopic-assisted excision offers a safe and effective option for managing adnexal cysts in adolescents, considering all the benefits of minimally invasive surgery. The used technique was particularly useful in larger cysts (one 20 cm cyst case). This approach allows for good cosmetic outcomes for the young patients and the preservation of the ovaries and fallopian tubes.

P253

CHOOSING THE BEST CUT: BALANCING EXCELLENCE, COST, AND EXPECTATIONS IN PEDIATRIC VARICOCELECTOMY

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Abstract

Purpose:

Varicocelectomy is a common procedure in adolescents. While laparoscopic techniques offer excellent visualization and precise vessel control, the decision between laparoscopic and open repair in private practice is influenced by both clinical and insurance-related factors. This study compares the two approaches regarding outcomes, recovery, and feasibility in a private pediatric setting.

Patients and Methods:

Our team retrospectively analyzed 43 boys (mean age: 13 years) with grade IV–V varicocele treated between 2020 and 2024 at a private pediatric surgical center. Most cases were diagnosed during routine school or sports physical exams or via self-examination. All patients underwent clinical evaluation and Doppler ultrasound using the Sarteschi classification.

Seventeen patients underwent laparoscopic Palomo varicocelectomy—most with an ultrasonic scalpel, while two used clips and two a Ligasure device. Twenty-six patients underwent open inguinal varicocelectomy. All procedures were performed by the same single pediatric surgeon (N.B.), ensuring consistency in technique and decision-making.

In the laparoscopic group, veins were sealed using electrocautery, ultrasonic scalpel, or vessel-sealing devices. In both techniques, the testicular artery and lymphatics were preserved to maintain function and drainage.

Results:

No recurrences or testicular atrophy were noted. Three hydroceles occurred in the laparoscopic group. Postoperative pain and recovery time were greater in this group. All open cases were discharged the same day, while laparoscopic patients required overnight stay. The laparoscopic method incurred higher costs due to disposable tools and hospitalization, with partial insurance coverage in several cases. This led to family dissatisfaction and negatively impacted surgeon perception.

Conclusion:

Laparoscopic varicocelectomy is safe and effective. However, in private pediatric practice, the open approach may be preferable due to faster recovery, lower cost, full insurance coverage, and higher family satisfaction. In such environments, surgical decision-making often extends beyond medical indications and must balance clinical outcomes with systemic constraints.

P62

BIPLANAR EXTRA-AND TRANS-PERITONEAL URETEROCUTANEOSTOMY BY LAPAROSCOPY (BETUL)

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Abstract

Despite brilliant developments in modern medicine and increased availability and access to medical care, incontinent diversions still has a place in the management of challenging conditions. Ureterocutaneostomy (in refluxing or non-refluxing moieties) is a viable option for relief of obstruction. Conventionally, it is performed in an open fashion. As with many surgical procedures, laparoscopic ureterocutaneostomy has also been reported. Here we report our laparoscopic technique of extraperitoneal cutaneous ureterostomy with the help of transperitoneal laparoscopy.

Seven patients are enrolled in the study with a mean age of $60,57 \pm 26,53$ (12 days-16 years). Indications were bladder outlet obstruction, VUR and obstructing megaureter. Six patients received unilateral, 1 patient bilateral diversion. Sober Y ureterostomy was performed in 6 patients and loop ureterostomy in 1. One patient 1 unilateral Y ureterostomy needed stoma revision surgery for stenosis.

One 5mm optical port was inserted from the umbilicus. After inspection and deciding the stoma site, another port (3 or 5mm) was inserted staying outside the peritoneum if possible. This port is directed to the ureter bluntly. If necessary, another 3 or 5mm assistant port is introduced. The ureter is grasped and taken out through the port site and stoma is reconstructed outside. For Y ureterostomy; ureter is divided, one end is reserved for stoma and the other is anastomosed the the other limb in an end-to-side fashion. For loop ureterostomy, one side of the ureteral wall is opened and reconstructed as standard loop stoma.

Uretero-cutaneostomy is not a common procedure in children and surgical approach should be individualized for each patient as indications vary significantly as well as the anatomy of every single patient. Transperitoneal laparoscopic approach provides evaluation of the anatomy of the patient, extended vision and magnification, and guiding the decision of the proper site for the stoma.

POSTER SESSION 9

P113

PRIMARY MANAGEMENT OF PEDIATRIC PLEURAL EMPYEMA: A TWO-CENTER EXPERIENCE COMPARING VATS AND INTRAPLEURAL FIBRINOLYSIS

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Abstract

Purpose: Pleural empyema is a common complication of pneumonia in pediatric patients and appears to be increasing in incidence in developed countries. Optimal management remains controversial, with some advocating thoracic drainage and fibrinolysis for early stages and others reserving video-assisted thoracoscopic surgery for advanced cases. This study aims to compare these two surgical approaches.

Materials and Methods: A retrospective observational study was conducted, including pediatric patients aged 0 to 16 years who underwent surgical management for pleural empyema between May 2005 and March 2025 at two tertiary pediatric hospitals. Outcomes were compared between those treated primarily with video-assisted thoracoscopic surgery and those with thoracic drainage and fibrinolysis. Continuous variables were expressed as mean and standard deviation and compared using the Mann-Whitney U test. Categorical variables were compared using proportions. The relationship between symptom duration and postoperative hospital stay was assessed using Spearman's rank correlation coefficient.

Results: Eighty-five patients were included: 61 primarily treated with video-assisted thoracoscopic surgery and 24 with thoracic drainage and fibrinolysis. Secondary intervention was required in 33.3% of the thoracic drainage and fibrinolysis group and in none of the video-assisted thoracoscopic surgery group. Hospital stay was significantly shorter in the video-assisted thoracoscopic surgery group (mean 17.0 days vs 20.2 days, $p = 0.042$), as was time to normalization of C-reactive protein (mean 12.0 days vs 18.1 days, $p = 0.017$). Symptom duration prior to intervention did not significantly correlate with treatment failure ($p = 0.06$) but showed a weak correlation with postoperative stay (Spearman's $\rho = +0.17$, $p = 0.06$).

Conclusions: Primary thoracic drainage and fibrinolysis are associated with higher treatment failure, longer hospitalization, and delayed recovery compared to video-assisted thoracoscopic surgery. Early surgical intervention may lead to better outcomes in pediatric pleural empyema, though further studies are needed.

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SURGICAL RESULTS OF VATS THYMECTOMY IN JUVENILE MYASTHENIA GRAVIS-SINGLE CENTER EXPERIENCE

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Abstract

Introduction: Since increased use and improvement of minimal invasive surgery, thoracoscopic thymectomy became very important part of management strategy for juvenile myasthenia gravis (JMG) in pediatric patients. Clinical improvement and decreased medication usage has already been described related to thymectomy itself, but when it comes to minimal invasive approach, lesser morbidity and mortality, shorter hospital stay and aesthetics are certainly appropriate reason why many surgeons choose this approach.

Methods: All cases of JMG in pediatric patients treated by video-assisted thoracoscopic (VATS) thymectomy in a single tertiary center from January 2008 to September 2024, were analyzed. Right VATS approach was used in all patients with extended dissection and completeness of thymectomy was ensured at the time of surgery by anatomical inspection of the resected gland and thymic bed for perithymic fat and ectopic thymic tissue. Demographic criteria (age at time of surgery, sex) and clinical outcome measures at follow up (impairment in number and intensity of symptoms and reduced medication use) were analyzed.

