ABSTRACT BOOK

1. URETROPLASTICA CON E SENZA SECOND-LAYER: INCIDENZA DI FISTOLA A CONFRONTO

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INTRODUZIONE

Gli interventi correttivi di ipospadia possono essere caratterizzati da diverse complicanze tra cui la comparsa di fistola uretro-cutanea (FUC) (5-35%). Diversi studi hanno investigato quale potesse essere il miglior tessuto da interporre per proteggere l'uretroplastica e ridurre l'incidenza di FUC.
L'obiettivo del nostro studio é stato quello di valutare la differente incidenza di FUC tra le ipospadie trattate con e senza un second-layer protettivo dell'uretroplastica.

METODI

Tutti i casi di ipospadie medio-peniene e distali trattate in tempo unico tra il 2016 ed il 2020 nel nostro centro sono state analizzate retrospettivamente. I casi sono stati divisi per chirurgo e per presenza/assenza di second-layer: Gruppo A (uretroplastiche con second-layer di tessuto periuretrale, chirurgo L.L.) e Gruppo B (uretroplastiche senza second-layer, chirurgo A.E.), valutando l'incidenza di FUC. L'uretroplastica è stata eseguita, in entrambi i gruppi con utilizzo di loop x3.5, in PDS 6/0, sutura continua, extramucosa, a margini introflessi.

RISULTATI

Sono state trattate 425 ipospadie con tecnica sec Duplay (334/425) e TIP (91/425), con un' incidenza di FUC complessiva del 7% (30/425) ad un follow-up medio di 3 anni (2-4). L'incidenza di FUC nel Gruppo-A e nel Gruppo-B è stata rispettivamente del 6,7% e del 7,3%, non statisticamente significativa (p = 0,8).

CONCLUSIONI

Nella nostra esperienza, il confezionamento di una uretroplastica tecnicamente corretta non ha influenzato statisticamente l'incidenza di FUC. Ulteriori studi più ampi, prospettici, sono necessari per la conferma dei nostri dati.

2. INDOCYANINE GREEN (ICG)-GUIDED ONLAY PREPUTIAL ISLAND FLAP URETHROPLASTY FOR SINGLE-STAGE REPAIR OF PRIMARY HYPOSPADIAS. THE FIRST EXPERIENCE.

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INTRODUCTION AND AIM OF THE STUDY

Firstly described by Duckett in 1981 and initially used for mid-penile hypospadias, the onlay preputial island flap urethroplasty has progressively gained more popularity, extending its indication to proximal hypospadias. However, with the severity of the penile anomaly, the rate of postoperative complications has also increased. A new tool capable of assessing the vascular perfusion of the preputial island flap in real-time was therefore introduced aiming to reduce the occurrence of postoperative complications associated with a poor vascular supply.

MATERIALS AND METHODS

The EleVision IR system (Medtronic Ltd) was intraoperatively adopted to assess the vascular perfusion of the preputial island flap in a 13-month-old boy undergoing the onlay urethroplasty for a mid-shaft hypospadias, 80 seconds after the intravenous injection of indocyanine green (ICG, 0.15 mg/kg)

RESULTS

The ICG perfusion ratio was clinically compared to post-operative tissue viabilty

INTERPRETATION OF RESULTS

ICG-based laser angiography proved to be safe and effective in intaoperative evaluation of blood supply of the preputial island flap during onlay urethroplasty.

CONCLUSIONS

ICG-based laser angiography should be considered as a reasonable adjunct for tissue perfusion assessment and operative decision-making in patients undergoing the reconstructive onlay preputial island flap urethroplasty.

3. STANDARDS OF CARE FOR THE HEALTH OF TRANSGENDER AND GENDER DIVERSE PEOPLE, VERSION 8 – SOC 8: CHAPTER 10 INTERSEX.

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INTRODUCTION AND AIM OF THE STUDY

The Standards of Care Transgender Version 8 (SCO 8) published in September 2022, has a dedicated chapter focusing on the clinical care of intersex people. The overarching goal of SOC 8 is to provide healthcare professionals with clinical guidance to assist intersex people in accessing safe and effective pathways to lasting personal comfort with their gendered self, with the aim of optimising overall physical health, psychological well-being and self-actualisation.

MATERIALS AND METHODS

International professionals and stakeholders were selected to serve on the SOC-8 committee. The SOC-8 recommendations were developed on the basis of data from independent systematic reviews on the professional consensus of experts in intersex health.

RESULTS

The classification of the recommendations was based on the available evidence supporting the interventions, a discussion of risks and harms, as well as feasibility and acceptability in different contexts and countries. In its 12 points, it emphasises not only the importance of multidisciplinarity and other training, but also multidimensionality in the management of care of these people. But also the concept of over-medicalisation.

INTERPRETATION OF RESULTS

The classification addresses the changing terminology, prevalence and different presentations of these individuals and provides recommendations for providing psychosocial and medical care with evidence-based explanations. As an infant with atypical sex differentiation may already present clinical challenges, including the need for family education and support from infancy, the decision-making process on gender assignment, subsequent clinical management of gender, the components of which - especially genital surgery - may be controversial, and a subsequent risk of developing gender dysphoria and gender reassignment that is significantly increased.

CONCLUSIONS

The SOC-8 guidelines are designed to be flexible and respond to the different health care needs of intersex people globally. While adaptable to each individual health care setting, they offer standards to promote optimal health care and guidance for the treatment of people experiencing intersex conditions.

4. SURGICAL CORRECTION OF CONGENITAL PENILE CHORDEE: A NEW TECHNIQUE COMBINING THE ADVANTAGES OF PLICATION AND INCISIONAL APPROACHES

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INTRODUCTION AND AIM OF THE STUDY

Congenital chordee without hypospadias are a common congenital anomaly, with a prevalence between 4-10%. The most frequent deviation, and the one with the highest request for correction, is ventral, and it is usually due to penile ventral hypoplasia. Diagnosis is usually late, done during puberty, with an increased risk of negative psychosexual outcomes.
In our work we will review the surgical approaches suggested for correction of congenital penile chordee and propose a new surgical technique which combines the advantages of simple plication with those of incisional techniques.

MATERIALS AND METHODS

The technique described can be considered a modified Nesbit technique, performed (after an anatomical study of the deviation done with a Gittes test) by peeling the surface of the tunica albuginea into two parallel lines, followed by small a transverse incision at the level of the fulcrum avoiding the dorsal neurovascular bundle, either by performing the minimal incision along the medial line or at 2 and 10 o' clock. Later, an inverted Yachia technique is done with stitches positioned proximally and distally to the incision, followed by transverse Donati stiches to reinforce the correction and reduce bleeding.
Seven adolescents were consecutively operated with the said technique for chordee with penile deviation exceeding 30°.

RESULTS

No surgical complications were observed, and the only minor post-surgical complication was a case of limited skin necrosis due to the application of an excessively tight dressing. The only recurrence was observed in a 14-year old boy who had been previously treated for bilateral undescended testis, penoscrotal transposition and scrotal hypospadias corrected with twostage Bracka repair. He had a stretched penis length of 10 cm, buried in excessive pubic fat.

INTERPRETATION OF RESULTS

Our proposed technique proved to be safe and effective, with no intraoperative complication, one minor postoperative complication, and a single recurrence in a very complex case.

CONCLUSIONS

Correction of a severe penile deviation is not free from surgical complications, recurrences, and unsatisfying results. Among the numerous approaches suggested we believe that the least invasive ones, such as the one proposed, should be prioritized.

5. DISTAL HYPOSPADIAS WITH SPONGIOSAL DEFECT: WHAT TO DO WITH PAPER URETHRA? A MODIFIED TUBULARIZED INCISED-PLATE URETHROPLASTY

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INTRODUCTION AND AIM OF THE STUDY

Hypospadias surgery remains one of the most challenging procedures in reconstructive urology. Surgical strategies changed progressively over the years, and often the most appropriate technique needed for surgical repair is chosen intraoperatively, depending on the assessment of specific anatomy of each patient.
Here we present our surgical experience with consecutive series of distal hypospadias combined with a long defect of the corpus spongiosum, all corrected with a modified tubularized incised plate urethroplasty (TIP).

MATERIALS AND METHODS

Data was collected prospectively. The hypospadias with a corpus spongiosum defect longer than half of the shaft were corrected with a modified TIP repair. A longitudinal incision of the entire ventral wall was performed. Intraoperative variables and potential post-operative complications were assessed. Complication rate was evaluated considering also patients conceived with in vitro fertilization (IVF) compared to patients conceived without.

RESULTS

41 patients underwent a modified TIP repair and a two-stage Bracka repair was performed in 7 patients. In a median follow-up of 11 months, complications were observed in 6 patients (14,6%), fistulas being the most common. Patients conceived with IVF presented a comparatively higher complication rate.

INTERPRETATION OF RESULTS

A modified TIP repair with 3 relaxing incisions allows for an easier, tension-free urethroplasty together with a short operative time and complication rates comparable to those already reported in literature. A two-stage Bracka repair was performed when the urethral plate was too narrow and in case of severe chordee.

CONCLUSIONS

The modified TIP technique can be considered both an easy and safe procedure to perform, giving remarkable results in terms of low complication rate and late functional and cosmetic results.

6. FEMORAL HERNIA IN CHILDREN

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INTRODUCTION AND AIM OF THE STUDY

Femoral Hernia (FH) is considered the "bête noir" of inguinal hernias, in both adults and children, due to its complex anatomy, frequent misdiagnosis, higher rate of complications and large number of surgical approaches available (femoral, laparoscopic, inguinal with mesh application and McVay technique, which will be discussed and compared). In pediatric age the challenges posed by FH are increased due to the low number of cases usually confronted by pediatric surgeons and urologists, as already evidenced in literature. To further analyse the level of knowledge of this condition we presented an anonymous, supervised questionnaire to a panel of paediatricians, pediatric urologists and pediatric surgeons, which showed low knowledge of this condition with surprisingly similar results in all three groups.

MATERIALS AND METHODS

We will present a series of 19 children, 11 males and 8 females, who underwent surgical correction for femoral hernia. Six cases had previously undergone an erroneous surgery for indirect inguinal hernia while three cases were FH recurrencies of. One presented with strangulation and one with bilateral FH.

Six cases were treated without opening the inguinal canal while the others had a combined approach both from the inside and the outside of the inguinal canal. The surgical technique used allows for an easy approach to the hernia by reaching the internal inguinal ring, opening the fascia trasversalis and dissecting the hernia and the adjacent lipoma outside the inguinal ligament. In 3 male cases the testis and the spermatic cord were delivered from the scrotum and the inguinal canal to have a better evaluation of the operative field.

RESULTS

No complications were observed but the bilateral case recurred unilaterally and had to undergo a second, successful, correction.

INTERPRETATION OF RESULTS

The proposed techniques proved to be effective with low rates of recurrence and absence of complications.

CONCLUSIONS

Misdiagnosis can have important consequences. If not identified before surgery, FH can be easily be missed during the operation as it is usually not evident when laying down, leading to a negative surgical exploration, lack of correction and representation after surgery. In other cases it can lead to suboptimal surgical approaches when identified intraoperatively.

A correct physical examination is the best diagnostic tool, as the bulge can be felt laterally to the inguinal ligament and the spermatic cord and round ligament are of normal calliper and it differs from phymphadenitis as it typically changes volume when altering body position and is painless on palpation.

To conclude, we believe it is essential to give more attention and increase training to facilitate the identification and improve treatment for this rare type of groin hernia.

7. ABDOMINOSCROTAL HYDROCELE: REVIEW OF THE LITERATURE AND PROPOSITION OF A LOGICAL STRATEGY FOR RELIABLE SURGICAL CORRECTION

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INTRODUCTION AND AIM OF THE STUDY

Abdominoscrotal hydrocele is a rare congenital anomaly with still poorly understood etiology. It requires early correction in most cases.
An essential part of making the correct working diagnosis is clinical: the "springing-back ball" sign together with a US study is sufficient in most cases. If the patient is scheduled for surgery with a wrong preoperative diagnosis.
We will discuss the other surgical options available for correction along with their pros and cons and briefly give an overlook to the historical steps which have contributed to the definition of the anatomy, etiology, and possible correction strategies, together with our position on the likely cause of this condition.

MATERIALS AND METHODS

In this work we present a the largest series to date with 22 ASH cases.
Three of these underwent partial or complete spontaneous resolution while the other 19 cases underwent surgical correction.
We have decided to opt for an inguinal approach in 4 cases, inguino-scrotal in 13 cases and alternate inguinoscrotal and scrotal in 2 bilateral cases. We believe that the ideal surgical technique to be performed should be tailored different anatomical variations at presentation of ASH, this could also be in wither one or two separate stages. We have built a scheme giving the advised surgery for each presentation.
The steps involved in each surgical technique used are described.

RESULTS

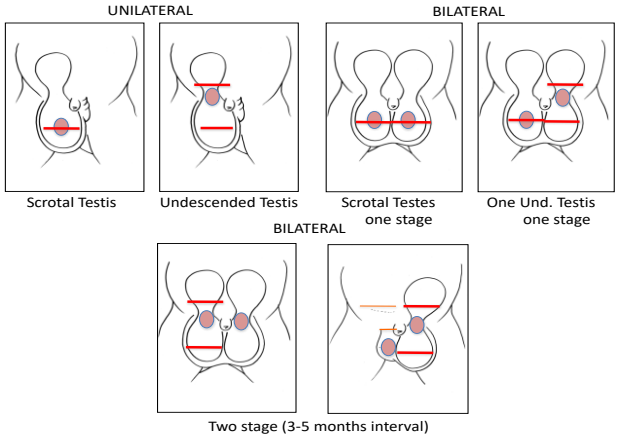
The follow up was uneventful in most cases, who were kept under observation for under 48 hours. In two cases we prolonged it to 3 days due to moderate bleeding from the drainage.
The only complication found was one case of direct inguinal hernia.

INTERPRETATION OF RESULTS

The proposed techniques proved to be effective with low rates of recurrence and low number of complications.

CONCLUSIONS

We believe that many complications are a result of a wrong working diagnosis and to the lack of a clearly defined surgical strategy for optimal correction, with a vast number of options currently described in literature. The approach described could provide a valid framework to improve the outcomes of this condition.



8. SELF-DILATION STRATEGY FOR VAGINAL HYPOPLASIA: MULTICENTRIC PROSPECTIVE INITIAL EXPERIENCE IN MAYER-ROKITANSKY-KÜSTER-HAUSER (MRKH) SYNDROME.

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INTRODUCTION AND AIM OF THE STUDY

MRKH syndrome is characterized by uterovaginal hypo-aplasia associated or not with extragenital manifestations. It is generally a delayed diagnosis after investigation for primary amenorrhea in 46XX young woman. Its prevalence is about 1/5000 female. Vaginal dilations for conscious patients can be a good option as first-line therapy, often being the definitive treatment, allowing to avoid reconstructive surgery or eventually facilitating it. Aim of the study is to confirm the value of the dilation strategy in a selected cohort of patients with MRKH.

MATERIALS AND METHODS

The prospective, 2-centers, database on patients under vaginal self-dilations was reviewed. Inclusion criteria: post-pubertal patients with MRKH not previously treated for vaginal hypoplasia and with a minimum follow-up >1 year. Patients with non-MRKH vaginal hypoplasia and prepubertal MRKH were excluded. Patients' data were collected form electronic clinical notes. Age, follow-up, initial and final vaginal length and sexual life feedback were reported. All patient applied the same vaginal dilation protocol.

