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RACCOLTA ABSTRACT

T3 Neurogenic Bladder

1 - Iatrogenic NLUTD: When Urinary Continence Management Represents a Surgical Challenge

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INTRODUCTION AND AIM OF THE STUDY

Urinary incontinence (UI) is a debilitating condition with a profound psychosocial impact. In neurogenic bladder (NB) cases, management is complicated by the need to preserve renal function. When NB is of iatrogenic origin in multi-operated patients, accurate diagnosis and a patient-tailored approach are paramount. We present a complex case of iatrogenic UI and its definitive surgical resolution.

MATERIALS AND METHODS

A 17-year-old female sought a second opinion for refractory UI. Her history included a left duplex system with an ectopic ureterocele at the bladder neck and bilateral VUR. After neonatal endoscopic puncture, she underwent bilateral intravesical ureteral reimplantation at age 2, complicated by vesicovaginal fistula. Despite subsequent fistulotomies, bladder neck reconstructions, and multiple bulking agent (Vantris) injections, pseudo-incontinence persisted. At age 14, a sacral neuromodulator (SNM) was implanted, causing paradoxical symptom worsening and severe psychological distress. Upon referral, video-urodynamics revealed poor bladder compliance and capacity, detrusor overactivity, and irreversible urethral/trigonal impairment with stasis-induced urolithiasis.

RESULTS

Following multidisciplinary evaluation, we performed SNM removal, augmentation ileocystoplasty bladder neck closure and continent urinary diversion (Mitrofanoff) for clean intermittent catheterization (CIC). Postoperatively, complete continence was achieved. The patient reached autonomous bladder emptying, stable renal function, and a significant improvement in quality of life.

INTERPRETATION OF RESULTS

Surgical management of ectopic ureters at the bladder neck is challenging; intravesical dissection can lead to trigonal/urethral injuries or fistulae. Extravesical isolation during reimplantation may better preserve sphincter integrity. In pediatric NLUTD with myofibrotic low-compliance bladders, SNM indication must be carefully weighed, as it can be deleterious without adequate bladder capacity. Augmentation ileocystoplasty and the Mitrofanoff procedure remain the "gold standard" when the native urethra is non-viable or bladder neck closure is required for dryness.

CONCLUSIONS

Extravesical isolation of trigonal ureteral ectopia may reduce incontinence risks. SNM eligibility must strictly account for bladder compliance, especially in multi-operated patients with extensive scarring. Therapeutic goals must e individualized to optimize functional outcomes and psychosocial well-being.

T3 Neurogenic Bladder

2 - Neonatal hydrometrocolpos in low vaginal atresia and tethered cord, a case report

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INTRODUCTION AND PURPOSE OF THE STUDY Neonatal hydrocolpos is a rare condition caused by the accumulation of uterovaginal secretions in the presence of an obstruction of the distal genital tract. The various forms of occult dysraphism are considered anomalies of secondary neurulation affecting the same caudal embryonic region from which the urogenital sinus and distal portions of the female genital tract derive, therefore their coexistence is plausible.The aim of the paper is to describe a case of low vaginal atresia with neonatal hydrometrocolpos and occult spinal dysraphism, discussing the diagnostic, therapeutic and embryological implications.

MATERIALS AND METHODS Description of a clinical case. A full-term newborn girl with prenatal detection of an abdominopelvic cystic mass. At birth, ultrasound revealed a pelvic cyst measuring 67×29×87 mm in continuity with the uterus, consistent with hydrometrocolpos. Clinical evaluation revealed the absence of the vaginal ostium; cystoscopy excluded the urogenital sinus and common canal, allowing for the diagnosis of low vaginal atresia. During follow-up, serial abdominal ultrasound, spinal ultrasound, and lumbosacral MRI were performed to detect a presacral dimple.

RESULTS: The increased volume of hydrometrocolpos resulted in bilateral hydroureteronephrosis with compression of the right renal parenchyma, requiring surgical drainage in the neonatal period. After progressive reexpansion of the hydrometrocolpos, at four months of age the patient underwent vaginal pull-through with good anatomical outcome and resolution of urinary obstruction. Spinal ultrasound showed a low conus medullaris, a thickened filum terminale, and abnormalities of the cauda roots. MRI confirmed occult spinal dysraphism with a tethered cord, a lipoma of the filum terminale, and associated sacral anomalies.
She is currently undergoing neuro-urological and neurosurgical follow-up.

DISCUSSION Neonatal hydrometrocolpos can represent a potentially severe cause of obstructive uropathy and requires prompt diagnosis. In the case described, the finding of a tethered cord, filum lipomatosus, and sacral anomalies suggests that vaginal atresia is not an isolated finding, but may be part of a broader defect in caudal development. The literature reports a consolidated association between anorectal malformations and spinal dysraphism; conversely, the concomitance with isolated vaginal atresia is rarely described.

CONCLUSIONS In newborns with vaginal atresia and hydrometrocolpos, a multidisciplinary evaluation is essential, aimed not only at the anatomical definition of the malformation but also at the search for associated anomalies. The concomitant presence of occult spinal dysraphism supports the hypothesis of a developmental defect in the caudal region and suggests the opportunity to include the study of the lumbosacral district in the diagnostic workup of these patients.

T6 Stones

3 - PTOSI RENALE: MITO O REALTÀ? TRATTAMENTO LAPAROSCOPICO IN UNA ADOLESCENTE

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Introduzione
La nefroptosi rappresenta una rara causa di dolore lombare di difficile diagnosi. Presentiamo il caso di un'adolescente con episodi di colica renale ricorrente, giunta alla diagnosi definitiva mediante imaging dinamico.

Caso clinico
Paziente di sesso femminile di 16 anni, con ripetuti accessi in Pronto Soccorso e numerose valutazioni urologiche per episodi di colica renale destra, inizialmente attribuiti a calcolosi urinaria. Nel corso degli episodi acuti venivano occasionalmente descritte minute immagini iperecogene e modesta dilatazione delle vie escretrici, tuttavia gli approfondimenti radiologici successivi, inclusa uro-TC, non documentavano una litiasi urinaria, né la paziente ha mai espulso spontaneamente alcuna formazione litiasica. L'ecografia renale eseguita in posizione supina mostrava reni in sede con normale morfologia; la ripetizione dell'esame in ortostatismo evidenziava invece una franca ptosi del rene destro. La scintigrafia renale dinamica eseguita in clinostatismo e ortostatismo confermava un rene mobile destro con lieve stasi urinaria non ostruttiva.

La paziente veniva sottoposta a nefropessi laparoscopica destra. L'intervento, della durata di 140 minuti, veniva eseguito con approccio transperitoneale mediante quattro accessi laparoscopici. Dopo mobilizzazione del colon destro e apertura della fascia di Gerota, il rene veniva completamente liberato dal grasso perirenale e fissato alla muscolatura della parete posteriore e al peritoneo parietale mediante otto punti staccati in Prolene ancorati con Hem-o-lok. A completamento della procedura veniva applicato un patch di TachoSil sulla superficie posterolaterale renale per favorire l'adesione fibrotica. Il decorso postoperatorio risultava regolare.

Conclusioni
Al follow-up la paziente risultava completamente asintomatica e con mantenimento della corretta posizione del rene all'esame ecografico anche in ortostatismo. Questo caso sottolinea come la nefroptosi debba essere considerata nella diagnosi differenziale della colica renale ricorrente e come l'ecografia dinamica in ortostatismo rappresenti un esame semplice ma determinante per la diagnosi. Nei casi sintomatici selezionati, la nefropessi laparoscopica costituisce un trattamento sicuro ed efficace, con ottimi risultati clinici.

4 - Urethral Cysts in the Pediatric Population: A Case Series and Minimally Invasive Management

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Abstract

Urethral cysts are rare and underdiagnosed entities in pediatric population, characterized by considerable anatomical and clinical heterogeneity. Their presentation ranges from asymptomatic lesions to lower urinary tract obstruction, making diagnosis challenging.

We present a case series of three paediatric patients with obstructive lower urinary tract symptoms. The first case involved a 13-year-old boy with a cystic lesion at the level of the verumontanum, successfully treated by endoscopic incision, resulting in clinical and functional improvement. The second case involved a 9-year-old boy presenting with stranguria and post-void dribbling, who was found to have multiple cysts of the anterior urethra, most likely consistent with the glands of Littré cysts. The patient underwent endoscopic resection with complete resolution of symptoms. The third case involved a 15-year-old boy with a cystic lesion located below the bladder neck, which was diagnosed and treated endoscopically, leading to complete symptom resolution.

Urethral cysts should be considered in the differential diagnosis of paediatric voiding disorders. Urethrocystoscopy remains the diagnostic and therapeutic gold standard. Endoscopic management is an effective and minimally invasive treatment option for symptomatic patients.

T14 Training

5 - PARATESTICULAR DIROFILARIASIS: A RARE DIFFERENTIAL DIAGNOSIS FOR PEDIATRIC SCROTAL MASSES

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INTRODUCTION AND AIM OF THE STUDY

Human dirofilariasis caused by Dirofilaria repens is an emerging vector-borne zoonosis in Europe. Genital involvement is rare, and pediatric cases presenting with paratesticular localization are exceptionally unusual. This work describes two clinical cases with the aim of suggesting dirofilariasis among the possible differential diagnoses of paratesticular masses in the pediatric population.

MATERIALS AND METHODS

We retrospectively reviewed two adolescent patients who presented to our Center between February 1, 2026, and March 31, 2026, with paratesticular masses. In both cases, serum tumor markers were measured preoperatively. Following negative marker results, both patients underwent a conservative surgical approach (testis-sparing surgery) via complete excision of the lesion, followed by definitive histopathological examination.

RESULTS

The first case involved a 13-year-old boy with a history of recent travel to Kenya, who presented with worsening testicular pain. Surgical exploration revealed a paratesticular nodule attributable to Dirofilaria repens localization. The second case involved a 15-year-old boy who presented following the incidental finding of an asymptomatic mass within the spermatic cord. Definitive histopathological examination of both surgical specimens confirmed Dirofilaria repens infection. The postoperative course was regular and free of complications for both patients.

INTERPRETATION OF RESULTS

Solid paratesticular masses in adolescents typically trigger strong suspicion of malignancy, which often leads to radical surgical treatments. However, the combination of completely negative tumor markers and localized disease allowed for a conservative strategy in these patients. The identification of Dirofilaria repens demonstrates that these masses can represent a benign, localized foreign-body granulomatous reaction to the parasite. This proves that an initial testis-sparing enucleation is fully curative and safe, as the lesion does not infiltrate the adjacent healthy tissues.

CONCLUSIONS

It is crucial to include dirofilariasis in the differential diagnosis of paratesticular masses in pediatric patients residing in or traveling to endemic regions. A high index of clinical suspicion, combined with an excisional surgical management aimed at preserving the testicular parenchyma, is essential to confirm the diagnosis and avoid unnecessary radical interventions.

T4 Vesico Ureteral Reflux

6 - RENOCUTANEOUS FISTULA PRESENTING AS A DORSAL ABSCESS IN A CHILD WITH A NON-FUNCTIONING CALCULOUS KIDNEY

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OBJECTIVE
To report an exceptionally rare pediatric case of renocutaneous fistula presenting as a dorsal abscess and to emphasize the importance of early surgical recognition and management.

CASE DESCRIPTION
A 6-year-old girl presented with a left dorsal paramedian abscess requiring surgical drainage. Soft tissue ultrasound suggested a deep fistulous tract communicating with the left kidney, which appeared markedly reduced in size and calcified. Contrast-enhanced uro-CT demonstrated an extensive abscess extending from the left kidney through the psoas muscle to the skin, associated with a severely dysplastic and corticalized left kidney containing multiple calcifications and a staghorn calculus, left ureteral ectasia and retroperitoneal lymphadenopathy. Voiding cystourethrography excluded vesicoureteral reflux. Renal scintigraphy showed negligible left renal function (1.6%). Follow-up ultrasound and preoperative uro-MRI confirmed persistent renocutaneous fistulization, psoas muscle involvement and markedly delayed urinary excretion. Given the non-functioning status of the kidney and ongoing infection, laparoscopic left nephrectomy was performed. The kidney appeared completely dysplastic with disrupted architecture and calcific remnants. Histopathology revealed a hypodysplastic kidney with severe acute and chronic suppurative inflammation and microcalcifications, without evidence of granulomatous disease. Postoperatively, vacuum-assisted closure therapy was applied for three weeks, leading to complete resolution of the infection.