Results: A total of 25 patients undergo VATS thymectomy for JMG. The average age at the time of operation was 13.8 ± 2.2 years (range, 8-18 years), and 22 (88%) patients were female. The electromyography and acetylcholine receptor antibody tests were positive in 18 (72%) patients. In one case (4%) conversion had to be done due to bleeding from brachiocephalic trunk. Mean duration of follow up was 7.6 years (range 2 -16 years), and during that period, 18 patients (72%) reported less intense symptoms and reduced number and dosage of medications.

Conclusion: VATS thymectomy is favorable surgical technique for management of pediatric patients with JMG, both sexes, different ages and symptoms, offering less morbidity and providing improved clinical status as well as reduced medication usage in treated patients.

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EXPANDING MINIMALLY INVASIVE THORACIC SURGERY TO THE PEDIATRIC POPULATION: FEASIBILITY, SAFETY, AND EARLY OUTCOMES OF UNIPORTAL VATS

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Abstract

Abstract:

Purpose: Although well established in adults, uniportal video-assisted thoracoscopic surgery (U-VATS) remains scarcely reported in pediatric patients. This study presents our early experience following an interinstitutional protocol between Thoracic and Pediatric Surgery departments.

Methods: We retrospectively analyzed all pediatric patients who underwent U-VATS between March 2020 and December 2024, focusing on perioperative parameters and outcomes.

Results: Twenty-three patients underwent 25 U-VATS procedures. The majority (80%) had oncological indications. Interventions included nine atypical pulmonary resections for metastases, six mediastinal biopsies, four aspergilloma resections, one lobectomy for congenital pulmonary airway malformation, and one bronchogenic cyst excision. Two primary tumors were resected: a ganglioneuroma and a paraganglioma. The latter required conversion to thoracotomy due to the tumor extending into the right atrium. Additional procedures included one diagnostic thoracoscopy with pleural drainage and one apical resection with pleurodesis for recurrent pneumothorax. Median patient age was 13 years (range 2–17), and 73.9% were male. Median operative time was 55 minutes. There were no intraoperative or postoperative complications, no 30-day mortality, and median hospital stay was 2 days.

Conclusions: U-VATS is a safe and reproducible technique in selected pediatric cases, allowing effective management of a broad spectrum of thoracic pathologies. The ability to palpate lesions intraoperatively is a notable advantage over conventional thoracoscopy. Our early experience supports further integration of this minimally invasive approach into pediatric thoracic surgery.

P131

THORACOSCOPIC EXCISION OF A BRONCHOGENIC CYST

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Abstract

Introduction

We present a case of a 13-month-old female with a bronchogenic cyst in the right upper mediastinum, highlighting thoroscopic resection.

Case Presentation

A 13-month-old female was evaluated for a thoracic mass detected on prenatal ultrasound. Chest CT demonstrated a 3 cm lesion in the mediastinum. MRI revealed a 4.5 cm cystic lesion in the right upper lobe; no systemic arterial supply was identified, excluding pulmonary sequestration. She underwent video-assisted thoracoscopic surgery (VATS) resection. The cyst's gelatinous contents were aspirated and the lesion was excised. Histopathology confirmed bronchogenic cyst. She had an uneventful postoperative course; chest drain was removed on day 2 and she was discharged on day 3. At 1 month she was asymptomatic with normal chest X-ray

Conclusion

Early detection and prenatal diagnosis of congenital thoracic cystic lesions allow timely surgical planning. Bronchogenic cyst should be included in the differential diagnosis of mediastinal cystic masses in small children. Video-assisted thoracoscopic resection can be performed safely in infants, enabling rapid recovery.

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THORACOSCOPIC APPROACH OF CONGENITAL THORACIC CYSTIC LESIONS AND PREOPERATIVE ASSESSMENT FOR OUTCOME IMPROVEMENT

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Abstract

Introduction:

Bronchogenic and esophageal duplication cysts are rare congenital mediastinal anomalies. While prenatal detection is increasingly common, the optimal timing and approach to surgical management remain under discussion. We present our institutional experience, emphasizing the role of comprehensive preoperative assessment in enhancing thoracoscopic approach and outcomes.

Materials and Methods:

We retrospectively reviewed patients treated for congenital lung malformations between 2010 and 2025. From this cohort, we identified 10 children with mediastinal cystic lesions. Clinical, imaging, surgical, and histopathological data were analyzed to evaluate diagnostic accuracy and guide management.

Results:

Of 120 patients with congenital lung anomalies, 10 (6 females, 4 males) had mediastinal cystic lesions, 7 right-sided and 3 left-sided. Median lesion diameter was 4.0 cm (range 2.5–6.0 cm). Lesions were subcarinal in 7 cases (70%) and paratracheal in 3 (30%). Eight were bronchogenic cysts (80%) and two esophageal duplication cysts (20%). All but one had a prenatal diagnosis. Median age at surgery was 22 months (range 8 months–6 years). One patient had respiratory symptoms; five showed mild dysphagia, confirmed by esophageal compression on imaging. Subcarinal lesions underwent cardiothoracic evaluation. Histology revealed chronic inflammation in all bronchogenic cysts excised after 1 year of age (n=4), while duplication cysts in patients aging less than 10 months showed mucosal erosion, ectopic gastric mucosa, and severe inflammation. Notably, 60% (6/10) of lesions exhibited histological inflammation and Thoracoscopic resection (VATS) achieved complete excision in all but one case, which later experienced recurrence and chronic respiratory infections.

Conclusions:

Preoperative assessment improves Thoracoscopic excision and outcome of congenital thoracic cystic lesions. Even asymptomatic patients might be considered for early surgery to prevent complications subclinical progression of inflammation. Partial or incomplete resection should be avoided to limit recurrence and complications. Intraoperative endoscopic assessment is also recommended for safer removal of all paratracheal and subcarinal lesions.

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PEDIATRIC EMPYEMA: VATS, FIBRINOLYSIS OR BOTH?

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Abstract

Introduction

Thoracic empyema, defined by the accumulation of pus within the pleural cavity and lung entrapment with atelectasy, continues to pose a substantial clinical challenge, concerning the decision of the correct therapeutic strategy. Both Vats and Fibrinolysis are proven effective methods of pleural empyema treatment. Lots of studies show both methods effectiveness but their combination is not studied yet and proven.

Purpose

The purpose of this review of 20 patients is to propose and show the effectiveness of the combination of both methods and the improvement of therapeutic protocols and duration of recovery and hospitalization.

Materials And Methods

We reviewed clinical and data from 20 children who developed pleural empyema and underwent VATS and fibrinolysis at the same time. Each patient met all the criteria for intervention due to the empyema, such as ultrasound findings (liquid quantity and composition, pleural thickness, diaphragms inside the liquid, atelectasy) correct antibiotic treatment, fever and x-ray imaging. All patients were given one dose of fibrinolysis in the OR after the VATS procedure.

Results

All patients resulted with no fever and improvement of clinical and laboratory findings from the 1st postoperative day. On 4th-5th postoperative day the thoracic catheter was removed and patients discharged the next day with p.o. antibiotics. In all patients a single dose of fibrinolysis was enough. No complications were reported.

Conclusions

With our review we found out that combination of VATS and fibrinolysis is a promising method of pleural empyema treatment. Both treatments are effective but combining them could lead to faster recovery with less morbidity and hospitalization.