RESULTS

7 patients on vaginal self-dilation were identified, 1 patient was a pre-pubertal girl. 2 patients with less than 1 year of follow-up, 2 patients with non-MRKH vaginal hypoplasia and MRKH pre-pubertal patient were excluded. 3 patients meet the inclusion criteria. Median age was 17 years-old (range 16-18 years). All had an initial vaginal pouch of about 1-2,5 cm on pushing. After a mean follow-up of 24,6 months (range12-44 months) the mean vaginal length was 6,8 cm (range 5,8-8,5 cm). No complications occurred. 2 patients declared a satisfying sexual life, one patient has not had yet intercourse.

CONCLUSIONS

Non-surgical vaginal elongation by self-dilation should be the first-line treatment for female teenagers with MRKH, an overall successful rate of about 90-95% is reported in literature with non-surgical vaginal dilation. Patients have to be well-counseled and emotionally prepared in order to achieve anatomic and functional success with this non-invasive approach.

9. THE ROLE OF MANUAL DETORSION IN PEDIATRIC TESTICULAR TORSION DURING THE GLOBAL COVID-19 PANDEMIC: EXPERIENCE FROM TWO CENTRES

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INTRODUCTION AND AIM OF THE STUDY

To evaluate the role of emergency manual detorsion as first line management for testicular torsion in the context of the COVID-19 pandemic

MATERIALS AND METHODS

This retrospective observational study includes 90 pediatric patients ≤14 years old with diagnosis of testicular torsion made at 2 tertiary centers between October 2020 and June 2022. Variables examined included age, presentation delay, surgical wait time, number of attempts at manual testicular detorsion, and manual testicular detorsion success. All patients finally underwent surgery, including contralateral testicular fixation. Outcomes included predictors of successful manual detorsion, testicular findings at surgery, and operation time

RESULTS

Mean (SD) age at diagnosis was 11.51 (2.64) years. Mean presentation delay was 11.76 (13.79) hours. Detorsion was attempted in 72 (80%) patients, resulting successful in 58 (80.5%). Surgical wait time after successful manual detorsion was 22.85 (16.94) hours. On multivariable analysis, successful manual detorsion was associated with a presentation delay

INTERPRETATION OF RESULTS

In our study, we were able to demonstrate that the two most important clinical determinants of successful testicular detorsion were the presentation delay and the degree of scrotal edema.

CONCLUSIONS

Manual detorsion of testis is a safe and effective technique, which can be attempted on arrival at the emergency department in about 80% of pediatric patients with a diagnosis of testicular torsion. The chance of success is higher if the presentation delay is definitive testicular fixation

10. PROPOSAL OF A PROTOCOL FOR THE MANAGEMENT OF PRIAPISM IN CHILDREN

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INTRODUCTION AND AIM OF THE STUDY

Priapism is a urological emergency, whose management aims to prevent erectile disfunction. Currently there are no widely accepted guidelines for the management of priapism in pediatric age. The aim of the study is to propose to formulate an Italian surgical protocol, easily available in emergency setting, for the treatment of priapism in children.

CASE REPORT

Priapism is a rare emergency in pediatric urology. The main risk factor is Sikle Cell Disease causing ischaemic priapism.
In the last 5 years we have treated 2 patients with priapism, both of which had SCD. They were both prepubertal and presented to the ER after a prolonged priapism lasting more than 24 hours.
The first patient was treated in the ER without sedation. Two injection of 2.5 mg of Ethylephrine were made in the lateral aspect of both corpora cavernosa followed by a long-lasting penile compression with detumescence.
The second patient was treated in the ER, after intranasal diazepam delivery, with trans glandular bilateral corporal aspiration and lavage with saline without detumescence. Then 4 injections of 2.5 mg each of Ethylephrine (every 20 minutes) were made in the corpora, and penile compression was applied without detumescence. So, he underwent apheresis without resolution. Then, under general anaesthesia, after the inhalation of Sevoflurane a detumescence was achieved, so we could avoid an invasive distal shunt surgery. After repeated injection of Ethylephrine, long-lasting compression and progressive reduction of Sevoflurane doses we achieved complete detumescence.

CONCLUSIONS

Priapism must be assessed urgently to prevent long term damages. Following our experience, we have found the need to perform a multicentric study to formulate a protocol for the management of pediatric priapism easily available in emergency setting.

11. ROUND-TRACTION-ASSISTED PYELOPLASTY (RO.T.A.P.): AN ALTERNATIVE MINI-INVASIVE TECHNIQUE SURGERY FOR THE TREATMENT OF URETEROPELVIC JUNCTION OBSTRUCTION IN INFANT. UPGRADE ON A SINGLE CENTER EXPERIENCE

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PURPOSE

We are presenting our experience in the treatment of ureteropelvic junction obstruction (UPJO) by open dismembered pyeloplasty with an alternative minimal invasive approach using the Alexis® autostatic wound retractor: Round-Traction-Assisted Pyeloplasty (Ro.T.A.P.).

MATERIALS AND METHODS

We retrospectively analysed the clinical data of 122 infants (88 males and 34 females) with UPJO from January 2009 to May 2023 at our hospital. The age of these patients ranged from 4 month to 13 years (mean age 35.8 months). The patients were placed under general anesthesia in a modified flank position, with a slight degree of flexion. A Foley catheter was placed in the bladder and removed the same day or on day 1.
After the minimal flank incision on the prolongation of the 11th or 12ve rib a muscle sparing divarication was performed. The Gerota's fascia was then opened and at this point the Alexis®.
It consists of a round wound retractor, originally designed for abdominal surgery, made of a cylindrical membrane sheath that has two rings (upper and lower) attached to each open end.
The Alexis was positioned in place squeezing the inferior ring and inserting it inside the fascia. Once introduced inside the Gerota's fascia the superior ring is rolled up on itself—like a shirt sleeve and a circumferential atraumatic traction is performed widening the operating field and protecting the borders of the surgical wound from contamination or electric and traumatic damages.
We usually apply the XS size for all the procedures. Traditional Anderson-Hynes dismembered ureteropyeloplasty is then performed and a double J stent is positioned.

RESULTS

All patients successfully underwent RoTAP. An aberrant crossing vessel was found in 27 patients. Operative time ranged from 70 to 140 minutes (mean 97.55 minutes). Length of incision varied from 14 mm to 27 mm (mean length 18.2 mm). A relapse has occurred (from abnormal vessels); accidental removal of the stent occurred in two cases (in both cases the black star stent was placed). The mean hospital stay was 2 days. The mean follow-up is 24 months: ultrasound performed at three months from operation and MAG3 nucleotide renal scan at 12 to 18 months. The incidence of incision dehiscence was 0%. Cosmetic results were in all cases excellent.

CONCLUSION

We believe that the round traction assisted pyeloplasty could be a good alternative to One-trocar assisted pieloplasty (O.T.A.P.), retroperitoneoscopic or laparoscopic procedures combining the advantages of open pyeloplasty with the advantages of minimally invasive surgery, but less expensive, avoiding at the same time the disadvantages of other techniques: longer learning curve and higher difficulty in managing anatomical anomalies (intra or extrarotation of the kidney; crossing renal vessels).

12. MID-TERM OUTCOMES OF TWO DIFFERENT BULKING AGENTS IN TREATMENT OF CHILDREN WITH VESICOURETERAL REFLUX

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INTRODUCTION AND AIM OF THE STUDY

To compare the clinical efficacy and safety in children with vesicoureteral reflux (VUR) of a single injection of two different bulking agents: polydimethylsiloxane (Macroplastique®) or dextranomer/hyaluronic acid copolymer (Deflux®) in two different centers. Success rate was defined as no more urinary infections (UTIs) after suspension of antibiotic prophylaxis (CAP).

MATERIALS AND METHODS

A total of 92 patients were identified: 46 treated with Deflux® (group D) and 46 with Macroplastique® (group M). Data regarding generic characteristics, patient's age at diagnosis and treatment, tests performed for diagnosis (VCUG, US, scintigraphy) and follow up, the grade/type of reflux presented, intra operative data, the follow-up period were considered. All *p* values <0,05 was deemed to be statistically significant.

RESULTS

In D group high grade VUR (IV-V) was present in 29/92 (31,5%) ureterorenal units. Bilateral VUR was found in 22/46 (47,8%) patients. In M group high grade VUR (IV-V) was present in 37/92 (40%) ureterorenal units. Bilateral VUR was present in 27/46 (58,7%) patients.
Overall, the correlation between VUR and SFU severity is present but moderate in both unilateral and bilateral VUR patients. Median age at surgery was 3,9 years (IQR 1,1-6,5) in D group and 4,5 years (IQR 3,6 -6,8) in M group. Operative time was comparable. STING was the most used technique in both groups. Difference between paste utilized was significant (p= 0,000), less in M group. Median follow up after endoscopic treatment was 12 months (IQR 6-24) in M group and 13 months (IQR 6- 29,5) in D group. Success rate was 69,6% in D group and 80,4% in M group, but the difference was not found significant. The re-treatment rate was higher in D group (p=0,04).

INTERPRETATION OF RESULTS

Few studies compared these two bulking agents. Oswald *et al.* in 2002 compared the efficacy of a single STING injection of Macroplastiquea® in 58 ureterorenal unit vs Deflux® in 56. Overall success was 71,4% with Deflux® and 86,2% with Macroplastique® (no significant difference). Successful reflux correction was defined as absent or grade I reflux on follow-up VCUG. In our series, VCUG was not performed routinely during the follow up due to its invasiveness and radiation exposure. Macroplastique® requires a specific gun to ensure high pressure during injection, which can be difficult beginner to handle; the Deflux® system is rather simple, but intraoperative time were comparable (≈20minuts). The difference in viscosity may explain the difference in the amount of paste used between the two groups. Limitations of our study: small sample, retrospective nature, lack of scheduled follow-up and multiple operators.

CONCLUSIONS

Macroplastique® and Deflux® provided an effective treatment in the early and mid- term follow up of children with primary VUR. No significant differences were found between the two bulking agents in success rate. A longer follow up might show different results.

13. COMBINED "STING-HIT" TECHNIQUE IN THE TREATMENT OF PATIENTS WITH RVU: A SINGLE-CENTER RETROSPECTIVE STUDY

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INTRODUCTION AND AIM OF THE STUDY

The endoscopic correction of RVU by bulking agent injection is a technique that is currently widespread worldwide, although there is still no unanimous consensus on the management of RVU patients. The aim of this work is to demonstrate the efficacy and safety of using a modified injection technique (combined "Sting-Hit" technique) in the treatment of RVU of any grade.

MATERIALS AND METHODS

Retrospective single-centre study on the treatment of RVU with the combined "Sting-Hit" technique. Patients who had a beating ureteral meatus with a reduced intramural ureteral portion underwent endoscopic treatment with this technique. All patients continued on prophylaxis for 1-3 months after surgery. Ultrasound and contrastographic follow-up were performed at 1 and 3-6 months after the procedure.

RESULTS

During the period January'13-December'22, 75 patients (26 M; 49 F), mean age 59 months (range: 7-193 months) underwent endoscopic correction with 'combined Sting-Hit technique'. 120 refluent uretero-vesical junctions were treated: 8(6%) grade V, 75(62%) grade IV-III, 37(30%) grade I-II; RVUs were unilateral in 30(40%) and bilateral in 45(60%) patients. All patients had at least one ureter with grade III-IV-V RVU. In 23 cases RVU was associated with congenital abnormalities of the urinary tract. In 19 the bulking agent injected was PPC(Vantris) and in 56 Dx/Ha(Deflux). Complete resolution of the RVU was achieved in 111(92%) ureters and RVU downgrade in 3(2.5%). Only in 6 cases did a 2nd endoscopic treatment/ureterocystoneostomy become necessary. No obstructive complications occurred in any case.

INTERPRETATION OF RESULTS

Our data show that endoscopic injection of bulking agent using the combined 'Sting-Hit' technique is an effective and safe procedure.

CONCLUSIONS

The combined 'Sting-Hit' technique is an effective procedure for treating all degrees of RVU with efficacy rates, in selected patients, higher than those reported with the Sting/Hit/Double Hit technique.

14. L'ECOCISTOGRAFIA NEL FOLLOW-UP DEL RVU TRATTATO ENDOSCOPICAMENTE

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Uoc Di Chirurgia Pediatrica, Azienda Ospedaliera Di Cosenza *(1)*

INTRODUZIONE

Il trattamento endoscopico del RVU è divenuto nel corso degli anni la procedura standard con alto tasso di successo (92%). Ancora aperta è la discussione su quale sia la metodica investigativa ideale nel follow-up del RVU trattato endoscopicamente. Riportiamo la nostra esperienza con l'utilizzo della ecocistografia comparata con altre metodiche radiologiche.

MATERIALI E METODI

In 235 casi con RVU tra 2 e 3 grado trattati endoscopicamente abbiamo praticato l'ecocistografia a distanza di 3 mesi. In 55 casi di questo stesso gruppo è stata praticata la CUM. In 35 pazienti è stata praticata soltanto la bladder ultrasound e successivamente l'ecocistografia.

RISULTATI

Nel gruppo dei 55 casi sottoposti ad ecocistografia e CUM comparata il risultato è stato identico: assenza di RVU. Nei 35 pazienti con età tra 3 e 7 anni dove era stata praticata solo la Bladder ultrasound (che aveva evidenziato un buon impianto) la ecocistografia ha evidenziato persistenza di RVU in 8 casi. In 22 casi in cui era stata praticata la Rx cistografia intraoperatoria si evidenziava risoluzione del RVU; l'ecocistografia a distanza di 3 mesi ha mostrato recidiva di RVU in 3 casi su 22.

CONCLUSIONI

Dalla nostra esperienza l'ecocistografia risulta la metodica ideale nel follow-up del RVU trattato endoscopicamente poiché sicura, sensibile e radiation-free. Nella nostra esperienza ha presentato una accurancy e sensibilità pari al 98%.

15. SAFETY AND EFFICACY OF ANDERSON-HYNES DISMEMBERED PYELOPLASTY FOR URETEROPELVIC JUNCTION OBSTRUCTION IN INFANTS ≤12 MONTHS OF AGE: A COMPARATIVE STUDY

Irene Paraboschi [(1)] - Letizia Maria Ippolita Jannello [(1)] - Marcello Carlucci [(2)] - Venusia Fiorenza [(2)] - Michele Gnech [(1)] - Erika Adalgisa De Marco [(1)] - Dario Guido Minoli [(1)] - Girolamo Mattioli [(2)] - Gianantonio Manzoni [(1)] - Alfredo Berrettini [(1)]

Department Of Pediatric Urology, Fondazione Irccs Ca' Granda Ospedale Maggiore Policlinico, Milano, Italia [(1)] - Department Of Pediatric Surgery, Irccs Istituto Giannina Gaslini, Genova, Italia [(2)]

INTRODUCTION AND AIM OF THE STUDY

To compare the outcomes of open (OP), laparoscopic (VLS), and robotic-assisted (RALP) Anderson-Hynes dismembered pyeloplasty in infants ≤ 12 months of age.