CONCLUSIONS
Renocutaneous fistula is an extremely rare condition in children and may represent the first manifestation of severe, previously unrecognized chronic renal disease. This case highlights the pivotal role of multimodal imaging in defining the extent of disease and guiding surgical decision-making. In the presence of a non-functioning, chronically infected kidney, laparoscopic nephrectomy is a safe and definitive treatment.

T11 Bladder and Bowel Dysfunction

7 - Urological symptoms due to vaginal foreing body in pediatric patients

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We present the case of two girls with urological problems due to foreign bodies retained in the vagina for long periods.

MATERIALS AND METHODS

CASE 1: A 13-year-old girl presented to the clinic for episodes of significant and involuntary urine leakage. A urinalysis, urine culture, nephrology examination, blood tests, abdominal ultrasound, neuropsychiatric examination, urology examination with uroflowmetry, and lumbosacral spinal MRI were performed. A voiding cystography revealed a foreign body with a vesicovaginal fistula. The patient then underwent removal of the foreign body (a spray dispenser) and vaginal closure of the defect, with a persistent fistula. She is awaiting trans-vesical surgery.

CASE 2: A 16-year-old girl underwent an ultrasound scan (follow-up for a previous liver transplant) which showed multiple solid lesions in the bladder floor. Cystoscopy confirmed the lesion and histological examination revealed chronic inflammation, features of cystic/polypoid cystitis and hyperplasia of von Brunn's nests. Six months later, a second cystoscopy with biopsies revealed areas of nephrogenic adenoma. An MRI was scheduled, documenting the presence of a vaginal foreign body (a deodorant cup), subsequently removed, responsible for the bladder changes.

Cystoscopy performed 9 months later revealed reduction of the lesion, with persistent areas of cystic and glandular cystitis, fibrosis of the lamina propria, squamous metaplasia of the urothelium, and papillary hyperplasia.

RESULTS

Both patients had a long-standing big vaginal foreign body, not visible on ultrasound.

INTERPRETATION OF RESULTS

The consequences of decubitus from undetected intravaginal foreign bodies may manifest with urological symptoms. Young women's embarrassment leads to a serious delay in diagnosis, with repercussions on therapeutic management.

T7 Robotic

RITIRATO

8 - Robot-Assisted Management of an Unexpected Ureteral Trifurcation in a Child with Persistent Multicystic Dysplastic Kidney

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INTRODUCTION AND AIM OF THE STUDY

To describe a rare anatomical variant encountered during robot-assisted nephroureterectomy for a persistent multicystic dysplastic kidney (MCDK) and to emphasize the role of robotic surgery in the management of complex pediatric anatomical anomalies.

MATERIALS AND METHODS

A 3-year-old boy with a prenatal diagnosis of left multicystic dysplastic kidney, confirmed postnatally, underwent serial ultrasound follow-up. The kidney remained enlarged and multicystic without the expected spontaneous involution. Preoperative assessment, including renal ultrasound and technetium-99m MAG3 renal scintigraphy, demonstrated the absence of renal function. Robot-assisted nephroureterectomy was therefore performed.

RESULTS

Intraoperatively, an unusual anatomical variant was identified. Approximately 1 cm from the renal pelvis, the ureter divided into three distinct branches, each associated with multiple small arterial and venous pedicles supplying separate renal segments. The robotic platform allowed meticulous dissection of the anatomical planes and safe vascular control. No intraoperative or postoperative complications occurred. The postoperative course was uneventful, and the patient was discharged on postoperative day 2.

INTERPRETATION OF RESULTS

Unexpected anatomical variations of the urinary tract and renal vasculature may increase the technical complexity of pediatric ablative surgery. In this case, the robotic approach facilitated precise dissection and safe management of a rare ureteral trifurcation associated with multiple segmental vascular pedicles.

CONCLUSIONS

Robot-assisted nephroureterectomy was safe and effective in the management of this rare anatomical variant. This case supports the use of robotic surgery in non-reconstructive pediatric urological procedures when complex anatomy requires meticulous dissection and precise vascular control.

9 - Partial Cistectomy in pediatric patient with inflammatory Myofibroblastic tumor (IMT) of the bladder

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Aim of study Inflammatory myofibroblastic tumour (IMT) is a rare tumour with malignant potential and has been described in many major organs with the most frequent site in lungs. Bladder is an extremely rare location. Inflammatory myofibroblastic tumours of the bladder (IMTB) are rare, consisting in a benign and reactive proliferation of myofibroblasts. 25% of the reported IMTB cases in the literature occur in children. The present abstract presents a case report of IMTB in 15yo child. IMT presents a unique diagnostic challenge because of the characteristics it shares with malignant neoplasms.

Materials and Methods: Case of a 15-year old male who presented with intermittent painless, macroscopic haematuria associated with non-specific lower abdominal pain for one month duration. Abdomen CT and RM revealed 78x64 mm tumour at the dome and left side anterior wall of the bladder. The patient was initially treated with a transurethral resection of the bladder, followed by neoadjuvant immunotherapy (Crizotinib), and subsequently underwent a robot-assisted partial cystectomy. Accurate histological assessment of the initial transurethral resection specimen was challenging; however, after two revisions the findings were most consistent with an inflammatory myofibroblastic tumour (IMT) of the bladder. The patient subsequently underwent a partial robotic cystectomy, and the definitive histopathological examination of the surgical specimen confirmed the diagnosis of IMT.

Result: Even though bladder IMT is indolent, typical IMTs can be locally aggressive. Due to the lack of specificity in clinical symptoms, it is not easy to arrive at a precise diagnosis before surgery. Hence, the final diagnosis depends on histomorphological features and the immune histochemical profile. IMTB may specifically show clonal gene rearrangements involving the anaplastic lymphoma kinase (ALK-1) gene. To differentiate IMTB from rhabdomyosarcoma, tissue diagnosis and careful histological analysis are essential.

Conclusion: It can be challenging to distinguish IMT from malignant neoplasms both clinically and histologically and subsequentially offer the best treatment in pediatric cases. As such, local surgical resection with close follow-up remains the mainstay of treatment for urinary tract IMT. Between 35% and 89% of cases of IMTB express ALK-1 by immunohistochemistry. ALK-1 expression is much less common in other bladder soft tissue tumours. ALK-1 is thus useful in the diagnosis of IMTB. The treatment of choice for IMTB is complete surgical resection of the lesion. In children, no proven recurrent or metastatic IMTB episodes are reported after excision. However IMTB recurrences are reported in adults, likely due to incomplete excision. Follow-up after excision is therefore recommended with Abdomenn RM.

Keywords: Bladder tumour; Inflammatory myofibroblastic tumour; Sarcomatoid variant.

Video production: 2026

T10 Urodynamic

10 - Secondary enuresis as major symptom: unusual diagnose of posterior-urethral valves

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INTRODUCTION AND AIM OF THE STUDY

Posterior urethral valves (PUV) is the most common cause of urinary tract obstruction and end stage renal disease in the male infants. Late presentation occurs in 10% of cases, with aspecific symptoms appearing abruptly in adolescence or adulthood. We present a case of PUV in an 8y.o. male who attended our clinic for enuresis. A rigid urethrocystoscopy showed type-I posterior urethral valve.
Our aim was to assess whether ablation of PUV was associated with improved clinical outcome in a boy with enuresis as major clinical simptom.

MATERIALS & METHODS

Since May'25, the patient complained pollakiuria, mild urinary incontinence, and enuresis. No history of urinary tract infection was mentioned. In July '25 ultrasound examination revealed severe bilateral hydronephrosis, a thick-walled bladder, pseudodiverticular formations, and visible retrovesical ureters. Lab tests showed serum creatinine level of 6.4 mg/dL. Uroflowmetry (UFM) revealed maximum flow rate of 2.6 ml/s and elevated PVR (100ml). 10ch bladder catheter was therefore placed, resulting in resolution of hydronephrosis and mild improvement in renal function. VCUG was subsequently performed, demonstrating a "tree shaped" bladder, poorly distensible, and multiple diverticular formations. Dilation of the prostatic urethra during the voiding phase and no sign of vesico-ureteric reflux. Renal scintigraphy was also performed to complete the diagnostic work-up, showing markedly reduced renal function, symmetrically distributed between the two kidneys. On September '25, the patient underwent cistoscopy showing the classic sail-shaped PUV treated with endoscopic Holmium-laser ablation. Postoperative uroflowmetry showed great improvement (Qmax 16ml/s). One month later, a second ablation was performed. therefore the patient had started with oxybutynin therapy and intermittent autocatheterization twice a day.

RESULTS

Second look valves ablation associated with Ossibutinina showed further benefits in terms of frequency, flow rate and wet nights per week. At four months follow-up the combination of surgical and medical treatment led to regression of hydroureteronephrosis, regression of pollakiuria, urinary incontinence and enuresis, improvement in renal function (Cre 0.9 mg/dL).
The urodynamic study shows a improved bladder capacity (360ml), good compliance, and detrusor stability; improved uroflowmetry parameters (Qmax 20 ml/s vs. 2.6ml/s), absent PRV.

INTERPRETATION OF RESULTS

PUVs are the most frequent cause of lower urinary tract outflow obstruction in infants with an estimated incidence of 1:5000 male infants and 1:25,000 live births. Laser ablation of valves combined with oxybutynin has proven effective in treating PUVs. Despite treatment, bladder function is abnormal in up to 70% of older children and adolescents, causing morbidity e.g. urinary incontinence, enuresis, poor bladder empting.

CONCLUSIONS

Unusual symptoms caused by impaired bladder emptying, e.g. secondary enuresis, urinary urgency and pollakiuria, require specialist assessment, as they may conceal underlying functional disorders or latent congenital urinary abnormalities, which can sometimes manifest in older pediatric patients.

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Imran Khan Jalbani [1], Syed Raziuddin Biyabani [1]

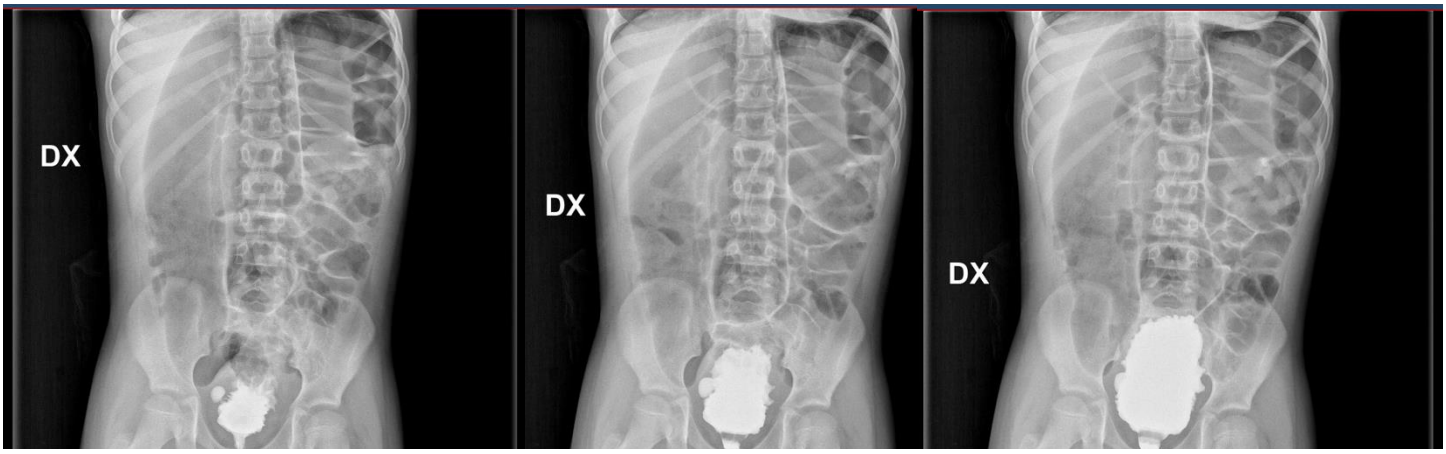
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J Vanwaeyenbergh [1], M H Libert, F I Keuppens