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MIRPE: MAKE IT SAFER. THE USE OF STERNAL ELEVATION AND BLUNT MEDIASTINAL DISSECTION WITH ONE ACCESSORY TROCAR

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Abstract

Introduction

Nuss procedure is considered worldwide the gold standard for minimally invasive repair of pectus excavatum (MIRPE). However, it may be associated with severe complications. For this reason, this technique has undergone numerous modifications over the years. In this study we aim to describe how we routinely perform MIRPE to improve visualization and safety, using thoracoscopy, sternal elevation and one accessory trocar for blunt dissection with an endo-peanut.

Materials and Methods

We collected data of all the procedures performed between July 2022 and April 2025 in which we routinely used thoracoscopy, sternal elevation and blunt mediastinal dissection. We do a thoracoscopy using a 5 mm optic 30° in the 7th right intercostal space and one 5 mm accessory trocar in the right incision made for bar insertion, to reduce the number of visible scars. At the beginning of surgery, we perform sternal elevation: two wires are placed into the sternum and connected to a table-mounted retractor to elevate the sternum.

We use an endo-peanut through accessory trocar for retrosternal dissection and create a space in the anterior mediastinum for the passage of the bar.

Results

In the last 2 years and 9 months we performed 45 procedures in patients aged between 13 and 26 years old and male prevalence.

In our Hospital we routinely performed MIRPE with thoracoscopy, sternal elevation and one accessory trocar for blunt dissection with an endo-peanut and we never experienced life-threatening complications such as major bleeding, cardiac lesion and/or heart perforation.

Conclusion

According to our experience, it is possible to make MIRPE safer performing these surgical procedures: thoracoscopy, sternal elevation and mediastinal blunt dissection. Although it remains a challenging intervention and for that, it should only be carried out in specialized centres.

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OPEN THORACOTOMY VS UNIPORTAL VIDEOASSISTED THORACOSCOPY FOR PULMONARY METASTASECTOMY IN PEDIATRIC PATIENTS: RESULTS FROM AN INTERINSTITUTIONAL PROTOCOL

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Abstract

Introduction

Pulmonary metastasectomy is a critical intervention in the management of pediatric malignancies with pulmonary spread. Traditionally performed via open thoracotomy, uniportal video-assisted thoracoscopic surgery (U-VATS) has emerged as a minimally invasive alternative. This study aims to compare postoperative outcomes between open and U-VATS metastasectomy in pediatric patients.

Methods

A retrospective review was conducted on pediatric patients undergoing pulmonary metastasectomy between 2022-2025, following the arrangement of an interinstitutional protocol between 2 departments of pediatric surgery and thoracic surgery. Patients were grouped based on the surgical approach: open thoracotomy versus U-VATS. Data collected included demographic, surgical and clinical information.

Results

A total of 16 procedures from 11 patients were included, with 8 surgeries approached via open metastasectomy and 8 via U-VATS. Median age at intervention was 11 and 13 years, respectively. Most common origin of primary malignancy was osteosarcoma (n=8), followed by Wilms tumour (n=3) and Ewing sarcoma (n=2). Of the 3 patients that required re-intervention, 2 had an osteosarcoma and 1 a Wilms tumour, with no association being established between approach and recurrency. The VATS group demonstrated a significantly shorter length of hospital stay (2.6 days vs. 5 days, $p = 0.036$). Eight interventions required a one-day postoperative stay in the intensive care unit.

Conclusion

Both open thoracotomy and VATS are viable surgical strategies for pulmonary metastasectomy in pediatric patients, offering acceptable oncologic outcomes. VATS, however, is associated with a significantly shorter hospital stay, suggesting an advantage in terms of postoperative recovery and pain management. While the ability of VATS to detect all pulmonary metastases remains a consideration, especially in tumors prone to small and multiple lesions, advances in imaging and surgical technique may mitigate these concerns. Larger prospective studies are needed to define optimal patient selection criteria for minimally invasive surgery in the pediatric population

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SINGLE-INCISION VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS) IN PEDIATRIC STAGE 3 EMPYEMA: A FEASIBLE AND EFFECTIVE TECHNIQUE

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Abstract

Purpose: The management of pediatric pleural empyema remains a challenge, as the empyema stage escalates from 1 to 3, in terms of the applied technique and the timing of each approach. The aim of this study was to observe the outcomes of decortication in children with stage 3 empyema using single-incision VATS.

Patients and Methods: We have prospectively studied the safety and effectiveness of the VATS for decortication in stage 3 pediatric empyema for the last twelve months. Patients diagnosed with pleural empyema in stage 1 and 2 were excluded. Single-incision port was applied in all patients and surgery included removal of pleural fluid, debridement, decortication double chest tube insertion.

Results: We included 4 children in the study. The mean age of them was 7.3 years old with the youngest being 4-months old. The most common presenting symptoms were persistent high fever, tachypnoea and shallow breathing. All patients had preoperative X-Ray and computed tomography. Three of them had an intercostal drainage tube inserted and received various courses of parenteral antibiotics prior to surgery. We had no perioperative complications and none of the thoracoscopies was converted to open approach. The median surgical time was 95 minutes and the mean duration of chest drainage was 10.2 days. Regarding microbiological analysis, *Streptococcus pneumoniae* was identified in 75% of patients' cultures and the rest was positive for *Haemophilus influenzae* type B. The follow-up has been uneventful with no signs of recurrence.

Conclusions: The application of the single-incision video-assisted thoracoscopic surgery seems to be a feasible and safe approach for late, stage 3, pleural empyema. All children tolerated the thoracoscopy well and had uncomplicated post-operative course with no signs of recurrence in the follow-up.

POSTER SESSION 10

P36

BACH MAI TECHNIQUE FOR MANAGEMENT OF COLON ADENOCARCINOMA IN A CHILD: A VIDEO-BASED TECHNICAL OVERVIEW

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Abstract

Introduction:

Laparoscopic right hemicolectomy with complete mesocolic excision (CME), central vascular ligation (CVL), and D3 lymphadenectomy (tLRHD3) remains technically demanding, especially in pediatric patients. Colorectal cancer is the second leading cause of cancer-related mortality, with right-sided and transverse colon cancers constituting nearly 40% of all cases. According to AJCC guidelines, right hemicolectomy is the definitive treatment for stage I–III right-sided colon cancers. The Bach Mai technique, integrating cranial, medial-to-lateral, and caudal dissection with early terminal ileum resection, offers a structured, minimally invasive approach to these complex procedures.

Methods:

We present the case of a 16-year-old female with right-sided colon adenocarcinoma, who presented with abdominal pain, significant weight loss, and imaging suggestive of colocolic intussusception caused by a polypoidal mass near the hepatic flexure. Colonoscopy confirmed a sessile, obstructing polyp; biopsy revealed adenocarcinoma. A total laparoscopic right hemicolectomy using the Bach Mai approach was performed with four ports and specimen retrieval via a Pfannenstiel incision. Postoperative recovery was smooth, with discharge on post-op day 4 after resumption of full oral intake.

Results:

Histopathology showed a Grade 2 mucinous adenocarcinoma (pT3N2a) with 6 of 45 lymph nodes positive, but clear margins and no lymphovascular or perineural invasion. The patient commenced adjuvant chemotherapy with the CAPOX regimen. At 6-months follow-up, she remains asymptomatic with no evidence of recurrence on imaging.

Conclusion:

We conclude that the Bach Mai technique is a safe, effective, and minimally invasive approach for pediatric laparoscopic right hemicolectomy with CME, CVL, and D3 lymphadenectomy. It allows for precise oncologic clearance with minimal manipulation and smaller incisions. Further studies are needed to evaluate long-term oncological outcomes in the pediatric population.