MATERIAL AND METHODS

A two-institution retrospective study was performed comparing surgical and radiological outcomes of infants aged ≤ 12 months who underwent OP, VLS, or RALP between 2013 and 2022.

RESULTS

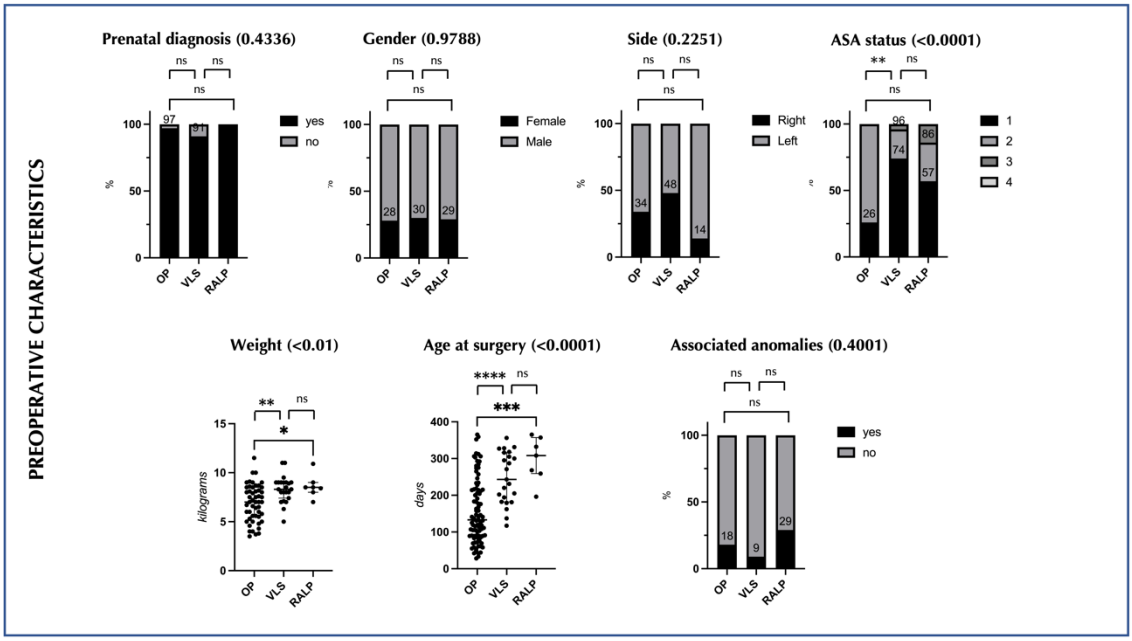
Among 121 patients, 91 (75%) underwent OP, 23 (19%) VLS, 7 (6%) RALP. As a baseline, OP patients were significantly younger (median age: 133 days) and smaller (median weight: 7 kg) than VLS (243 days; 8.3 kg) and RALP (308 days; 8.5 kg) (p-value:<0.0001; p-value:<0.01, respectively). Regarding surgical outcomes, RALP procedures were significantly longer (median: 155 minutes) than VLS (80 minutes) and OP (90 minutes) (p-value:<0.01). While OP procedures were burdened by lower postoperative complications (6/91; 7%; Clavien-Dindo I-II: n=3; III-IV: n=3) compared to VLS (8/23; 35%; Clavien-Dindo I-II: n=6; III-IV: n=2) and RALP (4/7; 57%; Clavien-Dindo I-II: n=3; III-IV: n=1) (p-value:<0.0001) and by shorter hospital stay (OP: 2 days; VLS: 6 days; RALP: 4 days; p-value:<0.0001), the need for re-do surgeries was similar (OS: 5/91; 5%; VLS=2/23; 9% RALP=1/7; 14%; p-value:0.6025). Regarding radiological outcomes, similar improvements in renal pelvis dilatation (OS:-15 mm; VLS:-17 mm; RALP: -17 mm; p-value:0.5524) and kidney function (OS: +1%; VLS:0%; RALP:+9%; p-value:0.2036) were recorded.

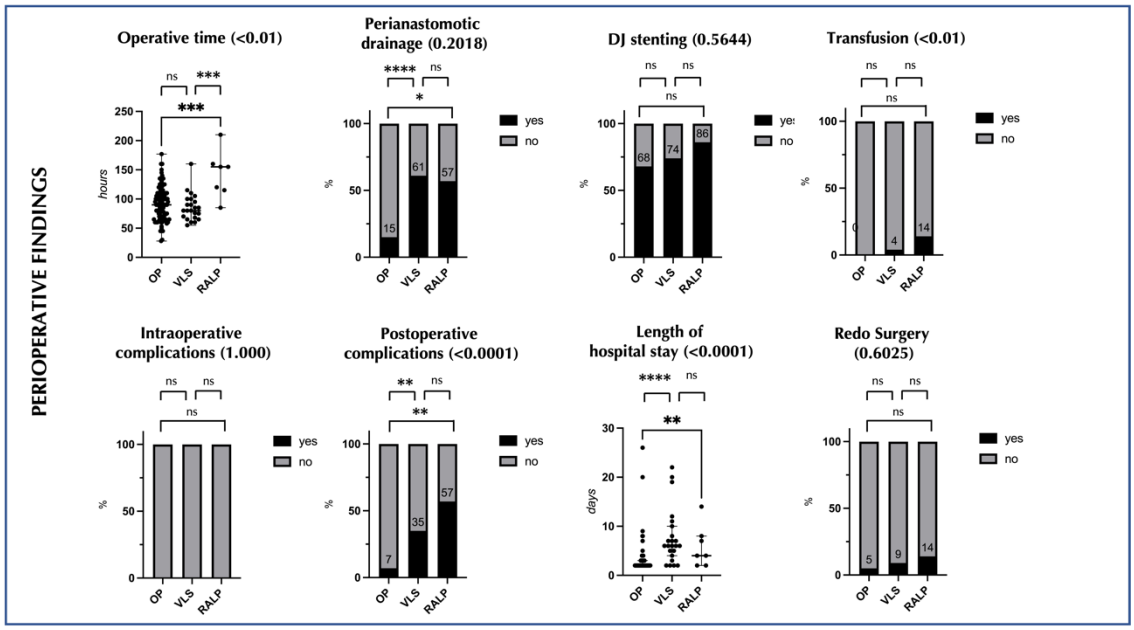
INTERPRETATION OF RESULTS

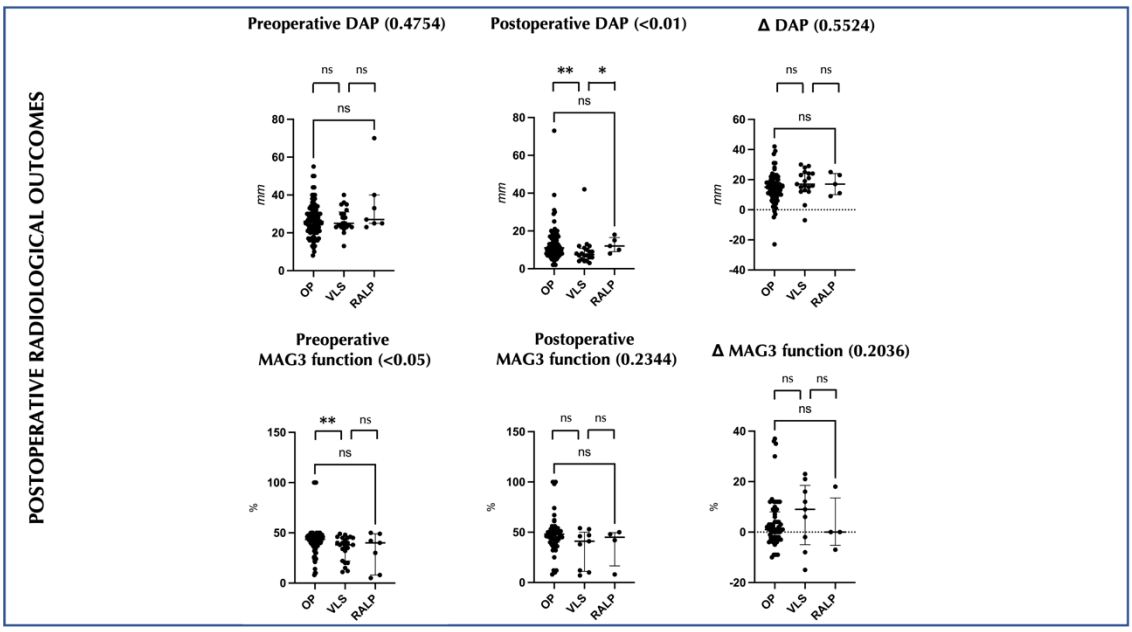
Open Anderson-Hynes dismembered pyeloplasties were performed in younger and smaller infants as a baseline. They were also shorter and associated with a lower incidence of postoperative complications and in-hospital stays. However, similar re-do surgeries were required and long-term radiological outcomes were comparable between open and minimally invasive in infants ≤ 12 months.

CONCLUSIONS

While OP traditionally represents the standard of care in infants ≤ 12 months of age, minimally invasive approaches can be considered attractive and effective alternatives in high-volume centers.


PREOPERATIVE CHARACTERISTICS
Prenatal diagnosis (0.4336)
Gender (0.9788)
Side (0.2251)
ASA status (<0.0001)
Weight (<0.01)
Age at surgery (<0.0001)
Associated anomalies (0.4001)
yes
no
Female
Male
Right
Left
1
2
3
4
kilograms
days
%
OP
VLS
RALP


PERIOPERATIVE FINDINGS
Operative time (<0.01)
Perianastomotic drainage (0.2018)
DJ stenting (0.5644)
Transfusion (<0.01)
Intraoperative complications (1.000)
Postoperative complications (<0.0001)
Length of hospital stay (<0.0001)
Redo Surgery (0.6025)
yes
no
hours
days
%
OP
VLS
RALP


POSTOPERATIVE RADIOLOGICAL OUTCOMES
Preoperative DAP (0.4754)
Postoperative DAP (<0.01)
Δ DAP (0.5524)
Preoperative MAG3 function (<0.05)
Postoperative MAG3 function (0.2344)
Δ MAG3 function (0.2036)
mm
%
OP
VLS
RALP

16. EARLY-IN-LIFE SERUM ALDOSTERONE LEVELS COULD PREDICT SURGERY IN PATIENTS WITH OBSTRUCTIVE CONGENITAL ANOMALIES OF THE KIDNEY AND URINARY TRACT: A PILOT STUDY

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INTRODUCTION AND AIM OF THE STUDY

The aim of the study was to evaluate whether serum aldosterone levels or plasmatic renin activity (PRA) measured early in life (1–3 months) could predict a future surgical intervention for obstructive congenital anomalies of kidney and urinary tract (CAKUT)

MATERIALS AND METHODS

Twenty babies aged 1–3 months of life with suspected obstructive CAKUT were prospectively enrolled. The patients underwent a 2-year follow-up and were classified as patients needing or not needing surgery. In all of the enrolled patients, PRA and serum aldosterone levels were measured at 1–3 months of life and were evaluated as predictors of surgery by receiver-operating characteristic (ROC) curve analysis.

RESULTS

Patients undergoing surgery during follow-up showed significantly higher levels of aldosterone at 1–3 months of life compared to those who did not require surgery ($p = 0.006$). The ROC curve analysis of the aldosterone for obstructive CAKUT needing surgery showed an area under the ROC curve of 0.88 (95%CI = 0.71–0.95; $p = 0.001$). The aldosterone cut-off of 100 ng/dL presented 100% sensitivity and 64.3% specificity and predicted surgery in 100% of cases. The PRA at 1–3 months of life was not a predictor of surgery

INTERPRETATION OF RESULTS

Noteworthy is the fact that both PRA and aldosterone levels have been regarded as early biomarkers for obstructive CAKUT because the obstruction at the tubulo-interstitial level determines the activation of the renin–angiotensin system, resulting in increased PRA and aldosterone levels

CONCLUSIONS

In conclusion, serum aldosterone levels at 1–3 months could predict the need for surgery during obstructive CAKUT follow-up. A future multicentre studies are needed to confirm this preliminary data and to implement serum aldosterone measurement in the clinical management of obstructive CAKUT

17. THE MONITORED SUCTION OF THE BLADDER: CAN BE CONSIDERED A NEW PROCEDURE TO TREAT THE PERSISTENT LEAKAGE AFTER THE SURGICAL OPERATION OF PYELOPLASTY?

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INTRODUCTION AND AIM OF THE STUDY

Children's managment, operated on pyeloplasty, is associated with various post-operative complications, such as persistent peri-anastomotic leakage (PPAL).
The aim of our controlled retrospective study was to evaluate the use of the bladder suction catheter in preventing post-pyeloplasty leakage.

MATERIALS AND METHODS

In the past 5 years, we have performed pyeloplasty on 114 patients, including: 57 patients weighing up to 8kg (age range from 3 months to 2 years; mean age 8.345 ± 4.27) using the OTAP technique; 41 patients weighing over 10kg, treated with the VLS technique (starting from 2 years, 8.2 ± 3.88), 16 patients treated with the robotic technique (from 3 to 18 years, 9.88 ± 4.27). Among them, 20 patients presented PPAL detected in the peri-renal drainage in the immediate post-operative period. We divided the patients into 2 groups: group A (7 pts), treated with bladder catheter and peri-renal drainage; group B (13 pcs), to which monitored aspiration of the bladder was added using a one-way water valve evacuation system (SEUVA), at an aspiration pressure of about 8-10 hectoPascals. Postoperative pain was assessed with the Wong-Baker scale.

RESULTS

In group A, the mean time to resolution of urinary leakage (MTRUL) was 13 days (range 10-15 days); Spontaneous resolution was achieved in 4 patients, while re-stenting was required in 3 pts. Mean pain was 6 according to the Wong-Baker scale. In group B the MTRUL was 5 days (range 3-8 days), resulting statistically lower ($p < 0.0001$). Re-stenting was required in 2 patients. Mean pain was 2 according to Wong-Baker scale. We found no haematuria in any of the 20 patients.

INTERPRETATION OF RESULTS

The use of monitored suction of the bladder to treat the PPAL after pyeloplasty improves the urinary drainage from pelvis to the bladder and, moreover, could resolve a possible occlusion of the urinary JJ stent**.**

CONCLUSIONS

The monitored aspiration of the bladder using SEUVA in the treatment of post-pyeloplasty PPAL appears to be an effective method as it reduces the resolution time and the risk of "re-stenting", as well as being safe due to the absence of complications.

18. JJ-STENT COMPLICATIONS: A RETROSPECTIVE SINGLE TERTIARY CENTRE EXPERIENCE

***Marcello Della Corte (1)* - Elisa Cerchia (2) - Massimo Catti (2) - Elena Ruggero (1) - Martina Mandaletti (1) - Barbara Tadini (2) - Elisabetta Teruzzi (2) - Simona Gerocarni Nappo (1)**

S.c. Urologia Pediatrica, Ospedale Infantile Regina Margherita, Università Degli Studi Di Torino, Asl Città Della Salute E Della Scienza, Torino, Italia (1) - S.c. Urologia Pediatrica, Ospedale Infantile Regina Margherita, Asl Città Della Salute E Della Scienza, Torino, Italia (2)

INTRODUCTION AND AIM OF THE STUDY

Double-J Stent (JJ) is nowadays placed as internal diversion after laparoscopic, endoscopic or open urological procedures, in order to allow early patient discharge. However, JJ stents are not devoid of complications. We aim to investigate factors related to JJ complications in our experience.