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Justine M Schober [1], Lori M Dulabon, Christopher R Woodhouse

8) The changes of urethral morphology recognized in voiding cystourethrography after endoscopic transurethral incision for posterior urethral valve in boys with intractable daytime urinary incontinence and nocturnal enuresis
Taiju Hyuga [1], Shigeru Nakamura [2], Shina Kawai [2], Taro Kubo [2], Rieko Furukawa [3], Toshinori Aihara [3], Makiko Mieno [4], Hideo Nakai [2]

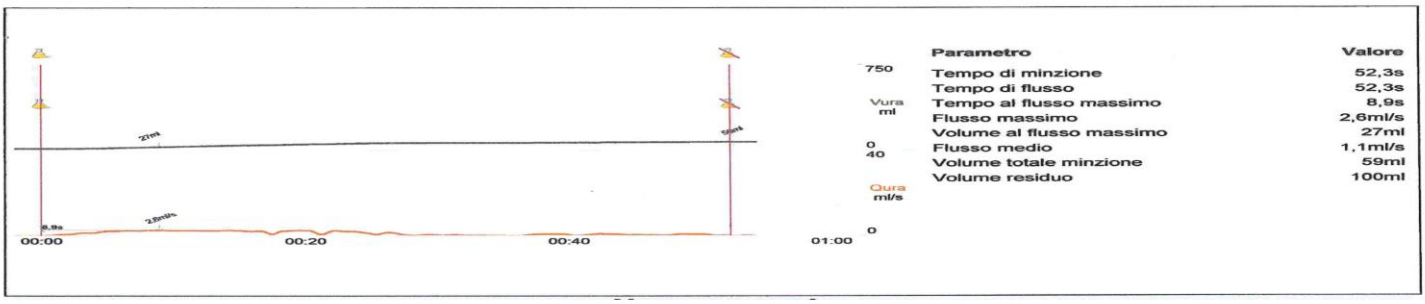


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Ambulatorio di Urologia-Andrologia

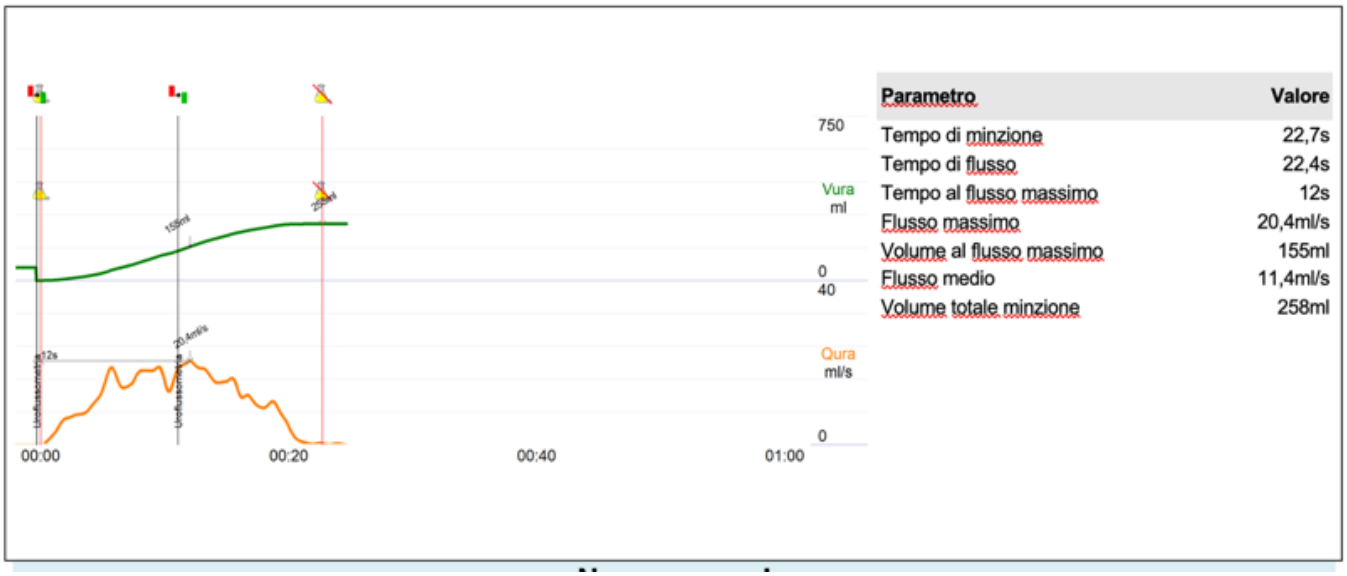
Paziente: **pontini, leonardo**

UROFLUSSIMETRIA



Parametro	Valore
Tempo di minzione	52,3s
Tempo di flusso	52,3s
Tempo al flusso massimo	8,9s
Flusso massimo	2,6ml/s
Volume al flusso massimo	27ml
Flusso medio	1,1ml/s
Volume totale minzione	59ml
Volume residuo	100ml

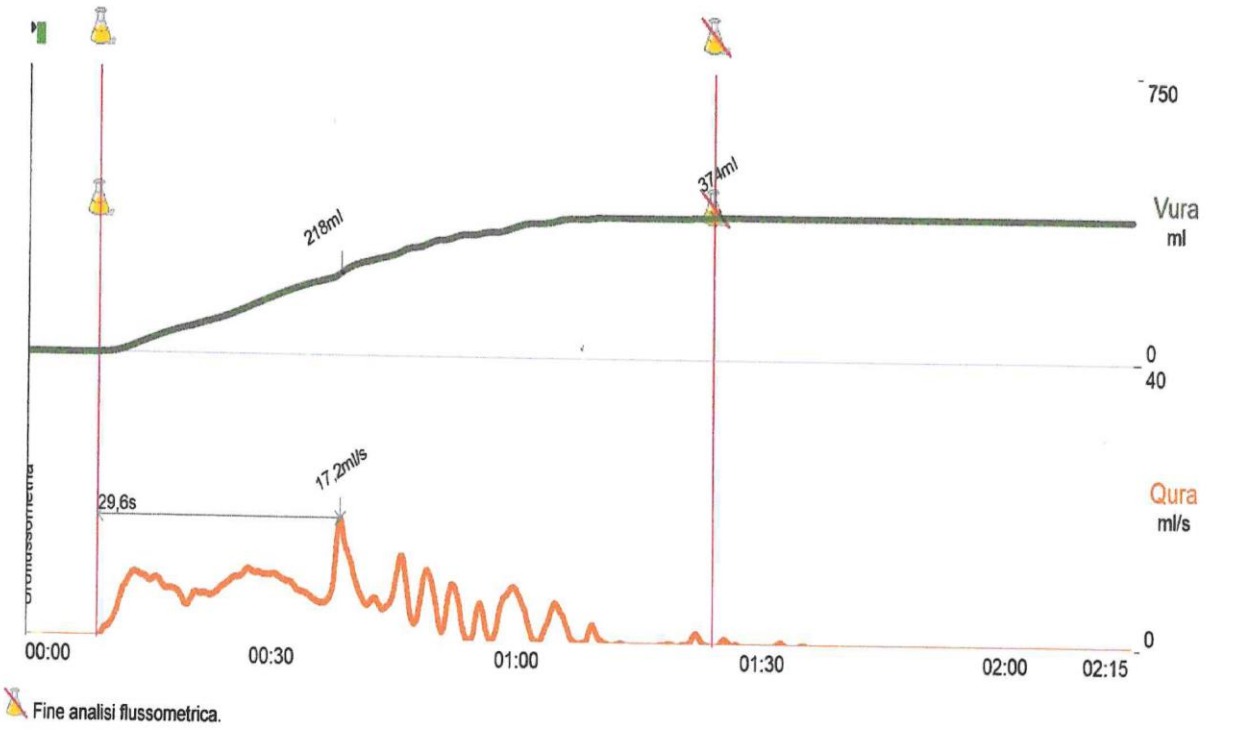
UROFLUSSIMETRIA



Parametro	Valore
Tempo di minzione	22,7s
Tempo di flusso	22,4s
Tempo al flusso massimo	12s
Flusso massimo	20,4ml/s
Volume al flusso massimo	155ml
Flusso medio	11,4ml/s
Volume totale minzione	258ml

REFERTO INDAGINE URODINAMICA

Uroflussometria



Fine analisi flussometrica.

Parametro	Valore
Tempo di minzione	75,2s
Tempo di flusso	71,4s
Tempo al flusso massimo	29,6s
Flusso massimo	17,2ml/s
Volume al flusso massimo	218ml
Flusso medio	5ml/s
Volume totale minzione	374ml
Volume residuo	50ml

11 - A single-center experience in long-term outcomes of bladder augmentation in pediatric population.

Martina Monti [1] - Alice Gismondi [2] - Rebecca Pulvirenti [2] - Antonio Maria Zaccara [2] - Maria Luisa Capitanucci [2] - Chiara Pellegrino [2] - Giovanni Mosiello [2]

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INTRODUCTION AND AIM OF THE STUDY
Augmentation cystoplasty (AC) is a major surgical procedure indicated in children for the management of severe bladder dysfunction with low capacity and low compliance when conservative treatments failed, with the aim to increase bladder capacity and compliance, preserving continence, and protecting the upper urinary tract. The aim of our study is to evaluate our experience, assessing short- and long-term outcomes and potential risk factors in children.

MATERIALS AND METHODS
A retrospective study was conducted at our centre in patients who performed AC from January 2010 to December 2025. Patients over the age of 18 were excluded. The patient data set including demographic characteristics, etiology, associated vesicoureteral reflux (VUR), comorbidities, previous surgery, pre- and postoperative urodynamic studies, intraoperative complications, surgical procedures associated to AC (anti-reflux surgery, bladder neck procedures, derivation, Mitrofanoff/Monti) were analysed. Postoperative data included analysis of symptoms, any reoperations, long-term outcomes, and postoperative complications.

RESULTS
A total of 43 patients underwent AC, six of whom were excluded due to adult age, and one due to bladder substitution. Of the 36 patients included (15 males and 21 females), the median age at the time of surgery was 11 years (5–18). The primary diagnoses were 30 neurologic bladder (secondary to myelomeningocele, neuroblastoma sequelae, or caudal regression syndrome), as well as 6 cases of bladder exstrophy sequelae. In all cases, ileal AC was performed; this was combined with a Mitrofanoff/Monti procedure in 23 cases, with ureteral reimplantation in 10 cases, with bladder neck reconstruction in 6 cases, and with bladder neck closure in only one case. The median preoperative bladder capacity was 100 ml (30–400), increasing to 307 ml (90–500) after surgery. No intraoperative complications occurred, but four patients required surgery for early postoperative complications (three Clavien–Dindo IIIb, one grade IV). Long-term complications included Mitrofanoff/Monti stenosis (n=6), persistent incontinence (n=2), bladder stones (n=2), and fistula (n=1). The median follow up was 6.5 years (1–14).

CONCLUSIONS
AC is a complex procedure that effectively improves continence and bladder capacity in pediatric patients with NB, requiring long-term follow-up. An increased risk of long-term complications was observed in females, patients without previous epicystostomy button and in bladder exstrophy. In consideration of the potential complications, meticulous patient selection, proactive postoperative management with close follow-up and care during the transition to adulthood, and the utilization of standardized surgical techniques are essential.

Keywords: bladder augmentation, neurogenic bladder, bladder exstrophy

T5 CAKUT

12 - Microvascular Ultrasound Accurately Identifies Clinically Significant Split Renal Function Impairment in Patients with Unilateral Urinary Tract Dilation

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INTRODUCTION AND AIM OF THE STUDY

Dynamic renal scan (DRS) is the reference standard for evaluating urinary tract obstruction (UTO) and split renal function (SRF) in patients with urinary tract dilation (UTD), but it involves ionizing radiation. This study aims to evaluate the diagnostic performance of microvascular ultrasound (MVUS) for detecting clinically significant SRF reduction in children with unilateral UTD, using DRS as the reference standard.

