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RACCOLTA ABSTRACT

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1. MYOID GONADAL STROMAL TUMOR (MGST) OF THE TESTIS IN PEDIATRIC AGE: A RARE CASE

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INTRODUCTION AND AIM OF THE STUDY

Myoid Gonadal Stromal Tumor (MGST) is a rare testicular neoplasm, with fewer than 30 cases reported in the literature since 1977. Its occurrence in the prepubertal population is extremely rare, with only one case described to date. Due to its rarity, the biological behavior and optimal management of this tumor remain unclear. The aim of this study is to report a rare case of prepubertal MGST and to discuss potential management options, emphasizing the feasibility of testis-sparing surgery (TSS).

MATERIALS AND METHODS

We present the case of a 6-year-old boy with a left testicular mass of 7 mm in diameter. The lesion was incidentally detected during an ultrasound examination performed for contralateral testicular pain. Serum tumor markers (AFP, β -HCG, and LDH) were normal. Testis-sparing surgery (TSS) was chosen, and the lesion was excised.

RESULTS

Intraoperatively, the mass appeared as a whitish, slightly firm lesion with well-defined margins. Histopathological examination confirmed the diagnosis of MGST of the testis. Surgical margins were negative. Postoperative follow-up was uneventful, with no signs of recurrence or complications at 5 months of follow-up.

INTERPRETATION OF RESULTS

This case supports the hypothesis that MGST, although rare, can occur in the pediatric population and may exhibit benign clinical behaviour. The negative tumor markers and the lesion's well-circumscribed nature allowed a conservative surgical approach, avoiding radical orchiectomy. The favourable short-term outcome supports the viability and safety of TSS in selected pediatric cases.

CONCLUSIONS

Testicular MGST is a rare and apparently benign lesion that can be managed conservatively in pediatric patients. TSS proved to be an effective and safe treatment in this case, enabling complete excision of the tumor while preserving testicular parenchyma. Long-term follow-up and the collection of additional cases are necessary to better define management strategies.

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2. A Case Report of Hypospadias Associated with Posterior Urethral Valves: a rare combination with potential consequences

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INTRODUCTION: The association between hypospadias and posterior urethral valves (PUV) is very rare, with few reports in the literature and an estimated incidence of 1%.

CASE REPORT: We present the case of a two-and-a-half-year-old child with a very distal hypospadias that had not been treated surgically. The patient had always been asymptomatic, with normal prenatal and postnatal kidney and bladder ultrasounds. Still, after removing the nappy, the child started to experience dysuria and abdominal pain, prompting a visit to the emergency room. Ultrasound imaging revealed a distended bladder, bilateral hydroureteronephrosis, and a 2 cm bladder diverticulum. Pyelo-nephritis was suspected and treated with intravenous antibiotic therapy, and cystography was scheduled. However, during cystography, catheterisation was impossible due to an extremely stenotic urethral meatus located a few millimeters above the corona. Blood tests, including renal function tests, a urinary analysis and cultures, came back normal. Voiding assessment with uroflowmetry revealed a narrow stream with prolonged urination time and abdominal straining. Due to these clinical findings, the patient underwent dorsal meatotomy and cystoscopy, which showed the presence of PUV with a very dilated posterior urethra, thickened and hypertrophied bladder, and large bladder diverticulum. Endoscopic PUV excision was performed using a YAG laser and a 10 Fr catheter was left in place for three days. Six months after the procedure, the patient was completely asymptomatic and had normal uroflowmetry results. A second cystoscopy showed marked improvement in the bladder, with a reduction in the size of the diverticulum, and no need for resection of residual valve flaps.

CONCLUSIONS: The incidence of association between hypospadias and PUV certainly does not justify routine cystoscopy for all patients with hypospadias, but it undoubtedly raises questions about the importance of investigating bladder emptying with uroflowmetry and pre a post voiding ultrasound bladder evaluation in symptomatic patients with minor hypospadias that normally would not be operated.

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3. UROLOGICAL MANAGEMENT OF CONGENITAL POUCH COLON: CASE REPORT

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INTRODUCTION: Congenital pouch colon (CPC) is a rare form of anorectal malformation where the colon terminates into a large dilated aperistaltic pouch or it's completely or partially replaced by it. The pouch is frequently connected with urogenital tract through a fistula and vertebral anomalies are often associated with neurogenic bladder.

CASE REPORT: A full term male neonate, with antenatal history of megavesica and a giant abdominal cyst of unknown origin was referred to our Institution . He underwent laparotomy, on the first day of life, for a huge abdominal distension and imperforate anus. Perioperative findings were suggestive for pouch colon malformation extending toward the bladder and a divided ileostomy was performed. Postnatally multiple multiresistent bacteria pyelonephritis, were treated i.v. and a left VUR was detected on cystourethrogram, in the first month of life. The baby was put on antibiotal prophylaxis with nitrofurantoin. At 6 months of age the patient underwent reconstructive surgical correction of the pouch malformation, previous bladder fistula ligation. At 1 year of life he performed orchiopexy and circumcision. In post op period he underwent multiple dilations for anal stenosis and a megavesica was always remarked on cystourethroscopies. On renal bladder US evaluation a persistent left pielectasy was noted in the absence of urethral dilatation. On spinal magnetic resonance (MRI) imaging a megavesica was confirmed and no spinal cord anomalies were observed. On further videourodynamic study no left VUR was registered. The patient demonstrated dysfunctional voiding. On urodynamic measurements a vesico hypocontractility and detrusor sphincter dysfunction were registered. At 5 years of age, a vesicostomy was performed to preserve bladder and kidney function.

CONCLUSION:

Congenital pouch colon (CPC) is an extremely rare disease in western countries. In males the pouch usually terminate in a colovesical fistula proximal to the bladder neck. Surgical management and outcomes of this complex reconstructive surgery are often burdened with intestinal and urological complications. Urinary tract problems are common in most anorectal malformations and frequently persist into adulthood. An adequate multidisciplinary planning, surgical treatment and urological follow up are mandatory in these patients.

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4. Targed-Controlled Infusion with Eleveld Model and SEF EEG Monitoring in Pediatrics Anesthesia : two Case Report

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Introduction & Aim

Respiratory complications are frequent in pediatric anesthesia, especially during emergence. We explored the safety and effectiveness of combining the Eleveld pharmacokinetic model for Target-Controlled Infusion (TCI) with Spectral Edge Frequency (SEF) EEG monitoring in children undergoing urethroplasty for hypospadias.

Materials&Methods

Two infants (12 and 17 months) underwent urethroplasty under general anesthesia. Premedication: intranasal dexmedetomidine (4 mcg/kg). Induction: volatile agents followed by TCI of propofol and remifentanil using the Eleveld model. Depth of anesthesia was monitored via SEF (target 8–15 Hz). Both received caudal block with levobupivacaine. Vital signs, TCI concentrations, and adverse events were assessed at three perioperative timepoints.

Results

No respiratory adverse events were observed post-extubation (no apnea, laryngospasm, desaturation <90%, or reintubation). Hemodynamic parameters remained stable. SEF confirmed adequate anesthetic depth throughout. One patient required no postoperative analgesia; the second received only a single dose of paracetamol. No signs of emergence agitation or PONV were noted.

Discussion

The Eleveld model enables precise dosing across pediatric age groups, improving control over hypnotic and opioid delivery. SEF provides a reliable, age-independent EEG-derived marker of anesthetic depth, outperforming BIS in infants. This approach supports individualized titration and reduces the risk of both under- and overdosedation.

Conclusion

The integration of Eleveld-based TCI with SEF EEG monitoring enhances safety, reduces ipnotic use, and ensures smoother emergence in pediatric patients. These findings support the use of multimodal, EEG-guided anesthesia protocols in high-risk pediatric surgeries.

Tab 1 Results

Anesthetic drugs + Hemodynamic parameters	T1 (induction)	T2 (post-LMA)	T3 (Extubation)
Propofol (TCI/Ce) µg/ml	4.2	2.2	0.3
Remifentanil (TCI/Ce) µg/ml	2.9	3.5	0.5

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SEF (Hrz)	14	12	24
A.P. (mmHg)	95/60	73/45	92/55
H.R. (min)	138	110	118
Sat. O2 (%)	97	100	100

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5. VASCULAR COMPRESSION OF A EXTRARENAL PELVIS: A CASE REPORT

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VASCULAR COMPRESSION OF A EXTRARENAL PELVIS: A CASE REPORT
INTRODUCTION

Extrarenal calyces are a rare renal anomaly that can present with a solitary symptom of flank pain, as a complex radiological finding, or as a confusing intraoperative discovery. Very few cases have been reported in the literature worldwide. In this anomaly, the major calyces and pelvis are located outside the kidney and it can be associated with other renal anomalies such as ureteropelvic junction obstruction, dysplasia, or ectopic kidney. Here, we report a case where extrarenal calyces were compressed by the vascular pole of the kidney, and we describe our surgical approach.

MATERIALS AND METHODS

A 14-year-old male presented with right flank pain, fever, and recurrent urinary infections. Abdominal ultrasound showed severe hydronephrosis and a reduction in the thickness of the upper part of the renal parenchyma. MAG3 scintigraphy demonstrated an obstructive pattern, more prominent in the upper part of the kidney. MRI excluded the presence of an accessory polar vessel. CT scan revealed extrarenal calyces with Grade 3 hydronephrosis involving the upper and middle calyces and the renal pelvis. Given the unusual renal anatomy, retrograde pyelography was performed, suggesting an incomplete double renal system on the right side with hydronephrosis of the upper renal pelvis. After placing a 4 Fr ureteral stent, a robotic surgical approach was chosen for the intervention.

SURGICAL TECHNIQUE

Upon accessing the renal lodge, we found extrarenal calyces that were crossed and compressed by the vascular pole of the kidney, causing an obstruction of urine outflow from the upper and middle calyces. A robot-assisted vascular pessi was performed.

RESULTS

Six months after surgery, the patient is asymptomatic, and follow-up scintigraphy shows improved urinary drainage.

CONCLUSION

Further follow-up evaluations are necessary to assess the long-term outcome of the treatment.

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6. LUMASIRAN TREATMENT IN PEDIATRIC PATIENTS WITH PRIMARY HYPEROXALURIA TYPE 1 (PH1): REAL- WORLD DATA FROM ITALIAN PEDIATRIC NEPHROLOGY UNITS

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INTRODUCTION AND AIM OF THE STUDY

PH1 is a genetic disease caused by increased renal excretion of calcium oxalate, chronic renal failure, urolithiasis, nephrocalcinosis and systemic oxalosis. Until 2020 the therapy were dialysis and liver-kidney transplantation. Then Lumasiran, an RNA interference reducing hepatic oxalate production by targeting glycolate oxidase, has been approved for the treatment. The aim of this study was to evaluate the **efficacy of Lumasiran** in a pediatric population in a routine clinical setting.

MATERIALS AND METHODS

We conducted a retrospective observational multicentric study. Inclusion criteria: pediatric patients with genetic diagnosis of PH1 treated with Lumasiran. The efficacy of Lumasiran was evaluated testing oxaluria, oxalemia, kidney function and ultrasonographic (US) data every 6 months (M).

RESULTS

17 patients were enrolled. All patients received also supportive therapy (hydration, pyridoxine, urinary alkalisation).

Oxalemia was below the limit of supersaturation and oxaluria was reduced > 25% from baseline to M(month)6 in patients in conservative treatment. In 5 patients oxaluria was variable after M12 without symptoms. US showed at start urolithiasis or nephrocalcinosis in 7 patients respectively, urolithiasis and nephrocalcinosis in 1 and was normal in 2 (prenatal diagnosis). At the last follow-up US was unmodified in 16 patients. One patient with prenatal diagnosis developed nephrocalcinosis at M3 and nephrolithiasis at M12. Renal function remained stable except one patient who started dialysis after 20 months of treatment.

No adverse effects were reported.

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CONCLUSIONS

This study provides real-world evidence on the use of Lumasiran for the treatment of PH1. Lumasiran is today the only therapeutic option with real impact on the management of PH1 and shows a good tolerability profile.

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7. Aspiration-Enabled Retrograde Intrarenal Surgery (RIRS) for Pediatric Cystine Staghorn Calculi: A Safe and Effective Alternative to PCNL

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INTRODUCTION AND AIM OF THE STUDY

Cystinuria is a rare hereditary disorder caused by defective renal tubular reabsorption of dibasic amino acids, especially cystine, leading to early-onset, recurrent nephrolithiasis. The chronic nature of this condition often requires repeated interventions. In pediatric patients, therapeutic decisions must prioritize efficacy, safety, and minimally invasive strategies. Although extracorporeal shock wave lithotripsy (ESWL) and percutaneous nephrolithotomy (PCNL) have traditionally been used, retrograde intrarenal surgery (RIRS) has recently emerged as a promising alternative, supported by advances in miniaturized endoscopic instrumentation.

This case report aims to highlight the role of RIRS in managing pediatric cystine stones, focusing on its safety, reproducibility, and stone-free outcomes.

MATERIALS AND METHODS

We report the case of a 16-year-old male suffering of cystinuria under medical therapy, presenting with a right renal staghorn calculus (20×10×28mm) identified on non-contrast CT scan. Preoperative urine culture was sterile, and blood tests (Hb 12.8 g/dL, WBC 7,430/mm³, PLT 375,000/mm³, sCr 0.74 mg/dL) were within normal limits.

The procedure was performed under general anesthesia with the patient in lithotomy position. Instrumentation included a 9.5 Ch Storz semirigid cystoscope, Sensor guidewire, dual-lumen catheter, 9.5–11.5 Ch × 20 cm ureteral access sheath, digital Pusen flexible ureteroscope with suction control, Ho:YAG laser, N-Gage nitinol basket, and a 6 Ch×22 cm double-J stent.

RESULTS

The postoperative course was uneventful. Stone fragmentation required 50 minutes, followed by 12 minutes for fragment retrieval. The patient was discharged on postoperative day 4 in good condition. The double-J stent was removed after one month. No auxiliary procedures were required.

INTERPRETATION OF RESULTS

This case shows the feasibility of aspiration-enabled RIRS for pediatric cystine stones, including large and complex ones. Continuous suction keeps the field clear, improving visibility and fragment removal. This achieves stone clearance comparable to PCNL but with lower risks and morbidity, allowing repeated procedures safely. The low invasiveness and short hospital stay are key benefits. Given cystinuria's metabolic nature, long-term multidisciplinary follow-up is essential. More studies are needed to confirm aspiration-enabled RIRS as first-line treatment.

CONCLUSIONS

RIRS using flexible ureteroscope with direct-in-scope suctioning system is a safe, minimally invasive option for pediatric cystinuric patients with renal stones. It offers stone clearance comparable to PCNL with fewer risks and better repeatability, ideal for recurrent disease. ESWL is limited by cystine composition, and PCNL carries higher risk, especially in children. Aspiration-enabled RIRS provides

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a reliable alternative within personalized treatment plans. Larger studies are needed to standardize indications.

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8. THE NATURAL HISTORY OF RESIDUAL STONE FRAGMENTS AFTER SURGICAL TREATMENT

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INTRODUCTION AND AIM OF THE STUDY

According to current evidence in surgical treatment of stone disease, success is defined for residual fragments below 4 mm. This study aims to define the destiny of postsurgical renal residual stones $\leq$ 9 mm.

MATERIALS AND METHODS

Data regarding 167 patients treated between January 2010 and June 2024, with minimum follow-up of 6 months, was retrospectively reviewed. 81 residual stone fragments, not meeting criteria for second treatment, were identified and followed-up. Our main parameters were patients' demographics, rates of regrowth, complication, spontaneous passage and re-operation.

RESULTS

The patients' median age was 65 months (3-22 months). The median size of the residual stones was 6 mm (2-9 mm). 61 stones (75%) were in the lower calyces, 15 (19%) in the middle, 4 (5%) in the upper and 1 stone (1%) in the pelvis. Spontaneous passage was observed for 33 stones (41%) with a median size of 5 mm (2-9 mm) and in a median interval of 13 months (1-60 months). Ejected stones were in lower (73%), middle (18%), upper calyces (6%) and pelvis (3%). 20 fragments (25%) showed a tendency to regrowth, but only 17 cases (21%) were re-operated during follow-up. Using logistic regression, we identified an optimal cut-off value of 6 mm as predictive of spontaneous passage, although the model exhibits a poor performance (AUC = 0,677). 49 residual stones (60%) were $\leq$ 6 mm and proved to be significantly associated with spontaneous passage and lower rates of clinical complications con chi-squared test ($p < 0,05$).