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PAPILLARY UROTHELIAL NEOPLASM OF LOW MALIGNANT POTENTIAL IN PEDIATRIC PATIENTS: REPORT OF TWO CASES

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Abstract

Background

Papillary urothelial neoplasm of low malignant potential (PUNLMP) is a non-invasive tumor characterized by papillary architecture, fibrovascular cores, thickened urothelium and minimal atypia. Patients are usually asymptomatic; when symptomatic, hematuria is the most common presentation. Despite its favourable prognosis, it may recur or progress. It is extremely rare in children (mean age at diagnosis: 64.6 years), with fewer than 50 cases reported.

Due to the lack of pediatric specific guidelines, we report our experience with two cases.

Cases description

Case 1: A 12-year-old girl was referred following incidental detection of a bladder lesion on abdominal ultrasound. MRI and cystoscopy revealed a vegetative lesion with pedunculated cystic and papillomatous areas. Urine cytology was negative. The lesion was completely excised via transurethral resection of the bladder tumor (TURBT), and histopathology confirmed PUNLMP. Follow-up cystoscopy and biopsy at two months showed no residual disease. The patient was enrolled in a strict follow-up protocol including clinical, radiological and cystoscopic assessments.

Case 2: A 13-year-old boy presented with gross hematuria and underwent US and MRI, which revealed a bladder polyp and a cauliflower-like lesion on the posterior bladder wall. He underwent en-bloc-TURBT, and histopathology confirmed a diagnosis of PUNLMP. Urinary cytology was again negative. A close follow-up protocol was initiated.

Both patients remain disease-free at 12 and 6 months of follow-up respectively.

Conclusion

Although extremely rare in pediatric patients, PUNLMP should be considered in the differential diagnosis of papillary bladder lesions with negative urinary cytology. TURBT is a safe and effective diagnostic and therapeutic approach even in children. Minimally invasive diagnostic methods and cystoscopy are essential to ensure proper follow-up and early detection of recurrence.

P83

IDRF AS A PROGNOSTIC METHOD FOR THE LAPAROSCOPIC APPROACH TO NEUROBLASTOMA

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Abstract

Purpose.

Neuroblastoma is one of the most common cancers in children, and its treatment requires a multidisciplinary approach. There is a need for new perspectives and methods to improve treatment outcomes. This study evaluates the feasibility of a laparoscopic approach for neuroblastoma in children and investigates how Image-Defined Risk Factors (IDRFs) influence surgical planning.

Method.

We conducted a prospective analysis of neuroblastoma treatment at the National Children's Specialized Hospital OKHMATDYT in Kyiv, Ukraine, from 2022 to 2025. After performing CT scans, we assessed IDRFs to evaluate the feasibility and safety of a laparoscopic approach. Tumor size was also measured as a factor influencing the decision to proceed laparoscopically. Following surgery, we analyzed long-term outcomes, intraoperative and postoperative complications, and the completeness of tumor resection.

Conclusion.

This three-year study at the National Children's Specialized Hospital OKHMATDYT highlights the viability, safety, and feasibility of laparoscopic management for neuroblastoma in children. Preoperative evaluation using IDRFs serves as a valuable tool for surgical planning and outcome prediction.

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MULTIDISCIPLINARY MANAGEMENT AND LAPAROSCOPIC EXCISION OF PAEDIATRIC PHEOCHROMOCYTOMA PRESENTING WITH HYPERTENSIVE CRISIS AND SEIZURES

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Abstract

Introduction

Phaeochromocytoma is a rare, usually benign but potentially life-threatening neuroendocrine tumour in paediatric patients. While often syndromic, sporadic cases also occur and require timely recognition, especially in the context of hypertensive crises.

Methods

We report a sporadic case of a 12-year-old boy who presented with seizures and severe hypertension. Biochemical and imaging findings confirmed the presence of a right adrenal mass consistent with phaeochromocytoma. Preoperative planning included 3D tumour segmentation performed by the operating team with the Slicer 3D software. The patient was medically optimized with alpha- and beta-blockade and managed by a multidisciplinary team comprising oncologist, intensivists, endocrinologists, anaesthetists, cardiologists, nephrologists and surgeons.

Results

The tumour was successfully excised via laparoscopic right adrenalectomy without complications. Histology confirmed the diagnosis of phaeochromocytoma. The patient was discharged on postoperative day 4. At 18-month follow-up, he remains normotensive and asymptomatic, with normal biochemical markers.

Conclusion

This case highlights the importance of early suspicion and coordinated multidisciplinary care in the management of paediatric phaeochromocytoma. Although open surgery is still commonly performed, this case supports the feasibility and safety of laparoscopic adrenalectomy in selected children when supported by appropriate planning and surgical expertise.

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LAP RIGHT HEMICOLECTOMY FOR APPENDIX NET WITH SECONDARY NET FOUND IN THE MESENTERIUM: A CASE REPORT

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Abstract

Introduction:

Neuroendocrine tumor (NET) of the appendix is the most common gastrointestinal epithelial tumor in children and they generally follow a benign clinical course. In clinical practise, with completely resected tumors, hemicolectomy is not indicated. There is a debate in multiple centers about the criteria of further hemicolectomy when a diagnosis of NET has emerged. Current guidelines for risk assessment and management of these tumors are primarily derived from studies in adult patients because the indications for hemicolectomy in children remain unclear.

Purpose

The purpose of this case report is to indicate the secondary focal point of the NET found in the pathology report after hemicolectomy while in the first pathology report appendix margins were negative. Secondary, we would like to propose our criteria that led to the decision of a secondary operation for further evaluation and discussion in children.

Case Description:

A 11 years old girl showed typical symptoms of acute appendicitis (right lower quadrant pain, vomits, fever and anorexia). She underwent laparoscopic appendicectomy and discharged with no complications. In the pathology report, a 2,2cm size NET G2 was found with R0 resection, lymph node metastasis (D240), with ki67(15%) and 6 mitoses/2mm². She underwent afterwards abdominal MRI without any findings. Laparoscopic right Hemicolectomy was decided. The pathology report showed a second NET in the mesenteric fat and 2 metastatic lymph nodes of the 47 resected.

Results:

Following ENETS 2024 guidance from adult guidelines, right hemicolectomy was proven mandatory for this patient.

Conclusions

While indications of further hemicolectomy are unclear in children and NETs are usually benign, there should be high awareness for the need of further hemicolectomy, taking into consideration size of the appendix, lymph node metastasis and pathology markers of the tumour (ki67 and number of mitoses).

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OVARIAN TISSUE CRYOPRESERVATION AS A FERTILITY PRESERVATION METHOD IN AN ADOLESCENT WITH HODGKIN'S LYMPHOMA RECEIVING CHEMOTHERAPY: A CASE REPORT

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Abstract

Purpose: Ovarian tissue cryopreservation (OTC) is employed as a fertility preservation method for adolescent cancer patients who receive moderate/high-risk gonadotoxic treatment where oocyte/embryo cryopreservation is not feasible.

Methods: Report of a 15-year-old adolescent girl diagnosed with stage IVB Hodgkin's lymphoma. She presented with excruciating pain over the left iliac bone and urgent initiation of chemotherapy was mandated. Due to resistant disease that required further treatment, ASCT and possibly local radiotherapy, in January 2025, she was submitted to ovarian tissue cryopreservation for fertility preservation in an IVF clinic in Greece.