MATERIALS AND METHODS

In this prospective cross-sectional diagnostic study, pediatric and adult patients with unilateral UTD evaluated in our tertiary center between February 2024 and November 2025 were enrolled. Kidney perfusion was quantified using a perfusion index, and MVUS-derived SRF (MVUS-SRF) was calculated. The inter-kidney difference (Δ-MVUS-SRF) was compared with that obtained from DRS (Δ-DRS-SRF). A Δ-DRS-SRF ≥20% was predefined as clinically significant. Agreement with the reference standard was assessed using correlation and Bland–Altman analysis. Diagnostic performance was evaluated with receiver operating characteristic (ROC) analysis.

RESULTS

One hundred patients (median age 14 months, IQR 4–53; 63 male) underwent 114 paired MVUS–DRS examinations. Clinically significant SRF reduction at DRS was present in 40/114 examinations (35%). Δ-MVUS-SRF correlated with Δ-DRS-SRF (Pearson's r = 0.67; 95% CI 0.56, 0.76; p < .001).

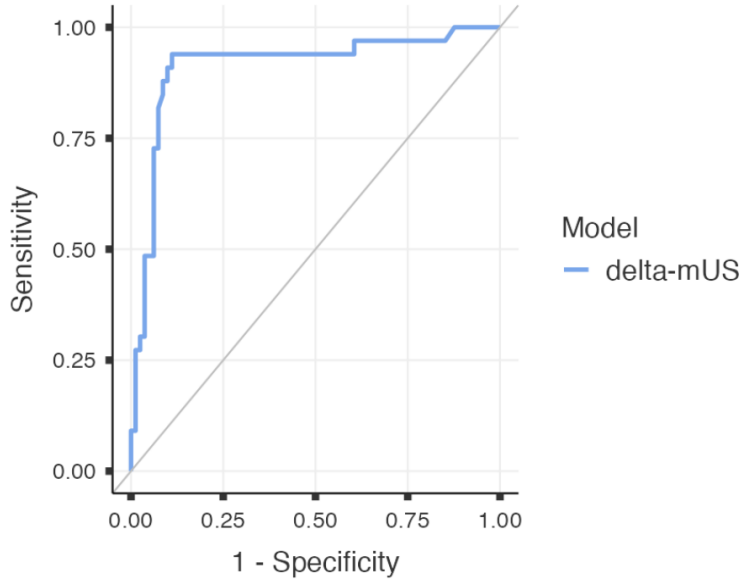
INTERPRETATION OF RESULTS

ROC analysis showed an area under the curve (AUC) of 0.91 (95% CI 0.84, 0.98; p < .001). Using a Δ-MVUS-SRF threshold of 20%, sensitivity was 94% (95% CI 79.77, 99.26), specificity was 89% (95% CI 79.95, 94.79), positive predictive value 77% (95% CI 64.90, 86.52), and negative predictive value was 97% (95% CI 90.36, 99.28), with positive likelihood ratio of 8.45 (95% CI 4.54–15.75) and a negative likelihood ratio of 0.07 (95% IC 0.02, 0.26).

CONCLUSIONS

MVUS demonstrated high diagnostic performance for detecting clinically significant SRF reduction and may serve as a radiation-free tool to exclude functional impairment.

Fig. 1: ROC curve of Δ-MVUS-SRF for identifiying clinically significant split renal function reduction defined as a Δ-DRS-SRF ≥20%.



13 - "Ready, Steady, Go" questionnaire: are the pediatric urologists actually ready for transitional care?

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INTRODUCTION AND AIM OF THE STUDY

The transition from pediatric to adult healthcare represents a critical milestone for individuals with spina bifida. Ensuring transition readiness is vital to prevent care fragmentation and foster adult self-management. In Italy, there are only a few centers with joint clinics involving both a pediatric urologist and an adult urologist to manage the transition of these patients. The use of validated questionnaires remains a poorly known practice. The aim of our study was to administer the Ready, Steady, Go questionnaire to patients with spina bifida attending two third-level referral centers.

MATERIAL AND METHODS

A cross-sectional study was conducted on a cohort of patients affected by spina bifida without mental impairment (aged 14–26 years). The "Ready, Steady, Go" questionnaire which is structured into 8 macro-areas: awareness, autonomy, health and lifestyle, daily life, education and future, leisure, emotional management, and transition to adult care; and was administered through in-person sessions. Responses were categorized into three operational classes: "Yes" (autonomous/aware), "No" (lack of autonomy), and "H" (requiring parental or medical assistance).

RESULTS

We included 57 patients (29 females, and 28 males) with an average age of 16.6 years. Positive responses dominated the overall questionnaire, with an average "Yes" rate exceeding 70%. Gender-specific analysis showed slightly higher overall autonomy in females compared to males (71.4% vs. 67.7% "Yes"). Readiness was strongly age-dependent: "Yes" responses increased progressively from 50.7% at age 15 to 81.0% at age 19, demonstrating a gradual decline in parental reliance. Thematic block analysis revealed high baseline clinical awareness (Block 2: 87.5% "Yes") but exposed significant vulnerabilities in lifestyle independence (Block 5: 34.3% "No") and advanced clinical navigation (Block 8: only 20.9% "Yes", with "H" rising to 42.6%).

INTERPRETATION OF THE RESULTS

The findings indicate that transition readiness is a progressive, age-dependent evolutionary process rather than a static chronological event. While basic medical knowledge matures naturally during late adolescence, complex care coordination, lifestyle choices, and active engagement with adult health systems remain heavily dependent on parental scaffolding.The sharp decline in autonomy observed in specific technical blocks highlights critical structural and psychological barriers that patients face when exiting structured pediatric models.

CONCLUSIONS

Adolescents with spina bifida exhibit strong foundational awareness but lack advanced self-advocacy and independent healthcare navigation skills.This appears to be the consequence of a transition process that is not yet formalized, characterized by a lack of structured programs and adequate educational and training planning.

T3 Neurogenic Bladder

14 - Catheter Choice and Urinary Tract Infections in Children with Neurogenic Bladder: A Clinical Evaluation

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INTRODUCTION AND AIM OF THE STUDY

Intermittent catheterization represents the gold standard for the management of neurogenic bladder. Nevertheless, recurrent urinary tract infections (UTIs) and procedure-related discomfort remain frequent complications and may negatively affect treatment adherence.

In our tertiary-level paediatric urology department, catheters with Micro-Hole Zone Technology (MHZT) were introduced with the aim of improving bladder emptying and reducing mucosal trauma.

This study aims to evaluate the impact of MHZT catheters on symptomatic UTIs, patient comfort, and bladder management.

MATERIALS AND METHODS

Patients followed by the Urology Department of Meyer Children's Hospital performing intermittent catheterization as their primary method of bladder emptying and experiencing recurrent UTIs were included.

From 2024 onwards, patients were switched to MHZT catheters. Clinical follow-up was performed at regular intervals. A telephone survey was conducted to assess comfort during catheterization, perception of bladder emptying efficacy, and changes in the frequency of symptomatic UTIs.

RESULTS

Sixteen patients were included (9 females, 7 males), with a median age of 17.4 years. Patients performed a mean of five catheterizations per day; five had a previous history of vesicoureteral reflux.

Following the introduction of MHZT catheters, 87% of patients reported a reduction in symptomatic UTIs. Among patients able to provide direct feedback, 90% reported reduced discomfort during catheterization and 82% reported an overall improvement in bladder emptying management.

INTERPRETATION OF RESULTS

Standard catheters may be associated with incomplete bladder emptying, need for repositioning, and mucosal trauma, all recognized risk factors for recurrent UTIs. MHZT catheters feature an extended drainage zone with multiple micro-holes, allowing more uniform urine flow, complete voiding without repositioning, and reduced mucosal trauma. These characteristics may contribute to the observed reduction in symptomatic UTIs and improvement in patient comfort.

The main limitations of this study include the small sample size and short follow-up period; therefore, results should be considered preliminary. Further follow-up is ongoing.

CONCLUSIONS

While intermittent catheterization remains the standard of care for children with neurogenic bladder, careful catheter selection tailored to patient needs may improve treatment adherence and reduce catheter-related symptomatic UTIs.

T9 Hypospadia and DSD

15 - The Hypospadia: in Delayed Ejaculation or absent Ejaculation my experience

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INTRODUCTION AND AIM OF THE STUDY

Hypospadias is caused by abnormal penile development, resulting in the urethral meatus being located proximal to its normal glandular position, anywhere on the shaft of the penis, scrotum, or perineum. A number of abnormalities, including ventral curvature of the penis (penile chordae), an incomplete foreskin, and an abortive corpus spongiosum, are commonly associated with hypospadias. Certain types of surgical correction are possible, aimed at reconstructing the urethral canal, but these may cause consequences in the physiological synchrony of insertion, orgasm, and ejaculation. This can lead to emotional frustration in individuals during their sexuality. The goal is to provide greater awareness in addressing the critical aspects and physiological process of orgasm and to experience sexual intercourse with less discomfort.

MATERIALS AND METHODS

Sexological psychotherapeutic treatment: psychoeducational and occupational, over an average period of 6-8 months, with weekly or fortnightly meetings, from 2010 to 2025. Type of hypospadias: perineal, scrotal, penile shaft, glandular hypospadias. Type of sexual dysfunction: anejaculation, delayed ejaculation, retrograde ejaculation, based on their condition.

RESULTS

Cases from 2010 to 2025, divided as follows: 150 perineal hypospadias, 110 scrotal hypospadias, 51 penile shaft hypospadias, 19 glandular hypospadias. Sexual dysfunctions detected: 30% anejaculation (perineal hypospadias), 55% delayed ejaculation (penile hypospadias), 25% retrograde ejaculation (retrograde ejaculation), based on their condition. A common feature among the entire cohort is a lack of information on the sexual aspects of later life and a difficulty and difference between autoeroticism and sexual intercourse.

INTERPRETATION OF RESULTS

These data highlight that individuals require psychosexual care in pre-adolescent and adolescent years, along with psychoeducational support.

CONCLUSIONS

The care of this cohort of individuals leads them to experience sexuality with greater awareness for their functioning, their body, and their sexuality.

16 - THE PAST AND THE FUTURE A CHALLENGE BETWEEN THE TWIST SCORE AND MACHINE LEARNING IN THE MANAGEMENT OF THE PEDIATRIC ACUTE SCROTUM

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INTRODUCTION AND AIM OF THE STUDY

Spermatic cord torsion is a urological emergency requiring prompt diagnosis to preserve testicular viability. The TWIST score is a clinical prediction tool combining five physical findings. This study aimed to assess the diagnostic accuracy of the TWIST score at two clinically relevant cut-offs (≥3 and ≥5) in identifying spermatic cord torsion, and to compare its performance with three machine learning models.

MATERIALS AND METHODS

A retrospective cohort of 111 pediatric patients evaluated for suspected spermatic cord torsion was analyzed. The TWIST score (0-6) was calculated from scrotal swelling, testicular consistency, cremasteric reflex, testicular position and nausea/vomiting. Definitive diagnosis (surgical/clinical) was the reference standard. Sensitivity, specificity, PPV, NPV, accuracy and AUC-ROC were calculated for thresholds ≥3 and ≥5, and compared with Random Forest (RF), Support Vector Machine (SVM) and K-Nearest Neighbors (KNN) models trained on the same cohort.

RESULTS

Of 111 patients, 65 (58.6%) had confirmed torsion. At TWIST ≥3: sensitivity 83.1%, specificity 60.9%, accuracy 73.9%. At TWIST ≥5: sensitivity 53.8%, specificity 97.8%, accuracy 72.1%. Overall AUC-ROC across all thresholds was 81.1%. All three machine learning models outperformed the TWIST score, with accuracy of 91.2% and AUC-ROC ranging 91.1-93.6% (Table 1).