CONCLUSIONS

vamPCNL is a safe treatment for large and complex kidney stones in pediatric patients with no blood transfusion. However, SFR after a single procedure remains low even in referral centers. Finally, a flexible nephroscopy at the end of the procedure is a feasible strategy to achieve higher SFR

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9. BILATERAL OBSTRUCTIVE SYNCHRONOUS URETERIC SOFT STONES IN COMBINED PRE-RENAL AND POST RENAL FAILURE

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INTRODUCTION AND AIM OF THE STUDY

Bilateral synchronous ureteric stone is uncommon in pediatric age, and can cause acute kidney injury (AKI), requiring prompt renal decompression. We describe two cases presenting with bilateral obstructive ureteric soft stones and AKI, investigating the possible role of acute dehydration.

MATERIALS AND METHODS

Patients underwent renal ultrasound, CT scan, blood test exam, urinalysis preoperatively. Emergency bilateral urinary tract decompression with JJ stent placement was performed.

RESULTS

A 6-year and a 7-year old boy with a history of gastroenteritis presented to the emergency with abdominal pain. Both patients had clinical signs of dehydration. US and CT scan show bilateral hydronephrosis with bilateral ureteric stones. Preoperative blood test showed AKI and high level of serum electrolyte (**table 1**). JJ placement was planned. During the procedure, after guide-wire placement, we assisted to under-pressure urine outflow with suspended sediments of soft stones. Stone clearance was complete and neither patient required further surgical procedures. Blood test exam improved progressively after the procedure and intra venous rehydration.

Patients	Age	Sex	Creatinine (mg/dl)	Urea Nitrogen (mg/dl)	Serum sodium(mEq/L)	Uric Acid(mg/dl)	Urine Ph	Glomerular Filtration Rate ml/min
1	7	M	1.6	37	128	9.8	5.0	34
2	6	F	3.73	28	132	8	5.5	13

INTERPRETATION OF RESULTS

Synchronous bilateral ureteric stone can cause metabolic decompensation if not treated, leading to severe kidney damage. Dehydration seen to have an important role in stone formation in our patients due to the increasing concentration of urine ions causing supersaturation. This condition is also correlated to a low urinary pH, that could have been the second promotor of crystals precipitation and consequently soft stone formation. Moreover, the bilaterality as uncommon finding can lead

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to an equivocal symptom such as abdominal pain delaying diagnosis. CT scan could be considered the gold standard for the diagnosis in this condition.

CONCLUSIONS

We present two cases with a combination of pre-renal and post-renal AKI. Both phenomena seem to be related to a severe dehydration due to a gastroenteritis. AKI solved after JJ stent placement and rehydration.

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10. Single-Centre Outcomes of Vacuum-Assisted Mini-PCNL for Complex Paediatric Kidney Stones: A Blood Transfusion-Free Approach

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INTRODUCTION AND AIM OF THE STUDY

To evaluate the efficacy and safety of semi-closed-circuit vacuum-assisted Mini-PCNL (vamPCNL) in managing complex kidney stones in pediatric patients.

MATERIALS AND METHODS

We included all vamPCNL procedures performed from December 2017 to March 2023 for minimally invasive management of complex kidney stones in our tertiary referral center. The procedure was performed with the ClearPetra® (Well Lead Medical Co., Ltd., Guangzhou, China) access sheath with a lateral arm connected to an aspiration system. Preoperative, intraoperative, and postoperative data were prospectively collected and analyzed. The stone-free rate (SFR) was defined as the absence of residual fragments with either ultrasound, X-ray, or CT scan.

RESULTS

A total of 42 procedures were performed in 36 renal units. Median age was 10 years (Interquartile range [IQR]: 6-13 years), median stone volume was 1.71 cm³ (IQR: 1.03-3.57 cm³). Preexisting metabolic pathology was present in 43% of patients (e.g. Cystinuria and primary hyperoxaluria). Most patients harbored high-burden stones (staghorn or multiple locations stones). No intraoperative complications were observed, but four post-op Clavien-Dindo 2 complications were reported (urinary tract infections). No patient required blood transfusions. SFR varied from 67% in single locations stones to 47% in staghorn stones. Flexible nephroscopy increases the SFR, by up to 60% in patients with staghorn calculi

CONCLUSIONS

vamPCNL is a safe treatment for large and complex kidney stones in pediatric patients with no blood transfusion. However, SFR after a single procedure remains low even in referral centers. Finally, a flexible nephroscopy at the end of the procedure is a feasible strategy to achieve higher SFR.

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11. SINGLE-TROCAR LAPAROSCOPIC-ASSISTED PLACEMENT OF PERITONEAL DIALYSIS CATHETER IN PEDIATRIC POPULATION: INITIAL EXPERIENCE IN A THIRD LEVEL CENTRE

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INTRODUCTION AND AIM OF THE STUDY

Children with chronic kidney disease (CKD) often require the placement of a peritoneal dialysis catheter (PDC) to initiate long-term dialysis. The conventional surgical approach involves an open abdominal laparotomy and subfascial tunnelling, which may lead to increased postoperative pain, peritoneal trauma, and scars. The aim of this study is to evaluate the outcomes of minimally invasive, laparoscopic-assisted PDC placement in paediatric patients.

MATERIALS AND METHODS

Retrospective review of pediatric patients (<18 years) with CKD who underwent mini-invasive PDC placement at our center over the past five years. All patients were treated using a standardized trans-umbilical laparoscopic-assisted technique. A 10-mm telescope with an integrated working channel was introduced through the umbilicus. Omentectomy was performed through the umbilical incision, and a subcutaneous tunnel was created under direct visualization.

RESULTS

Eight patients were included. The median age was 7.9 years (range: 0.1–16.9 years), and the median body weight was 23 kg (range: 2.8–84 kg). One patient has Prune-Belly Syndrome. The median operative time was 59 minutes (range: 45–75 minutes), with no intraoperative complications reported. Catheter type included 2-cuff Tenckhoff catheters in seven patients and a 1-cuff catheter in one patient. A 4-cm subcutaneous tunnel was created for all the PDCs. The first patient in the series required two reoperations due to catheter obstruction caused by incomplete omentectomy. Peritoneal dialysis was initiated after a median interval of 2 days (range: 1–4 days) postoperatively.

INTERPRETATION OF RESULTS

This case series suggests that trans-umbilical laparoscopic-assisted PDC placement is a safe and effective technique in the pediatric population, including infants and patients with complex conditions such as Prune-Belly Syndrome. The use of a telescope with a working channel facilitates omentectomy through the umbilical access and ensures precise catheter positioning under direct vision. Subsequent outcomes improved with experience and technique refinement.

CONCLUSIONS

Laparoscopic-assisted PDC placement using a working-channel telescope is a minimally invasive, reproducible technique that allows for complete omentectomy and accurate catheter placement with minimal scarring. It is a viable option for pediatric patients requiring peritoneal dialysis, offering the advantages of reduced peritoneal trauma, faster recovery, and early initiation of dialysis.

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12. MODERNIZING ANTENATAL HYDRONEPHROSIS CARE: IMPACT OF REDUCING INVASIVE TESTS AND EXPOSURE TO ANTIBIOTICS

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INTRODUCTION AND AIM OF THE STUDY

Published guidelines suggest that all infants with SFU 3-4 hydronephrosis (HN) be placed on continuous antibiotic prophylaxis (CAP) and investigated with a VCUG and diuretic renal scintigraphy (DRS). Over the last decade, we have reduced routine VCUGs, DRS and CAP use for isolated HN, regardless of severity. We aimed to determine the impact on UTIs and time to surgery with this modified approach.

MATERIALS AND METHODS

Patients <24 months with HN or hydroureteronephrosis (HUN) after 2015 were included. Patients with known VUR or other anomalies were excluded. Variables included demographics, VCUG and DRS rates, CAP use, UTIs, and surgical interventions. Patients were divided into three groups by year of presentation: Group 1 (2015–2018), Group 2 (2019–2021), and Group 3 (2022–2025). UTIs were defined as pyuria and positive culture from a catheter specimen in a febrile child.

RESULTS

A total of 985 patients were included. HN severity and baseline characteristics were comparable across groups (**Table**). There was a reduction in VCUG (52%, 31%, 29%, $p<0.01$), DRS rates (57%, 43%, 30%, $p<0.01$) and CAP exposure (12 ± 9 vs. 7 ± 6 vs. 5 ± 4 months, $p<0.01$) for groups 1, 2 and 3, respectively. UTI rates remained stable (4%, 3%, 3%; $p=0.74$), and age at surgery was younger (11 ± 13 vs. 7 ± 7 vs. 6 ± 5 months, $p<0.01$).

INTERPRETATION OF RESULTS

Selective monitoring resulted in reduced radiation exposure, CAP duration and earlier age at surgery, without increased UTIs. These

CONCLUSIONS

findings support revisiting current HN guidelines and may aid in identifying patients who would benefit from earlier surgical intervention.

Table 1. Testing, CAP and surgery trends

Treatment period	2015-18 (n=303)	2019-21 (n=381)	2022-25 (n=301)	p
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Age (months)	4 +/- 4	4 +/- 5	3 +/- 3	0.05
Etiology				
- Isolated HN	227 (75)	313 (82)	230 (77)	0.05
Sex				
- Uncircumcised	130 (43)	209 (55)	149 (50)	0.03
- Circumcised	114 (38)	106 (28)	96 (32)	
- Female	59 (19)	65 (17)	56 (18)	
High-grade HN	206 (68)	210 (55)	181 (60)	0.03
VCUG	157 (52)	119 (31)	86 (29)	<0.01
Nuclear scan	173 (57)	164 (43)	91 (30)	<0.01
CAP use	176 (58)	204 (54)	172 (58)	0.42
CAP Duration (months)	12 +/- 9	7 +/- 6	5 +/- 4	<0.01
UTI	11 (4)	10 (3)	10 (3)	0.74
Surgery	106 (35)	106 (28)	53 (18)	<0.01
Age at surgery	11 +/- 13	7 +/- 7	6 +/- 5	<0.01

Patients <24months with HN or hydroureteronephrosis(HUN) after2015were included. Variables included VCUG and DRS rates, CAP, UTIs, and surgeries. Patients were divided into groups by year of presentation: Group1(2015–2018), Group2(2019–2021),Group3(2022–2025). UTIs were defined as pyuria,andpositive culture from a catheter specimen in a febrile child.

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13. RENAL RESIDUAL FUNCTIONAL AREA (RFA) IN PRENATAL HYDRONEPHROSIS AS A ULTRASOUND MARKER OF POSTNATAL RENAL FUNCTION

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INTRODUCTION AND AIM OF THE STUDY

Prenatal ultrasound (US) evaluation of hydronephrotic kidneys aims to predict postnatal outcomes. This study proposes the Residual Functional Area (RFA) as a prenatal marker for predicting postnatal renal function.

MATERIALS AND METHODS

Retrospective multicenter study including pregnancies monitored for prenatal hydronephrosis or hydroureteronephrosis from January 2015 to February 2023. RFA was measured during prenatal USS at a mean gestational age of 36+6 weeks (IQR: 35+6 – 37+1). RFA was calculated by subtracting the hydronephrotic area from the total kidney area in a longitudinal ultrasound frame, and expressed as a percentage:
$$RFA = [(Total\ Area - Hydronephrotic\ Area) / Total\ Area] \times 100.$$
Postnatally, Effective Renal Plasma Flow (ERPF) was assessed using MAG3 renal scintigraphy, performed at a median age of 5 months (IQR: 4–8 months). ERPF was considered normal if >260 ml/min. Statistical analysis was conducted using IBM SPSS.

RESULTS

A total of 78 kidney units from 42 patients (fetuses) were analyzed, of which 56 kidneys were affected by hydronephrosis or hydroureteronephrosis. Among these:

- 51/56 kidneys had postnatal ERPF >140 ml/min and were diagnosed with pelvi-ureteric junction obstruction (PUJO) or vesico-ureteric junction obstruction (VUJO). Within this group, prenatal RFA >70% correlated with normal ERPF values (mean ERPF: 286 ml/min; minimum: 245 ml/min). Contrariwise, RFA <30% was never associated with normal ERPF, suggesting a poor functional prognosis.
- 5/56 kidneys were later diagnosed with posterior urethral valves (PUV) or severe vesico-ureteral reflux (VUR), and all had ERPF <70 ml/min. These kidneys had a mean prenatal RFA of 49%, indicating significant nephrogenic impairment, likely due to dysplastic changes.

INTERPRETATION OF RESULTS

The results support RFA as a reliable prenatal marker correlating with postnatal renal function as assessed by MAG3 scintigraphy. Higher RFA values (>70%) indicate preserved renal function, especially in obstructive pathologies such as PUJO or VUJO. Conversely, lower RFA values (<30%) appear to predict poor functional outcomes.

CONCLUSIONS

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Prenatal Residual Functional Area shows promising correlation with postnatal Effective Renal Plasma Flow (ERPF). Specifically, RFA values $>70\%$ and $<30\%$ are associated with normal and severely reduced renal function, respectively. RFA may serve as a valuable prenatal tool to anticipate postnatal kidney performance and guide early clinical decision-making.

14. BREAKING BARRIERS: KIDNEY TRANSPLANT FROM A PEDIATRIC DONOR WITH A HORSESHOE KIDNEY

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⁽¹⁾ AOU CITTA' DELLA SALUTE E DELLA SCIENZA

INTRODUCTION AND AIM OF THE STUDY

Horseshoe kidney (HSK) is the most prevalent renal fusion anomaly, with an estimated incidence of 1 in 400 individuals. It is frequently associated with vascular anomalies and urogenital malformations, which may complicate both procurement and transplantation procedures. Advances in surgical techniques and preoperative imaging have enabled successful use of these grafts. In adult patients, the use of horseshoe kidneys for transplantation is a documented practice, whereas reports of organ procurement in pediatric donors with this anomaly remain anecdotal.

MATERIALS AND METHODS

We report the case of a 13-year-old previously healthy pediatric donor who was declared deceased following asphyxia. Admission imaging revealed the presence of a horseshoe kidney. Intraoperative findings confirmed the anomaly, with fusion at the lower poles.

RESULTS

Each renal unit was supplied by two renal arteries, while the isthmus—containing functional parenchyma—was vascularized by two inferior polar arteries arising from both the right and left sides. No urinary anomalies were associated. Following multidisciplinary evaluation, the organ was deemed suitable for donation and retrieved en bloc. On the back table, based on the vascular anatomy, the kidney was divided at the junction between isthmus and left lower pole, with allocation of the isthmus to the right renal unit. The transection plane was sutured with running suture in PDS and the second haemostatic layer with running suture in Vicryl and emolock in line with standard technique of partial nephrectomy. The two renal grafts were successfully transplanted into two adult recipients with quick diuresis and no significant bleeding from the section plane and excellent postoperative outcomes.

INTERPRETATION OF RESULTS

A comprehensive review of the literature identifies around 80 reported cases of kidney transplantation from HSK donors between 1975 and today. Organ procurement may be performed en bloc or via splitting, depending on anatomical considerations. Transplantation can be conducted as an en bloc graft or allocated to two separate recipients. Fusion is almost invariably located at the lower poles, and the isthmus may contain functioning renal parenchyma, part of the collecting system, or both. The decision to perform a split transplantation must be guided by detailed anatomical assessment, based on imaging (i.e. contrast-enhanced CT angiography) or intraoperative findings. Particular attention must be paid to the vascular supply of the isthmus, which commonly derives from accessory arteries originating from the abdominal aorta or iliac vessels. Reconstruction of multiple arteries may be required, and the complexity of the vascular anatomy may influence graft selection and surgical planning.

CONCLUSIONS

In line with the literature our experience suggests that HSK patients should not be considered a contraindication to organ donation and that HSK grafts, whether en bloc or split, can achieve comparable results to standard donors in terms of graft function and recipient survival. Meticulous surgical technique and individualized planning are key to optimizing outcomes.