Results: Following upfront chemotherapy (OEPAx2, COPDACx4) and Brentuximab vedotin-Nivolumab x4 and before BEAM ASCT with the prospective of local irradiation, she underwent laparoscopic removal of a large section of ovarian tissue from the right ovary at the treating hospital. The specimen was immediately transferred to the IVF clinic lab where ovarian cortex was isolated and dissected into small tissue fragments (~5mmx4mmx1-2mm), which were frozen via slow freezing. Sixteen vials including 2 pieces each were obtained and stored in liquid nitrogen. Following ASCT and prior to local irradiation an attempt for oocyte cryopreservation was decided with GnRH antagonist for ovarian stimulation. Following ASCT, ovarian reserve was compromised, with serum values of AMH0.14ng/ml, FSH20.6IU/L and AFC 1 and she had experienced amenorrhea.

Conclusion: We present fertility preservation management for an adolescent cancer patient. According to preliminary data, OTC with subsequent transplantation seems to be an effective alternative for female fertility preservation allowing for both endocrine and reproductive function preservation. A first live-birth from a 28-year-old cancer patient following 11 years of OTC has already been reported by the same IVF clinic in Greece, while ovarian tissue of 2 adolescents and 24 adult women is currently in storage. Longitudinal studies should be performed to evaluate OTC's safety and effectiveness in preserving female fertility.

P228

RETROPERITONEAL NODULAR LESION MIMICKING RESIDUAL DISEASE AFTER LAPAROSCOPIC COLECTOMY: A CASE REPORT

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Abstract

Introduction: Postoperative nodular lesions at the tumor bed following laparoscopic colectomy present a diagnostic challenge in deciding whether reoperation is necessary. We report a case of a retroperitoneal nodular mass after laparoscopic colectomy that mimicked residual or recurrent Burkitt lymphoma.

Methods: We describe the case of a 13-year-old adolescent diagnosed with Burkitt lymphoma located at the ileocecal valve. Following initial successful chemotherapy, the patient underwent a laparoscopic right hemicolectomy. Anastomosis was done intracorporeally using stapling device. Postoperative imaging revealed a nodular lesion 2 x 1,2 x 1,7cm near the psoas muscle, located in the tumor resection bed, which demonstrated increased uptake on PET/CT. Despite initial concern for residual disease, an active surveillance strategy was adopted.

Results: The patient was placed under close ultrasound observation for the first two months every 2 weeks, and as the lesion remained stable in size, follow-up continued according to the oncologists' surveillance protocol. The adolescent has remained disease-free for the past two years.

Conclusion: This case underscores the importance of cautious interpretation of PET/CT findings in the postoperative setting, particularly in pediatric oncology. This limitation is critical in pediatric oncology, where elevated uptake may be misinterpreted as residual or recurrent disease and over-reliance on imaging without correlation to clinical and longitudinal findings can lead to unnecessary interventions. In this instance, the decision to pursue active surveillance proved appropriate, avoiding overtreatment.

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UROTHELIAL PAPILLOMA IN CHILDREN: A RARE CAUSE OF GROSS HEMATURIA

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Abstract

Background: Urothelial papilloma (UP) is a benign tumor of the urinary bladder that is extremely rare during the first two decades of life. Gross hematuria is the presenting symptom in the majority of cases. Herein, we present the case of a 13-year-old boy with UP, discussing diagnostic work-up, treatment, and follow-up.

Case Presentation: A 13-year-old boy presented to the emergency department complaining of macroscopic hematuria. A sonohyperlucent lesion adjacent to the left ureteral orifice, measuring up to 0,6cm in diameter, was discovered during ultrasound. Imaging with a magnetic resonance imaging (MRI) confirmed the finding, subsequently the patient underwent transurethral resection of bladder tumor (TUR-BT). The histologic examination revealed a urothelial papilloma. In terms of follow-up, the patient has undergone regular cystoscopic evaluation. To date, no signs of recurrence have been observed.

Discussion: UP accounts for 1-4% of all bladder neoplasms and has male predominance. The first diagnostic tool in children with gross painless hematuria is ultrasound, which can effectively detect lesions of more than 5mm in size, followed by cystoscopy. Transurethral resection of a bladder tumor (TUR-BT) is advocated as the most effective treatment approach. Progression to high-grade urothelial carcinoma occurs in less than 1% of cases and recurrence is observed in 0-13% of cases. There is lack of consensus regarding the recommended surveillance. Given the inability of the ultrasound to diagnose lesions less than 5mm, we deem cystoscopy a more appropriate tool for detecting local recurrence, hence we prefer it during the immediate postoperative period.

Conclusion: This case highlights the need to include urothelial papilloma in the differential diagnosis of children presenting with gross hematuria. Despite its benign nature, regular follow-up is mandatory while recurrence and malignant transformation, though rare, cannot be excluded.

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OUR INITIAL EXPERIENCE WITH ROBOTIC SURGERY IN MANAGING PAEDIATRIC CHOLEDOCHAL CYSTS

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Abstract

Aim: Robotic surgery offers significant advantage in children as it helps overcome the anatomical challenges of space constraint associated with minimal access surgery by improving vision and precision. Here, we present our initial experience with robotic surgery in managing children with Choledochal cysts.

Material and Methods: All children who underwent robotic Choledochal cyst surgery from March 2024 to December 2024 at our institution were included in the study.

Results: A total of seven children, including six girls and one boy, underwent robotic-assisted surgery for choledochal cyst excision during the study period. The median age at presentation was 29 months. Clinical presentation included recurrent abdominal pain in six patients, while one child was diagnosed antenatally. Among the symptomatic patients three had associated jaundice and one had pancreatitis. Five children had type I cysts and two had type IV cysts. The median cyst diameter measured on imaging was 10 mm. All patients underwent complete cyst excision followed by a Roux-en-Y hepaticoenterostomy.

The postoperative course was uneventful in all cases. Enteral feeds were initiated at a median of 24 hours following surgery, and all children were discharged in stable condition at a median postoperative duration of 72 hours. There were no immediate postoperative complications, and none required readmission within 30 days. Follow-up conducted clinically and radiologically over a mean duration of 9 months revealed all patients to be asymptomatic with patent biliary drainage.

Conclusion: Robotic surgery is safe and effective for managing Choledochal cyst in children. It offers enhanced precision with reduced recovery times and excellent outcomes.

POSTER SESSION 11

P235

THE DIFFICULT AIRWAY: CHALLENGES AND TROUBLESHOOTING IN PEDIATRIC BRONCHOSCOPIC FOREIGN BODY REMOVAL

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Abstract

Introduction:

Bronchoscopic removal of airway foreign bodies (FBs) in children is a frequently performed but high-risk procedure, complicated by delayed diagnosis, radiolucent objects, and perioperative airway instability. This study presents the clinical spectrum, procedural challenges, and troubleshooting strategies in pediatric bronchoscopic FB removal.

Methods:

A retrospective review was conducted of 65 pediatric patients (10 months to 17 years) who underwent rigid bronchoscopy for suspected airway FB over a 3-year period at a tertiary care center. Data included presentation type, FB characteristics and location, imaging findings, intraoperative difficulties, ICU needs, ventilation requirements, complications, and outcomes.

Results:

Clinical presentations ranged from acute choking to chronic cough and unresolved pneumonia. Chest X-rays were inconclusive in 40% of cases, especially with radiolucent FBs like peanuts, seeds, and betel nut—among the most commonly retrieved. Unusual FBs included safety pins, LED bulb tips, earrings, and an emerald ring stone. Nasopharyngeal impaction was observed in 3 patients. ICU admission was required in 55 cases, with 20 needing mechanical ventilation. Delayed extubation was necessary in 30%, mainly due to airway edema and prolonged manipulation. Re-do bronchoscopy was needed in 5 cases due to residual fragments. Complications included pneumothorax (n=1), bleeding (n=2), and tracheostomy (n=1). Major procedural challenges involved friable organic materials, sharp or irregular objects, and obscured visualization due to secretions or granulation tissue. Effective troubleshooting included the use of optical forceps, controlled ventilation techniques, tracheostomy in select cases, and cautious extubation protocols.