Table 1. Diagnostic performance of the TWIST score versus machine learning models

Model	Accuracy (%)	Sensitivity (%)	Specificity (%)	PPV (%)	AUC-ROC (%)
TWIST ≥ 3	73.9	83.1	60.9	75.0	81.1*
TWIST ≥ 5	72.1	53.8	97.8	97.2	81.1*
RF	91.2	95.0	85.7	90.5	92.9
SVM	91.2	95.0	85.7	90.5	91.1
KNN	91.2	90.0	92.9	94.7	93.6

INTERPRETATION OF RESULTS

The TWIST score shows a clear trade-off: ≥3 favors sensitivity, suitable for screening, while ≥5 favors specificity, supporting immediate surgical exploration without further imaging. Machine learning

models achieved higher and more balanced performance, combining higher sensitivity and specificity simultaneously, suggesting that non-linear integration of the same clinical variables may improve diagnostic discrimination compared to a simple additive score.

CONCLUSIONS

Although the TWIST score remains a valuable bedside tool, its diagnostic performance is strongly influenced by the selected threshold. Machine-learning models demonstrated superior and more balanced performance, suggesting a promising role as adjunctive decision-support tools in the diagnostic assessment of suspected spermatic cord torsion, subject to external validation.

17 - Feasibility, Safety, and Efficacy of ILY Robot-Assisted RIRS for Pediatric Renal Calculi: A Prospective Evaluation of a new Robotic System

Tiziana Russo [(1)] - Giovanni Torino [(1)] - Chiara Costantini [(1)] - Agnese Roberti [(1)] - Francesco Turrà [(1)] - Alessandra Farina [(1)] - Oscar Mazzei [(1)] - Ylenia Madddalena Forino [(1)] - Giovanni Di Iorio [(1)]

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INTRODUCTION AND AIM OF THE STUDY The incidence of pediatric urolithiasis has increased significantly over recent decades, posing distinct management challenges due to the smaller anatomical dimensions and delicate urinary tract of children. Among minimally invasive treatments, retrograde intrarenal surgery (RIRS) has emerged as a highly effective option. In adults, the integration of robotic platforms has revolutionized RIRS by improving ergonomics, reducing surgeon fatigue, and enhancing fiber stability. However, clinical evidence regarding the application of endourological robotics in the pediatric population remains absent. This prospective study evaluated the technical feasibility, safety, and therapeutic efficacy of robot-assisted RIRS using the innovative ILY® Robot system in a cohort of pediatric patients presenting with renal stones.

MATERIALS AND METHODS

This prospective,single-center observational study included pediatric patients treated at our institution between October 2025 and April 2026. Eligibility criteria comprised solitary renal stones ≤ 1.5 cm or multiple stones ≤0.7 cm, in the absolute absence of concomitant anatomical urinary tract anomalies. To ensure safe ureteral access, all patients underwent mandatory passive pre-stenting before the main surgery. Procedures were performed under general anesthesia utilizing flexible ureteroscopy, thulium laser lithotripsy for stone dusting, and robotic control through the ILY® platform. Perioperative outcomes, conversion rates, total operative times, intraoperative and postoperative complications, duration of hospital stay, postoperative pain scores, and stone-free status at one month were systematically assessed.

RESULTS Thirteen pediatric patients were analyzed (mean age: 8.6 years, min 5 e max 16). No conversions to conventional laparoscopic or open surgery were required. The overall mean operative time was 104.8 minutes (min 65’ e max 168’), which included approximately 10 minutes for robotic docking. No intraoperative or postoperative complications occurred (Clavien-Dindo 0). Hospital stay averaged 3.3 days (min e mex), and postoperative pain was controlled by Paracetamolo in all cases. Transient, self-limiting hematuria lasting between one and four days was observed in every patient and resolved spontaneously without intervention. A stone-free rate (SFR) of 100% was successfully achieved perioperatively and confirmed at the one-month follow-up via urinary tract ultrasound.

INTERPRETATION OF RESULTS The implementation of the ILY® robotic platform demonstrated excellent efficacy, achieving a 100% SFR that matches or exceeds standard manual RIRS literature. The surgical timeline highlighted a distinct learning curve: initial cases in the extended cohort showed a temporary increase in operative duration (up to 168 minutes), which rapidly stabilized down to 70–75 minutes in the final procedures. This indicates that team coordination and docking proficiency can be optimized swiftly. The absolute absence of complications underscores the safety of robotic assistance, where automated micrometer movements and enhanced fiber stability minimize the risk of pressure-induced ureteral injuries.

CONCLUSIONS Robot-assisted RIRS with the ILY® Robot system is technically feasible, safe, and highly effective for managing pediatric renal calculi. Despite an initial learning curve reflected in

operative times, the excellent stone clearance and safety profile are promising. Larger, multicenter studies are required to define its definitive role in pediatric endourology.

T7 Robotic

18 - Robot-Assisted Surgery for Pediatric Renal Tumors: Initial Experience and Technical Considerations

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[(1)] DINOGMI, Università di Genova, Genova, Italia - [(2)] IRCCS G. Gaslini, Dipartimento di Chirurgia Pediatrica, Genova, Italia

INTRODUCTION AND AIM OF THE STUDY

Robot-assisted surgery remains a limited field of application in pediatric surgical oncology, particularly for renal tumors, because preservation of oncological principles is paramount. However, the UMBRELLA SIOP-RTSG 2016 protocol recognizes a potential role for nephron-sparing surgery and minimally invasive approaches in highly selected patients, according to strict eligibility criteria. We aimed to report our preliminary single-center experience with robot-assisted surgery for pediatric renal tumors, describe the surgical technique and its evolution over time, and discuss the technical and oncological considerations arising from our initial cases.

MATERIALS AND METHODS

We retrospectively reviewed five consecutive pediatric patients undergoing robot-assisted renal surgery for oncological indications at our institution. Demographic, clinical, radiological, surgical, pathological, and postoperative data were collected. Outcomes of interest included type of procedure, operative time, intraoperative and postoperative complications, length of stay, surgical margins, and short-term oncological follow-up. In addition, we analyzed the key technical steps of the procedure and the modifications progressively introduced in our surgical approach, including port placement, patient positioning, hilar control.

RESULTS

Between December 2025 and May 2026 five patients underwent robot-assisted renal surgery. Procedures included 3 robot-assisted partial nephrectomies, 1 tumor enucleation and 1 tumor biopsy and subsequent nephrectomy according to tumour characteristics and protocol-based selection criteria. Median age at surgery was 29 months. Median operative time was 197 minutes, with a median console time of 127 minutes and median postoperative stay was 3 days. No conversion to open surgery occurred. One patient experienced a postoperative urinary leak, managed with placement of a ureteral stent during cystoscopy. Histopathological examination showed two wilms tumors, two metanephric adenomas and one cystic nephroma, all specimens had negative margins. Adequate lymph node sampling was carried out in all patients. The first two patients were positioned in the lateral decubitus position, whereas the subsequent patients were positioned supine. In all cases, four trocars were placed and the renal hilum was isolated and secured without vascular clamping.

INTERPRETATION OF RESULTS

Our initial experience suggests that robot-assisted nephron-sparing surgery is feasible in carefully selected pediatric patients with renal tumors. The progressive change from lateral to supine positioning improved access to the renal hilum and may facilitate a standardized approach. Hilar dissection without vascular clamping was achievable in all cases, potentially avoiding warm ischemia while maintaining adequate vascular control. Nevertheless, oncological safety, including complete resection and avoidance of tumor rupture, must remain the primary determinant of surgical indication.

CONCLUSIONS

Robot-assisted renal surgery may represent a feasible option for selected pediatric renal tumors within a multidisciplinary setting and according to strict protocol-based criteria. Refinement of

surgical technique and standardized operative steps may improve reproducibility. Larger multicenter series and longer oncological follow-up are required to define the role of this approach in pediatric renal oncology.

T8 Transitional Care

19 - TESTICULAR MICROLITHIASIS IN TRANSITION AGE: A FIVE-YEAR SINGLE CENTRE FOLLOW-UP EXPERIENCE

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INTRODUCTION AND AIM OF THE STUDY

Testicular microlithiasis (TM) is an ultrasound finding whose clinical relevance in adolescents remains debated, particularly during transition from paediatric to adult care. Although isolated TM is generally considered low risk, associated risk factors may influence surveillance. The aim of this study was to evaluate the clinical course of patients with known TM and the applicability of a risk-adapted follow-up model.

MATERIALS AND METHODS

We retrospectively reviewed 25 adolescents and young adults with known ultrasound-diagnosed TM followed at our centre between 2020 and 2025. Median age at first evaluation was 15.6 years (range 12-21), and median follow-up was 30 months (range 12-60). Patients were analysed according to age, laterality, TM pattern, testicular volume, symptoms and risk factors for testicular malignancy, including previous cryptorchidism/orchiopexy, testicular hypotrophy, family history of germ cell tumour and suspicious clinical or ultrasound findings. Patients were stratified into low-, intermediate- and high-risk groups.

RESULTS

TM was bilateral in 16 patients (64%) and unilateral in 9 (36%); a diffuse/classic pattern was observed in 14 cases (56%). Fifteen patients (60%) were classified as low risk, 6 (24%) as intermediate risk and 4 (16%) as high risk. The most frequent indications for surveillance were previous diagnosis during ultrasound for scrotal pain, varicocele, testicular asymmetry or follow-up after cryptorchidism. During follow-up, ultrasound findings remained stable in 22 patients (88%), with no palpable testicular masses. Low-risk patients remained asymptomatic and did not require escalation of diagnostic work-up. Patients with previous cryptorchidism/orchiopexy or reduced testicular volume continued scheduled urological and ultrasound surveillance. Tumour markers were requested only in selected higher-risk cases and were negative. No surgical exploration and no testicular malignancy were recorded.

INTERPRETATION OF RESULTS

Known TM in transition age showed a stable clinical and ultrasound course in most patients. Follow-up intensity was mainly driven by associated risk factors rather than by TM alone. The absence of malignant events in this small cohort should be interpreted cautiously, but supports a conservative risk-adapted approach in low-risk adolescents.

CONCLUSIONS

In this five-year single-centre experience, isolated TM did not justify intensive ultrasound surveillance. Counselling and testicular self-examination appear appropriate for low-risk patients, whereas adolescents with TM and additional risk factors may benefit from structured follow-up during transition to adult care. Larger prospective multicentre studies are needed to standardise recommendations.

20 - DIAGNOSIS OF FETAL MEGACYSTIS: WHERE DO WE STAND? SINGLE CENTER STUDY OF 40 CONSECUTIVE CASES

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AIM

Prenatal counselling after diagnosis of fetal megacystis is challenging, as predictive parameters of postnatal renal function and of diagnosis of Lower Urinary tract Obstruct (LUTO) are yet to be defined. Primary aim of the study was to analyse the outcome of 40 consecutive unselected cases of prenatal LUTO

MATERIALS and METHOD

Retrospective single center study on all consecutive fetal megacystis observed from 03.2015 to 07.2025. For all patients data were extracted from Trackcare: prenatale US, pregnancy, delivery, perinatal period, CrS, postnatal imaging, surgery. Statistical analysis conducted with Graph Pad Prism (vers 10, San Diego, CA, USA). (Mann-Whitney test for continuos variables, Fisher test for categorical variables; p-value <0,05).

RESULTS

40 fetused were observed at a mean GA of 26 weeks, 11/40 before 18 week (27.5% “early megacystis”). 7 ,with an average LBD 50 mm, underwent TOP, 1 IUFD. 32 were live born (80%), 3 with a normal urinary tract, 26 (60%) were confirmed as LUTO at VCUG or autopsy (52% PUV). Perinatal mortality was 35% in LUTO and 9% in non-LUTO.

DISCUSSION

Among all the parameters evaluated (Hydronephrosis, ureteral dilatation, AF, LBD, GA, keyhole sign) only a reduced AF was predictive of LUTO (p 0.027). among post natal variables, LUTO higher difficulties in postnatal adaptation (p 0.016) and higher CrS (p 0.044). At a mean followuo of 36 mths, 5 LUTO pts developed CKD, 2 of them underwent renal transplant. Strenght : all pts followed with the same procol, no pt lost at followup. Limits: retrospective, short followup

CONCLUSIONS

As in the literature 60% of fetal megacystis were found to have a LUTO, but only 7.5% had a normal urinary tract. The high perinatal survival (80%) could be due to the”late” diagnosis in the maiority of our pts. Out of all the parameters evaluated, only the reduction of AF was predictive of LUTO and increased post natal CrS. At a 36 mths followup, only pts with LUTO presented with CKD, which underlines the importance of prenatal parameters able to distinguish LUTO from non LUTO

21 - Is endoscopic thulium laser ablation of multiple uretral polyps associated with a complication-free outcome?