15. KIDNEY HYDATID CYST IN CHILDREN: IS MINIMALLY INVASIVE SURGERY A SAFE OPTION?

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INTRODUCTION AND AIM OF THE STUDY: Hydatid disease is a rural zoonotic parasitic infection. It predominantly affects liver and lungs, rarely kidneys (1.9% in children).. Rupture of the cyst into the renal collecting system may result in renal colic and hydatiduria, and it may lead to a severe immune response (6). Excision of the cyst with preservation of the renal parenchyma and avoiding contamination of the patient are the primary surgical goals. The main treatment is surgery, either open or MIS (minimal invasive surgery). We report a case of renal echinococcosis in a child treated by a minimally invasive approach

MATERIALS AND METHODS: A 10-year-old boy presented with a hydatid cyst, located in the upper pole of the left kidney, sized 55x60x60 mm,. The patient underwent left lower lobectomy for pulmonary cyst followed by laparoscopic transperitoneal excision of left renal cyst. Pre-operative albendazole therapy was started and continued for four weeks post-operatively. The cyst was punctured with a laparoscopic needle and 120 ml of clear fluid were aspirated. It was then filled with 100 ml of hypertonic 30% saline solution and subsequently aspirated without spillage. The intact germinal membrane was aspirated and placed in the endobag without spillage and removed intact through the umbilical incision..

RESULTS: The surgical procedure and the postoperative period were uneventful. Histological examination revealed fibrosclerotic tissue with an intense eosinophilic inflammation and a multi-layered lamellar chitinous fragment. Bacterioscopy, parasitology and cyst culture were negative. Follow-up imaging with abdominal US and MRI at six months confirmed resolution without recurrence.

DISCUSSION: The majority of renal hydatid cysts are asymptomatic in the early stages, but if the cysts communicate with the renal collecting system, hematuria or pyelocaliceal dilation can occur. Symptomatic cases present with flank pain and a palpable mass. In some instances, rupture of large cysts may trigger severe immune responses, including urticaria or even anaphylaxis. Additionally, rupture into the renal collecting system may result in renal colic and hydatiduria. Imaging plays a key role in the diagnosis and staging of hydatid disease, whereas serology has only a minor confirmatory role due to the high rate of false negative results. Ultrasonography is the most important tool in hydatid disease. Surgery is the treatment of choice for renal hydatid cysts for either resolution of the disease, symptom relief and sometimes diagnosis. Whenever possible, renal-sparing surgery must be pursued

CONCLUSION: Minimally invasive laparoscopic techniques, either transperitoneal or retroperitoneal, is a safe and efficient treatment option, offering excellent exposure, reduced recovery time and minimised morbidity. And may represent the treatment of choice of this rare disease.

16. VULVAR SYRINGOMA IN PEDIATRIC AGE: A CASE REPORT OF AN 11-YEAR-OLD GIRL

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Introduction

Syringomas are benign skin lesions originating from the eccrine sweat glands. These tumors most commonly affect face, particularly the periorbital region, but can also occur on other body areas, including the vulva. Vulvar syringomas are exceptionally rare in pediatric patients. Typically, the lesions are small, flesh-colored papules that may be asymptomatic or cause mild discomfort. Although syringomas are generally benign, misdiagnosis is frequent and, moreover, aesthetic impact may bother patient and parents. This abstract discusses a case of vulvar syringoma in a girl.

Materials and Methods

We present the case of an 11-year-old girl, referred to the Dermatology department of our institution, with a 6 month long presence of small, coloured, and itchy papules on the vulvar area, including the labia majora, in particular the right one. Further clinical examination: clusters of multiple small papules, flesh-coloured, measuring 2-4 millimetres. During palpation, the lesions were firm, and slightly elevated. There was no evidence of inflammation, ulceration, or other associated signs. Based on the clinical presentation, syringoma was suspected. Therefore, a radical excisional biopsy of right labia majora cluster lesion was performed, in order to confirm the diagnosis and to relief the patient from pruritus and psychological discomfort. Histopathological examination revealed typical syringoma features: ductal and lobular structures, cuboidal or columnar cells, surrounded by fibrous stroma.

Discussion and conclusions

Vulvar syringoma is a rare benign tumor of eccrine sweat gland, normally in periorbital location. It is probably due to an hormone imbalance as it arises especially during adolescence and pregnancy. It is an unrated differential diagnosis in pediatric dermatology, especially as regarding vulvar itchy lesions. Siringomas, although benign, can cause distress due to their location and appearance. In the case reported, the diagnosis was confirmed through histopathological examination, essential in distinguishing syringoma from other dermatological conditions that may occur with similar clinical presentation. We also stress aesthetic issues and the deriving psychological discomfort of the perception of the body, that may occur, in particular when syringoma arise in delicate parts such as face and genitals. In these selected cases, excision may be considered, though the management of syringoma is typically conservative. Reported treatments for symptomatic patients include topical corticosteroids, systemic and topical antihistamines, laser and excisional surgery, cryotherapy, and topical atropine. In conclusion, this case highlights the importance of considering vulvar syringoma in the differential diagnosis of firm, elevated, slightly coloured vulvar lesions in pediatric patients.

17. VACTERL ASSOCIATION WITH GONADAL DYSGENESIS, MÜLLERIAN ANOMALIES, AND VAGINAL APLASIA: VAGINAL RECONSTRUCTION USING A MODIFIED DAVYDOV PROCEDURE

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INTRODUCTION AND AIM OF THE STUDY

VACTERL association is a non-random constellation of congenital anomalies that includes vertebral defects, anal atresia, cardiac anomalies, tracheoesophageal fistula, renal anomalies, and limb abnormalities (OMIM: 192350). While these malformations often co-occur, the presence of distal vaginal atresia and complete gonadal dysgenesis in such patients is exceedingly rare, with only one previously documented case in the literature. This report presents a unique pediatric case demonstrating this rare constellation and describes the surgical management of vaginal aplasia using a modified Davydov procedure.

MATERIALS AND METHODS

A 12-year-old female patient, G.L., presented with a confirmed diagnosis of VACTERL association including vertebral anomalies, esophageal atresia type IIIb, anal atresia with rectovesical fistula, right renal agenesis, and post-axial polydactyly. Notably, she exhibited complete gonadal dysgenesis and Müllerian hypoplasia with distal vaginal agenesis. Given the patient's anatomy and age, a modified Davydov peritoneal vaginoplasty was selected as the most appropriate reconstructive option.

The procedure consisted of five main steps:

1. Creation of a neovaginal space via laparoscopic dissection.
2. Mobilization of peritoneal flaps from the pelvic sidewall.
3. Inversion of the peritoneum to line the neovagina.
4. Placement of a purse-string suture to secure the flap.
5. Suturing the vaginal apex over a stent to maintain patency.

Post-operative care included the use of a vaginal stent for two weeks followed by long-term maintenance through regular dilation or intercourse.

RESULTS

The surgical procedure was completed successfully without complications. The reconstructed vaginal canal demonstrated adequate length and elasticity. The peritoneal flap provided a moist, elastic epithelial lining suitable for functional vaginal use. Literature data support the effectiveness of this approach, with an average vaginal length of 8.86 cm, 81.5% of patients achieving penetrative intercourse, 96.7% reporting sexual satisfaction, and a low stenosis rate (0.4% in a meta-analysis by McQuillan et al., 2014).

INTERPRETATION OF RESULTS

Vaginal agenesis in the context of VACTERL association and gonadal dysgenesis presents significant diagnostic and therapeutic challenges. Surgical options vary widely, including self-dilation, McIndoe flap, buccal or intestinal vaginoplasty, Vecchietti procedure, and the Davydov technique. The modified Davydov procedure offers several advantages in pediatric patients: it is minimally invasive, utilizes autologous tissue with mucosal-like characteristics, and avoids skin grafts or bowel segments. This approach is particularly advantageous when Müllerian remnants are insufficient for other techniques.

CONCLUSIONS

Peritoneal flap vaginoplasty using the modified Davydov technique is a feasible, safe, and effective option for vaginal reconstruction in pediatric patients with vaginal aplasia, even in complex syndromic conditions like VACTERL association with gonadal dysgenesis. This method allows the creation of a functional, elastic vaginal canal in a single operative step with excellent anatomical and functional outcomes. Given the rarity of such cases, further documentation and long-term follow-up are essential to standardize care and optimize outcomes.

18. LAPAROSCOPIC ANEURYSMORRHAPHY OF AN INFERIOR POLAR RIGHT RENAL VEIN ANEURYSM USING A MECHANICAL STAPLER: FIRST REPORTED CASE AND REVIEW OF THE LITERATURE

Giovanni Torino ⁽¹⁾ - Oscar Mazzei ⁽¹⁾ - Tiziana Russo ⁽¹⁾ - Francesco Turrà ⁽¹⁾ - Andrea Farina ⁽¹⁾ - Agnese Roberti ⁽¹⁾ - Giovanni Palazzo ⁽¹⁾ - Anna Maria Cotrufo ⁽¹⁾ - Giovanni Di Iorio ⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Renal venous aneurysms (RVAs) are exceedingly rare, accounting for <3% of visceral venous aneurysms. They are often asymptomatic and incidentally detected during imaging for unrelated issues. When symptomatic or at risk of rupture or thrombosis, surgical treatment is indicated. Most reported RVAs involve the main renal vein; those affecting segmental or polar branches are extremely uncommon. The cause remains uncertain, though congenital vascular weakness and acquired conditions may contribute. Management varies from open resection or aneurysmorrhaphy to observation. Use of vascular staplers in such cases is rarely documented, and laparoscopic repair remains unreported. We present a successful laparoscopic repair of a right inferior polar RVA using a mechanical stapler and discuss its implications.

MATERIALS AND METHODS

A 17-year-old male presented with intermittent right flank pain. His history included bilateral cryptorchidism and glanular hypospadias treated in early childhood, along with longstanding right-sided hydronephrosis, previously attributed to mild pelvico-ureteral junction obstruction, managed conservatively. Doppler ultrasound and contrast-enhanced CT angiography revealed a 70 × 37 × 41 mm saccular aneurysm arising from the right inferior polar renal vein. The lesion showed slow flow without thrombosis but was adjacent to the renal pelvis, raising concerns for obstruction or thromboembolism.

RESULTS

Due to the patient's age, vascular anatomy, and symptoms, surgical intervention was recommended. Following preoperative enoxaparin (50 UI/kg twice daily for 5 days), a 3D laparoscopic transperitoneal approach was chosen for its minimally invasive benefits. Intraoperatively, a broad-neck saccular aneurysm was confirmed, originating from the inferior polar renal vein, with no involvement of the main renal vein. After achieving vascular control, aneurysmorrhaphy was performed using a mechanical vascular stapler applied tangentially to the sac, ensuring hemostasis and preserving renal parenchymal drainage. Fibrin glue was applied over the suture line without the use of a prosthetic graft. Recovery was uneventful. The patient was discharged on postoperative day 5, and follow-up Doppler ultrasound showed normalized renal drainage with no recurrence or thrombosis at three months. Histology confirmed a true venous aneurysm, without evidence of vasculitis or malignancy. The patient was satisfied with the minimally invasive approach and provided consent for case publication.

INTERPRETATION OF RESULTS

This case highlights a rare instance of an inferior polar RVA in an adolescent with urogenital anomalies. The association of cryptorchidism, hypospadias, and hydronephrosis may suggest a congenital predisposition to venous wall fragility. No cases of segmental RVAs have been reported in pediatric patients, and laparoscopic repair using staplers is undocumented.

CONCLUSIONS

This case enriches the limited literature on pediatric RVAs and illustrates the safety and feasibility of laparoscopic stapled resection in well-selected patients.

This approach enabled precise and safe aneurysm correction with minimal operative morbidity, though its use must be tailored to selected cases of favourable anatomy and flow dynamics. Early detection and treatment of such anomalies are crucial to prevent rupture, thrombosis, and renal impairment.

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19. CONGENITAL PENILE CURVATURE. OUR EXPERIENCE

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INTRODUCTION AND AIM OF THE STUDY: congenital penile curvature (CPC) is a rare condition leading to possible psycho-sexual discomfort after puberty.

Concerning severe cases, surgical correction is the only treatment option.

Indications for surgery depend on:

- 1) difficulty in entering into romantic relationship and low self-esteem connected to the aspect of the penis (psychological issue)
- 2) difficulty in engaging into sexual intercourse (functional issue).

The aim of our study is to evaluate complication and recurrence rate after CPC surgical correction, patient's satisfaction after the procedure, post-surgical cosmetic appearance (scars, residual curvature).

MATERIALS AND METHODS: all consecutive patients treated by three expert surgeons were retrospectively analyzed from February 2014 to May 2025.

Inclusion criteria were:

- boys affected by severe CPC aged 1 to 17 years;
- no previous penile surgery

Exclusion criteria were:

- patients over 18 years-old
- hypospadias/epispadias or other mayor penile defects
- associated psychiatric diseases

A validated questionnaire on erectile and sexual dysfunction was given to all patients at last follow-up outpatient visit (International Index of Erectile Function Questionnaire - IIEF-5).

RESULTS: seventeen patients affected by severe CPC were operated at our Institute during the last 11 years. The median age was 7,9 years (range 14 months to 16,5 years); 4/17 were treated by degloving and chordèe lysis, 7/17 by Nesbit procedures, 2 By Yachia procedures and 4 by Baskin procedures. The median follow-up was 8,5 years (range 6 months-11 years). Eight children aged less than 2 years, two patients aged less than 7 years, seven patients aged more than 15 years. Operative time ranged from 30 to 120 minutes (median 75 minutes).

No intra-operative complications occurred. No recurrence requiring a redo-surgery during the follow-up. All patients were partially or totally satisfied after operation at the last follow-up outpatient visit (questionnaire ongoing).

INTERPRETATION OF RESULTS: : regardless surgical technique, CPC treatment has good long-term results both during infancy and adolescence. In our opinion the best choice is surgery after puberty justified by great personal motivation.

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CONCLUSIONS: CPC surgical treatment performed by experienced surgeons represent a safe and a low complication risk procedure. Even when partial curvature persists during follow-up, psychological attitude of the patients seems improving after surgery.

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**20. SURGICAL OUTCOMES OF TOTAL PHALLIC RECONSTRUCTION IN PATIENTS WITH THE
EPISPADIAS-EXSTROPHY COMPLEX**

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Background

and

Objectives

Most penile lengthening techniques in patients with bladder exstrophy-epispadias complex (BEEC) involve mobilization of the corpora cavernosa. These techniques are often associated with a significant risk of neurovascular bundle injury and, in more severe cases, fail to achieve a penis with satisfactory appearance and dimensions. The aim of this study is to report our experience with total phallic constructions (TPC) using cutaneous flaps in patients with BEEC.

Materials

and

Methods

This is a retrospective study in which data were collected from the medical records of patients who underwent TPC with concurrent urethral reconstruction between January 2019 and April 2025. Relevant data such as operative time, intraoperative and postoperative complication rates (classified according to the Clavien-Dindo classification), phallic length and width, and penile prosthesis implantation were gathered, analyzed, and compared.

Results

Three TPC procedures met the inclusion and exclusion criteria. Specifically, 2 (66.7%) phalloplasties were performed using a radial free flap and 1 (33.3%) using a pedicled anterolateral thigh flap. The median patient age was 21 years (IQR 19–22). The median follow-up was 36 months (IQR 2–36). The median operative time was 400 minutes (IQR 270–480), and all patients were hospitalized for one week. Postoperative phallic measurements were homogeneous: 14 cm in length and 10 cm in width. No intraoperative complications were recorded. Two (66.7%) patients experienced postoperative complications: one case (33.3%) of a spontaneously resolving hematoma (Clavien-Dindo grade 1), and one case (33.3%) of partial flap necrosis (Clavien-Dindo grade 3a) requiring surgical revision, resulting in a 25% loss of phallic tissue. All three patients were able to urinate from the tip of the neophallus. In two patients (66.7%), a penile prosthesis was successfully implanted, allowing erectile function of the neophallus.

Conclusions

This study shows that total phallic reconstruction with cutaneous flaps, while complex, can provide effective penile reconstruction in patients with bladder/cloacal exstrophy-epispadias complex, enabling restoration of adequate sexual function.

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21. IS DORSAL INLAY GRAFT URETHROPLASTY A GOOD OPTION IN REVISION HYPOSPADIAS REPAIR?

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INTRODUCTION AND AIM OF THE STUDY

Over the years, Dorsal Inlay Graft (DIG) urethroplasty has gained worldwide acceptance for primary hypospadias repair. However, its safety and effectiveness for revision surgery are yet to be proven.