Conclusion:

Pediatric airway foreign body removal is associated with significant diagnostic and intraoperative challenges. Anticipation of complications, multidisciplinary coordination, and structured protocols are essential to improve safety and outcomes in this vulnerable population.

P18

CLINICAL INSIGHTS INTO THE SURGICAL MANAGEMENT OF LIVER AND SPLEEN CYSTS IN PEDIATRIC PATIENTS

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Abstract

Background:

Liver and spleen cysts encompass a diverse and complex group of diseases. While the necessity for surgical treatment is well established, the choice of the optimal surgical approach remains a topic of debate.

Materials and Methods:

A retrospective analysis was conducted on the medical records of 31 patients (21 boys, 69%, and 10 girls, 31%) who underwent surgery for liver and spleen cysts between 2019 and 2025.

Results:

All patients experienced favorable outcomes post-surgery. Of the 18 patients with splenic cysts, 16 underwent laparoscopic procedures, while 2 required open surgery due to the complex anatomical positioning of the cysts.

For the 11 patients with liver cysts, surgical excision followed by argon plasma coagulation of the cyst base was performed. Laparoscopic surgery was used in 8 cases (70%), whereas 3 cases (30%) required open surgery. No postoperative complications were observed, and the average hospital stay was approximately 7 ± 1 days.

Conclusions:

Surgical intervention is recommended for all patients with liver and spleen cysts. Laparoscopic surgery represents the most effective treatment method for managing these conditions.

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CLINICAL CASE: HYBRID SURGICAL APPROACH FOR MULTIPLE MAGNETIC FOREIGN BODIES IN A CHILD'S GASTROINTESTINAL TRACT

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Abstract

Purpose

This case report aims to demonstrate the efficacy of a hybrid surgical approach in the management of a pediatric patient with multiple magnetic foreign bodies in the gastrointestinal tract. The study highlights the diagnostic and therapeutic challenges, as well as the importance of minimally invasive techniques in reducing surgical aggression and postoperative complications.

Methods

A 3-year-old male presented to the emergency department after ingesting 27 magnetic balls from a toy construction set. The child was asymptomatic, with no dysphagia, hypersalivation, or vomiting. Physical examination revealed a soft, non-tender abdomen without signs of peritonitis. Abdominal radiography identified multiple radiopaque objects in the stomach, small intestine, and colon. Upper endoscopy retrieved four magnets from the pyloric region without evidence of perforation. Due to the remaining magnetic bodies in the small intestine, laparoscopic exploration was performed. Intraoperative findings included deformed ileal loops with magnetic "chains" causing serosal adhesions and focal ischemia. Laparoscopic removal was partially successful, but conversion to mini-laparotomy was necessary to extract the remaining magnetic bodies through the cecum after appendectomy. Postoperative recovery was uneventful, and the patient was discharged on the ninth day. Follow-up at one month revealed no complications.

Conclusions

Timely diagnosis and a hybrid surgical approach are crucial for managing multiple magnetic foreign bodies in the gastrointestinal tract. Minimally invasive techniques reduce surgical aggression and complication risks.

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OUTCOMES OF ROBOTIC-ASSISTED EXCISION OF PARATUBAL CYSTS IN A PEDIATRIC COHORT: A RETROSPECTIVE CASE SERIES AND SYSTEMATIC REVIEW

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Abstract

Introduction:

Paratubal and paraovarian cysts are benign lesions arising between the ovary and fallopian tube, often derived from mesothelial tissue. While usually asymptomatic, larger cysts can cause pelvic pain or complications requiring surgery. Management depends on cyst size, symptoms, and patient age, with fertility preservation being crucial in younger patients. This case series evaluates clinical outcomes of robotic-assisted excision of paratubal cysts in pediatric patients and reviews the existing literature on regard.

Materials and Methods:

Retrospective review of pediatric patients who underwent robot-assisted paratubal cystectomy at our institution. Data on demographics, surgical details, hospitalization and follow-up were collected. A systematic literature review following PRISMA guidelines was also performed across Embase, Scopus, PubMed, and Web of Science to identify studies reporting robotic excision of paratubal cysts in pediatric patients. Two independent reviewers screened and extracted data.

Results:

Six girls, with mean age of 13.6 ± 4.3 years and mean weight of 58 ± 10.6 kg, underwent robotic paratubal cystectomy. Mean operative time was 117.5 ± 30.9 minutes. No conversions to open or laparoscopy were necessary. Median length of stay was 2 days (range: 2–4), with no complications reported at mean follow up of 45 months. The systematic review identified 762 records; after screening, two studies were included, reporting on two pediatric patients (aged 14 and 17.8 years) who underwent robotic excision without complications. Both cases confirmed the safety and feasibility of this technique, although available evidence remains limited.

Conclusions:

Robotic-assisted surgery is a safe and feasible option for paratubal cysts in pediatric patients, offering advantages such as precision and minimally invasive access. The enhanced surgical precision may be particularly valuable in preserving reproductive structures and ensuring fertility sparing. However, the extremely limited data underline the need for further prospective studies to better define its role compared to traditional surgical techniques.

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PARATUBARIC CYST TORSION: DIFFERENTIAL DIAGNOSIS IN ACUTE ADDOMINAL PAIN IN THE FEMALE

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Abstract

Introduction

Paratubaric cyst, known often as Hydatid of Morgagni, is a small appendicular formation of the fallopian tube. Its torsion presents with acute abdominal pain, placing it in differential diagnosis with ovarian torsion and acute appendicitis.

Methods

This is a retrospective study covering the last 5 years (2020/2024), conducted in two Italian centers. Inclusion criteria: female patients under 18 years who underwent abdominal surgery for acute abdomen with preoperative or intraoperative diagnosis of paratubaric cysts. Age of diagnosis, histological examination, pre and postoperative work up and follow up were considered.

Results

We included 26 patients, mean age at diagnosis 13.6 years (9-18). The diagnosis was: in 5 patients of twisted paratubar cyst, in 9 of tubal torsion from paratubaric cyst, and in 12 of non-twisted paratubar cyst. A preoperative second-level examination (MRI) had to be performed in 7 cases. Laterality was similar (11 left and 13 right) and in 2 cases bilateral presentation. In most cases, patients were operated on as an emergency (77%) by laparoscopic technique (96%). Histological examination showed paratubular serous cystadenofibroma in 2 cases. In all cases clinical follow-up was performed and in 50% of cases also instrumental; only one case presented recurrence.

Conclusion

Comparing our experience with the literature, we confirm that the torsion of the hydatid of Morgagni is a cause of acute abdominal pain in the female. It is important to consider it in differential diagnosis in acute abdomen in female in pediatric age because, although in a small percentage of cases, the nature may be different from Morgagni's hydatid.

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LAPAROSCOPIC TREATMENT OF FALLOPIAN TUBE PATHOLOGY IN TEENAGERS: INDICATIONS AND TECHNIQUE

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Abstract

Background: Fallopian tube pathology in adolescent patients, although rare, presents unique diagnostic and therapeutic challenges. This study explores the laparoscopic approach in treating such pathologies, with a focus on preserving fertility and minimizing morbidity. Common conditions addressed include pelvic inflammatory disease, hydro/hematosalpinx, congenital anomalies, and tubal torsion. Imaging plays a crucial role in diagnosis, with ultrasonography being the first-line modality, supplemented by MRI in complex cases.