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INTRODUCTION AND AIM OF THE STUDY Fibroepithelial ureteral polyps are rare benign lesions, occurring in males and more frequently in the left ureter. They may present with flank pain, hematuria, or urinary obstruction. Endoscopic laser excision is currently considered the treatment of choice. Despite these advantages, ureteral injury and postoperative stricture formation have not been completely eliminated, particularly following extensive resections.

MATERIALS AND METHODS
We report the case of a 14-year-old patient of Chinese origin presenting with recurrent flank pain and hematuria. Preoperative evaluation, including ultrasound, Tc-99m mercaptoacetyltriglycine (MAG3) diuretic renography, and magnetic resonance urography, demonstrated intermittent hydronephrosis with preserved renal function and partial urinary obstruction, suggesting ureteropelvic junction obstruction (UPJO) caused by an aberrant lower-pole crossing vessel. Laparoscopic pyeloplasty was planned. Intraoperatively, no evidence of UPJO was found. Therefore, ureteroscopy was performed, revealing 20 fibroepithelial polyps involving an 8-cm segment of the proximal ureter. A double-J ureteral stent was placed. Endoscopic excision was performed using a 365-µm thulium fiber laser through a 7.5-Fr Pusen ureteroscope.

RESULTS
During follow-up, the patient developed recurrent flank pain, progressive hydronephrosis, and intolerance to the double-J ureteral stent. Pyelography demonstrated a 6-cm proximal ureteral stricture located 3 cm distal to the ureteropelvic junction. The stricture progressed to complete ureteral obliteration, requiring percutaneous nephrostomy. Robot-assisted ureterectomy was planned. During surgery, intraoperative ureteroscopy was required to identify the stenotic segment because of extensive periureteral fibrosis. A primary end-to-end ureteroureterostomy was performed after resection of a 5-cm fibrotic ureteral segment. A three months MAG3 diuretic renogram demonstrated resolution of the obstruction with preserved renal function.

INTERPRETATION OF RESULTS
Fibroepithelial ureteral polyps are a rare condition and their diagnosis may be challenging. Thulium fiber laser technology is considered the preferred endoscopic treatment because of its excellent cutting precision and favorable safety profile. Nevertheless, clinical experience suggests that ureteral stricture may still occur, particularly after prolonged laser activation or treatment of long ureteral segments. Robot-assisted surgery may represent the preferred treatment for multifocal or extensive ureteral polyps, as well as for the management of secondary ureteral injury.

CONCLUSIONS
Long-segment ureteral stricture should be recognized as a potential complication following extensive laser resection of fibroepithelial ureteral polyps. Robot-assisted surgery represents a safe and feasible alternative to endoscopic management, particularly in patients with extensive disease or secondary ureteral injury.

22 - A Novel Concept in Pediatric Endourology: Robot-Assisted RIRS Using the ILY® System as a New Approach for Hydrocalyx Treatment

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INTRODUCTION AND AIM OF THE STUDY Pediatric hydrocalyx, often secondary to infundibular stenosis or a calyceal diverticulum, represents a challenging endourological entity due to the narrow working space and the extreme precision required to incise the stenotic infundibulum. Traditional manual retrograde intrarenal surgery (RIRS) is effective but demands exceptional scope stability. This study introduces a novel therapeutic concept: utilizing the ILY Robot as a new approach for the definitive treatment of symptomatic pediatric hydrocalyx. By integrating the ILY® Robot system, this strategy offers revolutionized ergonomics, precise micrometer movements, and enhanced fiber stability to overcome manual limitations. We evaluated the feasibility, safety, and therapeutic efficacy of this innovative surgical concept in a pediatric cohort.

MATERIALS AND METHODS This prospective, single-center observational study evaluated pediatric patients treated for symptomatic hydrocalyx associated with infundibular stenosis between January and May 2026. Patients underwent preoperative imaging (ultrasound and MRI) to delineate the calyceal anatomy. Passive pre-stenting was performed prior to the main procedure to ensure safe ureteral access. Under general anesthesia, a flexible ureteroscope was mounted on the ILY® robotic platform. The ILY robot was utilized to precisely navigate the narrow infundibulum and to perform thulium laser infundibulotomy (incision of the stenosis). Perioperative outcomes, docking times, complications, and resolution of the hydrocalyx at follow-up were systematically evaluated.

RESULTS Two pediatric patients, aged 2 and 10 years, were successfully treated and analyzed. No conversions to conventional laparoscopic or open surgery were required. The operative times were 111 and 117 minutes respectively, which included approximately 10 minutes for robotic docking. No perioperative, intraoperative, or postoperative complications occurred (Clavien-Dindo 0). Postoperative pain was controlled by Paracetamolo, and the hospital stay was 4 and 3 days. Transient, self-limiting hematuria resolved spontaneously within 48 hours in both cases. At the short-term follow-up, ultrasound confirmed complete resolution or significant reduction of the hydrocalyx.

INTERPRETATION OF RESULTS This novel treatment concept demonstrated exceptional technical precision, proving highly effective even in the challenging anatomy of a 2-year-old patient. The ILY® Robotic system provided the steady control necessary to execute delicate thulium laser infundibulotomies without accidental parenchymal or vascular injury. By eliminating microscopic hand tremors inherent to manual manipulation, this robotic approach represents a true paradigm shift, allowing for a safer, more controlled, and wider infundibular incision compared to standard manual techniques. The absolute absence of perioperative complications and the resolution of the Hydrocalyx validates the safety and efficacy of this new therapeutic approach.

CONCLUSIONS ILY Robot-assisted endourological management represents a safe, technically feasible, and highly effective new approach for the treatment of pediatric hydrocalyx, even in early childhood. The platform offers unprecedented precision for delicate tissue incision and intracavitary navigation. While these initial results on two patients are extremely promising, larger multicenter studies with longer follow-up are warranted to standardize this novel treatment and establish its definitive role in pediatric endourology.

T7 Robotic

23 - Implementing Robot-Assisted Pediatric Urology: A Health Technology Assessment of Pyeloplasty and Ureteral Reimplantation

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INTRODUCTION AND AIM OF THE STUDY

Robot-assisted surgery is well established in adult urology, whereas its role in pediatric urology remains less defined because of limited evidence, low procedural volumes, high costs, and dedicated training requirements. We describe the development of a Health Technology Assessment (HTA) framework for robot-assisted pediatric urological surgery at our institution.

MATERIALS AND METHODS

A multidisciplinary group including pediatric surgeons, pediatric urologists, hospital management, clinical engineers, and HTA specialists developed two reports following the regional HTA methodology: robot-assisted laparoscopic pyeloplasty (RALP) for ureteropelvic junction obstruction and robot-assisted laparoscopic ureteral reimplantation (RALUR) for ureterovesical junction pathology. The process included a review of high-level evidence and guidelines, focusing on surgical outcomes, and a micro-costing analysis based on 2024 data from two Italian Institutes. Robotic procedures were compared with conventional laparoscopic pyeloplasty and open ureteral reimplantation.

RESULTS

RALP showed success rates above 90%, most commonly 95–100%, with outcomes comparable to open and laparoscopic surgery. Conversion and intraoperative complication rates were very low, postoperative complications were mainly minor, and reintervention was uncommon. RALP may provide particular advantages in complex anatomy and recurrent obstruction. RALUR achieved success rates of 95–98%, comparable with open surgery, with potential perioperative advantages in experienced centres. Conversion and intraoperative complications were rare; postoperative events were mainly minor and conservatively managed, while transient urinary retention was the most characteristic complication, especially after bilateral repair. For both procedures, robotic surgery was associated with reduced analgesic requirements, shorter hospital stay, and faster postoperative recovery. Micro-costing showed that the higher cost of robotics was mainly driven by fixed platform costs. For pyeloplasty, the cost per procedure was €12.423,8 for RALP versus €3.560,5 for laparoscopy (difference €8.863,2), of which €8.046,8 was attributable to depreciation and maintenance; the difference in variable costs was €932,6. For ureteral reimplantation, the cost difference versus open surgery was €7.529,7, while the difference in direct operative costs was only €517,1. A €3.500 regional reimbursement for robotic DRGs substantially reduced the economic gap.

INTERPRETATION OF RESULTS

The HTA supports the clinical feasibility and safety of RALP and RALUR in selected pediatric patients, provided that case selection, training, and outcome monitoring are standardized. The main economic barrier is not the operative act itself, but the amortization of fixed platform costs over a limited number of procedures. Therefore, increasing procedural volumes and concentrating activity in specialized centres are key determinants of economic sustainability.

CONCLUSIONS

An HTA-based implementation pathway may support the responsible introduction of pediatric robotic urology. RALP and RALUR provide favourable clinical outcomes, while their economic sustainability depends on adequate case volumes, regional reimbursement policies, and centralization within high-specialty centres. Prospective monitoring of clinical, organizational, and economic outcomes is required.

24 - Robot-assisted treatment of bladder diverticula in children: a single-centre experience

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INTRODUCTION AND AIM OF THE STUDY
Bladder diverticula are uncommon in children and may be associated with vesicoureteral reflux, recurrent urinary tract infections, voiding dysfunction or complex ureterovesical anatomy. Surgical treatment can be demanding when the diverticulum is close to the ureteric orifice or when ureteral reimplantation is required. The aim of this study was to evaluate the feasibility and outcomes of robot-assisted surgery for pediatric bladder diverticula.

MATERIALS AND METHODS
We retrospectively reviewed all children who underwent robot-assisted treatment for bladder diverticula at our institution between March 2018 and July 2025. Collected data included age, weight, symptoms, previous urological procedures, diverticulum side and location, associated reflux or obstruction, preoperative imaging, operative strategy and follow-up. The robotic procedure consisted of diverticulectomy alone or diverticulectomy with ureteral reimplantation according to anatomy and intraoperative findings. Outcomes included operative time, conversion, catheter and drain duration, ureteral stenting, complications, length of stay, postoperative imaging, recurrent infections, persistent reflux and reintervention.

RESULTS
6 patients were included. Median age and weight were 80 months and 28 kg, respectively. Diverticula were 5 left and 1 right. Four patients had ipsilateral vesicoureteral reflux, and one additional patient had contralateral low-grade reflux treated endoscopically.. Robot-assisted treatment was completed in all patients, with no conversion. Mean operative time was 310 minutes. Mean bladder catheterization duration and hospital stay were 3.5 and 7.6 days, respectively. No major complication occurred. Only one patient presented postoperative fever. At a mean follow-up of 27 months postoperative imaging showed complete resolution of the diverticulum in all patients. One patient developed recurrent vesicoureteral reflux, successfully treated endoscopically.

INTERPRETATION OF RESULTS
Robot-assisted surgery allowed accurate identification of the diverticular neck, safe dissection close to the ureterovesical junction and tailored reconstruction. The approach appeared particularly useful in patients requiring concomitant ureteral reimplantation or complex bladder wall repair. Operative times and postoperative course were consistent with a minimally invasive reconstructive procedure.

CONCLUSIONS
Robot-assisted surgery is a feasible option for selected pediatric bladder diverticula, especially when anatomy is complex or ureterovesical reconstruction is needed. Standardized reporting and longer follow-up are required to define indications, durability and comparative advantages over open repair.

25 - Robot-assisted surgery for pediatric ureterovesical junction disorders: a single-centre series

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INTRODUCTION AND AIM OF THE STUDY
Pediatric ureterovesical junction (UVJ) disorders includes vesicoureteral reflux (VUR), paraureteral diverticula, duplex systems and ectopic ureters. These heterogeneous conditions often require ureteral reimplantation, diverticulectomy or combined reconstruction. We report our single-centre experience with robotic surgery.