MATERIALS AND METHODS

We describe in this video the step-by-step technique in re-do hypospadias repair, using a free graft harvested from the inferior lip and sutured onto the incised urethral plate. After urethral tubularization, a dartos flap is placed to protect suture and prevent fistula formation.

We carried out a retrospective analysis of data collected from 53 consecutive DIG urethroplasties performed by a single surgeon at our institution. Patients were stratified in primary and redo-urethroplasty.

RESULTS

Out of 53 DIG urethroplasties, 21 (39.6 %) were primary and 32 (60.4 %) were re-do. As expected, the two groups differed for median age at surgery: 20 months for primary and 68.5 months for revision surgery ($p < 0.001$). Additionally, all primary interventions were performed with preputial graft, whereas among revision 93.8% DIG urethroplasties were buccal. Catheterization time and postoperative complication rates were comparable between primary and revision surgery group, respectively. Forty-two patients underwent uroflowmetry during follow-up.

CONCLUSIONS

Dorsal Inlay Graft urethroplasty has long been known to be safe and effective for primary hypospadias repair while DIG urethroplasty as a salvage surgery after primary repair failure is scarce. Surprisingly, according to our findings, surgical outcomes and complication rates are comparable between primary and revision hypospadias cases. According to our findings, DIG urethroplasty is a safe and effective option to treat revision hypospadias.

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22. PATIENT-REPORTED OUTCOMES IN HYPOSPADIAS: RESULTS OF A MULTICENTRIC LONG-TERM STUDY

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INTRODUCTION AND AIM OF THE STUDY

Surgical correction of hypospadias is often performed during childhood. This study aims to assess the degree of adolescent and adult patient satisfaction using patient-reported outcome measures.

MATERIALS AND METHODS

Male patients aged at least sixteen, operated during childhood for hypospadias in two reference centres and without prior treatments at other hospitals, were contacted for this study. Those who agreed to participate received a questionnaire via email containing single questions and the H.O.S.E., P.P.S., and S.I.G.H.T. tests. A descriptive analysis of the responses was followed by statistical analysis using Pearson's Chi-square test and Fisher's exact test, with significance set at $p < 0.05$, to determine if there was a correlation between patient satisfaction and the type of hypospadias or the need for reintervention due to complications.

RESULTS

184 patients answered the questionnaire. 82.9% of these had distal and 17.1% proximal hypospadias. Global sexual satisfaction outcomes range from 70% to 80.4%, urinary satisfaction 66.2% and cosmetic satisfaction from 62.3% to 83.9%. Median HOSE score was 14 (IQR), median PPS 8 (IQR) and median SIGHT 33 (IQR). Stratification for distal VS non-distal hypospadias produced a statistically significant difference in three items: satisfaction with the appearance of penis, shape of the external urethral meatus, sexual activity. Only HOSE score showed a significant difference between distal and non-distal hypospadias (14 vs 13), while SIGHT score was significantly lower in patients who underwent reintervention (33 vs 28).

INTERPRETATION OF RESULTS

Adolescent and young adults who underwent surgical correction of hypospadias in childhood report acceptable long-term outcomes.

CONCLUSIONS

Very long-term follow-up and standardized outcomes reporting, possibly in large and multicentre studies, will help confirm these results.

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23. INDOCYANINE GREEN (ICG)-GUIDED LYMPHATIC SPARING LAPAROSCOPIC VARICOCELECTOMY IN YOUNG PATIENTS. SAFETY OF INTRATESTICULAR INJECTION: A SINGLE CENTER STUDY.

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- Francesco Tedesco ⁽¹⁾ - Roberta Guglielmini ⁽¹⁾ - Francesca Carraturo ⁽¹⁾ - Maria Escolino ⁽¹⁾**

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INTRODUCTION AND AIM OF THE STUDY

Laparoscopic Palomo varicocelectomy with indocyanine green (ICG) fluorescent lymphography is a standardized approach for preserving lymphatic vessels and preventing post-operative hydrocele. However, there is currently no data available on the safety of intratesticular ICG injection. The study aimed to assess the safety and efficacy of this procedure at mid-term follow-up.

MATERIALS AND METHODS

A total of 72 patients (median age 14.5 years) who underwent laparoscopic Palomo varicocelectomy with ICG fluorescent lymphography between January 2019 and July 2022 were included in the study. All patients had high-grade varicocele as the surgical indication, with 30 out of 72 (41.7%) presenting with related symptoms and 42 out of 72 (58.3%) showing left testicular hypotrophy. Follow-up consisted of clinical evaluations at 1, 6, and 12 months, along with scrotal Doppler ultrasound at 12 months post-surgery to evaluate varicocele persistence, hydrocele formation, and any injection-related complications.

RESULTS

Lymphatic preservation was successfully achieved in all cases using ICG fluorescent lymphography. There were no intraoperative complications or adverse reactions related to ICG. The median follow-up period was 22.8 months (range: 11–49 months). A self-limiting scrotal hematoma at the injection site occurred in 1 of 72 patients (1.4%). In 3 patients (4.2%), ultrasound revealed a small hypoechoic area at the injection site, which resolved within one year in 2 of those cases (66.7%). Persistent grade II varicocele was found in 4 patients (5.5%), but none required further surgical treatment. No cases of hydrocele were reported, and 14 of 22 patients (63.6%) with preoperative testicular hypotrophy demonstrated catch-up growth.

INTERPRETATION OF RESULTS

ICG intratesticular injection proved to be clinically safe, with no allergic or systemic adverse reactions observed. Aside from one case of self-limiting scrotal hematoma, no injection-related injuries were noted. Three patients showed a small hypoechoic, avascular area at the injection site on ultrasound, which appeared clinically insignificant as all were asymptomatic with normal tumor markers. In two cases, the finding resolved within a year. Its benign nature is suggested, possibly linked to injection volume or pressure. Further studies with larger cohorts and extended follow-up are needed to evaluate long-term testicular effects.

CONCLUSIONS

Laparoscopic Palomo varicocelectomy with ICG-FL demonstrated excellent results, with a low rate of varicocele recurrence and no cases of post-operative hydrocele. Preliminary findings also support the mid-term safety of intratesticular ICG injection, showing no specific risks to the testis or overall patient health.

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24. TAUBER PROCEDURE FOR VARICOCELE TREATMENT: TIP AND TRICKS AVOIDING SEVERE COMPLICATIONS

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Introduction and aim of the study

Varicocele is a common condition characterized by abnormal dilatation of pampiniform plexus vein due to venous reflux. Tauber procedure is one of the most common surgical techniques to treat varicocele.

Our study points out some safety technical aspects.

Materials and methods

All consecutive Tauber procedures were retrospectively revised from November 2012 to December 2024.

Results

At our Institute, during the last 12 years, one hundred and eighty seven boys were treated by Tauber procedure and discharged on the same evening of surgery. Median age was 15 years (range 10 – 20). Median operative time was 40 min (range 25 – 120). Recurrence occurred in 6/187 patients (3.2%). Redo-Tauber procedure was successfully performed in 5 out of 6 patients (83%), while Palomo varicocelectomy in 1/6 cases. Transient post-operative hematoma occurred in 5/187 cases (2.7%), partial wound's dehiscence (conservatively treated) was noted in 6/187 ones (3.2%). No postoperative infections, orchiepididymitis or scrotal lymphocele were registered.

Interpretation of results

Additionally to minor postoperative complications (hematoma, wound infection or dehiscence), other severe complications have been described in the literature, including orchiepididymitis, abdominal wall necrosis, and intestinal segmental necrosis. Orchiepididymitis is generally caused by sclerosing agent extravasation outside the vein: after catheter's removal, a quick closure of the vein is recommended while washing the testicle with saline solution. A correct phlebography could avoid abdominal wall and intestinal segmental necrosis. Referring to our cases, during phlebography two vascular anomalies were noted:

- 1) a collateral circulation through the cremasteric area due to the injection of the contrast into the superficial pampiniform plexus, potentially causing a lower abdominal wall necrosis.
- 2) a collateral vein starting from the proximal tract of the spermatic vein headed toward the left colic space, potentially causing a bowel segmental necrosis.

In order to prevent some severe complications, patients (especially tall ones) need to be carefully positioned on the operating table to allow an adequate phlebography; ongoing Valsalva manoeuvre during the entire phlebography is recommended to identify potential inversion of the venous flow through collateral small veins toward the internal iliac veins.

Conclusions

Even if Tauber procedure can be considered a safe and effective procedure for varicocele treatment, some challenging complications could be avoided following simple, but not negligible, technical details.

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25. OUTCOMES OF SURGICAL REVISION IN PERINATAL CIRCUMCISION: A REVIEW OF COMPLICATIONS AND TREATMENT STRATEGIES BASED ON A SINGLE CENTER EXPERIENCE AND LITERATURE REVIEW

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Aim of the Study: evaluation of the surgical approach and its outcomes in major injuries following circumcision in newborns.

Materials and Methods: from 2014 to 2024, 5 patients underwent surgical revision of post-circumcision injuries using the Plastibell technique performed in another center during the perinatal period. They presented with significant skin loss, predominantly ventral and bleeding. No glanular lesions were observed. In 4 patients primary closure with skin grafting was performed, and 3 of these experienced subsequent wound dehiscence, which resolved conservatively. In one patient, a skin graft was required due to significant tissue loss, followed by surgical treatment for scar contracture during follow-up.

Discussion: perinatal circumcision complications can be classified as early and late, from minor events such as bleeding and adhesions (up to 42%) to severe outcomes like glanular necrosis, urethrocutaenous fistulas (up to 39%), and amputations (4.7%). Our experience, according to a literature review, may suggests that, although surgical intervention is often required for major tissue loss, the conservative management of wound dehiscences could be effective as a first-line treatment, considering that we observed excellent resolution, even of secondary dehiscence due to the skill scarcity, without the need for further surgical intervention in most cases.

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26. HIERARCHICAL CLASSIFICATION OF TORSION AND NON-TORSION IN THE DIAGNOSIS OF ACUTE SCROTUM IN PEDIATRIC SETTINGS THROUGH MACHINE LEARNING APPROACHES.

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INTRODUCTION AND AIM OF THE STUDY

Acute scrotum is a pediatric emergency that requires prompt diagnosis to avoid irreversible damage. The aim of this study was to develop and evaluate a hierarchical machine learning (ML)-based diagnostic workflow to accurately classify torsion versus non-torsion cases in patients treated for acute scrotum using clinical data and ultrasound (US) parameters.

MATERIALS AND METHODS

A retrospective study was conducted on 111 patients (0–19 years; median 12) diagnosed with acute scrotum. Clinical signs assessed included: pain onset <8 hrs, swelling, erythema, absent cremasteric reflex, increased consistency, palpation pain, and retraction. US signs included: increased volume, heterogeneity, absent vascular signals, and the “whirlpool sign.” Clinical and US signs were correlated with final diagnoses. A two-level ML classification approach was used: the first level trained models only on clinical features, to train several ML models (70/30 stratified split, GridSearchCV with 5-fold CV); the second level applied models to US features, limited to patients classified as non-torsion in level one.

RESULTS

In the first-level, the best ML classifier was SVM with RBF kernel, C=1, gamma='scale' hyperparameters. This model achieved an accuracy of 91.18%, precision of 90.48%, recall of 95.00%, F1-score of 92.68%, and AUROC of 91.07% on the test set. In the second-level, the same test set was maintained, and separate ML-based classifiers were trained exclusively using US-derived features. The best model (SVM), optimized with C=1 and gamma='auto', achieved an accuracy of 85.29%, precision of 82.61%, recall of 95.00%, F1-score of 88.37%, and AUROC of 87.68%.

INTERPRETATION OF RESULTS

One false negative occurred at the first level, but the second-level US-based model correctly identified the case as torsion, resulting in 100% recall overall for testicular torsion cases by compensating for the clinical model's limitation. To improve the interpretability of the best predictive ML model, XAI methods were applied using SHAP (SHapley Additive exPlanations) values. SHAP results showed age, increased testicular consistency, and absent cremasteric reflex as the most influential features, while erythema and tenderness had minimal impact. This level of explainability reinforces clinical confidence in the use of AI-based systems, particularly in emergency settings where decision-making must be rapid and justified.

CONCLUSIONS

A hierarchical ML approach combining clinical and US data ensured robust diagnostic support in pediatric acute scrotum. By cascading predictions, this strategy prevents false negatives in torsion diagnosis, offering a clinically valuable safeguard in emergency settings. The findings on XAI not only confirm the central role of certain clinical predictors but also provide a transparent rationale behind the ML model's decisions.

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27. THE FASTER WAY TO VISUALIZE LYMPHATIC VESSEL DURING LAPAROSCOPIC VARICOCELECTOMY

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INTRODUCTION AND AIM OF THE STUDY

Lymphatic mapping with vital dyes is useful for lymphatic sparing and reduction of post-operative complication during laparoscopic varicocelectomy. The injection sites described are 3 (subdartoic, intravaginal and intraparenchymal) with variable efficacy. The intravaginal injection is the most difficult and most of the time the injection in this site is accidental when performed intradartos or intraparenchymal injection.

Despite intratesticular injection seems to be the more effective with 80-100% of mapping, to our knowledge, no studies in literature compared the techniques considering the timing of lymphatic visualization, and number of lymphatics visualized.

We aim to evaluate mapping success, coloration time and visualized vessels comparing the intraparenchymal injection with intradartotic injection. We hypothesized that intraparenchymal injection is faster and more effective than the other techniques.

MATERIALS AND METHODS

An evaluation of our ongoing database was performed including all consecutive pediatric patients undergoing lymphatic sparing laparoscopic varicocelectomy between June 2023 to may 2025.

After trocar positioned lymphography with Methylene blue diluted at 25% with saline solution was used for lymphatic mapping following 3 techniques divided in 3 groups respectively:

Intraparenchymal 1 ml, subdartotic 2 ml and combined intraparenchymal/ subdartotic injection.

Lymphatic mapping failure rate, coloration time and lymphatic vessels visualized were evaluated and compared between groups.

RESULTS

Ninety seven patients underwent lymphatic sparing laparoscopic varicocelectomy at a median(range) age of 15(11-18) years.

The injection was intraparenchymal in (30/97; 31%) subdartotic in (28/97; 29%) and intraparenchymal/ subdartotic in (39/97; 40%).

Failure of lymphatic visualization was significantly higher in subdartotic injections compared to intraparenchymal injection (16/39, vs 6/30; p=0.05) but lower in intraparenchymal/ subdartotic compared to intraparenchymal injection (3/28 vs 6/30; p= 0.05).

The mean time of Lymphatic vessel visualization was 30 seconds in intraparenchymal injection, 77 seconds in subdartotic and 60 seconds in subdartotic/intraparenchymal injection. The mean of visualized vessels was 2 in all groups and vessels remain colored and visible throughout the procedure.

INTERPRETATION OF RESULTS

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Our result confirms that intraparenchymal injection is the most effective and faster in lymphatic mapping compared to subdartoic injection with success rate around 80%. If combined subdartoic and intraparenchymal injection the success rate is higher (90%) but on average vessel are visualized later. This result could be explained by the double lymphatic drainage pathway of the scrotum and their anatomical variation. Testis drain directly into the retroperitoneum lymph nodes via the spermatic cord, in contrast the scrotum drains into the superficial and the deep inguinal nodes. Despite the vessels are first visualized with intraparenchymal injection in case of mapping success, the number of visualized vessels and consequently preserved vessel are comparable in all techniques. The latency time before visualization of the lymphatic is however of questionable clinical relevance.

CONCLUSIONS

Even if intraparenchymal injection is faster and more effective in lymphatic mapping, the choice of the injection sites remains controversial and more studies are necessary to prove his superiority.

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28. INTERSEX AND TRANSGENDER GENDER DIVERSE: AFFINITIES AND DIVERGENCES

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INTRODUCTION AND AIM OF THE STUDY

Intersex are congenital conditions in which chromosomal, gonadal and anatomical sex development is atypical. The term transgender and gender diverse (TGD) denotes, as broadly and comprehensively as possible, members of the many and varied communities worldwide of people with gender identities or expressions that differ from the gender and/or sex assigned to them at birth.