Methods: We present a case of an 11-year-old female with a congenital imperforated fallopian tube initially misdiagnosed through ultrasonography and MRI. The definitive diagnosis of right hematosalpinx was made on a third ultrasound, and the patient underwent successful laparoscopic intervention.

Results: Surgical technique, instrumentation, and intraoperative positioning are discussed in detail. Postoperative evolution was favorable, with resolution of symptoms and preservation of ovarian function.

Conclusion: This case highlights the importance of minimally invasive surgery in the management of tubal pathology in adolescents and underscores the role of accurate imaging and surgical expertise in ensuring optimal outcomes.

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LAPAROSCOPIC TREATMENT OF PARAOVARIAN CYST TORSION

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Abstract

Paraovarian cysts (POC) is one type of benign non-neoplastic cyst in female adnexa. They constitute 5% to 20% adnexal masses confirmed by pathohistology. The true incidence of POC in adolescent is not clearly defined. An ultrasonographic misdiagnosis of POC as ovarian cysts or other cystic finding is common. POC torsion is a common condition that has recently been increasingly diagnosed in adolescent girls. However, the accurate diagnosis of this pathology often is not achieved preoperatively.

Aim of the study was to summarize our experience in the diagnostic and laparoscopic treatment of paraovarian cyst torsion in adolescent female.

Among 159 female patients with acute abdomen pain syndrome, 9 (5.7%) adolescent girls were diagnosed with and operated on for POC, including 7 of them with torsion in our clinic in 2024. All surgeries (100%) were performed laparoscopically.

Emergency hospitalization was carried out in 100% of patients. The mean age of patients was 16.1 ± 0.5 years. Pelvic ultrasonography was performed in all patients. Diagnosis of POC, including torsion, preoperatively was established in 5 (55.6%) of patients and in 4 (44.4%) – during diagnostic laparoscopy. POS torsion in 3 patients associated with ovarian torsion and in all these cases the ovary-sparing surgery was successful. There are no intra- and postoperative complications. All patients remain under dispensary observation by pediatric and adolescent gynecologists at our clinic.

Thus, the clear preoperative diagnosing POC in adolescent is challenging. The laparoscopic removal of paraovarian cysts torsion, even with simultaneous ovarian torsion, is the method of choice.

P9

POSSIBILITIES AND LIMITATIONS OF LAPAROSCOPY IN THE TREATMENT OF OVARIAN CYST IN NEWBORNS AND INFANTS

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Abstract

Ovarian cysts are the most common intra-abdominal cystic formation that prenatally revealed in female fetuses. The most serious complication of fetal ovarian cysts is ovarian torsion, followed by ovarian necrosis. However, the indications and method of surgery (open or laparoscopic) in newborns and infants with prenatally diagnosed ovarian cysts remain under discussion.

The aim of this study to analyze possibilities and limitation of laparoscopy in the treatment of congenital ovarian cysts at neonatal period and infants.

At 2010-2024 years 19 newborns and infants were operated. The open surgery was applied in 11 (57.9%) patients and laparoscopic – in 8 (42.1%) patients.

Signs of autoamputation in 3 newborns, 2 of them were operated laparoscopically, and presence of torsion of cyst in 2 patients was indication for surgery at early neonatal period. Huge cyst size, severe abdomen distention, which make difficult visualization, and associated with respiratory compromise are the contraindication for laparoscopy in newborns. Increasing of the cyst's size with the signs of torsion was the indication for the urgent surgery during of the first month of life in 8 patients, among them 4 babies operated laparoscopically. Presence of cyst without tendency to decreasing of its size was the indication for elective surgery in 5 patients. Laparoscopic adnexectomy was performed in 3 patients, in 2 patients – detorsion with the cystectomy, and in one – cystectomy. It was one case of conversion due to presence of cyst with serous-hemorrhagic content (histopathological diagnosis – ovarian cystadenoma).

The mean value of the largest cyst size was 4.79 ± 0.52 cm that was removed laparoscopically. Cyst's size clear correlated with the torsion development ($R=0.82476$, $p=0.00001$) and autoamputation ($R=0.64529$, $p=0.00285$).

Thus, the laparoscopy can be applied in selected cases during early neonatal period. At the late neonatal period and in infants indication to laparoscopy determined by the cyst size.

P15

IMPLEMENTATION AND STRICT ADHERENCE TO THE ERAS-PROTOCOL REDUCE POST-OPERATIVE STAY TIME TO LESS THAN 24 HOURS FOLLOWING ROUTINE LAPAROSCOPIC PROCEDURES IN CHILDREN

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Abstract

ERAS is a multimodal, interdisciplinary approach to perioperative management aimed at accelerating recovery and reducing complications. While the extensive body of evidence on the effects of ERAS demonstrates its status as an evidence-based standard in adult surgery, recent years have seen a growing number of publications reporting the successful and effective implementation of ERAS protocols in pediatric surgery.

Our study aimed to evaluate the effectiveness of the ERAS concept in routine laparoscopic procedures, such as appendectomies and cholecystectomies, in children.

Methods. Following the introduction of an ERAS protocol developed with input from pediatric surgeons, anesthesiologists, and nursing staff, we initiated a prospective collection of data on patients undergoing laparoscopic surgery in our clinic (n 40). The collected data were anonymized and compared with data from an equivalent number of patients (n 40) who underwent similar procedures before the implementation of the protocol (control group).

Main Results. The average hospital stay for children undergoing cholecystectomy and appendectomy for uncomplicated appendicitis was reduced to less than 24 hours following the introduction of the ERAS protocol, representing a 3,6-fold decrease compared to the control group. Additionally, no opioid analgesics were required in the ERAS group, in contrast to the control group, and the consumption of non-opioid analgesics was significantly reduced.

Discussion. The implementation of a structured ERAS protocol and rigorous adherence monitoring resulted in significant benefits, including a reduction in hospital stay to less than 24 hours and a statistically significant decrease in analgesic use. We believe that further optimization of perioperative management protocols represents a crucial direction for advancing pediatric surgery practices.

P59

LAPAROSCOPIC MANAGEMENT OF SCROTAL MIGRATION OF THE PERITONEAL END OF A VENTRICULOPERITONEAL SHUNT IN A 1-YEAR-OLD PEDIATRIC PATIENT: A CASE REPORT

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Abstract

Introduction: Migration of the peritoneal end of the ventriculoperitoneal (VP) catheter into the scrotum is a rare phenomenon. Inguino-scrotal migration usually occurs due to increased abdominal pressure and patency of the processus vaginalis.

Case presentation: A 14-month-old pediatric patient presented to the emergency department of our hospital with abdominal pain, vomiting, and swelling of the right scrotum that had persisted for two days. The patient had a history of a head injury that had resulted in a large secondary arachnoid cyst for which a VP shunt had been placed at eight months of age. Examination of the inguino-scrotal region revealed a swollen and painful right side of the scrotum with a hydrocele and a palpable distal portion of the VP catheter in the right groin extending to the scrotum. After a brief preoperative preparation, the patient underwent laparoscopic abdominal emergency exploration, during which shunt repositioning and laparoscopic closure of the patent processus vaginalis were performed.

Conclusion: Prompt diagnosis and treatment of this condition are important due to various complications such as shunt dysfunction and testicular lesions. Treatment of this condition consists of surgical closure of the patent processus vaginalis and shunt repositioning.