MATERIALS AND METHODS
We retrospectively reviewed patients <18 years underwent robot-assisted surgery for UVJ disorders from April 2017 to February 2025, with follow-up >6 months. Demographic, clinical, radiological, intraoperative, postoperative and follow-up data were collected. Preoperative work-up included ultrasound, VCUG and renal scan when indicated. Complications were classified according to Clavien-Madadi. Favourable outcome was defined as absence of clinically relevant recurrence/persistence or need for reintervention.

RESULTS
Twenty-two patients were included: 13 males and 9 females. Median age was 48 months and median weight 18 kg. VUR was documented in 17/22 patients; high-grade VUR (IV-V) was present in 14/17. Diagnoses included isolated VUR (n=8), VUR with bladder/paraureteral diverticulum (n=7), duplex system without VUR (n=3), VUR with duplex system (n=1), VUR with ectopic ureter (n=1), and symptomatic ureteral stump (n=2). Fifteen patients were symptomatic and 13 had infectious/febrile manifestations. Procedures included extravesical Lich-Gregoir ureteral reimplantation (n=16; associated diverticulectomy n=5), heminephroureterectomy (n=2), ureterectomy with ureteropelvic anastomosis (n=1), isolated diverticulectomy (n=1) and ureteral stump resection (n=2). Robotic completion was achieved in 21/22 cases; one conversion was required for difficult planes and poor exposure. No intraoperative complications occurred. Mean operative and console times were 277.5 and 212.5 minutes. Mean hospital stay was 5.5 days. Postoperative complications occurred in 5 patients, mainly infectious, all managed conservatively. At a median follow-up of 22 months, 20/22 patients showed no clinically relevant recurrence or persistence after the primary robotic procedure. Two patients required further treatment for persistent/recurrent VUR: one underwent open Cohen reimplantation and one endoscopic correction.

INTERPRETATION OF RESULTS
Unlike standard isolated VUR cohorts, this series included diverticula, duplex systems and combined procedures. Operative time and hospital stay should therefore be interpreted in relation to anatomical complexity.

CONCLUSIONS
Robot-assisted surgery is a feasible and safe reconstructive option for selected pediatric UVJ disorders, including complex and combined anatomical conditions. Favourable outcomes were achieved in 20/22 patients, although persistent/recurrent VUR requiring further treatment occurred in 2 cases. Larger prospective studies with standardized follow-up are needed to define indications and durability.

26 - MAPPING PROCESS ACROSS EUROPEAN SPINA BIFIDA CENTER : A MANDATORY STEP FOR STANDARDIZING THE MANAGEMENT BEFORE A TRIAL FOR FETAL SURGERY. RESULTS BY ERN EUROGEN, ERKNET,ITHACA SURVEY.

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INTRODUCTION: European Reference Network (ERN)for Health Assistance, have been created with the aim to improve and standardized the care of patients across Europe. Patients with Spina Bifida and other Dysraphysms (SBoD) are at risk for life-long comorbidities, as Lower Urinary tract dysfunction (LUTD) and chronic kidney disease (CKD) and should be managed by a multidisciplinary team as recommended by all international guidelines. Nowadays despite medical advances, as fetal repair, the care and management of this complex congenital malformations, are still heterogeneous across Europe. This study aimed to map SB healthcare providers (HCPs) activities in Europe, for assessing the availability of dedicated care pathways and follow-up programs.

MATERIAL AND METHODS: Different specialists (pediatric urologist, pediatric nephrologist, gynecologist, specialized nurses, etc) developed a 18 items multiple choice online questionnaire focusing on SB care and the availability of dedicated facilities and follow-up programs focusing to continence care. The survey was distributed among HCP involved in SB management into ERNs ITHACA, eUROGEN, and ERKNET. Responses were collated, analyzed, and summarized using descriptive statistic.

RESULTS: 76 HCPs across 23 European countries completed the questionnaire. The majority of centres were academic (62/76:81%). Patient referral to HCPs was mainly related with pediatricians (57/76:75%), general practitioners (45/76:59%), and gynecologists (38/76:50%). Prenatal diagnostic services are available in 70/76 (92%), while fetal surgical repair is performed in 15/76(19%). Specifically, prenatal open repair in 13/76, fetoscopic repair in 9/76 and stem cells therapy in 2/76. A standardized pathway for pregnant women is established in 42/76.55%. 57/76:75% offer a specific outpatient consultation service and 72/76:94%) have a dedicated multidisciplinary team. Pediatric urologist is part of the team in 65/76:90%, urodynamic services in available in 73/76:96%, a dedicated urotherapists team for clean intermittent catheterization training is present in 66/76 :86%. A structured transition-of-care pathway from pediatric to adult services reported in 57/76:75%,). Participation in SB studies confirmed by 42/76:55%, while collaboration with patient association was reported in 36/76:47%. Only 30/76:39% are listed as SB treating centers on ORPHANET website.

CONCLUSIONS: This European survey highlights considerable variation in the organization and provision of SB care. Important disparities remain particularly in the composition of multidisciplinary team, consistency of structured pathways,.informations for patients are lacking as suggested by scant collaboration with patient's association. These findings underscore the need, first of all, to harmonize into ERN, and related HCP, the organization in order to optimize care models and establish standardized patient-centered pathways. These results suggested the need to establish a standardized protocol before to start a study for evaluating the urological results of SB fetal repair.

27 - Efficacy and Safety of Intradetrusor OnabotulinumtoxinA Injections in Pediatric Patients with Spina Bifida: A 3-Year Retrospective Study from a National Reference Center

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INTRODUCTION AND AIM OF THE STUDY

Botulinum toxin A (onaBoNT-A) has been used as a third-line treatment for patients affected by overactive bladder as well. The aim of our study was to evaluate the efficacy and safety of detrusor BoNT-A injections in pediatric patients in a reference center for spina bifida.

MATERIALS & METHODS

To this aim, we conducted a retrospective analysis of pediatric patients (aged < 18 years) with spina bifida who underwent endoscopic detrusor botulinum toxin injections between December 2022 and December 2025 at a specialized reference center. A video-urodynamic study (VUDS) was repeated 3 months postoperatively to confirm the clinical benefit; on that occasion, a 3-day bladder diary, was collected.

RESULTS

During the study period, 46 procedures were performed in 34 patients (mean age: 11 y 5 m; range: 11 months – 18 years). In all cases, patients were on intermittent catheterization and antimuscarinic therapy adjusted for body weight. Two patients did not combine antimuscarinic therapy with intermittent catheterization due to prior adverse reactions: xerostomia (n=1) and vomiting (n=1). All patients received peri-procedural antibiotic prophylaxis. In all cases, discharge occurred on the first postoperative day. No intra- or postoperative complications were documented, with a mean follow-up of 36 months. Benefit was reported in 88,2 % of the treated cases, as evidenced by bladder diaries and VUDS across all parameters evaluated ($p < 0.05$) 3 months postoperatively: increase in cystometric capacity, reduction in voiding frequency, and reduction in urgency episodes/urge urinary incontinence. In 29,4 % of cases, patients repeated the procedure with a success rate of 60%, while the remaining patients were referred for major surgery, such as bladder augmentation with or without bladder neck closure and the creation of a Mitrofanoff catheterizable channel.

INTERPRETATION OF RESULTS

OnaBoNT-A is established as a third-line option for refractory detrusor overactivity in adults and, recently, in older children with neurogenic lower urinary tract dysfunction after pharmacotherapy failure. Regulatory guidance currently supports intradetrusor onaBoNT-A for pediatric neurogenic detrusor overactivity starting at 5 years of age; recommended dosing is 6 U/kg for patients <34 kg or a fixed 200 U for those ≥34 kg, reflecting the pivotal pediatric program leading to the 2021 U.S. approval.
In pediatric population there is a lack of experience, in particular there is no consensus about the optimal dose to administer, and about its efficacy and safety.

CONCLUSIONS

In our series, we found that the treatment of detrusor overactivity via OnaBoNT-A injection can be successfully utilized in terms of safety and efficacy, advocating for its adoption as a valid therapeutic option. Further prospective, multicenter studies with larger sample sizes are necessary to definitively demonstrate the efficacy and safety of this procedure in the pediatric population.

T2 Posterior Urethral Valves

28 - Does Prenatal Diagnosis Modify Outcomes in Patients with Posterior Urethral Valves? A Systematic Review and Meta-Analysis

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INTRODUCTION AND AIM OF THE STUDY

Posterior urethral valves (PUV) represent the most common cause of congenital infravesical obstruction in male pediatric patients. Up to 30-42% of affected patients progress to end-stage renal disease (ESRD). Prenatal diagnosis via fetal ultrasonography has become increasingly prevalent; however, whether early identification translates into improved long-term renal outcomes compared to postnatal diagnosis remains controversial. This systematic review and meta-analysis aimed to assess whether prenatal diagnosis of PUV is associated with different renal outcomes compared to postnatal diagnosis.

MATERIALS AND METHODS

A systematic review and meta-analysis (PROSPERO: CRD420251169157) was conducted following PRISMA guidelines. PubMed, Ovid (Embase), and Cochrane databases were searched up to January 2026. Eligible studies included comparative studies (prenatal vs. postnatal PUV diagnosis) reporting at least one renal outcome: chronic kidney disease (CKD) stage ≥3, ESRD, or renal transplantation. Risk of bias was assessed using ROBINS-I; certainty of evidence with the GRADE framework. Pooled odds ratios (OR) with 95% confidence intervals (CI) were calculated using random-effects models.

RESULTS

Eight retrospective comparative studies were included, comprising 927 patients (prenatal: n=442; postnatal: n=485). No statistically significant differences were found for any primary outcome. For CKD ≥stage 3 (7 studies), the pooled OR was 1.04 (95% CI: 0.45–2.40; p=0.919), with substantial heterogeneity (I^2=76%). For ESRD (6 studies), OR=1.34 (95% CI: 0.64–2.79; p=0.436; I^2=40%). For renal transplantation (4 studies), OR=1.29 (95% CI: 0.42–3.90; p=0.659; I^2=55%). GRADE assessment rated evidence as low for CKD and moderate for ESRD and renal transplantation. Overall risk of bias was moderate for most studies per ROBINS-I.

INTERPRETATION OF RESULTS

The absence of outcome differences likely reflects a selection bias intrinsic to prenatal diagnosis: antenatally detected cases typically represent more severe disease with greater renal dysplasia, whereas postnatal cases represent milder forms. Furthermore, irreversible nephron damage in PUV occurs early in gestation, potentially before prenatal detection is feasible. The results suggest that long-term prognosis is driven primarily by congenital renal dysplasia and postnatal disease management rather than timing of diagnosis per se.

CONCLUSIONS

Prenatal diagnosis of PUV, in the absence of intrauterine intervention, does not appear to significantly modify long-term renal outcomes. Its primary clinical value lies in enabling early postnatal planning and multidisciplinary care coordination. The evidence base is limited by the observational and retrospective nature of available studies and substantial heterogeneity. Prospective multicenter studies with standardized outcome definitions are needed to identify subgroups that may benefit from prenatal detection.

29 - Artificial Intelligence in Pediatric Urology: Innovative Strategies for Communication and Management of Urinary Incontinence

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INTRODUCTION AND AIM OF THE STUDY

Artificial Intelligence (AI) is progressively transforming clinical and surgical practice across various medical specialties. Moving beyond isolated decision-support algorithms, the current state-of-the-art is evolving toward integrated ecosystems capable of assisting clinicians throughout the entire patient journey.

To evaluate the impact of AI in Pediatric Urology, with specific reference to:
• Advanced imaging and longitudinal follow-up.

• Behavioral intervention modeling.

• Minimally invasive surgery.

• The interaction between patients, families, and multidisciplinary teams within transitional care pathways.

MATERIALS AND METHODS - RESULTS

Current and emerging applications of AI in Pediatric Urology are proliferating rapidly, specifically in:

1. **Diagnostic Support and Predictive Analysis:** Automated interpretation of imaging data, prediction of therapeutic outcomes, and risk stratification for high-complexity clinical cases.

2. **Functional Disorders (Nocturnal Enuresis Model):** The deployment of wearable devices, mobile applications, and machine learning algorithms enables increasingly personalized monitoring and intervention strategies for bladder-sphincter dysfunctions.