MATERIALS AND METHODS

A single center retrospective analysis of JJs placed over the last 2 years was performed. Evaluated parameters were: age, sex, circumcision status, surgical procedure, stenting-fashion (SF), stenting-duration, anatomical anomalies, JJ-type, antibiotic prophylaxis (AP), urinary tract infections (UTI), JJ-dislodgement. The statistical analysis included mean, standard deviation and t-test with different variance.

RESULTS

50 patients (27 M, 23 F) aged 2 months-17 years (mean 6,28 years±5,65) consecutively received 71 JJs during: 13 open-pyeloplasties (OP), 17 laparoscopic-pyeloplasties (LP), 4 retrograde intra-renal surgeries (RIRS), 6 kidney transplantations, 7 endoscopic high-pressure balloon-dilatations (EHPBD), 22 other non-operative stenting (pre-stentings for stones, trauma, ureterocele etc.), 2 ureteral reimplants. 3 patients presented duplicated collecting system, 1 horseshoe kidney.
39 JJs were placed through retrograde-fashion, 32 anterograde. 51 JJs were fixed-length type, 20 multi-length. The average stent duration was 71,18(±57,39) days. All patients received AP (50 cefixime, 17 amoxicillin-clavulanate, 4 cotrimoxazole) during JJ-maintenance.

8 JJs (11,26%) were associated with complications. These JJs were placed: 2 OP, 1 LP, 1 RIRS, 1 EHPBD, 2 pre-stenting, 1 pyelotomy. The average stenting-time of 59,5(±17,39) days was not significatively different from the not-complicated patients. None had anatomical anomalies.

UTIs occurred in 5 patients, 2 of them developed acute pyelonephritis. These patients received AP as follow: 4 cefixime, 1 amoxicillin-clavulanate. All 5 UTIs were associated with retrograde fashion placement. JJ-dislodgement interested 3 patients. All the migrated JJs were fix-length. An association between SF and dislodged ringlet figured: 2 distal-anterograde, 1 proximal-retrograde. No JJ related stone occurrence was observed.

INTERPRETATION OF RESULTS

JJs are associated with a significant mobility, although their steady use. In our experience retrograde placement was associated with UTI, and fixed length JJs with displacement. We could not relate complication occurrence with the length of stenting or with any other variable evaluated. Limitation of the study is the retrospective analysis and the limited number of patients evaluated.

CONCLUSIONS

JJs complications are potentially preventable. Evaluation of risk factors is mandatory in order to perform a root-cause analysis. Multicenter studies are warranted.

19. BOSNIAK 3 LESION IN AN ADOLESCENT: NOT SUCH A BENIGN LESION

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INTRODUCTION AND AIM OF THE STUDY

Bosniak 4 lesions are unfrequent findings in adults, generally regarded as localized renal cell carcinoma and committed to surgery, while Bosniak 3 lesions can be managed conservatively. Their report in adolescents is rare and guidelines on management are lacking. We report a case of a Bosniak 3-4 lesion in an adolescent managed with a robotic-assisted enucleation.

MATERIALS AND METHODS

A 14-years-old boy underwent abdominal US for left varicocele with an incidental finding of a hyperechoic roundish mass 35x33 mm of the lower pole of the left kidney. Abdominal CT confirmed a partially exophytic lesion, with a hypodense lower moiety as for liquid content without contrast enhancement, and a solid upper moiety solid with point-like calcifications and contrast enhancement (Bosniak 3). Periodic follow-up was started elsewhere with US @3 months interval, unchanged.
After 12 months the patient came to our attention. MRI was performed suggesting in T1 and T2 phase a partially solid content in the upper portion and a fluid content in the lower one of the lesion (Bosniak 4). A 3D-reconstruction of the mass was performed. The patient was discussed at the oncologic multidisciplinary meetings, enrolled in the Umbrella-SIOP protocol and upfront surgery was planned.

RESULTS

At age 15 the boy underwent robotic-assisted tumor enucleation together with hilar end para-aortic lymphadenectomy. Intraoperatively, ICG injection was used. Operative time was 205 minutes, selective artery clamping 22 minutes. No intraoperative complications occurred. Enucleation was complete. The postoperative period was uneventful.
Histopathology showed a tubulocystic RCC (ISUP-WHO 2016), stage pT1aN0R0, without capsule, lymph nodes involvement or vascular invasion. Immunocytochemistry displayed anti-PAX8+, CK18+, CK7+ and CD10+; estrogenic and progesterone receptors were not expressed. No mitotic activity was found. Histopathology did not support any adjuvant treatment, and strict follow-up was planned. At 9-months follow-up, neither signs of local recurrence nor distant metastasis have appeared.

INTERPRETATION OF RESULTS

Tubulocystic RCC is a rare tumor representing < 1% of all the renal tumors. Its clinical presentation is usually silent. In our case the finding was unexpected. The robotic-assisted approach allowed a safe and precise surgical management, offering a minimally invasiveness and a nephron sparing surgery.

CONCLUSIONS

Bosniak 3 lesions can be managed expectantly but surgical management should be considered for persisting Bosniak 3 lesions and Bosniak 4 even in adolescents. Tc-RCC is an uncommon form of RCC and according to the literature this is the first case of a young patient treated for a Tc-RCC with a robotic-assisted enucleation. Despite SIOP-Umbrella guidelines suggest partial nephrectomy after chemotherapy, our case suggests a potential role of upfront surgery in doubtful cases.

20. MULTIDISCIPLINARY MANAGEMENT FOR CHILDREN WITH BILATERAL WILMS TUMOR.

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6. Oncologia Pediatrica Ospedale Papa Giovanni XXIII, Bergamo

INTRODUCTION AND AIM OF THE STUDY

Synchronous bilateral disease occurs in approximately 5% of children with Wilms tumor (WT) and renal insufficiency is a significant complication in the 5% of patients. Nephron-sparing surgery (NSS) allows preservation of renal mass and improved renal function. We reviewed our experience to assess the feasibility and oncologic and functional outcomes of NSS for children with bilateral WT.

MATERIALS AND METHODS

A retrospective review was performed of all children undergoing NSS at our two institutions for bilateral Wilms tumor. The outcomes evaluated included tumor recurrence, renal function, and patient survival.

RESULTS

Since 2015, 9 children with bilateral Wilms tumor have been treated. The median follow-up period was 4 years (range 1-8). 5 were boys and 4 were girl, with a median age of 3 years (range 16); Six patients (66%) underwent bilateral NSS and with mini-invasive in three cases. 1 patient developed postoperative sepsi and 1 patient a chyloperitoneum which required a long hospital stay (67 days). 1 patient died during follow-up period. Unfavorable histologic findings had a significant negative effect on survival. Majority of patients had good renal function during follow-up although two patients require medical management of hypertension.

INTERPRETETION OF RESULTS

Our experience suggests that NSS for bilateral Wilms tumor is feasible and affords acceptable oncologic outcome with preservation of renal function.

CONCLUSIONS

Bilateral Wilms' tumors impose 2 conflicting issues: elimination of the pathology and preservation of the renal function. NSS is a safe and effective technique to achieve oncologic control and maintain renal function in children with bilateral WT, and should be considered in the majority of patients with this condition.

21. MULTIDISCIPLINARY MANAGEMENT OF CLOACA PATIENTS: UROLOGICAL LONG-TERM OUTCOME

Marco Agamennone *[1] - Chiara Pellegrino [2] - Beatrice Turchi [3] - Maria Luisa Capitanucci [2] - Antonio Maria Zaccara [2] - Barbara Daniela Iacobelli [4] - Andrea Conforti [4] - Pietro Bagolan [4] - Giacomo Esposito [5] - Paolo Palma [5] - Gessica Della Bella [6] - Rossella D'urzo [6] - Enrico Castelli [6] - Giovanni Mosiello [2]*

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INTRODUCTION AND AIM OF THE STUDY

The main urological goals of cloaca management are to preserve renal function and achieve continence. Aim of our study has been to analyze continence status, renal function and correlation with spinal dysraphism (SD) and length of the common channel (LCC).

MATERIALS AND METHODS

Medical records of patients, treated between October 1999 and January 2020 were retrospectively reviewed. Only patients who had a minimum of 2.5 years of follow-up were included**.** Urological and spinal anomalies, LCC, renal function, urodynamics (UD), continence, urological surgery were evaluated

RESULTS

About 27 patients, 20 have been included. Median age at cloaca surgical repair: 7.1 months. Follow-up: 9.3 years (2.5-19.3). An LCC>3 cm was described in 11 (55%). According to our protocol MRI was performed in all. SD was observed in 12 patients (60%), 3 (17.6%) underwent dethetering. Neuro-urological dysfunction at UD exam, was observed in 88.9 % of them. Volitional voiding was observed in 9 (45%), while CIC was prescribed in 11: 7 patients (35%) were able to perform CIC, while urinary diversion was carried out in 4 (20%) (3 Mitrofanoff, 1 button cystostomy). 90% of patients were dry. Regarding risk factors for continence, volitional voiding was obtained in 33.3% of SD patients vs. 62% of non-SD. In the SD group 8 patients presented with LCC>3cm (66.7%), while in non-SD LCC>3cm was reported in 3(37.5%). Renal anomalies were observed in 7/12 in SD (2 pyelectasis, 1 agenesia, 1 duplex renal district, 1 hydronephrosis, 1 horseshoe kidney, 1 ectopic kidney) and in 28(25%) of non-SD (1 agenesia, 1 ectopic kidney). In SD group, 2 patients presented renal failure (1 increased during time requiring kidney transplant). Fecal continence was obtained in 17 (85%) (14/17 (82.4%) with bowel management regimen): 83.3% SD patients (90% on bowel management regimen) and 87.5% non-SD (71.4% on a bowel management regimen).

INTERPRETATION OF RESULTS

The presence of SD and LCC are effective risk factors for continence. SD, LCC>3cm, renal anomalies are commonly associated.

CONCLUSIONS

Anyway, continence and renal function can be preserved in long-term in these complex forms too, thanks to an early diagnosis, MRI and UD, and careful multidisciplinary follow-up.

22. MULTIDISCIPLINARY MANAGEMENT OF HYPOSPADIAS IN CHILDREN WITH ANORECTAL MALFORMATION: A SINGLE CENTER EXPERIENCE

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INTRODUCTION AND AIM OF THE STUDY

Anorectal malformation (ARM) is often associated to a wide spectrum of other congenital malformations. For this reason, the management of these children requires a careful evaluation to define the best therapeutic individualized approach. Prevalence and treatment of hypospadias in ARM patients has been poorly described. Aim of this study is to describe our experience in hypospadias management in ARM patients especially in relation to Occult Spinal Dysraphism (OSD), which could be a cause of neurogenic lower urinary tract dysfunction (NLUTD) and related concerns.

MATERIALS AND METHODS

Patients treated for ARM in our Hospital, between January 1999 and March 2022, were retrospectively reviewed, selecting male patients with hypospadias. Clinical data, severity of hypospadias (proximal/distal), ARM sub-type (GROUP A, perineal fistulas VS GROUP B, other ARM: urethral fistulas, bladder fistulas, no fistulas), presence of OSD, associated malformations, NLUTD and related treatment, age at hypospadias surgical repair and complications were evaluated. Patients without completed data were excluded

RESULTS

Among 395 patients treated, 222 were males, 22 (10%) also had hypospadias. Two patients were excluded because not eligible. According to our protocol, spinal MRI was performed in all patients at 1 year of age and Neuro-urological evaluation has been performed before hypospadias repair: ARM, hypospadias and OSD characteristic are reported in Table. Eleven patients (55%) had OSD. NLUTD requiring CIC was reported in 4 OSD patients, all underwent detethering and required surgery for bladder emptying (2 cystostomy button, 2 Mitrofanoff); 2 of them had hypospadias repaired previously. All patients with proximal hypospadias underwent 2 stages surgical repair (mean age 1,8 yrs). Distal hypospadias was corrected in 4/11 cases so far (mean age 1,9 yrs) other 4 children are not yet surgically correct because of coexisting malformations.

INTERPRETATION OF RESULTS

Complexity of ARM seems related to proximal hypospadias.

CONCLUSIONS

Hypospadias is quite common in ARM patients and its surgical management must be scheduled considering the eventual coexistence of OSD and NLUTD.

	DISTAL HYPOSPADIAS	PROXIMAL HYPOSPADIAS	TOT	*p*
ARM SUB-TYPE				
GROUP A	6(55%)	2(22%)	8	0.2
GROUP B	5(45%)	7(78%)	12	
TOT	11(100%)	9(100%)	20	
OSD				
YES	6(55%)	5(55%)	11	1
NO	5(45%)	4(45%)	9	
TOT	11(100%)	9(100%)	20	

Table. ARM, hypospadias and OSD characteristic

23. FETAL MEGACYSTIS: NOT ONLY POSTERIOR URETHRAL VALVES. RESULTS FROM A SINGLE REFERRAL CENTER

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INTRODUCTION AND AIM OF THE STUDY

Megacystis is one of the most worrisome findings in urological prenatal diagnosis. Prognostic features to discern Lower Urinary tract (LUTO) from non-LUTO babies are currently under evaluation. Aim is to review clinical outcome of prenatal megacystis in a single center.

MATERIALS AND METHODS

All babies followed postnatally for fetal megacystis from January 2017 to May 2023 were enrolled. Retrospectively pre-natal findings, data of delivery and neonatal adaptation, imaging, final diagnosis, history of UTI, surgeries, presence of CKF (Chronic Kidney Failure) at last followup were collected.

RESULTS

20 cases were identified. 6/20 (30%) had reduced Amniotic Fluid, 2 received prenatal shunting.
10 (50%) had hydronephrosis, 1 bilateral, 3/20 (15%) had renal dysplasia and 2/20 (10%) renal agenesis. Two patients underwent fetal RMI, a male fetus of a twin pregnancy and the single female fetus of the series, as a microcolon-megacystis syndrome was suspected. 11/20 patients underwent preterm delivery (31-34 weeks), 8 had respiratory distress/ hypotonia.
After birth renal-bladder US was performed and a transurethral catheter or s/p tube were placed in all cases. 19 VCUG showed: 15 LUTO (2 siringocele, 11 Posterior Urethral Valves 5 with Vesico ureteric Reflux VUR, 2 complete penoscrotal transposition PST with hypoplastic urethra); 5 non LUTO who all had VUR (1 with anorectal malformation and neurogenic bladder). 13 patients underwent laser endoscopic resection of PUV/ siringocele, 1 PUV had ureterocutaneostomy, 2 open vesicostomy (1 VUR and 1 PST). At a mean follow-up of 34 months (range 1m– 6y), 4/20 (20%) have CKF; 1 is awaiting kidney transplant. 2 babies died for non-urological causes (1 cardiac malformation and 1 cardiac rabdomiosarcoma).

INTERPRETATION OF RESULTS

In our experience LUTO was the most frequent cause of fetal megacystis (75%), however PUV weren't the only cause as 2 siringocele were diagnosed at cystoscopy. 25% of megacystis were non LUTO-related, but had VUR, with ARM and neurogenic bladder in 1 case. Interestingly, none or our patients had a normal urinary tract. In agreement with current literature, prenatal hydronephrosis or keyhole sign could not differentiate prenatally LUTO from non LUTO. Limit of the study are the retrospective nature and the limited number of patients.