MATERIALS AND METHODS

There are similarities between these two proles TGD and intersex as a wide range of gender identities and expressions, with different needs for affirmation of their gender throughout life, depending on individual goals and characteristics. Unlike TGDs, intersex persons may have several syndromes of different severity that may require hormonal and surgical therapies. Most physical variations among individuals with intersex variations do not impair functionality, at least in the first years of life. However, the psychosocial stigma associated with atypical genital appearance often leads to early genital surgery commonly

RESULTS

Stigmatisation leads to prejudice and discrimination, resulting in minority stress for both populations. Intersex persons undergoing normalised surgery before reaching the age of consent may present with clinical psychosexual issues including a significantly increased risk of developing gender dysphoria and subsequent gender reassignment.

CONCLUSIONS

Both health and mental health professionals caring for intersex people need to be aware that it is very different from caring for TGD and endosexual people. Therefore, it is important not only to consider the psychological and social aspects, but also those of atypical development. Therefore, it is not only sufficient to have a multidisciplinary team but to have a multidimensional sexual approach and especially if early surgery has been performed.

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29. ARE PERINEPHRIC URINOMAS AND URINARY ASCITES IN PUV PATIENTS ASSOCIATED WITH VESICoureTERAL REFLUX?

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INTRODUCTION AND AIM OF THE STUDY

Urinary extravasation in PUV patients, in the form of urinomas or ascites, are thought to be related to high detrusor pressures secondary to infra-vesical obstruction. If so, it is reasonable to expect higher rates of reflux on the side of the leak. We explored characteristics and outcomes in urinomas and ascites with and without VUR to test this hypothesis.

MATERIALS AND METHODS

Retrospective review of a prospectively maintained database (2001–2024) focusing on patients under two years old managed at our institution. We included patients with postnatal urinomas or ascites and collected data on demographics, VUR, creatinine parameters, CKD and kidney replacement therapy (KRT). PUV patients without urinomas or ascites served as a comparison group.

RESULTS

A total of 27 patients had a postnatal urinoma (n=22) or ascites (n=5), and 4 patients had both. While the overall presence of VUR and reflux grades were similar between groups, only 30% of urinomas had ipsilateral VUR. Similarly, VUR was noted in 33% of those with ascites. Most urinoma cases had ipsilateral hydroureteronephrosis without reflux, suggesting a functional or anatomical obstruction at the ureterovesical junction.

INTERPRETATION OF RESULTS

The urinoma/ascites group had higher baseline creatinine, likely related to urine reabsorption. However, this was similar at follow-up (Table). There were no differences in CKD >3 or KRT between urinoma/ascites vs. not.

CONCLUSIONS

While there does not appear to be any long-term impact on kidney function in PUV patients with urinoma/ascites, the low incidence of VUR in this population suggests that urinomas and ascites are related to the severity of obstruction and not high-pressure voiding/VUR. These findings should be considered when selecting the best initial surgical management in children with PUV.

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Table: Characteristics of PUV patients with and without urinoma/ascites

	Urinoma/ascites (n=27)	No (n= 162)	p
Age at presentation	5 (13)	5 (25)	0.64
PURK >3	15 (56%)	67 (42%)	0.21
LOS	20 (16)	10 (15)	<0.01
VUR to urinoma	8 (30%)	-	
VUR	15 (56%)	93 (57%)	1.00
Baseline creatinine	141 (87)	83 (115)	<0.01
Creatinine @ surgery	79.5 (97.5)	63 (121)	0.52
Last eGFR	87.39 (40.49)	91.60 (62.13)	0.83
CKD >3 at follow up	7 (26%)	44 (27%)	1.00
KRT	2 (7%)	26 (16%)	0.38
Follow up time	12.6 (12)	8.2 (20.4)	0.15

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30. IS MINI-INVASIVE SURGERY ALWAYS THE OPTION? CASE PRESENTATION OF OPEN PYELOPLASTY IN PATIENTS WITH COMPLEX URINARY TRACT MALFORMATION

Marco Pistone ⁽¹⁾ - ***Ana Ludy Lopes Mendes*** ⁽¹⁾ - ***Michele Innocenzi*** ⁽²⁾ - ***Ermelinda Mele*** ⁽¹⁾ - ***Giuseppe Collura*** ⁽¹⁾ - ***Marco Castagnetti*** ⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Among patients with ectopic kidneys, pelvic ectopia is the most frequent location. These patients are at increased risk of ureteropelvic junction obstruction (UPJO), estimated to be between 22 and 37%. In this condition, when indicated, surgical treatment mini invasive or open could be even more challenging especially if associated with others urinary tract abnormalities.

The aim of this video presentation is to report a case of pediatric patient affected by malrotated pelvic kidney with UPJO, describing the successful open surgical procedure.

MATERIALS AND METHODS

This is a case of 2 years old boy with prenatal diagnosis of left kidney hydronephrosis confirmed with US after birth. The US study showed a pelvic and malrotated kidney with full-length ureteral dilation. At 3 months of age he underwent VCUG that showed no vesico-ureteral reflux and a DMSA scan showing a left side renal function of 16%.

At 2-year follow-up, US study demonstrated a progressive worsening of pelvic dilation (pre-op AP diameter 75mm), thinning and hyper-echogenicity of the renal parenchyma with an important extrarenal pelvic dilation (12.8x 10 cm), causing a visible bulking on the right iliac fossa. MAG3 renal scan highlighted a stable left renal differential function (16%) with UPJO, dilation of the right kidney and transitory obstruction due to compression by the left renal pelvis. Based on these findings the patient was scheduled for pyeloplasty.

An open, retroperitoneal access through a Pfannenstiel incision was performed to access the Retzius space. The left umbilical ligament was ligated and cut. After identification of the dilated left renal pelvis we proceeded with freeing of the left ureter up to the pyeloureteral junction. A long (>2cm) ureteral stenosis was identified, while the remainder was of normal size and shape.

After puncturing the pelvis 150ml of urine were aspirated. Three stay sutures were placed on the renal pelvis to help with pelvis dissection and resection.

We then proceeded with dismembered Anderson Heynes pyeloplasty using Assufil 5/0 suture with placement of double J stent 4.8 Ch/12 cm before anastomosis closure. A Penrose 10 Fr drain was placed at the end of the procedure.

RESULTS

The post-op time was uneventful. The drain was removed on the 2nd post-op day and the patient was discharged on the 5th post-operative day. The operative time was 134 minutes.

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INTERPRETATION OF RESULTS

There is no gold-standard procedure for ectopic kidney with UPJO.

Despite mini-invasive surgery could be indicated in patients affected by this condition, open approach by Pfannensteil incision provided an excellent operative view and has been technically straightforward and effective.

CONCLUSIONS

Open retroperitoneal pyeloplasty is an easy and safe surgical procedure in pelvic and malrotated kidney.

Therefore, we believe it should be carefully considered, especially in patients with large extrarenal pelvis and importantly rotated renal axis.

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31. THE IMPACT OF A STANDARDIZED PROACTIVE PUV CARE PATHWAY ON RENAL OUTCOMES

Mandy Rickard⁽¹⁾ - Joana Dos Santos⁽¹⁾ - Miriam Mikhail⁽¹⁾ - Beverly Miranda⁽¹⁾ - Noreen Goraya⁽¹⁾ - Jin Kyu Kim⁽¹⁾ - Adree Khondker⁽¹⁾ - Martina Bruniera⁽¹⁾ - Rodrigo Romao⁽¹⁾ - Joao Pippi Salle⁽¹⁾ - Nithiakishna Selvathesan⁽¹⁾ - Michael Chua⁽¹⁾ - Armando J Lorenzo⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Since 2019, our institution has employed a standardized proactive care pathway for patients diagnosed with posterior urethral valves (PUV). This pathway tailors the initial surgical approach based on changes in hydronephrosis and serum creatinine (sCr) in response to bladder decompression. Patients showing improvement in these parameters undergo valve ablation, while those without improvement receive primary diversions, typically ureterostomies.

MATERIALS AND METHODS

We retrospectively reviewed a prospectively maintained database (2001–2024) focusing on PUV patients under two years old managed at our institution. Patients were classified as either in agreement or deviation from the pathway based on adherence to the guidelines for type of surgical intervention. Captured data included baseline and perioperative creatinine values, ultrasound parameters, initial surgical intervention, need for secondary diversions, CKD >3, and KRT. Patients with fewer than two baseline creatinine measures were excluded.

RESULTS

A total of 73 patients were in the agreement group and 33 in the deviation group, with comparable PURK scores. The deviation group had significantly more secondary diversions after failed ablations. Baseline sCr were similar, but postoperative creatinine was significantly lower in the agreement group (**Table**).

INTERPRETATION OF RESULTS

CKD >3 rates were also similar (31% vs. 25%; $p=0.08$); however, KRT was more frequent in the deviation group (33%) compared to the agreement group (12%; $p=0.02$) and occurred at younger ages (0.7y vs. 7.2y; $p=0.03$).

CONCLUSIONS

Standardized, individualized management with tailored initial surgical interventions appears to improve kidney function and ultrasound parameters, even when considering historical patients managed according to the recent care pathway.

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Table

	Pathway Agreement (n=73)	Pathway Deviation (n=33)	P
PURK >3	32 (45)	21 (63)	0.09
- Ablation	45 (62)	20 (60)	0.02
- Primary diversion	24 (33)	6 (18)	
- Secondary diversion	4 (6)	7 (22)	
Baseline SCr	103 (92)	127 (184)	0.54
Pre-op SCr	57 (51)	178 (259)	<0.01
SCr at one year (IQR)	30 (10)	33 (36.5)	0.17
SCr at FU (IQR)	39 (33)	44 (281)	0.02
eGFR	96.80 (51.98)	87.75 (89.82)	<0.01
CKD >3 last follow up	16 (31%)	13 (25%)	0.08
KRT	9 (12%)	11 (33%)	0.02
Age at KRT (years) (IQR)	7.2 (7.5)	0.7 (6.8)	0.03
KRT before 5-y FU	3 (4%)	9 (27%)	<0.01
CIC	27 (37%)	13 (39%)	0.83

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32. LONG-TERM FOLLOW-UP OF PRIMARY ENDOSCOPIC TREATMENT OF URETEROCELES IN A SINGLE CENTER

Marianna Iaquinto ⁽¹⁾ - **Jurgen Schleef** ⁽¹⁾ - **Damiana Olenik** ⁽¹⁾ - **Daniela Codrich** ⁽¹⁾ - **Alessandro Boscarelli** ⁽¹⁾ - **Maria-Grazia Scarpa** ⁽¹⁾

⁽¹⁾ *IRCCS, Burlo Garofolo, Trieste, Italia*

INTRODUCTION AND AIM OF THE STUDY: We reevaluated the outcome of patients undergone to primary endoscopic treatment for ureterocele in our Center between 2014 and 2024.

MATERIALS AND METHODS: We included 22 patients, aged between 8 days and 7 years. The maximum follow-up was 10 years. Antenatal ultrasound scan detected hydronephrosis and led to the postnatal diagnosis of ureterocele in 12 children, whereas in the remaining 10 children the diagnosis was made on investigation for urinary tract infection (UTI). The ureterocele presented as a part of renal duplication in 15 patients and a single system in 7. Twelve of the patients with duplication presented with non- or poorly functioning upper poles. Vesicoureteric reflux (VUR) was seen in the lower moiety of the ipsilateral kidney in 5. Hydroureteronephrosis on preoperative renal ultrasound was represented in 13 patients. The majority of ureteroceles (18) were on the bladder trigonum, 3 along the bladder neck and 1 in the urethra.

RESULTS: Complete decompression of the ureterocele was achieved in 19 patients after the first endoscopic treatment. Three patients required a second look. Two patients had VUR in the upper pole moieties after ureterocele endoscopic management, none required treatment.

CONCLUSIONS: Our data suggest that primary endoscopic treatment of ureteroceles is a simple, long-term, effective, and safe procedure avoiding complete reconstruction in the majority of the patients.

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33. FEASIBILITY AND OUTCOMES OF BUTTON CYSTOSTOMY IN PEDIATRIC NEUROGENIC BLADDER: A SINGLE-CENTER EXPERIENCE

Rebecca Pulvirenti ⁽¹⁾ - Chiara Pellegrino ⁽¹⁾ - Ida Barretta ⁽¹⁾ - Michela Galati ⁽¹⁾ - Gaia Brunetti ⁽¹⁾ - Maria Luisa Capitanucci ⁽¹⁾ - Antonio Maria Zaccara ⁽¹⁾ - Giovanni Mosiello ⁽¹⁾

⁽¹⁾ Ospedale Pediatrico Bambino Gesù, UOC Chirurgia della Continenza e Neurourologia, Roma, Italia

INTRODUCTION AND AIM OF THE STUDY

Neurogenic bladder (NB) in children poses a risk for urinary tract infections (UTIs), renal damage, and impaired quality of life. While clean intermittent catheterization (CIC) is the standard of care, it is not always feasible due to anatomical, sensory, or compliance-related issues. In such cases, alternative urinary drainage is required. Button cystostomy (BC), originally developed for gastrostomy but adapted for urinary use, offers a minimally invasive option that preserves bladder function better than vesicostomy and appears more stable than traditional suprapubic catheters.

Aim of this study was to evaluate the feasibility, safety, and clinical outcomes of BC placement in children with NB, and to report patient and caregiver satisfaction.

MATERIALS AND METHODS

A retrospective review was conducted on all NB patients who underwent endoscopic BC placement between January 2020 and December 2024 at a single tertiary pediatric center. Collected data included baseline characteristics, operative time, complications, follow-up outcomes, and subjective satisfaction. All procedures were performed using a minimally invasive endoscopic technique involving bladder distension, cystoscopic visualization, and guidewire placement for precise button insertion. Descriptive statistics were used to analyze the results.

RESULTS

A total of 36 patients (28 males, 8 females) received BC placement. The majority (86.1%) had myelodysplastic conditions; others had syndromic or structural causes. Median age at surgery was 7.76 years (IQR: 4.88–13.33), and median weight was 25 kg (IQR: 16–35). Mean operative time (in isolated procedures) was 48.7 ± 6.1 minutes.

During a mean follow-up of 2.22 ± 1.43 years, five patients (13.9%) experienced febrile UTIs, and two had button-site leakage, which resolved with device adjustment. No other complications were observed. Two patients reverted to CIC for personal-family preference; the remaining families (34/36, 94.4%) reported greater satisfaction with BC than with CIC. The device was removed in three children—two after conversion to a continent diversion and one after sacral neuromodulation restored spontaneous voiding.

INTERPRETATION OF RESULTS

BC placement proved to be an effective and well-tolerated method for bladder drainage. By permitting individually scheduled opening times, it facilitates easy bladder management while preserving capacity and compliance. Its minimally invasive placement and reduced anesthesia time make it suitable even for complex patients. Additionally, it proved feasible in a wide patient age range, including an infant of 1.5 months.

CONCLUSIONS

Endoscopic BC is a reliable, quick, and low-risk urinary diversion for children with NB. It is effective even in infants and offers flexibility for both temporary and long-term use. Our results support its broader adoption, though prospective studies using standardized outcome measures are needed to confirm long-term benefits compared to other drainage methods.

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34. SINGLE-CENTER RESULTS FROM THE FIRST 100 ROBOTIC REIMPLANTATIONS: ANALYSIS OF LEARNING CURVE EFFECTS

Gaia Brenco ⁽¹⁾ - **Venusia Fiorenza** ⁽¹⁾ - **Federica Fanti** ⁽¹⁾ - **Giulia Rotondi** ⁽¹⁾ - **Marcello Carlucci** ⁽¹⁾ - **Girolamo Mattioli** ⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Vesicoureteral reflux (VUR), obstructive megaureter (OM) and refluxing/obstructive megaureter (ROM) are common pediatric urologic conditions that may require surgery. Robot-assisted laparoscopic ureteral reimplantation (RALUR) has emerged as a minimally invasive alternative to open surgery, especially in complex or redo cases. This study analyses the outcomes of 100 consecutive pediatric RALUR performed at a single center, aiming to evaluate progressive improvement in surgical performance over time.

MATERIALS AND METHODS

We conducted a retrospective single-center study involving 100 consecutive RALURs over five years. The cohort was divided into two groups: the first 50 procedures (Group A) and the next 50 (Group B). Both simple and complex cases were included. All surgeries were performed by a single senior surgeon. Only patients with a minimum follow-up of 6 months were included. Ethical approval was obtained from the institutional review board.