3. **Surgical Innovation:** The convergence of AI and robotic technologies is leading to "human-in-the-loop" operating environments, where clinicians maintain central decision-making roles while collaborating with intelligent systems for surgical planning and intraoperative guidance.

4. **Assisted Robotics and Conversational AI:** Beyond the surgical suite, these technologies support healthcare education, treatment adherence, and active patient engagement through empathetic and automated communication tools.

5. **Regulatory and Ethical Challenges:** Implementation must address transparency, accountability, and digital equity, particularly in alignment with the European AI Act, to ensure the safe application of AI in the pediatric population.

CONCLUSIONS

Rather than questioning whether AI will replace clinicians, the goal for pediatric urologists is to explore how to design, govern, and integrate these technologies. The focus remains on building safer, more personalized, and child-centered care pathways.

30 - Efficacy of preoperative hormonal treatment in severe cases of hypospadias: a case-control study

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Background:
Severe proximal hypospadias repair remains a surgical challenge due to the elevated risk of complications. Success rates vary according to the severity of the malformation, with glans width (GW) < 14 mm recognised as an independent risk factor for poor outcomes. Preoperative hormonal treatment (PHT) has been proposed to enhance penile size and improve tissue quality prior to surgery, although its efficacy and the optimal regimen of administration remain controversial. This case-control study evaluates the efficacy of a tailored PHT regimen in patients with severe hypospadias and compares surgical outcomes between patients who received PHT and those who did not.

Methods: A retrospective study of the medical records of patients with proximal (PXH) or midshaft (MSH) hypospadias who underwent surgical repair in the same centre between August 2001 and May 2025. Since June 2020 patients with GW<14 mm and/or significant ventral curvature (>30°) at preoperative assessment received PHT as daily treatment with 2% transdermal testosterone gel(2 mg/day) for 30–60 days, except for one patient who received topical androstanolone 2.5% due to 5alpha-reductase deficiency. Hormonal treatment was discontinued at least 1 month prior to surgery(mean 55±23 days). Penile length(PL), GW, and adverse effects were recorded pre- and post-treatment by the same Paediatric Endocrinologist. Surgical outcomes and short-term postoperative complications were assessed by the same surgeon.

Results: A total of 48 patients were included: 16 received PHT (6 MSH, 10 PXH) and 32 no-PHT (12 MSH, 20 PXH). Mean age at surgery was 2.68±1.75 and 2.09±1.13 years, respectively (p:0.38). In the PHT group no adverse effects due to the hormonal treatment were reported. A mean increase of 45±27mm(+50%) for GW and of 80±42mm(+41%) for PL were measured, with a relevant Cohen's effect size for both parameters(d=0.75 and d=1.10, respectively). The overall complication rate (CR) between the two groups was 66% in PHT (urethrocutaneous fistula 78%, glandular dehiscence 22%) and 71% in no-PHT (urethrocutaneous fistula 75%, glandular dehiscence 15%, urethral stenosis 15%) (p:0.4), over a mean follow-up period of 31±15 months. For MSX cases, CR was 20% for PHT while 50% for no-PHT.

Conclusions: PHT was found to be a non-invasive, well-accepted, and effective treatment for enhancing penile size prior to surgical repair of severe hypospadias. Although a direct impact on complication rates could not be established for PXH, the significant improvements in GW and PL support its use as an adjunctive therapy in this patient population.

31 - Correlation Between Varicocele and Aortomesenteric Compression of the Left Renal Vein in Prepubertal Age: A National Single-Center Observational Study

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INTRODUCTION AND AIM OF THE STUDY

Varicocele is defined as a dilation of the pampiniform plexus veins and is well known to negatively affect fertility. While its prevalence is higher in adolescents, it is less frequently reported in prepubertal patients. In this age group, its occurrence may suggest secondary causes, such as extrinsic compression of the left renal vein. A relevant mechanism is the so-called "nutcracker phenomenon," in which a reduced aorto-mesenteric angle leads to compression of the left renal vein. This condition may be asymptomatic or present with hematuria, proteinuria, flank pain, and less commonly, left-sided varicocele.
This study aims to evaluate the incidence of nutcracker phenomenon in prepubertal varicocele.

MATERIALS AND METHODS

This is a prospective, monocentric observational study including patients with prepubertal diagnosis of varicocele (defined as testicular volume < 4 mL bilaterally at diagnosis). Evaluation of the aorto-mesenteric angle is performed using color-Doppler ultrasonography. An angle < 35° is considered pathologic. The study was approved by the Ethics Committee, and all participants provided written informed consent prior to enrollment.

RESULTS

We included 42 patients in the study, with a mean age at diagnosis of 10,9 years. Preliminary data have shown that the nutcracker phenomenon is present in 8/42 patients (19%). 38/42 patients (90,5%) had already undergone corrective treatment. Among patients diagnosed with nutcracker phenomenon 4/8 (50%) underwent surgical correction, 2/8 (25)% underwent retrograde percutaneous scleroembolization and 2/8 (25%) has not yet had surgery due to lack of indications. The 6-months recurrence rate at ultrasound in patients with nutcracker phenomenon was 62,5%.

INTERPRETATION OF RESULTS

Although these are preliminary data from an ongoing study, the prevalence of nutcracker phenomenon observed in our cohort (19%) appears clinically relevant. As patient enrollment is still ongoing, this proportion may further increase, suggesting that left renal vein compression could be more common among prepubertal patients with varicocele than currently appreciated. The high 6-month ultrasound recurrence rate observed in patients with nutcracker phenomenon (62.5%) also warrants further investigation in a larger cohort and it may indicate that persistent left renal vein compression contributes to varicocele recurrence despite corrective treatment.

CONCLUSIONS

The nutcracker phenomenon may represent a relevant underlying condition in a subset of patients with prepubertal varicocele and could influence postoperative outcomes. Routine assessment of the aorto-mesenteric angle by color-doppler ultrasonography may help identify patients at higher risk of recurrence. More data are needed to define which surgical strategy is more effective in case of secondary prepubertal varicocele. Larger studies with longer follow-up are needed to confirm these preliminary observations.

32 - Early Urostomy in Pediatric Lower Urinary Tract Obstruction: Is it a good solution for Nephroprotection?

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INTRODUCTION AND AIM OF THE STUDY Lower urinary tract obstruction (LUTO) in the pediatric population represents a critical and time-sensitive threat to the development and long-term preservation of the nephronic pool. Severe obstructive uropathy leads to high-pressure urinary stasis, which triggers a cascade of progressive renal dysplasia, tubulointerstitial fibrosis, and irreversible nephron loss. When initial endoscopic interventions—such as the ablation of posterior urethral valves—or conservative management are clinically unsuccessful, technically unfeasible, or delayed by anatomical factors, the creation of a temporary diverting urostomy (such as a cutaneous vesicostomy or ureterostomy) serves as a fundamental, nephro-saving therapeutic strategy. This procedure lead to immediately decompress the upper urinary tract and halt progressive organ damage. The objective of this retrospective study is to evaluate the clinical efficacy of early and temporary diverting urostomies to protect and stabilize the renal function in pediatric patients with severe lower urinary tract obstruction, utilizing longitudinal serum creatinine levels as an objective biochemical marker of functional outcome.
MATERIALS AND METHODS A retrospective, single-center analysis was conducted on a cohort of 14 pediatric patients (11 males, 3 females) who underwent to early urostomy between January 2020 and May 2026. The median age at the time of the surgical intervention was 60.8 days (Interquartile Range, IQR: 34.1 – 235.6 days) reflecting a high prevalence of neonates and infant. High-resolution laboratory data were collected for all patients. Serum creatinine levels measured immediately prior to the surgical intervention (baseline) were compared with those obtained during the routine post-operative follow-up at 1 week and 3 months. The Wilcoxon test was used the evaluate our data.
RESULTS The biochemical analysis demonstrated a drastic, uniform, and statistically significant reduction in serum creatinine levels at seventh postoperative day after the urinary diversion. The median pre-operative creatinine level was 1.31 mg/dL (overall range: 0.22 – 5.44 mg/dL). Following the successful creation of the urostomy, the median post-operative serum creatinine level significantly dropped to 0.35 mg/dL (overall range: 0.10 – 0.80 mg/dL) at seventh postoperative day. This creatinine reduction with improvement of renal function was confirmed to be highly statistically significant (p =0,0058) via the Wilcoxon signed-rank test). All patients achieved a stable renal function at 3 and 6 months follow-up. No short and long-term surgical or systemic complications related to the diversion procedure were recorded during the follow-up ((mean: 5 months; range: 3 – 7 months for 4 patients) or until the closure of the urostomy (10 patients).
INTERPRETATION OF RESULTS The remarkable and rapid decline in serum creatinine values provides strong clinical evidence that early mechanical decompression effectively alleviates the devastating high-pressure system within the immature urinary tract. By rapidly reversing severe creatinina in the immediate post-operative phase, this surgical intervention effectively removes the obstructive insult, allowing the compromised renal parenchyma to recover. The complete normalization of creatinine levels—even in patients presenting with critical pre-operative peaks up to 5.44 mg/dL—indicates that prompt diversion can successfully arrest or partially reverse obstructive nephropathy during crucial stages of somatic and renal growth. Decompression prevents further parenchymal thinning and enhances the compliance of the upper tract, optimizing the preservation of the remaining nephrons
CONCLUSIONS In pediatric patients affected from severe lower urinary tract obstruction, the early creation of a diverting urostomy remains a life-saving procedure and a highly effective strategy for "nefroprotection". The significant post-operative reduction in serum creatinine levels objectively proves the success of upper tract decompression in preserving residual renal function.

33 - THREE YEARS OF EXPERIENCE WITHIN AUSL ROMAGNA IN THE PRJTACO TRANSITIONAL CARE MODEL FOR BLADDER EXSTROPHY

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INTRODUCTION AND AIM OF THE STUDY

In 2021, we pioneered an organizational model for transitional care named PRJTACo (Preparation, Readiness, Joint visit, Transition to Adult care, Coordinator) tailored for complex malformations, based on systematic literature review and identification of multidisciplinary/multiprofessional working group; started in 2023.
Aim of study is to evaluate efficacy indicators, with focus on Bladder Exstrophy (BE).

MATERIALS AND METHODS

Over the last 3 years, 11 patients with BE (5F, 6M; age 18–35yrs) and ongoing challenges (difficult clean intermittent catheterization, pregnancy, desire for paternity, urolithiasis, incontinence, pelvic organ prolapse,..) were enrolled in the transition pathway.
The parameters evaluated were:
- role of the pediatric surgeon;
- patients' readiness for transition, assessed via psychological questionnaires.

Efficacy indicators were:
- Health Status: via the Short Form Health Survey (SF-36);
- Care Experience during transition: via a structured interview;
- Healthcare utilization: time interval between the last pediatric and the first adult visit, persistence of adult follow-up at 3 years.

RESULTS

Among patients 1 completely transitated, 10 still require the pediatric surgeon, because of specific conditions (Mitrofanoff stenosis, pregnancy, urolithiasis,...).
Questionnaires administered revealed that parents remained the primary decision-makers and no patient was fully ready for the transition, despite a strong desire for autonomy.
Regarding the efficacy indicators:

- incontinence and genital self-acceptance were the main factors negatively impacting QoL;
- the care experience during the transition process was reported as excellent, effectively reducing emergent visits to zero;
- a critical challenge remains the required persistence of the pediatric surgeon as a "bridge" between patient and adult specialists for follow-up adherence.

INTERPRETATION OF RESULTS

The current adult BE patient cohort reflects a past paradigm where early patient/family psychological support was underemphasized, primarily focusing on reconstructive surgery, hindering health education and self-management of patients.

CONCLUSIONS

Despite a structured transitional care model (PRJTACo) specifically tailored for complex cases and our efforts to dismantle existing barriers, in certain conditions of adult BE long-term management still demands continuous collaboration pediatric-adult teams. The concept of transition, traditionally defined as a “transfer of care”, must be evolved into an “overlapping care”. The two teams ideally represent the two support points of an “hammock” under the patient.
This can be changed referring families to psychological support program starting in early childhood, in order to increase their parenting skills and self-acceptance of patients.