CONCLUSIONS

The prognosis of fetal megacystis is still hard to define. In our experience, despite no patient died for urological issues, most patients required early endoscopic or surgical decompression and 20% of fetal megacystis has CKF after a mean follow-up of 33 months. However, the cause of megacystis, LUTO vs non LUTO, could not be differentiated before birth. None of our patients had a normal urinary tract. These data should be taken into account and considered for prenatal counselling.

24. FETAL MEGACYSTIS: SEARCHING FOR PRENATAL PREDICTORS OF POSTNATAL RENAL OUTCOMES.

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INTRODUCTION AND AIM OF THE STUDY

To identify prenatal predictors of postnatal renal function in fetuses with megacystis, with the aim of assisting clinicians during prenatal counseling and decision-making.

MATERIALS AND METHODS

Retrospective unicentric cohort study of fetuses with megacystis and known eGFR at the last follow-up. Univariate and logistic regression analyses were used to identify fetal and maternal demographic findings and ultrasound variables capable of predicting long-term unfavorable renal outcomes, as defined by eGFR < 60 mL/min/1.73m^2 at the last follow-up.

RESULTS

31 (63.3%) of the 49 fetuses included in the study developed an impaired kidney function at a median age of 26 (9-47) months. The need for fetal surgery (p=0.005), the gestational age at birth (p=0.0027), the echogenicity of the renal cortex (p=0.016), the single deepest pocket (p=0.0406) and the amniotic fluid index (p=0.0208) were associated with adverse postnatal renal outcomes in the univariate analysis. However, the hyperechogenicity of the renal cortex only confirmed its predictive role in the logistic regression model.

CONCLUSIONS

Our analysis, incorporating maternal and fetal demographic data and ultrasound parameters, proved that the hyperechogenicity of the renal cortex can be used to predict adverse kidney outcomes in fetuses with megacystis. This clinical information can be used for improving the counseling of parents and in clinical decision-making.

25. NADIR CREATININE AS A PREDICTOR OF RENAL OUTCOMES IN PUVS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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INTRODUCTION AND AIM OF THE STUDY

Posterior urethral valves (PUVs) represent the most severe paediatric obstructive uropathy, responsible for chronic renal failure in up to 65% of cases and progression to end-stage kidney disease (ESKD) in about 8%-21% of patients. Unfortunately, renal outcomes have poorly improved over time. The key point is to identify patients at risk; thus, several prenatal and postnatal prognostic factors have been analysed to improve clinical outcomes. Postnatal nadir creatinine seems to accurately predict long-term renal prognosis, but there is no definitive evidence to support this finding. We performed a systematic review with meta-analysis to analyse the predictive value of nadir creatinine on long-term renal function in infants with PUVs.

MATERIALS AND METHODS

We conducted this systematic review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. PubMed and Cochrane Library were systematically searched for studies published from January 2008 to June 2022. All the articles were checked independently by two reviewers in two steps.

RESULTS

A total of 24 articles were screened, and 13 were included for data extraction. Data from 1,731 patients with PUVs were analysed, with a mean follow-up of 5.5 years; of these, on average, 37.9% developed chronic kidney disease (CKD) and 13.6% developed ESKD. All the articles evaluated nadir creatinine as a predictor of CKD, most using a level of 1 mg/dL, with statistical significance at the 5% level. The relative risk of developing CKD in patients with creatinine values higher than the nadir cutoff considered was 7.69 (95% CI: 2.35-25.17, $I^2 = 92.20\%$, $p < 0.001$).

INTERPRETATION OF RESULTS

The most relevant result of our study is that nadir creatinine in the first year of life appears to be a reliable predictor of declining renal function in all the selected studies. The cutoff values ranged from 0.7 to 2.7 mg/dL, although most studies considered 1 mg/dL as a reference. Bladder dysfunction and baseline creatinine are the second most frequent prognostic factor for the development of kidney impairment, identified as significant by three studies each through multivariable analysis

CONCLUSIONS

Nadir creatinine is the best prognostic factor for long-term renal function in patients affected by PUV. A value above the cutoff of 1 mg/dL should be considered a significant predictor for the risk of CKD and ESKD. Further studies are needed to define different nadir creatinine cutoffs for better stratification of the different CKD stages and for the development of reliable scores, which include the association of several variables.

26. FLUORESCENCE IMAGING USING INDOCYANINE GREEN (ICG): VERSATILITY, SAFETY AND EFFICACY IN MINIMALLY INVASIVE UROLOGICAL SURGERY

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INTRODUCTION

Indocyanine green (ICG) fluorescence imaging has recently been adopted in pediatric minimally invasive surgery (MIS) to improve intraoperative visualization of anatomical structures and facilitate surgery. The aim of the study is to describe our experience about the versatility of the use of ICG in different type of minimally invasive urological procedures.

MATERIAL AND METHOD

In the perdiod between 2020 and 2023 ICG technology was used in 20 patients (5 m-15 y, average 6,5 y) undergoing minimally invasive urological procedures: 8 upper polar nephrectomies for resection of the non-functioning pole in duplex system, 6 pyeloplasties for GUP stenosis, 4 spermatic vessel ligations in hydiopatic left varicocele and 2 parapyelic giant cyst removals. ICG was used as a specific tracer for the different type of procedure. In cases of heminephrectomy it was used intravenously to highlight the vascularization of two hemidistricts and facilitate their identification.
During pyeloplasty it was injected intravesically to verify the correct positioning of the dubleJ stent in the bladder, highlighting the appearance of tracer at the pyelic level: after that ICG fluorescence visualization can be removed from the camera and it does not disturb the continuation of the procedure, otherwise the blu indigo tracer previously used.
During spermatic vessels ligations, the ICG was injected in 3 cases in the left intradarotic site, allowing easy lymphatic sparing to be performed and in 1 case intravenously for evaluation of atypical vascularisation (presence of numerous collaterals) highlighted during surgery, allowing the internal spermatic vessels to be ligated and sectioned safely. ICG was injected in ureteral catether during parapyelic cyst removal to identify the absence of communication with the urinary tract.

INTERPRETATION

The dosage of ICG was 0.3 mg/mL/kg in all indications as literature describe. All procedures were completed with laparoscopic (8 procedure) or retroperitoneoscopic (12 procedure) approach without conversions: in all of case ICG met the needs for which it was used.
No adverse and allergic reactions to ICG and other complications occurred postoperatively and at the follow-up.

CONCLUSION

The safety and efficacy of ICG technology in pediatric urology and highlighted its potential advantages as adjunctive surgical technology in patients undergoing MIS urological procedure. In our experience ICG fluorescence has been extremely versatile both as a tracer in the urinary tract and in identifying the vascularization, making surgical procedures easier, faster and performed in greater safety. Specifical, recent and dedicated instrumentation is required for this technology; for this reason we think it is great in complicated cases or in which an excellent anatomical visualization is required.

27. INDOCYANINE GREEN (ICG)-GUIDED ONE-STAGE DELAYED BLADDER CLOSURE AND RADICAL SOFT-TISSUE MOBILIZATION (KELLY PROCEDURE) FOR BLADDER EXSTROPHY REPAIR. THE FIRST EXPERIENCE.

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INTRODUCTION AND AIM OF THE STUDY

The vascular supply of the pelvic structures and the external genitalia can be easily injured during the one-stage delayed bladder closure and radical soft-tissue mobilization (Kelly procedure) for bladder exstrophy (BE) repair. Aiming to help surgeons assess and confirm the tissue perfusion and viability, indocyanine green (ICG)-based laser angiography was incorporated into the operative approach to reduce the risk of ischemic injuries.

MATERIALS AND METHODS

The EleVision IR system (Medtronic Ltd) was adopted to confirm the identification of the vascular pedicles and assess the tissue perfusion in real-time in a 5-month-old with BE undergoing the one-stage delayed bladder closure and radical soft-tissue mobilization (Kelly procedure). ICG (0.15 mg/kg) was intravenously administered at 6 key steps during surgery with the ability to be redosed every 15 minutes.

RESULTS

ICG-based laser angiography helped to confirm the correct identification of the vascular structures during surgery and to assess tissue perfusion in real-time. Blood flow did not change to any significant degree either after initial dissection or upon approximating the pubis symphysis. At the end of the procedure, a good penile perfusion was shown, proving that no direct injury or significant compression of the pudendal vessels had occurred following the mobilization and the reconstructive phase.

INTERPRETATION OF RESULTS

At the end of the procedure, a good penile perfusion was shown, proving that no direct injury or significant compression of the pudendal vessels had occurred following the mobilization and the reconstructive phase.

CONCLUSIONS

ICG-based laser angiography proved to be safe, effective, and easy to employ and should be considered as a reasonable adjunct for tissue perfusion assessment and operative decision-making in patients undergoing BE Kelly repair.

28. BLADDER DYSFUNCTION IN MECP2 DUPLICATION SYNDROME

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INTRODUCTION AND AIM OF THE STUDY

MeCP2 (Methyl-CpG binding protein 2) is a multifunctional gene located at Xq28 that plays a critical role in neurodevelopment and is known to induce Rett Syndrome when it is haploinsufficient. A different clinical phenotype has been described as MeCP2 Duplication Syndrome (MDS). According to certain accounts, a subset of MDS patients display severe urologic dysfunction. Aim of the study is to characterize the clinical course of bladder dysfunction in a 18 years old patient carrying this genetic disease with neurologic involvement and a short life span.

MATERIALS AND METHODS

Observational retrospective case report, with data extracted from hospital digital clinical charts.

RESULTS

We report the case of a 18 years old male patient carring a large Xq28 duplication including MECP2 and adjacent IRAK1, LCAM1, ABCD1, SLC6A8 and AVPL2 genes, affected by drug-resistant epilepsy, severe intellectual disability, autism, recurrent lung and urinary tract infections (UTI) and CAKUT, showing later in life severe bladder dysfunction and acute urinary retention. Born from an uneventful pregnancy, he was hypotonic for the first few months of life. At 6 months of age he presented with urosepsis and a positive ultrasound examination for hydroureteronephrosis, followed by several UTI in the following years. At the age of 3 he underwent surgical ureteral reimplantation. At 9 years he presented with seizures requiring antiepileptic therapy, later in years becoming resistant to drugs. At the age of 11 he began to show bladder dysfunction, until an episode of acute urinary retention at the age of 15. For the presence of an ureteral obstruction he was not able to sustain intermittent catetherization and underwent cystostomy using a low profile gastrostomic device, not showing UTI since then.

INTERPRETATION OF RESULTS

Because it acts as a transcriptional repressor by detecting signs of DNA methylation, MECP2 is recognized to play a significant role in epigenetics. The basic function that the protein plays in the central nervous system is demonstrated by the significant neurological involvement that both Rett Syndrome and MDS exhibit, albeit to varied degrees of severity.
Despite bladder dysfunction has been already described in MDS, acute urine retention leading to cystostomy is a severe event that can occurs as the patient ages.

Although the cause of the neurogenic bladder in MDS is unknown, MECP2 is the only gene in the critical region that has been shown to be sensitive to triple dosage, and furthermore strongly involved in neurodevelopement. Some authors attribute a pathogenic role to the adjacent gene of filamine (FLA), frequently interested in larger duplications but not included in our patient genetic rearrangement.

CONCLUSIONS

Careful monitoring of urinary function has to be included in the management of MDS, to prevent and treat precociously any complication related to this frequent comorbidity of an already highly morbid disease.

29. TELEMEDICINE IS APPROPRIATE FOR THE FOLLOW-UP OF CHILDREN AND ADOLESCENTS WITH ENURESIS AND LUTS

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INTRODUCTION AND AIM OF THE STUDY

The first national Italian Guidelines on Telemedicine (Linee di Indirizzo della Telemedicina, Istituto Superiore di Sanità, March 17th, 2014) dates back in 2014, but only after the Covid-19 pandemic outbreak the telemedicine became reality.
In the middle of the pandemic, following the address lines published by the Ministry of Health on June 1st, 2020, several Regions defined new rules for the online health delivery. The Region of Piedmont in the DGR 6-1613 of July 3rd, 2020 defined the characteristics of patient enrollment, online booking and payment, delivery and reimbursement of televisits, facing the issues of informed consent, doctors responsibility, patients privacy and data secret.
The aim of this work is to report the telemedicine experience for the management of children with enuresis and LUTS in a pediatric hospital in Piedmont.

MATERIALS AND METHODS

Following the DRG 1-1613 and the subsequent publication of our Hospital recommendation (PDTA Aziendale), televisits started at the Pediatric Urology division in September 2021. The "patient journey" was defined according to the Regional recommendations. After each televisit delivery, the patient reported outcome (PRO) was evaluated through an ad hoc questionnaire.

RESULTS
75 patients with enuresis and LUTS were enrolled and a total of 105 televisits were delivered. According to the regional guidelines, telemedicine was never used as a first appointment but only for follow-up. The mean patients' age was 9.7 years (range 8-17). In 33% of cases a drug therapy was started, modified or stopped. In 38% of cases the follow-up was stopped due to symptoms resolution. Only in 2 cases the televisit had to be completed in presence, due to linguistic barriers.
PRO showed caregivers satisfaction in more than 88% of cases, with time and money savings. Patients' or their caregivers' evaluations of the virtual outpatient clinics did not differ from the ones related to the visits in presence.

INTERPRETATION OF RESULTS

Telemedicine ensures high levels of satisfaction and clinical efficacy in the follow-up of LUTS and enuresis in pediatric patients.

CONCLUSIONS

Currently the Digitalization of our National Health System, through the improvement of hardware availability and of digital education, and the improvement of Health services delivered by tele-health are the main goals of PNRR related to Health (Mission 6 – Salute: Telemedicina per un miglior supporto ai pazienti cronici). As far as pediatric urology is concerned, our experience shows that for patients with enuresis and LUTS, telemedicine is an appropriate way of delivery sanitary assistance, with good results in terms of resolution of symptoms, economic advantages and good patients reported outcomes. The applicability of telemedicine to patients with chronic conditions, disabilities and rare diseases such as spina bifida can be deepened as a valuable next step.

30. THE USE OF HYPNOSIS IN PEDIATRIC UROLOGY

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INTRODUCTION AND AIM OF THE STUDY

We are presenting a preliminary report on the use of hypnosis in pediatric urology. Our study compares the patient prospective after undergoing retrograde percutaneous embolization of the testicular veins (RPETV) under local anesthesia or under hypnosis.

MATERIALS AND METHODS

Eighteen patients age 12-17 years with symptomatic grade 2-3 left sided varicocele underwent APETV either with brachial or femoral access. They were prospectively randomized in two groups: A) procedure performed under local anesthetic, B) procedure performed under hypnosis without local anesthetic. The following outcomes were measured: length and subjective perceived length of the procedure, perceived pain in a scale between 0 and 10, perceived anxiety in a scale between 0 and 10. T student test was used to compare results inside the two groups and between group A and group B. Data are presented as median (IQR) and a power <0.05 was considered significant.