RESULTS

A total of 100 RALUR were performed in 96 patients. Complex anatomy -such as double system, ureterocele or para-ureteral diverticula-was present in 50% of Group A and 58% of Group B. Prior uretero-vesical junction (UVJ) surgery had been performed in 54% of Group A and 52% of Group B. No intraoperative complications occurred. Bladder catheterization time decreased from a mean of 2.3 days in Group A, to 1.5 days in Group B. Additionally, opioid use significantly declined in Group B (4% vs. 14%). Early postoperative complications occurred in 30% of Group A compared to 12% in Group B ($p = 0.02$). Five patients in Group A and two in Group B required surgical reintervention. Complete resolution was achieved in 66% of Group A and 84% of Group B. Among patients without resolution, most were managed successfully with endoscopic treatment.

INTERPRETATION OF RESULTS

Our findings suggest a progressive improvement in outcomes and complication rates over time, likely reflecting the surgeon's increasing experience. Improvements are evident both in postoperative management—reflected in lighter pain therapy ($p=0.08$), shorter hospital stays, and reduced catheterization time—and in surgical results.

Our data show how experience can improve the outcomes. In this series, resolution rate increased between group A and group B ($p=0.06$), with a significant reduction of post-operative VUR ($p=0.04$) and need for redo surgery ($p=0.6$).

This trend supports the presence of a learning curve, with improvements not only in technical execution but also in perioperative strategies. The better outcomes seen in Group B suggest that greater familiarity with the robotic approach enhances reproducibility and safety. These data align with existing literature and highlight the role of surgical volume in achieving consistent results.

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CONCLUSIONS

RALUR is a relatively recent non-standardized surgical innovation. Although our success rate has not yet matched those of open procedures, it shows considerable potential, particularly given its more accessible and efficient learning curve. Our findings underscore how increasing robotic surgical experience can lead to improved outcomes, supporting the continued development and optimization of this technique, which still holds room for refinement.

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35. TRANS-TROCAR RIRS (TTR) FOR RENAL STONES ASSOCIATED WITH PELVIC-URETERIC JUNCTION OBSTRUCTION (PUJO): INITIAL EXPERIENCE OF A TERTIARY LEVEL CENTRE

Alberto Mantovani ⁽¹⁾ - Andrea Zulli ⁽¹⁾ - Virginia Carletti ⁽²⁾ - Chiara Cini ⁽¹⁾ - Luca Landi ⁽¹⁾ - Maria Taverna ⁽¹⁾ - Niccolò Firenzuoli ⁽³⁾ - Lorenzo Masieri ⁽³⁾

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INTRODUCTION AND AIM OF THE STUDY

Pelvic-ureteric junction obstruction (PUJO) can lead to the formation of renal calculi in up to 15% of affected patients. Managing both conditions simultaneously poses a surgical challenge. A minimally invasive technique combining robotic-assisted pyeloplasty with endoscopic stone removal offers a potential solution. This study aims to assess the safety and efficacy of TTR in children and adolescents with PUJO and associated urolithiasis.

MATERIALS AND METHODS

Retrospective review of patients under 20 years of age treated at our center between 2018 and 2024 for PUJO associated with renal stones using the Trans-Trocar RIRS (TTR) approach. The procedure involves the insertion of a flexible ureteroscope through one of the robotic trocars, allowing direct access to the renal calyces via a pyelotomy, which is made to perform the subsequent pyeloplasty. Stones are retrieved using either a basket or robotic forceps. The pyeloplasty is then completed robotically using a 5/0 Monosyn® suture.

RESULTS

A total of seven patients underwent the TTR procedure, with a median age of 9.9 years (range: 1.4–19.3 years). The mean anteroposterior diameter (APD) of the renal pelvis was 24 mm (range: 10–32 mm). Renal stones had a mean diameter of 8 mm (range: 4–26 mm), predominantly located in the lower calyces (71%). Stone retrieval was successful in all cases. The mean operative time was 145 minutes (range: 85–182 minutes), with no intraoperative complications. Postoperative stone-free rate (SFR) was 100%, and remained at 71% after a mean follow-up period of 2 years (range: 0.5–4.5 years).

INTERPRETATION OF RESULTS

The TTR technique allowed for effective treatment of both the obstruction and nephrolithiasis in a single surgical session. The use of the robotic platform facilitated precise pyeloplasty, while the integrated flexible ureteroscopy enabled successful stone clearance.

CONCLUSIONS

The TTR technique, combining robotic pyeloplasty with simultaneous stone removal, is a safe, effective, and minimally invasive option in pediatric patients for treating PUJO with concurrent renal calculi. This one-stage procedure avoids multiple interventions and provides satisfactory outcomes in terms of both obstruction resolution and stone clearance.

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36. EVALUATION AND MANAGEMENT OF UROLOGICAL COMPLICATIONS FOLLOWING PEDIATRIC KIDNEY TRANSPLANTATION: EXPERIENCE FROM A SINGLE TERTIARY CENTER

Alessandro Morlacco⁽¹⁾ - Maria Sangermano⁽²⁾ - Enrico Montagnani⁽²⁾ - Serena Vigezzi⁽²⁾ - Marco Moi⁽²⁾ - Nicola Bertazza Partigiani⁽²⁾ - Elisa Benetti⁽²⁾ - Enrico Vidal⁽²⁾

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INTRODUCTION AND AIM OF THE STUDY

Kidney transplantation is the treatment of choice for children with end-stage renal disease (ESRD), but its outcome can be affected by urological complications, with incidence rates of 2.5–25%. The aim of this study was to evaluate the occurrence of urological complications and their management in a cohort of pediatric kidney transplant recipients.

MATERIALS AND METHODS

A retrospective analysis on 178 patients who received a renal transplant at our Pediatric Kidney Transplant Center between 2011 and 2023 was conducted. Demographic and clinical data were analyzed. Urological complications were categorized as early, intermediate, or late based on their onset time.

RESULTS

Out of 178 patients, 28 (15.7%) experienced urological complications. Most patients (61%) had a pre-existing uropathy. Early complications (7–30 days) were all obstructive, namely, ureterovesical junction obstruction and perirenal collections. Intermediate complications (1–3 months) comprised ureteral stenosis, symptomatic vesicoureteral reflux (VUR), and obstructive lymphocele. Late complications (>3 months) included symptomatic VUR and ureteral stenosis, with one case leading to ureteral rupture. Early complications were often detected due to acute graft dysfunction, while late ones were mainly identified during routine clinical, laboratory, or ultrasound follow-up. Urological complications requiring surgical or endoscopic therapy were 13.4%. Most ureteral stenoses were treated with initial endoscopic stents, followed by definitive surgery. VUR was treated with endoscopic correction with a high success rate (75%), while open surgery was reserved for cases where initial treatments failed or complications recurred. No clear correlations were found between patient characteristics and risk of urological complication.

INTERPRETATION OF RESULTS

Urological complications required multiple diagnostic procedures and therapeutic interventions (+2.5 admissions in mean and approximately +EUR 24,000) compared to an uncomplicated post-transplant course. However, they did not significantly impact transplant outcomes, with a graft survival rate comparable to that of the control group.

CONCLUSIONS

Regular post-transplant follow-up is crucial, especially for patients with known risk factors, to allow for timely detection and treatment of urological complications, avoiding detrimental effects on graft function and improving transplantation outcomes.

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37. NEPHRON-SPARING SURGERY FOR BILATERAL WILMS TUMOR: INSIGHTS FROM AN HIGH-VOLUME CENTER

Dario Guido Minoli ⁽¹⁾ - **Alberto Quistini** ⁽¹⁾ - **Michele Gnech** ⁽¹⁾ - **Arianna Roggero** ⁽¹⁾ - **Erika Adalgisa De Marco** ⁽¹⁾ - **Eduje Thomas** ⁽¹⁾ - **Francesca Mitzman** ⁽¹⁾ - **Davide Biasoni** ⁽²⁾ - **Giovanna Gattuso** ⁽³⁾ - **Filippo Spreafico** ⁽³⁾ - **Carlo Morosi** ⁽⁴⁾ - **Alfredo Berrettini** ⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Wilms tumor (WT) is the most common malignant renal tumor in children. Bilateral presentation occurs in 4–8% of cases. Bilateral nephron-sparing surgery (NSS) is strongly recommended to preserve renal function. We aim to evaluate the feasibility and oncologic and functional outcomes of NSS in children with bilateral WT treated in a high-volume team.

MATERIALS AND METHODS

A retrospective review was conducted on children treated surgically for bilateral WT at two collaborating institutions, sharing one surgical team. Postoperative complications were evaluated, and outcomes including recurrence, renal function, survival, and hypertension were assessed.

RESULTS

Data from 11 patients (81.8% girls) with a mean age of 21.7 ± 9.9 months were analysed. All were treated with neoadjuvant chemotherapy followed by surgery according to the SIOP Umbrella protocol. Four patients developed hypertension. Ten cases were synchronous, one metachronous. Mean baseline creatinine was $0.28 (\pm 0.06)$ mg/dl, rising to $0.32 (\pm 0.09)$ mg/dl at follow-up (median 42 months). Eight patients (73%) underwent bilateral NSS, while three had a combined approach: NSS on one side and contralateral radical nephrectomy. Postoperative complications developed in one patient, who presented chyloperitoneum and leg thrombosis, requiring prolonged hospitalization (58 days) vs. overall median stay of 9 days. Three patients kidney relapsed, treated with NSS and adjuvant chemotherapy, and one of these died due to metastases.

CONCLUSIONS

NSS is a feasible approach for most bilateral WT, achieving good oncologic control and preserving renal function in most patients, who maintained stable renal function Long-term follow-up remains essential to monitor functional outcomes.

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38. UROLOGICAL, COSMETIC, SEXUAL AND MOOD WELL-BEING FOLLOWING SURGICAL TREATMENT FOR HYPOSPADIAS AT A TERTIARY REFERRAL CENTER: A RETROSPECTIVE STUDY

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Introduction

Sexual dysfunction is highly prevalent among men of reproductive age, with patients affected by congenital urogenital disorders, such as hypospadias, being at an even higher risk. Many common pediatric urology surgeries aim to correct anatomic pathology that could lead to dysfunction in adulthood. This study aims to evaluate postoperative surgical outcomes, focusing on urological and sexual function, as well as their potential impact on mood disturbances.

Material & Methods

Clinical and surgical data from men diagnosed with hypospadias and surgically managed between 1972 and 2007 at a single tertiary referral center were collected. Patients were invited to complete the International Prostate Symptoms Score (IPPS), the Beck's Depression Inventory (BDI), the International Index of Erectile Function (IIEF, divided into 5 domains). Erectile dysfunction (ED) severity was categorized according to Cappelleri criteria. Patients were classified into two groups: Group 1 and Group 2 for distal and proximal hypospadias, respectively. Descriptive statistics and logistic regression models tested the association between surgical characteristics and quality of life (QoL).

Results

Of 354 patients, 61 (17.23 %) had complete data at a median (IQR) FU of 26 (22-31) yrs. Median age (IQR) at surgery was 20 (12-37) mo in Groups 1 and 12 (9-39) mo in Group 2. Complications rates were significantly higher in Group 2 (69.2% vs. 31.2%; $p=0.03$), with fistula being the most common (24.6%). Median (IQR) IPSS QoL scores were worse in Groups 2 [3 (2-4)] compared to Groups 1 [0 (0-1)], $p=0.004$. ED was reported higher in Group 2, with the other IIEF domains similar between groups. Logistic regression analyses showed type of hypospadias as the only independent predictor of IPSS QoL. No significant differences were found in IPPS, BDI and PPS scores between groups.

Discussion

The analysis of the dataset reveals that the median age at the time of intervention varied across groups, with no statistically significant differences ($p=0.547$). Follow-up duration showed a similar trend ($p=0.133$).

Postoperative complications were more frequent in Group 2: fistula formation ($p=0.002$), dehiscence ($p=0.48$), phimosis ($p=0.007$). Moreover patients requiring reoperation were significantly higher in Group 2 ($p=0.021$). Erectile function (IIEF_ef) showed statistical differences ($p=0.04$), highlighting potential variations in functional outcomes.

The Urinary Quality of life (QoL) scores varied considerably ($p<0.001$). Comparing groups, QoL measures differed significantly ($p=0.015$), suggesting a notable effect of intervention on patient-perceived outcomes.

Conclusion

Overall, our study underscores variations in surgical approaches, complications, and quality-of-life outcomes, emphasizing the necessity of tailored clinical management strategies. Although no other

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variables showed significant differences between groups, hypospadias type emerged as the strongest predictor of good urinary QoL.

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39. SACRAL NEUROMODULATION: ROLE IN THE MANAGEMENT OF DYSFUNCTIONAL VOIDING OF ADOLESCENTS AND YOUNG ADULTS

NOEMI DEANESI ⁽¹⁾ - **CHIARA PELLEGRINO** ⁽¹⁾ - **REBECCA PULVIRENTI** ⁽¹⁾ - **MARIA LUISA CAPITANUCCI** ⁽¹⁾ - **GIOVANNI MOSIELLO** ⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Sacral neuromodulation (SNM) with an implantable pulse generator is a well-known therapy for dysfunctional voiding and neurogenic bladder in adults, but it is not an established treatment in adolescents.

The aim of the study is to analyze functional and clinical outcomes of SNM in a population of children/young adults with functional emptying obstruction.

MATERIALS AND METHODS

Retrospective evaluation of all patients subjected to SNM implantation for chronic urinary retention (CUR), January 2013-December 2023, with follow-up ≥ 12 months.

Exclusion criteria: > 18 years-old, placement of SNM for urge urinary incontinence or chronic constipation alone, and neurogenic bladder.

All patients underwent clinical evaluation, laboratory tests (blood and urine exams), urinary ultrasound, voiding cystourethrography, spinal magnetic resonance, urethrocistoscopy and urodynamic evaluation. SNM placement was conducted in two surgical stages.

The analysed outcomes were: underlying condition which led to the implantation, peri-/post-operative complications, clinical and functional changes (urodynamic evaluation), patients' personal perception of their condition and overall satisfaction, and whether the neuromodulator was removed at the study end.

RESULTS

Among 56 children subjected to SNM implantation during study period, 21 patients were included (11 XX, 10 XY): 14 (66.7%) had CUR, 6 (28.5%) CUR and chronic constipation, 1 (4.8%) CUR and urge incontinence. Nineteen patients (90.5%) were managed with CIC via urethra, 2 (9.5%) with button cystostomy.

Mean age at surgery: 13.8 years (7-17). Two patients (9.5%) experienced early postoperative complications: one (4.7%) had a surgical site infection successfully treated with local therapy, while another one (4.7%) showed battery decubitus, which required device replacement. Mean follow-up was 62.3 months (range: 15-120 months).

Urodynamic improvement was observed in 15 patients (71.4%); of these, 13 reduced the number of CIC/day, 2 had button cystostomy removed.

During clinical evaluation, seventeen patients (81%) reported feeling satisfied in terms of their psychological, social, and self-perception.

Four patients (19.1%) decided to remove SNM: 1 with CUR and urge urinary incontinence simultaneously (no resolution of incontinence), 1 because of a somatoform disorder, 2 had no benefits after SNM.

INTERPRETATION OF RESULTS

We found no statistically significant differences between sex and age of the implant and postoperative complications (regarding sex $p=0.7$; regarding age $p=0.02$). We found no statistically significant differences in clinical effectiveness of the device between females and males ($p=0.2$).

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CONCLUSIONS

SNM is a safe and effective therapy for dysfunctional elimination syndrome in properly selected pediatric patients. However, further studies are necessary to confirm our results.

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40. INFLUENCE OF PRESTENTING ON THE OUTCOME OF ENDOSCOPIC TREATMENT OF STONES IN PEDIATRIC AGE. SINGLE CENTER EXPERIENCE

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INTRODUCTION AND AIM OF THE STUDY

Ureteral double-J stenting plays a crucial role in both the acute management and definitive treatment of urolithiasis. By passively dilating the ureter, the stent facilitates easier access during a subsequent ureteroscopy. However, despite its benefits, stent placement can lead to discomfort and other stent-related complications. As a result, the practice of pre-stenting prior to definitive intervention remains controversial, with studies reporting mixed outcomes. The EAU guidelines do not mandate preoperative stenting. Data on the impact of pre-ureteral stent placement in children remain limited. However, a recent meta-analysis by Law et al. suggests that children who did not undergo pre-stenting had a higher risk of ureteric injuries. This study aimed to evaluate the effectiveness and safety of preemptive ureteral stenting two months before definitive ureteroscopy for treating urolithiasis.