P234

EXPERIENCE WITH UNMENTORED IMPLEMENTATION OF MINIMALLY INVASIVE SURGERY IN A MIDDLE-INCOME COUNTRY SETTING

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Abstract

Introduction: Minimally invasive surgery (MIS) has transformed surgical care worldwide. However, in low- and middle-income countries, the widespread implementation of MIS remains limited. Efforts to introduce MIS in these settings often occur without structured mentorship or formalized training pathways. In the absence of experienced mentors, local surgeons frequently face steep learning curves, limited access to essential equipment, and insufficient opportunities for hands-on practice.

Methods: We present our department's initial experience with advanced pediatric MIS procedures performed between 2017 and 2025. All surgeries were carried out by a single surgeon who had no prior hands-on experience in MIS and operated without mentorship. The surgeon's training consisted solely of multiple MIS courses and practice using simulation boxes.

Results: During this period, a wide range of basic and advanced laparoscopic procedures was performed, including nephrectomy, pyeloplasty, Duhamel's procedure, adrenalectomy, fundoplication, splenectomy, ovarian sparing surgery and basic thoracoscopy. No significant intraoperative complications were reported, and none of the patients required reoperation for recurrent or residual disease. During the implementation of MIS techniques, we had to overcome several obstacles including lack of experience and equipment, disbelief from colleagues and limited operative room availability.

Conclusion: Minimally invasive pediatric surgery can be initiated safely without mentorship, achieving comparable outcomes in many cases. While mentorship should be encouraged and expanded where possible, the potential for non-mentored approaches to succeed offers a hopeful outlook for scaling MIS globally, especially in regions where expert supervision is not immediately available. MIS workshops and expert discussions are essential and sufficient for a successful transition from open to laparoscopic surgery, particularly in the absence of direct mentorship.

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TRANSUMBILICAL LAPAROSCOPIC PERCUTANEOUS EPIGASTRIC HERNIA REPAIR

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Abstract

Introduction: The purpose of this study was to evaluate the feasibility, safety, and effectiveness of transumbilical laparoscopic percutaneous technique for epigastric hernia repair, utilizing a 3D-printed modified guidewire.

Methods: We employed a similar technique originally defined by Patkowski et al. for inguinal hernia repair. The procedure commenced with the insertion of a 5mm trocar through the umbilicus using the Hasson technique. Visualization was achieved exclusively through a 5 mm 30-degree scope inserted through this trocar. No additional trocar was inserted. The location of the previously marked epigastric hernia was palpated percutaneously and confirmed. Subsequently, a 3D-printed modified guidewire was percutaneously inserted through a 16-gauge sheet. The guidewire was carefully withdrawn. Then, a loop of Prolene suture, prepared extracorporeally, was passed through the sheath. Procedure continued with the wire being reinserted percutaneously via sheath, passed through the loop, and then retracted to form a U-shaped suture. This suture was then tied and buried under the skin. Concurrently, the patients with patent processus vaginalis (PPV) were closed.

Results: A total of 18 patients, comprising 10 males and 8 females, underwent repair of epigastric hernias. Preoperatively, one patient was diagnosed with an epigastric hernia + inguinal hernia. During the surgery, it was discovered that two patients had a unilateral PPV and another had bilateral PPV, resulting in a total of 4 PPV across 3 patients. Patients with PPV also underwent simultaneous inguinal hernia repair. There were no intraoperative complications. Conversion rate was 0%. All patients were discharged within 24 hours post-operation. There was no recurrence, and the cosmetic outcomes were excellent.

Conclusion: Transumbilical laparoscopic percutaneous epigastric hernia repair using a 3D-printed modified guidewire proved to be a feasible, safe, and effective technique.

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TISSUE REGENERATION IN PEDIATRIC SURGERY: A SINGLE-CENTER EXPERIENCE WITH PLATELET DERIVATIVES

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Abstract

Introduction: Platelet-rich fibrin is a blood-derived product composed of platelets, growth factors, cytokines, and other bioactive molecules essential for stimulating tissue regeneration by accelerating and enhancing the healing process. The aim of this study is to present our experience with the use of platelet-rich fibrin in pediatric surgery, proposing a reproducible and low-cost organizational model from blood processing to product application.

Materials and Methods: Platelet-rich fibrin was used in 28 patients undergoing the following procedures:

Pilonidal cyst excision (n=14): healing time was evaluated.

Hypospadias repair (n=8): incidence of postoperative fistulas was assessed with a 6-months follow-up.

Esophagocutaneous fistula (n=1).

Complex wounds (n=5): healing time was evaluated.

Results: The use of platelet-rich fibrin was not associated with any adverse effects.

We observed a statistically significant reduction in healing time in patients undergoing pilonidal cyst excision ($p = 0.01$). No postoperative fistulas were reported in the hypospadias repair group.

In patients with complex wounds, platelet-rich fibrin use was associated with rapid wound healing and improved aesthetic outcomes.

Conclusion: At our center, we have developed a structured, low-cost model for the use of platelet-rich fibrin in pediatric surgery. Preliminary results show that platelet derivatives play a significant role in pediatric patients by reducing healing time and improving outcomes in the treated conditions.

This research received no external funding, the authors declare no conflict of interest, informed consent for the participation to the study was obtained from all participants, the study is conform to the principles of the Declaration of Helsinki of the world medical association (clinical 57 research 1966;14:103) and is in accordance with the ethical standards of the institutional and/or national research committee.

P146

THE SURGICAL SPATIAL SET-UP: A FUNDAMENTAL PILLAR FOR LAPAROSCOPIC TRAINING AND EDUCATION

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Abstract

Purpose

Different simulation models and scenarios have been largely incorporated into pediatric laparoscopic training curricula. However, the emphasis on the type of optics to be used for the best performance has been rarely focused. The aim of the study is to test different focal lengths in a training setup as relevant factors to be considered in surgical education.

Materials and Methods

The study was conducted in an equipped laparoscopic laboratory. Two groups were included in the study: group A, surgeons, and group B, unskilled students. One single exercise was conducted in a pelvic trainer with different laparoscopic lenses (Storz 3-4-5-10mm). The best performance was assessed, according to focal distance and camera type, with a performance score, spatial variations, a self-assessment questionnaire, and the compilation of the NASA-Task Load Index.

Result

We have observed an effect of focal length in both subjective and objective evaluations. In both groups there is a worsening of the score with lower calibre optics with statistical differences (Score optics 3mm GroupB 2.0(0.0-2.0), GroupA 3.5(2.5-7.0) **p0.010** / Score optics 4mm GroupB 2.0(0.0-4.0), GroupA 5.0(4.0-7.5) **p0.006** / Score optics 5mm GroupB 1.0(0.0-4.0) GroupA 6.0(4.5-9.5) **p<0.001** / Score optics 10mm GroupB 4.0(1.0-6.0) GroupA 6.0(5.0-10.0) **p0.013**). Moreover, when changing optics, there is an increase in focal length proportional to the increase in calibre Display column distance (cm) 3mm 136.0(105.0-168.0); 4mm 145.0(121.0-165.0); 5mm 150.0(120.0-170.0); 10mm 153.0(114.0-168.0). Subjective data showed these parameters also affect the overall comfort of the test and consequently the overall fatigue of a surgical task.

Conclusion

Visual field plays a crucial role in the learning process and surgical performance. Surgical spatial set-up, including focal distance between monitor and operation, quality of instruments, is a fundamental parameter that defines the pillars for the best education program in minimally invasive surgery.