RESULTS

Eight patients underwent the procedure under local anesthesia and 10 under hypnosis. Two of the patients in group B (20%) required local anesthesia. Anxiety and subjective perceived length of the procedure were statistically lower inside group B.
Length of the procedure was 30.0 minutes in group A and 36.50 minutes in group B (p=0.003); subjective perceived length of the procedure was 22.50 minutes in group A and 15.00 minutes in group B (p=0.134), perceived pain was 4.50 in group A and 4.50 in group B (p=0.785); perceived anxiety was 4 in group A and 2 in group B (p=0.044).

INTERPRETATION OF RESULTS

Hypnosis is an efficient and feasible tool in expert hands and can be a valid alternative to sedation for minor procedures.

CONCLUSIONS

RPETV under hypnosis in pediatric age is feasible. It effectively reduces the patient anxiety. The length of procedure was related to operators more than patients. Hypnosis and local anesthetic have the same efficacy on pain

31. AN ANALYSIS OF SHORT-TERM OUTCOMES AFTER ANTEGRADE SCLEROTHERAPY: SAME SURGERY WITH TECHNICAL VARIATIONS IN TWO DIFFERENT PEDIATRIC CENTERS.

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INTRODUCTION AND AIM OF THE STUDY

Antegrade scrotal sclerotherapy is a simple and easy technique for the treatment of varicocele. We aimed at measuring the surgical outcomes of this surgery performed in two different paediatric centres with some variation of the original technique described for the first time in 1988 by Tauber et al.

MATERIALS AND METHODS

We retrospectively analysed the data relating to a total of 329 patients under 18 treated for varicocele at two different Departments of Paediatric Urology of two different Italian hospitals from 01/2010 to 12/2021. We compared the results in terms of recurrence and short-term complications of the two techniques performed with different anaesthesia (general vs local) and with different surgical practices (isolation of only the most dilated and straight vessel prepared for cannulation – vs isolation of all the spermatic cord with the exception of the deferens, which is palpated and digitally separated) and embolization (sclerosing agent mixed with air to make a foam – vs "air-block technique" with infusion of 1 mL of air followed by 4 mL of sclerosing agent and with the patient performing a Valsalva manoeuvre in order to permit an optimal distribution of the sclerosing agent through the spermatic vein). Descriptive statistics were used to analyse the data. All the analyses were performed using R software v.1.2.5042. Pearson's Chi-squared test or Fisher's exact test, as applicable, were used to compare the two groups. A $p < 0.05$ was considered statistically significant.

RESULTS

There are no statistically significant differences in age distribution between the two populations with IQR 14 (7-18). There is a significant difference in the number of patients lost to follow up whose data we could not retrieve at the second centre (64/114 vs 58/215), the mean follow up considered was 6 and 7 months respectively. Within this period there was a higher number of recurrences at the second centre (3,4% vs 11,8%; p 0.025) and no difference in terms of complications (1.3% vs 2%; p 0.729). Surgical times are minimally reduced in the case of the second technique (36 vs 31 min.)

INTERPRETATION OF RESULTS

The S.A. is a safe method regardless of minimal technical modifications and it is also feasible in local anaesthesia in the paediatric population. It seems that the outcomes in terms of recurrence are slightly worse in the case of the technique variations used at the second centre.

CONCLUSIONS

The study is affected by the retrospective feature and the lack of data lost at follow-up. We believe that a collaboration for data analysis between paediatric is mandatory in order to drive clinical practice by evidence-based indications and not by personal preferences of the surgeons.

32. SCLEROTERAPIA SCROTALE ANTERIORE SEC. TAUBER (ASS): 20 ANNI DI ESPERIENZA DI UN UNICO CENTRO

Annarita Marino *(1)* ***- Marco Gambino*** *(1)* ***- Patrizia Manfredi*** *(1)* ***- Antonio La Riccia*** *(1)* ***- Fawzi Shweiki*** *(1)*

Uoc Di Chirurgia Pediatrica, Azienda Ospedaliera Di Cosenza *(1)*

INTRODUZIONE

Il Varicocele rappresenta ancora oggi una patologia molto discussa in letteratura circa l'indicazione al trattamento, il timimg chirurgico e la metodica chirurgica di scelta. Da Gennaio 2003 abbiamo iniziato a correggere il varicocele mediante la Scleroembolizzazione Anterograda sec. Tauber.

MATERIALI E METODI

Abbiamo trattato 527 casi di varicocele: 521 erano a sinistra e 6 bilaterali. Età media pari a 15,2 anni. Abbiamo posto indicazione chirurgica in caso di: Varicocele di terzo grado con reflusso all'eco-color-doppler dei vasi spermatici, varicocele di secondo grado associato ad ipotrofia testicolare e/o sintomatologia dolorosa. Tutte le procedure sono state portate a termine con successo. La tecnica è stata eseguita in anestesia locale in 94/527 casi (18%). La durata dell'intervento è stata compresa tra 20-40' ed abbiamo effettuato tutte le procedure in day surgery.

RISULTATI

Non vi sono state complicanze intraoperatorie e nessun paziente ha presentato reazione allergica al mezzo di contrasto od alla sostanza sclerotizzante. Nell'immediato post-operatorio abbiamo osservato in 21 casi trattati (1.9%) la comparsa di ematoma scrotale. Come follow-up post-operatorio abbiamo sempre eseguito 3 controlli ecografici (a 1, 6 e 12 mesi) che hanno documentato: 15 casi di recidiva (1.2%) trattati con successo con nuova ASS e 16 casi (0.8%) di reflusso di primo grado per un totale di complicanze pari al 2.2%, nessuna atrofia testicolare, nessun idrocele postoperatorio. Il costo della procedura si aggira attorno ai 100 Euro (costo dei materiali, escluso la degenza ospedaliera).

CONCLUSIONI

La ASS sec. Tauber ha presentato, nella nostra casistica, una percentuale di successo pari al 98%. Le complicanze postoperatorie hanno inciso per il 2.2% richiedendo, però, una seconda procedura chirurgica solo nel 1.2% dei casi. La scleroterapia scrotale anteriore sec. Tauber è risultata essere una tecnica semplice, rapida, minimamente invasiva che si adatta perfettamente alle esigenze della Day-Surgery.

33. ROBOTIC-ASSISTED PYELOPLASTY IN CHILDREN: OUTCOMES FROM TWO TERTIARY REFERRAL CENTERS

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INTRODUCTION AND AIM OF THE STUDY

We aim to report outcomes and complications of patients (pts) treated with robot-assisted Anderson-Hynes pyeloplasty in two tertiary referral centers.

MATERIALS AND METHODS

We prospectively included all the consecutive pts treated from July 2012 to September 2021. We analyzed pts characteristics, intra-operative(op) data, postop outcomes, and follow-up planned as ultrasound (US) and clinical evaluation at 3, 6 and every 12 months. Exclusion criteria were follow-up<12 months or age >20 years. Pelvis diameter (PD) reduction was used as early marker of success.

RESULTS

142 pts matched our criteria. Pts' characteristics are listed in Table1. Da Vinci Si robot was used in 92 pts (64.7%), Da Vinci Xi in 50 (35.2%). Mean op time was 147min (55-360). In 135 pts (95.1%) the colon was medialized; in 7 (4.9%) the approach was transmesocolic (2 right side, 5 left). 55 (38.7%) presented a crossing vessel. The 3 children with urolithiasis were treated with trans-trocar intraop RIRS in 2 cases and with pyelolithotomy in 1 case. 2 (1.4%) required conversion to open surgery. Abdominal drain was placed in 45 pts (31.6%) and removed after a mean of 3.7 days (3-7). A stent was placed in 99.3% of pts and maintained a mean of 44.6 days (23-201). No other intraop complications or bleedings> 50 ml were reported. Mean length of hospital stay was 3.8 days (2-14). 5 pts (3.5%) presented Clavien-Dindo I complications (3 paralytic ileus, 2 colic pain following the removal of the ureteral stent). 7 pts (4.9%) presented Clavien-Dindo III complications (5 stent malfunctioning or displacement, 2 laparoceles).
Mean follow-up was 35.2 months (12-99). Mean postop PD was 13.8 mm (1-50). Mean reduction of the PD was 20.9 mm (-11 to 57) (57.3% (-68.8% to 98.0%) of the preopPD) ($p<0.001$). It was reduced in 135 pts (95.1%), the same in 4 (2.8%) and increased in 3 (2.1%). 2 pts (1.4%) required reintervention. The rest showed acceptable renography and did not manifest recurrent symptoms, therefore they continued the follow up.

INTERPRETATION OF RESULTS

Our results are in line with the current literature in terms of success and complications reported. The main limit of our study is the variability of the preoperative evaluation and of the follow up. We also aim to increase the number of pts.

CONCLUSIONS

Robot-assisted pyeloplasty confirms to be safe and effective in pediatric pts.

Table1- Patients' characteristics

n°	142 pts
male	86
female	56
Age (years)	9.6 (1.1 – 20)
Weight (kg)	34.8 (10-90)
Laterality	
Left	82 (57.7%)
Right	60 (42.3%)
Symptoms	77 (54.2%)
-flank pain	*48 (33.8%)*
-UTIs	*17 (11.9%)*
Asymptomatic	65 (45.7%)
Urinary tract malformations	13 (9.2%)
Urolithiasis	3 (2.1%)
Previous treatment	8 (5.6%)
Pre-stented	6 (4.2%)
Nephrosomy	2 (1.4%)
Pyeloplasty	12 (8.4%)
Renography	performed in 98 (69.0%) pts
Mean transit time (s)	353.0 (147-584)
Mean split renal function (%)	40.5 (10-57)
Mean preop pelvis diameter (PD) (mm)	34.7 (12-90)

34. STAGHORN CALCULI: THE LAPAROSCOPIC APPROACH IS ALWAYS POSSIBLE?

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INTRODUCTION AND AIM OF THE STUDY

Staghorn calculi are very challenging in their treatment. According to literature surgical approach can be both laparoscopic or endosurgical one.
The aim of this study is to analyze our cases which could not allow to complete a laparoscopic procedure.

MATERIALS AND METHODS

We analyzed our cases with urinary tract lithiasis from 2018 to 2022. We collected 69 patients, 11 with staghorn calculi underwent both surgery endoscopy (9) and laparoscopy (11).
4 patients could not allow a laparoscopic procedure for anatomical characteristics: 2 patients with a polar renal vessel who cross pelvis could not admit a safe approach, 1 case showed a complete intrarenal pelvis, 1 patient showed an uretero-pelvic junction obstruction (non functionant kidney), who underwent laparoscopic nephrectomy. 2 patients recived an endourological treatment, 1 patient a percutaneus one.

RESULTS

Laparoscopic approach was successfull in 7 cases, in 3 patients anatomical specimens could not allow a safe approach to the pelvis, 1 case who showed an uretero-pelvic junction obstruction needed a total nefrectomy.

INTERPRETATION OF RESULTS

Our results shows how the miniaturizing of instrumentation and magnification of view allow different option to paediatric patients suffering urolithiasis. Laparoscopic approach is the gold standard according to literature for staghorn calculi treatment, and somehow a double approach both laparoscopical and endourological one should give a better result.

CONCLUSIONS

Laparoscpy is a safe and faisable approach for staghorn calculi. In spite of these a good preoperative management (TC, RMN) allow to do the better choice for the patient.

35. TREATMENT OF UPPER TRACT STONES IN CHILDREN: ANY DIFFERENCE BELOW 2 YEARS OF AGE?

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INTRODUCTION AND AIM OF THE STUDY

Paediatric stone disease is a relevant problem in clinical paediatric urology. Given the nature of the disease and the patients' population, choosing the most appropriate treatment is very important and the patient's age is a key factor. The aim of this study is to compare the results of upper tract stones below and over the age of 2 at the diagnosis at two referral centres.

MATERIALS AND METHODS

Paediatric patients treated for upper tract stones at two referral centres from 2009 to 2022 were retrospectively evaluated. Detailed data about family history, associated urological conditions, presenting symptoms, treatment modality, complications and stone-free rate were collected. Besides descriptive statistics, the population was categorized as <2y (G1) and 2>y (G2) and the results were compared using the chi square or Fisher test for categorical variables and the Mann-Whitney U Test for continuous variables.

RESULTS

216 patients were included. Overall, median age at treatment was 88.5 months (IQR 42.7-143). 52 patients (24%) were diagnosed below the age of 2. IVU (40.4%) and incidental diagnosis (15.4%) were the most frequent presentation for the G1, while G2 presented more often with colic (44.2%), p<0.001. Family history of stone disease, urinary obstruction at the diagnosis and the presence of urological malformations did not differ in the two groups. 63.5% in G1 had multiple stones vs 46% in G2 (p=0.02), renal and reno-ureteral stones were more common in G1 (94% vs 70%, P=0.04). The median size of the largest stone at the treatment did not differ in the two groups (13.5 vs 13 mm, p=0.6). The distribution of treatment modality was not significantly different between the groups, as well as intraoperative, early and late complications (all p>0.05). The hospital stay (days) was not statistically different between the two age groups (3 vs 2 days, p=0.1). Stone-free rate (SFR) at 1st procedure was not significantly affected by age group (58% vs 58.6%), as well as the total number of procedures to SFR. 30.6% of patients in G1 and 23.7% in G2 presented a relapse during follow-up (p=01).

INTERPRETATION OF RESULTS

A quarter of all paediatric patients treated for upper tract stones presents under the age of 2; the symptoms/signs of lithiasis are peculiar in this age group. Retrograde endourology, followed by PCNL and ESWL, is the most used treatment modality. No differences in surgical outcomes between younger and older patients could be seen.

CONCLUSIONS

Treatment modality, results and complications of stone treatment are not influenced by age group in patients with paediatric urolithiasis. Patients' selection and the availability of all the useful techniques are key to ensure the best results.

36. PREPERITONEAL MICROSURGICAL VARICOCELECTOMY IN CHILDHOOD AND ADOLESCENCE WITHOUT TESTIS DELIVERY: A PROSPECTIVE STUDY AND LITERATURE REVIEW.

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INTRODUCTION AND AIM OF THE STUDY

A. Shafik, after an extended physio-patholgical research, noticed a relevant negative effect over the testicular function also in low grade varicocele pateients. He therefore suggested (Br J urol, 1972) the correction of varicocele without interruption of the spermatic veins (*The fasciomuscular tube of the spermatic cord. A study of its surgical anatomy and relation to varicocele. A new concept for the pathogenesis of varicocele -Br J Urol, 1972).* With his technique the distal intrascrotal segment of the spermaic cord is wrapped by flaps of tunica vaginalis (*Fascial grafting of the spermatic cord. A new concept operative procedure for the treatment of varicocele, Urologia 1973*).
In this paper we will present the results from a large series of adolescent males on who underwent varicocele correction in our unit and a prospective study of 20 patients with posteirior plexus dilation corrected with a combined technique

MATERIALS AND METHODS

633 patients were sent to surgery for varicocele correction. Of these 15 grade were II and 598 grade III (Dubin e Amelar classification).
After noticing the relation of recurrency with dilated posterior plexus, we devised a second prospective series of cases in which the US- Doppler scan revealed the presence of solely posterior plexus dilation. In the 20 patients seen which this anomaly we combined the microsurgical ligature at the internal ring, considered the best approach in adolescents and young thin adults, to the suspension orchidopexy and to the tunical sling operation. In one patient operated on for spermatic cord torsion only the Shafik approach and orchidopexy were performed.