MATERIALS AND METHODS

We retrospectively analyzed the data of patients with urinary stones treated between January 2020 and May 2025. The patients were divided into two groups: the treatment group underwent stent insertion 2 months prior to the definitive treatment, while in the control group, primary ureteronephroscopy was attempted. We compared surgical outcomes, operative time, complication rate, success rate, and stone-free rate, between the two groups.

RESULTS

The study included 77 patients with renal and ureteral stones. Of the 77 patients, 67 were treated endoscopically and included in the study. The cohort comprised 35 females and 32 males, with an average age of 9.7 years (standard deviation ± 4.3).

Forty-two patients underwent pre-stenting, of which 25 planned while 20 after an attempted and failed primary ureteroscopy. In the control group 25 patients underwent primary successful ureteronephroscopy, the stone-free rate was not statistically different between the two groups ($p = 0.901$); however, the operation time for the ureteronephroscopy treatment in the pre-stenting group was shorter than in the control group ($50,25 \pm 13,17$ DS vs $91,99 \pm 38,13$ DS).

There were no differences in the complication rate between the two groups ($p = 0.523$); however, there was a longer mean hospital stay due to pain and hematuria in the control group (6.3 ± 1.1 DS vs. 4.1 ± 0.9 DS).

INTERPRETATION OF RESULTS

While the study found no significant difference in overall perioperative complications, pre-stenting was associated with a slightly lower risk of pain and hematuria after definitive treatment.

CONCLUSIONS

The findings of this study suggest that pre-stenting of the ureter, followed by deferred stone treatment, may provide clinical benefits in selected pediatric cases, particularly by reducing the risk of procedure-related pain and hematuria. While further studies are needed to confirm the present results, preliminary stent placement should be considered prior to definitive endoscopic treatment of stone disease in children.

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41. ROBOT ASSISTED NEPHRON SPARING SURGERY FOR COMPLEX RENAL CYSTS IN PEDIATRIC PATIENTS: OUR EXPERIENCE.

Massimo Catti ⁽¹⁾ - **Marco Allasia** ⁽²⁾ - **Carlotta Mangione** ⁽²⁾ - **Marta Serpentino** ⁽¹⁾ - **Lorenzo Cirigliano** ⁽¹⁾ - **Elisa Cerchia** ⁽¹⁾ - **ilaria Macchia** ⁽¹⁾ - **Ana Sofia Soto Torselli** ⁽¹⁾ - **Simona Nappo Gerocarni** ⁽¹⁾ - **Paolo Gontero** ⁽²⁾

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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 minimally-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.

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**42. PELVIURETERIC JUNCTION OBSTRUCTION AFTER 2 YEARS OF AGE, A CHANCING SCENARIO:
CAN WE PREDICT THE PRESENCE OF POLAR VESSELS?**

Ermelinda Mele ⁽¹⁾ - **Alice Gismondi** ⁽²⁾ - **Michele Innocenzi** ⁽²⁾ - **Ana Ludy Lopes** ⁽²⁾ - **Giuseppe Collura** ⁽²⁾
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Introduction: Crossing lower polar vessel (CLPV) is found in 15% of children with pelviureteric junction obstruction (PJO). Preoperative tests can help identify polar vessels but have a high false-negative rate. The aim of our study was to define the characteristics of patients >2 years requiring pyeloplasty and possible risk factors for predict presence of polar vessels.

Materials and Methods: 118 patients >2 years are treated consecutively in our department in the last 5 years. We have retrospectively reviewed demographic data, clinical presentation, imaging features, management and outcomes.

Results: 118 patients are treated laparoscopically, median age 11(2-22) years. 72 (61%) M and 71 (60%). Clinical presentation are described in the table. Children with CLPV were not different from others in any way. (TAB.)

In the group without polar vessels here have been 3 complications (10%): 1 patient required stent repositioning due to dislocation and two patients due to renal colic and hydronephrosis in the immediate post-operative period. In the group with polar vessels, 9 complications (10%): 1 stent dislocation, 2 fUTI in patients with jj stent, 2 urinomas and 4 renal colic. At follow-up of 19 month (6-60), all were asymptomatic.

Conclusions: In our experience, the incidence of polar vessels in this population is much higher than that reported in the literature. In group with polar vessels, pain is the predominant presenting feature. These patients have well-preserved renal function and moderate hydronephrosis. No imaging can predict, with certainty, the presence of CLPV. Patients with CLPV can be treated with Vascular-Hitch, with precautions.

	Patients tot.118	Male	Left	Median age (years)	Symptoms (pain/futi)	Prenatal diagnosis	Median DAP (mm)	Median DFR	TC/RMN	VH/AH	Complications	Follow-up Median DAP (mm)	Follow-up Median DFR
Polar Vessels	87 (74%)	51 (59%)	49 (56%)	12 (4-22)	67 (77%)	23 (26%)	32 (12-91)	44.5% (11-54)	35 (40%)	24/63	9 (10%)	13 (0-45)	46 (7-58)
No Polar Vessels	31 (26%)	21 (68%)	22 (71%)	8 (2-12)	19 (62%)	14 (45%)	30 (15-60)	47% (14-75)	6 (19%)	0/31	3 (10%)	13.5 (4-57)	48 (5-75)

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43. OZONATED OLIVE OIL AS A WOUND DRESSING IN PEDIATRIC HYPOSPADIAS REPAIR: RESULTS FROM A RANDOMIZED CONTROLLED TRIAL

Vincenzo Coppola⁽¹⁾ - Maria Escolino⁽¹⁾ - Fulvia Del Conte⁽¹⁾ - Claudia Di Mento⁽¹⁾ - Francesca Carraturo⁽¹⁾ - Francesco Tedesco⁽¹⁾ - Roberta Guglielmini⁽¹⁾ - Marialuisa Pirone⁽¹⁾ - Ciro Esposito⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

In recent years, several ozone-based products have emerged for enhancing wound healing. This study evaluates the effectiveness of a new spray dressing containing stable ozonides combined with Vitamin E Acetate in pediatric patients undergoing surgery for distal hypospadias.

MATERIALS AND METHODS

All children who underwent Tubularized Incised Plate Urethroplasty (TIPU) for distal hypospadias over a 12-month period were enrolled. Patients were randomly assigned to one of two postoperative treatment groups: Group 1 (G1) received a spray formulation containing ozonides and Vitamin E Acetate, while Group 2 (G2) received a hyaluronic acid-based cream. After hospital discharge, parents were instructed to apply the dressing twice daily for 2–3 weeks. Clinical follow-ups were scheduled at 7, 14, 21, 30, 60, and 180 days after surgery, and then annually. A parental satisfaction survey was conducted at the end of the treatment period.

RESULTS

A total of 86 patients were included, with a median age of 18 months. Wound healing occurred significantly faster in G1 than in G2 ($p = 0.001$). No skin reactions or adverse effects were reported in either group. G1 showed lower rates of foreskin dehiscence and need for reoperation. Foreskin retractability was significantly improved in G1, while G2 had a higher incidence of secondary phimosis. Additionally, the median treatment cost was significantly lower in G1 ($p = 0.001$). Parents in G1 rated the spray dressing as easier to use, which enhanced treatment adherence and simplified home care.

INTERPRETATION OF RESULTS

The spray dressing with ozonides and Vitamin E Acetate proved to be more effective than conventional hyaluronic acid cream in promoting wound healing following distal hypospadias repair. It also reduced postoperative complications such as dehiscence and phimosis, lowered costs, and improved parental satisfaction. The ease of application—without direct contact with the surgical site—offered an additional advantage in pediatric home care, making it a practical and parent-friendly option.

CONCLUSIONS

This new ozonide-based spray dressing demonstrated superior outcomes in wound healing, ease of use, and cost-effectiveness compared to traditional treatments. It represents a valuable tool for postoperative care in children undergoing hypospadias repair, offering both clinical and practical benefits for families and caregivers.

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44. THE IMPACT OF STANDARDIZED CARE FOR PUV PATIENTS ON LOWER URINARY TRACT INTERVENTIONS: 5-YEAR OUTCOMES FROM A HIGH-VOLUME PUV CLINIC

Mandy Rickard⁽¹⁾ - Joana Dos Santos⁽¹⁾ - Miriam Mikhail⁽¹⁾ - Beverly Miranda⁽¹⁾ - Noreen Goraya⁽¹⁾ - Jin Kyu Kim⁽¹⁾ - Adree Khondker⁽¹⁾ - Martina Bruniera⁽¹⁾ - Rodrigo Romao⁽¹⁾ - Joao Pippi Salle⁽¹⁾ - Nithiakishna Selvathesan⁽¹⁾ - Michael Chua⁽¹⁾ - Armando J Lorenzo⁽¹⁾

⁽¹⁾ Sick Kids, The Hospital for Sick Children, Toronto, Canada

INTRODUCTION AND AIM OF THE STUDY

In October 2019 we implemented a dedicated clinic for PUV patients and a standardized care pathway. Herein, we present a comparative analysis of 5-year bladder management outcomes.

MATERIALS AND METHODS

Retrospective review of a prospectively maintained PUV database, including patients diagnosed at <2 years of age managed at our institution from presentation. Patients were divided into before (BPUV) and after (APUV) PUV clinic. We collected the initial type of surgical intervention, medication (anticholinergic/botulinum toxin/alpha blocker) use, frequency of urinary tract infections (UTIs), ultrasound (US) findings, first and last uroflowmetry parameters, and need for CIC. BPUV patients were censored at 1900 days to ensure equivalent follow-up.

RESULTS

We included 189 patients (132 BPUV and 57 APUV). More APUV patients underwent primary diversions (55% vs. 11%; $p<0.01$). Rates of UTIs were similar, but use of anticholinergics, B3 agonists and alpha blockers were significantly higher in APUV patients but age at initiation was younger, and APUV patients had lower grades of hydronephrosis and ureteric dilatation than BPUV patients (Table).

INTERPRETATION OF RESULTS

A similar proportion were started on CIC (32% BPUV vs. 23% APUV; $p=0.22$), however APUV patients were significantly younger at initiation (1755 [IQR1212] vs. 37 [IQR 1123] days; $p<0.01$) and had a higher proportion of overnight only catheterization ($p=0.02$).

CONCLUSIONS

Standardized, proactive care appears to result in improved degrees of upper tract dilatation with similar uroflow parameters, likely related to earlier initiation of medications and CIC. These findings suggest improved upper tract drainage. Longer term follow up is required to determine if proactive management translates into safer lower urinary tract function.

	Before (n=132)	After (n=57)	p
Age at presentation (days) (IQR)	8 (22)	3 (16)	<0.01
Age @ initial surgery (days) (IQR)	16 (30)	10 (18)	0.05
High grade HN @ FU	52 (39%)	7 (12%)	<0.01
Anticholinergics/B3 agonists	55 (42%)	37 (65%)	<0.01
Age initiated (days) (IQR)	1688 (1770)	370 (774)	<0.01
Alpha blockers	58 (44%)	38 (67%)	0.03
Age initiated (days) (IQR)	1686 (2276)	563 (763)	<0.01
Recurrent UTI	37 (29%)	13 (23%)	0.47

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CIC	42 (32%)	13 (23%)	0.22
Age CIC started (days) (IQR)	1755 (1212)	37 (1123)	<0.01

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45. ROBOTIC AND LAPAROSCOPIC MANAGEMENT OF URACHAL ANOMALIES IN PEDIATRIC PATIENTS

Fulvia Del Conte ⁽¹⁾ - **Daniele Alberti** ⁽²⁾ - **Claudia Di Mento** ⁽¹⁾ - **Marco Castagnetti** ⁽³⁾ - **francesco Tedesco** ⁽¹⁾ - **Roberta Guglielmini** ⁽¹⁾ - **Francesca Carraturo** ⁽¹⁾ - **Sofia Caracò** ⁽¹⁾ - **Giovanni Boroni** ⁽²⁾ - **Vincenzo Coppola** ⁽¹⁾ - **Maria Escolino** ⁽¹⁾ - **Ciro Esposito** ⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Urachal remnants are a group of rare anatomical anomalies of the urinary tract that include cysts, diverticula, and tumors. The aim of the study is to report a multicentric experience in the management of urachal anomalies in children with minimally invasive surgery (MIS) using laparoscopy and robotically assisted approach.

MATERIALS AND METHODS

All paediatric patients operated between January 2019 and January 2025 in three different Italian centers with laparoscopic or robotic approach for asymptomatic urachal anomalies were included in the study.

Medical reports were retrospectively reviewed and data as demographics, preoperative workup, intraoperative data, postoperative follow-up were collected.

RESULTS

A total of 23 patients (13 boys and 10 girls) with a mean age 5.9 years (range 6 months–14 years) were included. Fifteen patients (65.2%) were operated in laparoscopy adopting three 3 or 5-mm trocars, and 8 patients (34.8%) were operated in robotics with a Davinci Xi system using 3 trocars of 8-mm plus one bedside trocar of 5-mm. In all cases a Foley catheter was positioned and ICG fluorescence technology was adopted to identify the urachal anomalies. All the urachal remnants were removed in MIS with a small cuff of bladder dome. The urachal ducts were closed with a transfixing point of Vycryl 2/0 plus an endoloop.

All the procedures were successfully completed in MIS and the excised specimens were assessed histologically. The median intraoperative time was 45 minutes (range: 33 – 73 minutes).

All the patients had a Foley catheter for 24-hours after surgery and they were discharged home after 24-48 h. Histopathological report was negative in all cases. We didn't report intra or postoperative complications with a median follow-up of 2 years (3 months - 7 years).

INTERPRETATION OF RESULTS

Laparoscopy and Robotics are safe and effective techniques to adopt to treat urachal anomalies, surgery is fast, painless and without complications. Robotics compared to laparoscopy is ergonomically and technically easier for the surgeon above all in the dissection phase and during the suture of the bladder. ICG guided surgery seems helpful for the identification of the lesion at the beginning of the dissection.

CONCLUSIONS

We believe that MIS can be considered the gold standard technique to remove symptomatic urachal remnant.

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46. ROBOT-ASSISTED BLADDER AUGMENTATION AND MITROFANOFF IN AN ADULT EXSTROPHY PATIENT.

Alessandro Morlacco ⁽¹⁾ - **Giorgio Saggionetto** ⁽¹⁾ - **Moreno Spada** ⁽¹⁾ - **Waifro Rigamonti** ⁽¹⁾ - **Giovanni Betto** ⁽¹⁾ - **Fabrizio Dal Moro** ⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Bladder exstrophy is a rare condition requiring highly specialized care. Several patients will eventually require bladder augmentation and catheterizable channel, either during childhood or in the adult age. This video aims to show the technical steps for bladder augmentation and catheterizable channel in a patients with classical bladder exstrophy.

MATERIALS AND METHODS

A male 38 yo patient, born with classical bladder exstrophy had previously undergone multiple reconstructive procedures including cervicoplasty, genitoplasty and ureteral reimplantation. Despite multiple interventions, he developed multiple urethral stenoses and experienced severe LUTS including dysuria, straining, increased frequency (every hour), incomplete emptying with an estimated bladder capacity of 50-100 cc and urge incontinence.

RESULTS

A robotic approach was chosen. After release of adhesions, the bladder was opened and a Mitrofanoff channel was fashioned using the appendix. Bladder augmentation was performed using 40 cm of ileum. A cutaneous stoma in the lower right quadrant was created using a VQZ technique. The postoperative course was uneventful and the patient was discharged on POD 6. 40 days after the procedure the patient started intermittent catheterization every 3-4 hours.

(Video 4 min)

INTERPRETATION OF RESULTS

In specialized centres and highly selected patients, robotic technique can be a useful option for bladder augmentation and catheterizable channel. A previous experience with robotic intestinal procedures, including intracorporeal ileal neobladder, may help the surgeon in mastering some key steps of the procedure.

CONCLUSIONS

Robotic approach for augmentation and catheterizable channel is feasible even in selected exstrophy patients. This video shows the detail of the surgical technique.

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47. ROBOTIC PYELOPLASTY IN THE PEDIATRIC POPULATION: LONG-TERM OUTCOMES OF A SINGLE INSTITUTION.