RESULTS

In the first series, recurrences of III grade were 12 (1.9 %), of I-II grade were 6 (0.9%) with all recurrences showing at US- Doppler scan a dilation of only the posterior pampiniform plexus.
Testicular hypotrophy was seen in 31% of cases, all with grade III varicocele.
4.9% underwent suspension orchidopexy due to pain or evident dysmorphism.
Mean operative time was 23 +- 7 min if no associated surgery.
In the second prospective series no intraoperative or postoperative complications and no recurrences were registered.

INTERPRETATION OF RESULTS

The use of US to check for posterior pampiniform plexus dilation in varicocele patients can be a valid instrument to employ a different surgical technique, such as the one described, and reduce recurrencies.

CONCLUSIONS

It remains unclear whether such positive outcomes should be attributed to one or to the combination of the associated techniques.

37. EFFICACY AND SAFETY OF LUMASIRAN FOR INFANTS AND YOUNG CHILDREN WITH PRIMARY HYPEROXALURIA TYPE 1: 30-MONTH ANALYSIS OF THE PHASE 3 ILLUMINATE-B TRIAL

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INTRODUCTION AND AIM OF THE STUDY

Primary hyperoxaluria type 1 (PH1) is a genetic disorder resulting in excess hepatic oxalate production, which can lead to urolithiasis, systemic oxalosis, nephrocalcinosis (NC), and ultimately, chronic kidney disease/kidney failure. Lumasiran, a liver-directed RNA interference therapeutic that reduces urinary oxalate (UOx) levels, demonstrated sustained efficacy with an acceptable safety profile over 12 months in infants and young children age <6 years with PH1 participating in ILLUMINATE-B (NCT03905694). To evaluate outcomes of lumasiran treatment through Month 30 of ILLUMINATE-B.

MATERIALS AND METHODS

ILLUMINATE-B is an ongoing, Phase 3, multinational, open-label, single-arm study. Eligible patients had a confirmed PH1 diagnosis, were <6 years old at study entry, had an eGFR >45 mL/min/1.73m^2 if ≥12 months old or normal serum creatinine if <12 months old, and UOx:creatinine (Cr) ratio greater than upper limit of normal. A primary analysis was conducted at 6 months; patients are now in an extension period (EP) of up to 54 months. Changes in NC and kidney stone event rates were exploratory endpoint.

RESULTS

All 18 patients enrolled in ILLUMINATE-B entered the EP and remain in the study. At Month 30, the mean percent reduction from baseline in spot UOx:Cr ratio with lumasiran treatment was 76%. Mean percent reduction in plasma oxalate was 42% from baseline to Month 30. eGFR remained relatively stable through Month 30. In 14 patients with NC at baseline, NC grade improved in 86% (12/14) at Month 24; no patient worsened. Of the 4 patients with no baseline NC, all remained stable at Month 24. Kidney stone event rates remained low through Month 30. The most common lumasiran-related adverse events were mild, transient injection-site reactions (3 patients [17%]).

INTERPRETATION OF RESULTS

In infants and young children with PH1, lumasiran treatment resulted in sustained reductions in urinary and plasma oxalate through Month 30, with an acceptable safety profile.

CONCLUSIONS

Previous observations of stable kidney function and low kidney stone event rates were maintained through Month 30, while improvements in NC grade were maintained through Month 24.

38. RISK FACTORS FOR URINARY TRACT INFECTION (UTI) IN CHILDREN WITH UROLITHIASIS: SINGLE CENTER EXPERIENCE

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INTRODUCTION AND AIM OF THE STUDY

The management of urolithiasis in children is similar to adults even if there is a difference between these two populations regarding etiology, symptoms and recurrences. Most of our current management strategies comes from the adult population. We need to better understand the risk factors of UTI in children to prevent complications and tailored the use of antibiotic prophylaxis in patients with higher risk.

There is a variability between centers worldwide regarding the use of antibiotic prophylaxis to prevent UTI in children undergoing stone treatment and until now the evidence are limited and there is no specific guide line. Use of ureteric stents is associated with UTI in children and was observed that the risk of bacterial colonization and UTI increase with increasing dwelling time duration.

Aim of this study was to evaluate the current practice on stone management in a single center accessing the risk factors associated with UTI.

MATERIALS AND METHODS

We retrospectively analyzed all electronic dossier of children with urinary stones (ureteral or renal) admitted to our department from 2017 to 2021. Children with previous history of (UTI) or infected stone before the first stone treatment were excluded from study.

All patients included in the study underwent double j stent placement. The stone location, size, stenting dwelling time, operative time and admission for UTI were recorded.

All patient underwent antibiotic prophylaxis after treatment until double j stent removal.

RESULTS

125 patients were included. Median age was 8.7 (7 months-17 years) years and 57% were females. Regarding treatment, 68 (54.4%) RIRS, 14 (11.2%) PCNL and 43 (34.4%) URS were performed. Urinary tract infection was recorded in 9/125, (7%) patients with no differences between genders (p=0.4).

The median operative time and ureteral stent dwelling time were 78 minutes and 56 days respectively.

Stenting dwelling time and stone size were not correlated with UTI (p=0.8 and p=0.2).

Operative time was higher in patients with UTI comparing with those without even if with not statistically significant 115 min vs 82min (p=0.08).

Urinary tract infection was significatively higher in patients undergoing multiple retreatments compared with patients undergoing only one procedure, 67% vs 33% (p=0.04).

INTERPRETATION OF RESULTS

In our study all patients had a double J stent after the procedure and all of them received antibiotic prophylaxis with UTI rate around 7%. Stenting dwelling time and operative time were not correlated with UTI probably because we analyze only patients admitted for UTI and not the post-operative UTI as the limit of retrospective study.

Re-treatment was the only risk factor for UTI in patients treated for urolithiasis. We suppose that repeated manipulation of the upper urinary in patient with stones which in themselves are risk factors for UTI further increases the risk for UTI.

CONCLUSION

To reduce the incidence of UTI in patients undergoing urinary stone treatment we need to focus our attention on clinical presentation and surgical aspect to choose the best surgical treatment in order to optimize post-operative outcomes.

39. GIANT BLADDER STONES IN EARLY CHILDHOOD. THE IMPORTANCE OF AN ENDOSCOPIC "VIEW"

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INTRODUCTION AND AIM OF THE STUDY

Bladder stones (BS) are still endemic in children in developing countries. According to a recent Systematic Review and Meta-analysis the benefits and risks of minimally invasive and open surgery for the treatment of bladder stones in children are not clear. The aim of our study is to underline the importance of cystoscopy to decide the best and faster approach.

MATERIALS AND METHODS

We describe two cases of BS completely occupying the bladder cavity. BS were both symptomatic and respectively measured 5 cm in a five years-old female patient and 2,5 cm in a two years-old male patient. Both patients underwent cystoscopy that confirmed the presence of giant, not friable stones occupying the whole bladder. The consistence of the stones were very hard, so we prefer a surgical approach rather than an endoscopic treatment.

RESULTS

Both BS were surgically treated with a mini-cystotomy. Postoperative course was uneventful. Patients maintained a bladder catheter respectively for 3 and 5 days and were discharged after 5 days. At last visit (respectively 12 months and 16 months after operation) they were asymptomatic. Abdominal ultrasound and examination were normal. Physical-chemical test of the stones revealed mixed stone composition (struvite 40%, urato di ammonio 34%, acido urico 16%, cistina 10% in female patient; ossalato 35%, brushite 20 %, acido urico 40% in male patient).

INTERPRETATION OF RESULTS

Cystoscopy represents a crucial tool to decide the therapeutic approach in BS: if the stone have an hard texture and occupy completely the bladder, surgery is faster and safer than other treatments.

CONCLUSIONS

Prevention of BS and the knowledge of their etiology are the most important goals in pediatric nephrolithiasis management. We consider surgery necessary only in particular situations; for example when big, hard texture BS became symptomatic in early childhood.

40. OUTCOMES OF PEDIATRIC KIDNEY TRANSPLANTATION PERFORMED DURING DAYS-OFF AND NIGHT-TIME

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INTRODUCTION AND AIM OF THE STUDY

Surgical complications represent a threat for paediatric kidney transplantations (KT). Several risk factors have been investigated, including human aspects, such as professionals' stress and fatigue. The aim of this work was to investigate the impact of night-time or day-off surgery.

MATERIALS AND METHODS

The design was retrospective. Medical records of pediatric KTs performed at a single institution between 2013 and 2021 were reviewed. Only non-living donor paediatric KTs were included. The population was split into three groups according to the cutting time and the calendar: ordinary day (8.00 AM – 6.30 PM), day-off, and night-time (6.30 PM – 8.00 AM). The following endpoints were compared: ischemia times, length of surgery, rate of short-term complications (within 30 days), occurrence of delayed graft function (DGF), primary graft non function (PGNF) and eGFR at three-month follow-up.

RESULTS

Ninety-six non-living donors KTs were performed. The median age was 11 (IQR 4.3-14) years and median body weight was 26 (13-50) kg. Fifty-one of them (53%) were males. Forty-one KTs (43%) were performed during night-time and 28 (29%) during day-off, whilst the other 27 (28%) were performed during ordinary days. The detailed results are shown in the table. Ischemia times were similar (p=0.769, p=0.536). Day-off KTs presented an extended length of surgery (p=0.011). Thirty-two adverse events were reported in 31 KTs. No difference in the overall rate of complications, DGF and PNGF was found (p=0.669, p=0.383, p=0.949). However, post-operative bleedings were more common after KTs performed in days-off (p=0.003). The eGFR at three-month follow-up was similar (p=0.093).

INTERPRETATION OF RESULTS

Less than 30% of the KTs were performed during ordinary hours, even though paediatric KTs might be more challenging. No difference among the groups was reported and our results were consistent with those of the adult's population. However, a higher rate of post-operative bleedings and an extended length of surgery for day-off KTs might be considered as a warning sign of fatigue.

CONCLUSIONS

The number of after-hour pediatric KTs was considerable. More caution should be focused on the KTs performed in days-off to avoid severe complications.

Table. Results of paediatric non-living donor KTs.

	Ordinary-day KT *(n=27)*	**Day-off KT** *(n=28)*	**Night-time KT** *(n=41)*	*p-value*
Cold ischemia time *(median, IQR)*	12 (10-13) hours	10 (8.5-12) hours	12 (10-15) hours	0.769
Warm ischemia time *(median, IQR)*	60 (59-65) minutes	65 (60-71) minutes	62 (55-69) minutes	0.526
Operative time *(median, IQR)*	255 (232-283) minutes	285 (251-330) minutes	235 (203-293) minutes	0.011
Inotropic drugs *(n, %)*	8 (30)	15 (54)	15 (37)	0.168
Length of hospital stay *(median, IQR)*	19 (15-22) days	17 (15-24)	19 (14-24) days	0.571
Serum creatinine at discharge *(median, IQR)*	55 (36-82) umol/l	81 (44-106) umol/l	57 (37-91) umol/l	0.432
eGFR at discharge *(median, IQR)*	78 (66-96) ml/min/1.73 m^2	67 (54-94) ml/min/1.73 m^2	77 (60-109) ml/min/1.73 m^2	0.521
Serum creatunine at 3-month follow-up *(median, IQR)*	55 (43-79) umol/l	73 (54-112) umol/l	54 (36-69) umol/l	0.371
eGFR at 3-month follow-up *(median, IQR)*	76 (68-85) ml/min/1.73 m^2	67 (50-82) ml/min/1.73 m^2	81 (62-100) ml/min/1.73 m^2	0.093
3-month graft loss *(n, %)*	0 (0)	2 (7.1)	4 (9.8)	0.469
Overall short-term complications *(n,%)*	6 (22)	9 (32)	10 (24)	0.669
Bleeding *(n,%)*	0 (0)	6 (21)	0 (0)	0.003*
Graft venous thrombosis *(n,%)*	0 (0)	0 (0)	3 (7.3)	0.456
Arterial stenosis *(n,%)*	1 (3.7)	0 (0)	1 (2.4)	0.412
Urinary obstruction *(n,%)*	2 (7.4)	2 (7.1)	4 (9.8)	0.909
Medical conditions *(n,%)*	3 (11)	1 (3.6)	2 (4.9)	0.458
Delayed graft function	0 (0)	3 (11)	3 (7.3)	0.383

(n,%)				
Primary graft non-function *(n,%)*	0 (0)	0 (0)	1 (2.4)	0.949

41. WHEN A RETROPERITONEOSCOPIC PARTIAL NEPHRECTOMY ACTED AS OPENING THE CAP ON THE PANDORA'S BOX

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INTRODUCTION AND AIM OF THE STUDY

We report a life-threatening complex case after a partial nephrectomy conducted with minimally invasive technique

MATERIALS AND METHODS

A 1-month-old girl was referred to our department because of a bilateral duplex kidney complicated by bilateral dysplastic non-functioning upper moieties associated with ipsilateral ureteroceles (32 mm L, 18 mm R). Due to recurrent UTIs and persistent left hydroureteronephrosis despite multiple endoscopic punctures, a retroperitoneoscopic upper pole partial nephrectomy was deemed required at 10 months of age.
The upper pole resected moiety was sectioned as proximally to the bladder as possible by using laparoscopic sealer and removed through the middle access; an indwelling perirenal 10 Ch drain was left. In the immediate postoperative period, the patient developed necrotizing fascitis involving the operated area, complicated by severe sepsis and septic shock (P. Aeruginosa e K. Aerogenes). Following adequate patient stabilization and sepsis resuscitation treatments, extensive debridement of the affected area was performed, and a vacuum-assisted closure system was applied to optimize wound healing. An autologous split-thickness skin graft harvested from the upper thigh and buttocks was then used to cover the skin defect.

RESULTS

Patient was discharged home and followed up in the dressing clinic until complete wound healing and functional recovery

INTERPRETATION OF RESULTS AND CONCLUSIONS

This case illustrates a life-threatening complication of minimally invasive urological procedures, successfully treated thanks to the effective interdisciplinary collaboration between medical and surgical healthcare professionals.

42. RECTAL NEOBLADDER IN A COMPLEX CASE OF MULTI-OPERATED UROGENITAL SINUS: A DIFFICULT CHOICE.

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INTRODUCTION

Persistent urogenital sinus (PUGS) is a complex anomaly in which the urinary and genital systems do not separate during embryonic development. We describe below the case of S.I., 9 years old, who suffered from the results of numerous attempts of surgical correction of PUGS associated with aortic coarctation.

Materials and methods: The patient was born at 38 weeks of gestation with a prenatally diagnosed urinary malformation with bilateral hydroureteronephrosis. She presented recurrent pyelonephritis from the first days of life and bilateral vesicoureteral reflux associated with ectopic ureters and urogenital sinus. At two years of age she underwent bilateral Cohen ureteral reimplantation with Kalicinski ureteral folding technique, which resulted in ureteral stenosis. On follow-up she had a persistent bilateral hydroureteronephrosis, diminished right renal function (5%) and a very low bladder capacity (< 50 ml). At the age of five she underwent terminolateral uretero-ureteral anastomosis (left on right), bladder augmentation using the right ureter and bladder neck reconstruction.