Alessandro Morlacco ⁽¹⁾ - Elisa Tonet ⁽¹⁾ - Martina Bruniera ⁽¹⁾ - Ermanno Maria Segreto ⁽¹⁾ - Martina Bruniera ⁽¹⁾ - Giovanni Betto ⁽²⁾ - Waifro Rigamonti ⁽¹⁾ - Fabrizio Dal Moro ⁽²⁾

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INTRODUCTION AND AIM OF THE STUDY

Pyeloplasty for congenital pyelo-ureteral junction obstruction (PUJO) can be performed as an open, laparoscopic or robotic procedure in children. The aim of this study was to analyze results of a monocenter cohort of pediatric patients operated using the robotic system.

MATERIALS AND METHODS

A prospective analysis of the cohort of patients aged 3 to 17 years who underwent robotic pyeloplasty between March 2010 (when the pediatric robotic program was started) and May 2025. The operative time, urinary diversion used, surgical drainage, hospitalization length, early complications and long-term functional results were evaluated from the medical records.

RESULTS

During this period, we operated on 64 children aged 3 to 17 years (median 12). The time from incision to skin closure was 75 to 390 minutes (median 150 minutes). 63 patient were derived with a urinary stent DJ, 1 with DJ and nephrostomy and 1 only with nephrostomy. Surgical drainage was placed in 35 patients. Early complications were reported in 6 patients (9%), maximum Clavien Dindo 3 in 3 patients (4.8%), mainly urine leakage requiring improved drainage with the use of a MJ stent. Patients were hospitalized for 1 to 20 days (median 2) after the surgery and followed up for 1 to 122 months (median 9.5). We lost 14 patient at follow-up. 48 out of 50 followed patients showed regression of the pelvic obstruction according to the postoperative renal dynamic scintigraphy and ultrasound.

INTERPRETATION OF RESULTS

Robotic pyeloplasty is feasible and effective in the pediatric population. DJ stent and no drain is now the standard of our clinical practice and allow the discharge on 1 or 2 POD for most patients. Complications are usually low-grade and may require endoscopic management.

CONCLUSIONS

Robotic pyeloplasty in children is an effective and safe alternative to open or laparoscopic surgery. Absence of surgical drainage and early discharge proved safe, not increasing postoperative complications.

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48. FACING THE TOUGHEST CASES: THE ROLE OF ROBOT-ASSISTED LAPAROSCOPIC URETERAL REIMPLANTATION (RALUR) IN PEDIATRIC UROLOGY - A MULTICENTER ANALYSIS

EMANUELA GALLO ⁽¹⁾ - **Mohan S Gundeti** ⁽²⁾ - **Boris Chertin** ⁽³⁾ - **Ciro Andolfi** ⁽⁴⁾ - **Alfredo Berrettini** ⁽⁵⁾ - **Venusia Fiorenza** ⁽¹⁾ - **Marcello Carlucci** ⁽¹⁾ - **Girolamo Mattioli** ⁽¹⁾

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AIMS:

Even though robotic surgery is well described in simple vesico-ureteral reflux (VUR), few studies explore its role in case of complex uretero-vesical junction (UVJ) anatomy or reiterative surgery. In these cases robotic surgery is recommended only in experienced centers and in older children. This study evaluates the role of robotic ureteral reimplantation in children.

METHODS:

Data of children who underwent robotic reimplantation between 2017 and 2023 in case of reiterative surgery or complex UVJ anatomy across five centers were retrospectively analyzed. All centers employed a transperitoneal approach. Reimplantation techniques included: dismembered and non-dismembered Lich-Gregoire (D-RALUR, ND-RALUR), Dismembered Extravesical Cross-Trigonal reimplantation (RADECUR).

MAIN RESULTS:

The study included 134 patients, 44.7% female, median age 4 years (IQR 2.1-6.6; range: 0.5-17.4), median weight of 15.2 Kg (IQR 13.1-22.0; range: 6.7-80.0). Reiterative surgery (48, 35.8%), duplex systems (38, 28.4%), obstructive megaureter (29, 21.6%) and other pathologies (27, 20.1%). D-RALUR 65 (48.5%), ND-RALUR 56 (41.8%), RADECUR 13 (9.7%). The early post-operative complication rate was 1.4% with only six grade 3B (Clavien-Dindo classification) requiring surgical intervention (2 incisional hernia, 4 UVJ stenosis).

At a mean follow-up of 19.5 months the resolution rate was 82.2%. The comparative analysis found no significant statistical difference in resolution rate respect to pathology, surgical technique, age and body weight. No statistical difference was found stratifying on body weight. As treatment

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failures we recorded 9 UVJ obstruction: 5(9%)D-RALUR, 4(8%)ND- RALUR; 11 VUR: (15%)RADECUR, 7(12%) D-RALUR, 2 (4%)ND-RALUR and a recurrent febrile UTI without VUR or obstruction: 1(D-RALUR).

CONCLUSIONS:

Robotic reimplantation is feasible and safe in case of complex pediatric UVJ pathologies, also in low weight patients.

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49. THE MANAGEMENT OF OVARIAN MASSES THE EVOLUTION FROM LAPAROSCOPY TO ROBOTICS AND INDOCYANINE GREEN FLUORESCENCE TECHNOLOGY: 25-YEAR EXPERIENCE IN NEONATES, CHILDREN AND ADOLESCENTS.

Ciro Esposito ⁽¹⁾ - Fulvia Del Conte ⁽¹⁾ - Vincenzo Coppola ⁽¹⁾ - Vincenzo Bagnara ⁽²⁾ - Marco Castagnetti ⁽³⁾ - Benedetta Cesaro ⁽¹⁾ - Claudia Di Mento ⁽¹⁾ - Francesca Carraturo ⁽¹⁾ - Francesco Tedesco ⁽¹⁾ - Roberta Guglielmini ⁽¹⁾ - Maria Escolino ⁽¹⁾

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INTRODUCTION AND AIM OF THE STUDY

Laparoscopic Palomo varicocelectomy with indocyanine green (ICG) fluorescent lymphography is a standardized approach for preserving lymphatic vessels and preventing post-operative hydrocele. However, there is currently no data available on the safety of intratesticular ICG injection. The study aimed to assess the safety and efficacy of this procedure at mid-term follow-up.

MATERIALS AND METHODS

A total of 72 patients (median age 14.5 years) who underwent laparoscopic Palomo varicocelectomy with ICG fluorescent lymphography between January 2019 and July 2022 were included in the study. All patients had high-grade varicocele as the surgical indication, with 30 out of 72 (41.7%) presenting with related symptoms and 42 out of 72 (58.3%) showing left testicular hypotrophy. Follow-up consisted of clinical evaluations at 1, 6, and 12 months, along with scrotal Doppler ultrasound at 12 months post-surgery to evaluate varicocele persistence, hydrocele formation, and any injection-related complications.

RESULTS

Lymphatic preservation was successfully achieved in all cases using ICG fluorescent lymphography. There were no intraoperative complications or adverse reactions related to ICG. The median follow-up period was 22.8 months (range: 11–49 months). A self-limiting scrotal hematoma at the injection site occurred in 1 of 72 patients (1.4%). In 3 patients (4.2%), ultrasound revealed a small hypoechoic area at the injection site, which resolved within one year in 2 of those cases (66.7%). Persistent grade II varicocele was found in 4 patients (5.5%), but none required further surgical treatment. No cases of hydrocele were reported, and 14 of 22 patients (63.6%) with preoperative testicular hypotrophy demonstrated catch-up growth.

INTERPRETATION OF RESULTS

ICG intratesticular injection proved to be clinically safe, with no allergic or systemic adverse reactions observed. Aside from one case of self-limiting scrotal hematoma, no injection-related injuries were noted. Three patients showed a small hypoechoic, avascular area at the injection site on ultrasound, which appeared clinically insignificant as all were asymptomatic with normal tumor markers. In two cases, the finding resolved within a year. Its benign nature is suggested, possibly linked to injection volume or pressure. Further studies with larger cohorts and extended follow-up are needed to evaluate long-term testicular effects.

CONCLUSIONS

Laparoscopic Palomo varicocelectomy with ICG-FL demonstrated excellent results, with a low rate of varicocele recurrence and no cases of post-operative hydrocele. Preliminary findings also support the mid-term safety of intratesticular ICG injection, showing no specific risks to the testis or overall patient health.

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50. 3D VIRTUAL PLANNING ALGORITHM FOR PELVIC RECONSTRUCTION IN PATIENTS WITH BLADDER EXSTROPHY: A MULTIDISCIPLINARY INNOVATIVE APPROACH

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Introduction

Pelvic reconstruction in bladder exstrophy presents unique surgical challenges due to complex congenital deformities. In adolescents, secondary deformities, including acetabular retroversion and hip dysplasia, often lead to femoroacetabular impingement (FAI) and joint instability, requiring advanced surgical approaches. The application of 3D virtual planning algorithms has emerged as an innovative solution, enabling precise, patient-specific surgical strategies for such challenging cases.

Aim of the study:

This study aims to demonstrate the clinical and radiological outcomes of an innovative 3D virtual planning technique for correcting deformities associated with bladder exstrophy.

Materials & Methods:

Five patients were included. Two patients had undergone bladder exstrophy repair during the neonatal period. The other three were adolescents treated for acetabular retroversion and hip dysplasia secondary to untreated bladder exstrophy. Preoperative planning involved a 3D virtual simulation algorithm (Medics srl, Turin, Italy) to optimize pelvic osteotomy strategies. Postoperative outcomes were assessed using radiological parameters (acetabular orientation, lateral centre edge angle) and clinical metrics (range of motion, visual analogue scale), and functional scores (modified Harris Hip Score). A minimum follow-up period of 6 months was ensured, and complications were recorded.

Results and Discussion:

All five patients underwent successful surgical correction guided by the 3D virtual planning algorithm. In the two patients with neonatal bladder exstrophy repair, pelvic stability and alignment were significantly improved postoperatively. The three adolescent patients demonstrated significant improvements in acetabular orientation, reduction in hip pain, and enhanced range of motion. Radiological parameters, including the LCE angle and acetabular index, showed significant improvement. No complications were recorded during the follow-up period.

Conclusions

The use of a 3D virtual planning algorithm for pelvic reconstruction in bladder exstrophy and its sequelae resulted safe and effective. Further studies with larger cohorts are warranted to confirm these findings.

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51. MY SON HAS AN UROLOGICAL ISSUE... EH, I'M JUST GONNA CHECK TIKTOK

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INTRODUCTION AND AIM OF THE STUDY

In 2024 , Tiktok has raised its social media position and is based on the publication of short videos used by over 1.5 billion people.

With the use of social media, there is an increasing trend among families and patients to seek answers about medical conditions.

To assess the accuracy and reliability of information available on common pediatric urological conditions, in comparison with current evidenced -based clinical guidelines (European Association of Pediatric Urology ESPU).

MATERIALS AND METHODS

We performed a systematic search on TikTok for a range on paediatric urological conditions (nocturnal enuresis, paediatric urinary incontinence, vesicoureteral reflux, hypospadia). Video were screened using strict , predefined inclusion and exclusion criteria. The content and medical claims presented in each video were critically evaluated and compared against the most recent evidence-based guidelines issued by the ESPU.

Information aligning with these guidelines was classified as accurate and reliable , while deviations were noted and categorized accordingly.

RESULTS

The hashtags employed in the search strategy were #Enuresis, #Bedwetting, #ChildrenUrinary Incontinence, #VesicoureteralReflux, #Hypospadia.

A total of 33 videos meeting the inclusion criteria accumulated a combined 7,468,902 views, 415,760 likes and 6,921 comments.

Only 31.7% of these videos contained information consistent with the guidelines provided by the ESPU.

Notably, none of the included videos cited any scientific evidence to support the claims presented.

INTERPRETATION OF RESULTS

This study showed that TikTok can be used to spread information, often incorrect, about various medical conditions and treatments. Family members or caregivers without a medical background can have difficult verifying and ensuring the credibility of information posted on social media.

CONCLUSIONS

The rise of TikTok as a global social media platform has enabled non-experts to generate and disseminate content with the potential to reach millions of users worldwide.

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While this study highlights TikTok's potential as a medium for disseminating health-related information, the findings indicate that it currently serves as a significant source of misinformation, which may pose risks to public health.

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52. MIRABEGRON: SAFETY AND EFFICACY IN PEDIATRIC PATIENTS WITH NEUROGENIC BLADDER

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INTRODUCTION AND AIM OF THE STUDY

Mirabegron, a β_3 -adrenoceptor antagonist, relaxes detrusor smooth muscle, enhances bladder capacity, and is widely used for neurogenic detrusor overactivity (NDO) in adults. However, its efficacy and safety in pediatrics remain limited.

MATERIALS AND METHODS

We reviewed children 4- 18y with NDO treated with mirabegron between 2018 and 2023. Data on treatment indications, side effects, and effectiveness were collected. Efficacy outcomes included partial or complete improvements in incontinence and overactive bladder symptoms.

RESULTS

Sixty patients (57% female) at a median age of 11y (9, 14) were included. Mirabegron was used alone in 30% and in combination with anticholinergics or alpha blockers in 70% of patients. 75% showed partial or complete improvement in incontinence, 79% had improvements in nocturnal enuresis, 63% had reduced frequency, and 70% had less urgency. Side effects were reported in 10% (2% constipation and 2% allergic reaction). Chronic kidney disease (CKD) was identified in 10% of patients, with no worsening renal function or hypertension.

INTERPRETATION OF RESULTS

Chronic kidney disease (CKD) was identified in 10% of patients, with no worsening renal function or hypertension.

CONCLUSIONS

Mirabegron appears to be a safe and effective treatment for pediatric NDO and should be considered as a primary or adjunctive therapy, especially for children who cannot tolerate anticholinergics. This study supports its use in children, including those with CKD and on combined pharmacotherapy.

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Table 1: Population Variables, Side Effects and Outcomes

Variable	Measure (N, % or Median, IQR)
N	60
Age at Start (years)	11 (9, 14)
Sex (Female)	34 (57%)
Follow-up (months)	12 (12, 24)
Other Medications	
Solifenacin	27 (45%)
Oxybutynin	13 (22%)
Tamsulosin	2 (3%)
Side Effects	6 (10%)
Headaches	1 (2%)
Hypertension	1 (2%)
Dizziness	1 (2%)
Allergic reaction	1 (2%)
Fatigue	1 (2%)
Constipation	1 (2%)
Incontinence	
No improvement	13 (25%)
Partial improvement	15 (29%)
Complete improvement	24 (46%)
Nocturnal Enuresis	
No improvement	4 (21%)
Partial improvement	6 (32%)
Complete improvement	9 (47%)
Urgency	
No improvement	3 (30%)
Partial improvement	4 (40%)
Complete improvement	3 (30%)
Frequency	
No improvement	4 (36%)
Partial improvement	5 (45%)
Complete improvement	2 (18%)

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53. BLADDER CANCER IN PATIENTS WITH NEUROGENIC BLADDER DYSFUNCTION: A CASE SERIES IN OUR REGIONAL REFERENCE CENTER TO IMPROVE STRATEGIES OF FOLLOW UP

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Introduction: Bladder cancer (BCa) represents a significant complication in patients with neurogenic bladder dysfunction (NBD), a condition frequently associated with spinal cord injury (SCI), spina bifida (SB). BCa-related mortality is 6.7 times higher in SCI patients compared to the general population. Despite the elevated risk, there are no universally accepted screening guidelines for BCa in NBD patients.

Methods: In our experience at the Spina Bifida Center common follow up in adult stable patients required urological clinical examination once a year followed by urodynamic studies, urinary ultrasound, urine test and blood test with the study of renal function.

In our case series we identified 4 cases of bladder malignant cancer in patients with neurogenic bladder dysfunction secondary to SB. Of the four patients, three were female and one male, all adult patients under 40 years of age. Three patients died from metastatic, inoperable disease, while one is currently undergoing treatment with a poor prognosis. None of the patients had been performing intermittent catheterization before the diagnosis, and two returned to follow-up because of symptoms after a long period of non-adherence to clinical visits.

After this series we change our plan in adult selected patients, above all when CIC wasn't performed, follow up with annual urine cytology and/or cystoscopy with biopsies.

Results: The data from our center align with findings in the literature, underscoring the heightened risk of BCa in this population, especially in the presence of long-term bladder dysfunction. Annual cystoscopy, while suggested by some, are invasive and poorly tolerated, with cytology showing a low sensitivity for low-grade tumors but we recommend the follow up role, also thinking about BCa, in adult patients with neurological bladder.