RESULTS

The patient was referred to our Center for total urinary incontinence and persistent bilateral hydronephrosis. Extensive tests lead to the diagnosis of PUSG with the previous ureteral orifices observed inside it, a punctiform vaginal orifice, total bladder incontinence, bilateral hydronephrosis with marked right renal hypoplasia and persistent left vesicoureteral reflux. To preserve renal function and provide adequate continence in this complex situation, we decide tu submit the patient to a urinary diversion in a rectal neobladder in witch left ureter was reimplanted associated to a Duhamel colic pull-through. Post-operative complications were intestinal anastomotic dehiscence, treated conservatively, and laparotomy wound dehiscence, treated with VAC therapy. At follow-up she had complete urinary and fecal continence and no UTIs; there was complete resolution of the left hydronephrosis. The future surgical plan includes right nephrectomy and vaginal canalization through the residual sinus.

Discussion: the goal in this complex situation was to preserve the functionality of the residual kidney and guaranteeing continence to the patient: we carefully evaluated the possible surgical solutions but the important hydroureteronephrosis of the only functioning kidney despite the reimplantation and the complete compromise of the bladder made us choose the rectal neobladder as a difficult but definitive solution.

CONCLUSION

Surgical planning in PUSG is often very difficult, particularly when there is a severe impairment of the urinary system. An initial surgical approach that does not consider the bladder's function and future continence can make aggressive and irreversible interventions the only possible solution. Rectal neobladder is a surgical effective but not without difficulties and complications and requires excellent compliance by the patient and the family

43. PERSISTENT UROGENITAL SINUS (PUGS) WITH UNICORN UTERUS AND DIDELPHYS CERVIX, DOUBLE VAGINA AND SEVERE DYSPLASIA OF THE UPPER URINARY TRACT- A CASE REPORT

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MATERIALS AND METHODS

Persistent urogenital sinus (PUGS), is a rare congenital malformation of the urogenital system. We report a "high joined" and complex PUGS case of a 3yrs old female from Morocco, in Italy on temporary visa and no fixed abode , presenting with recurrent fever and urinary tract infection, urinary incontinence , chronic renal insufficiency with oligoanuria, chronic constipation and ETG diagnosis of severe bilateral hydroureteronephrosis.
Failure of catheterization per uretram led to derivation with emergency epicistostomy. Diagnostic workup was set as following: Rx-epicistography showed bilateral megaureter (obstructing on the left and refluxing on the right) and a long atresic urethra . MAG 3 renography suggested important loss of renal function (mostly on the left side). Genitoscopy revealed a septate vagina with a didelphys cervix and unicornuate uterus.

RESULTS

Bilateral ureteral reimplantation according to Politano Leadbetter was then performed. In postoperative period minor anemization (2 blood units transfused) and paralytic ileus occurred. Patient was discharged in good condition with draining button cistostomy. Resolution of clinical symptoms and improvement in radiological scenario were evident (ETG follow up at 3 months showing reduction of bilateral hydroureteronephrosis, magnetic resonance of the abdomen with contrast at 6 months demonstrating absence of previous marked bladder hypertrophy).

CONCLUSIONS

Reconstruction of a continent urinary derivation (Mitrofanoff procedure) was delayed only for the previously mentioned social issues.

44. MACROSCOPIC HEMATURIA AND UNCOMMON INTRAVESICAL LESIONS IN TWO AFRICAN BOYS

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INTRODUCTION AND AIM OF THE STUDY

Macrohematuria is caused by several etiologies in children. Persistent gross hematuria is an indication to perform cystourethroscopy, if nephrological causes are excluded. Parasitic diseases are not frequent in our country. Nowadays immigration is a common occurrence, so endemic diseases, typical of developing countries, have to be considered in differential diagnosis.

MATERIALS AND METHODS

We describe two cases of macrohematuria in two African boys from two different centers. The first one was an eight-year-old boy with dysuria and persistent gross hematuria for three months. The second one was a sixteen-year-old boy with inconstant painless macrohematuria. Urinalysis failed in diagnosis. In both cases ultrasound scan showed a bladder mass with no typical features. Cystourethroscopies were immediately scheduled, as radiologists denied the possibility of a certain diagnosis by other radiological investigations. Multiple endoscopic biopsy specimens of the friable masses were obtained for histological analysis. A second level urine examinations were also performed.

RESULTS

Postoperative course was uneventful. Bladder catheters were left in place for a day and both patients were discharged the day after the procedure. Bladder histological specimens were negative for neoplasia but revealed classic findings for Schistosoma haematobium. Urine sediment showed several ovoid shaped elements with terminal spine. The urinary schistosomiasis were successfully treated by oral administration of Praziquantel 40 mg/kg. The dose was repeated after one month in the first center. On scheduled follow up controls, 6 months later, both patients were asymptomatic.

INTERPRETATION OF RESULTS

“Abnormal” bladder lesions with no specific features at ultrasound scan, often need cystoscopy and endoscopic biopsies for a correct diagnosis. However peculiar symptoms and ethnic considerations could allow us to spare invasive, unnecessary diagnostic tools.

CONCLUSIONS

Recurrent macrohematuria could be expression of parasitic infestation in African patients. It is important to exclude this benign diagnosis with urinalysis before planning other diagnostic invasive tests. In case of an uncertain diagnosis, cystoscopy is indicated.

45. CHRONIC RENAL FAILURE AND BILATERAL HYDROURETERONEPHROSIS IN A PATIENT WITH UNTREATED DISTAL HYPOSPADIAS

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INTRODUCTION AND AIM OF THE STUDY

Distal hypospadias are sometimes labelled as "functionally normal", parents are reassured and no referral is made. Our case demonstrates that above-mentioned can have serious consequences.

MATERIALS AND METHODS

Nephrologist sends for our observation a 10-year-old patient with chronic renal failure, bilateral hydroureteronephrosis in probable obstructive uropathy, enuresis, recurrent urinary tract infections and untreated distal hypospadias. With an accurate examination, we observe a balanic pinhole meatus; flat and elongated curve (Qmax 2.2 ml/s) and significant post-voiding residual urine volume (140 ml) on uroflowmetry. We performed a meatotomy/meatoplasty, an urethrocystoscopy with resection of mild posterior urethra valves, bilateral ascending pyelography excluding bilateral obstruction of the ureteral meatus.

RESULTS

At the maximum follow-up of 18 months, we report the improvement of renal insufficiency, uroflowmetric and ultrasound findings, and nocturnal enuresis; disappearance of diurnal enuresis and urinary tract infections.

INTERPRETATION OF RESULTS

Presence of a meatal narrowing is a reported cause of urinary symptoms. If it goes undetected or underestimated, it could have serious consequences.

CONCLUSIONS

All children with hypospadias, regardless of the severity, should be referred to a specialist paediatric urologist to identify those at risk of developing functional issues (those with a pinhole/stenotic meatus) and to appropriately recommend parents regarding the risks and benefits of surgical and conservative management.

46. LATE HYDROURETERONEPHROSIS ONSET IN A MALE TEENAGER

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INTRODUCTION AND AIM OF THE STUDY

Late hydroureteronephrosis onset can be a challenging diagnosis. The aim of our case report is to emphasize the importance of Uro-MRI test for suspected low urinary tract obstruction.

MATERIALS AND METHODS

A 15-year-old boy was twice operated for hypospadias at another Hospital during childhood. He suffered from primary enuresis, diurnal incontinence and constipation treated by oxybutynin and behavioral therapy before coming to our Institute. At our first urological consultation the patient had a long-time history of recurrent cystitis with very smelly urine. He had a persistence of diurnal incontinence with a good management of constipation with laxatives and an improvement of bedwetting after behavioral therapy. We proposed a diagnostic approach step by step.

RESULTS

Non-invasive urodynamic study showed high functional bladder capacity, intermittent not-coordinated flow, high bladder residual and detrusor thickening also confirmed by abdominal ultrasound that even showed an important left hydroureteronephrosis. From the blood tests creatinine was always in range. We opted for a severe bowel-bladder dysfunction. An invasive urodynamic study was postponed to first investigate eventual organic obstructive causes. A voiding cystourethrography was positive for bilateral reflux (right 1st grade, left 5th grade reflux), irregular bladder with the possibility of stenosis of the proximal urethra. With a further cystoscopy we excluded the stenosis but a posterior urethral valve was found and endoscopically resected. To exclude obstructive-refluent megaureter an Uro-MRI test was planned to acquire both anatomical and functional information. After a preliminary scan, the radiologist noticed a severe tethering cord with sacral dysraphism and lipomyelocele.

INTERPRETATION OF RESULTS

According to the patient's medical and surgical history we initially focused on a low urinary tract obstruction, but an MRI test as first choice has been appropriate to get the definitive diagnosis earlier.

CONCLUSIONS

Uro-MRI to investigate an obstructive disease, instead of other "classic" diagnostic tests such as MAG3 scintigraphy, is a good option especially for teenagers who don't require sedation. During this complex case, preliminary MRI scans allowed us to get the main diagnosis faster.

47. A LATE DIAGNOSIS OF BLADDER BOWEL DYSFUNCTION: A CASE REPORT

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INTRODUCTION AND AIM OF THE STUDY

The bladder bowel dysfunction is a clinical syndrome defined by the coexistence of constipation and lower urinary tract syntoms , the non neurogenic neurogenic bladder is the most severe form of dysfunctional voiding disorder in wich the baldder sphincter discoordination causes damage to the baldder and uppery urinary tract. We report a complex case to discuss in wich a late diagnosis had a foundamental role in the prognosis of the patient.

MATERIALS AND METHODS

Case of an adolescent valutated in emergency room for occasional evidence of hypertension during a sports medical examination. History of enuresis since one year ,sensation of incomplete voiding and straining .Ultrasound and blood examination revealed a bilateral severe hydrourteronefrosis and renal disease (Creatinine: 2.4 gr/dl)
After 24 hours of general examination a bilateral nefrostomy was performed risulting in gradual improvement of renal function values.
Serial ultrasounds and descending pielography showed obstruction of the bladdere ureteral junction due to severe detrusorial hypertrophy and ureteral kinkings, an urodynamics showed hypo contractility of the detrusor and bladder obstruction. It was decided to performe a bilateral refluxing ureteral reimplantation , the right distal ureteral stamp was used as a continent catheterizable channel and a cistostomic button was placed .A treatment with Doxazosine 1 mg by night was started.
After 2 weeks the boy started self clean catheterization .

RESULTS

The boy is in good general conditions, the Creatinine is stable on 1.2 gr/dl , he had just one Pseudomonas infection before starting nocturnal baldder emptying.
The boy and the family are followed by a psychologist for poor acceptance of the gravity of the patology becouse of the uncertainties about future.
The transplantation group has been involved starting from the beginnigs to follow the patient regularly.

INTERPRETATION OF RESULTS

A early diagnosis can prevent from end stage renale desease , in case of late diagnosis a ready decompression of the kidney , intermittent catheterization and nocturnal bladder emptying appear the best solution.

CONCLUSIONS

Bladder Bowel dysfunction , neurogenic non neurogenic syndrome, Hinman syndrome different way to define a pathology difficult to dignose and treat in a standardized way. What is the future of these patients? Renal transplantation ? Bladder remodelling? Bladder sosotitution? Catheterization for all the life? Questions still open.

48. THE USE OF ROBOTIC TECHINIQUE TO TREAT THE PROSTATIC UTRICLE: A CASE REPORT

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INTRODUCTION AND AIM OF THE STUDY

Prostatic utricle (PU) is a rare malformations described in children associated with hypospadias and with posterior urethral valves. Intervention may be required in symptomatic cases. Excision of the prostatic utricle is a challenging surgical problem due to his deep location in the pelvis between the rectum and urethra; moreover, the removal of prostatic utricle can be associated with damage of the near structure as the ejaculatory ducts, vas deferens, pelvic nerves and ureters. We describe the case of a prostatic utricle successfully treated with robotic-assisted surgery.

MATERIALS AND METHODS

2-year-old male admitted to our division for urinary infection and painful micturition.
The ultrasound showed a formation of 11.5x11.7x14.7 mm in diameter below the bladder and the MRI confirmed it.
We performed a cystoscopy which showed the presence of posterior urethral valves that were endoscopically resected; moreover, during the cystoscopy, we did a contrastographic examination that showed the presence of a prostatic utricle.
We decided to remove the prostatic utricle with the robotic technique by the only transperitoneal approach.

RESULTS

Postoperative pain was well controlled with Paracetamol alone.
No intraoperative or postoperative complications occurred.
The patient was discharged on the third postoperative day.
No complications were observed at follow-up.

INTERPRETATION OF RESULTS

The robotic technique remains a mini-invasive approach that for his features of magnified vision and total freedom of movement of the struments seems to be very suitable to treat the pathologies of the pelvis as the prostate utricle.

CONCLUSIONS

The use of robotic technique to remove the prostatic utricle is feasible, safe, and effective.

49. TOTALLY-TUBELESS PERCUTANEOUS NEPHROLITHOTRIPSY IN A PRE-SCHOOL PATIENT

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INTRODUCTION AND AIM OF THE STUDY

The placement of a percutaneous nephrostomy tube and an internal ureteral stent for drainage after PCNL (percutaneous nephrolithotripsy) has been always described as an integral part in the steps of a standard surgery. In recent years the procedure has been modified into a 'tubeless' PCNL, in which nephrostomy tube is not placed and only an internal drainage could be placed (double-J stent or ureteral catheter) or "totally-tubeless" PCNL, in which no drainages are placed. We report our first attempt of totally-tubeless PCNL in a paediatric patient.

MATERIALS AND METHODS

We report data of a child who underwent totally-tubeless miniPCNL in May 2023. Gender, age at surgery, weight, stones maximum diameter, instrumentation used, operation time, fluoroscopy time, drop in hemoglobin levels, days of hospitalization, postoperative stone free rate and complications are reported.

RESULTS

Patient was a 6-year-old girl. Weight was 16 kgs. Stone maximum diameter was 18 mm. No pre-stenting was done. For the lithotripsy we used MIP M 15-16 F set from Karl Storz, 7.5 F nephroscope, 272 µm holmium laser fiber setted for dusting (0.4 J, 12-15 Hz). Global operative time was 70 minutes, of which 30 minutes for lithotripsy. Fluoroscopy time was 180 seconds. There was no change in hemoglobin levels between preoperative and postoperative measurements (10.5 g/dl). The catheter was removed on the first day after the operation. In first and second postoperative day we performed follow-up abdominal ultrasound, demonstrating no bleeding, decreasing dilation and valid ureteral jet. Length of hospital stay was 3 days. Stone free rate was 100%. There were no major operative or postoperative complications.

INTERPRETATION OF RESULTS/DISCUSSION

There are only few cases in which PCNL has been performed in children without any additional instruments being left in place. Conventionally, urinary drainage is an integral part of PCNL surgery. The advantages of placing a nephrostomy include optimum drainage, hemostatic tamponade along the percutaneous tract and advantage in case of re-look need but also contributes to postoperative pain and eventual complications. Tubeless procedures have been shown to contribute to significantly reduced hospitalization, less analgesic requirement, and less discomfort for the patient. Totally-tubeless procedures are even more simplified with even lesser discomfort for the patient and no need for an additional procedure to remove the internal stent.

CONCLUSIONS

PCNL performed via totally-tubeless technique seems to be feasible and safe, in expert hands. This approach offers advantages to the patient such as less discomfort during postoperative stay, shorter hospitalization, and no need for further anesthesia to remove the double J stent. We will need further confirmation with larger cohort of patients.

50. TRANSITION OF CARE OF DSD PATIENTS: OUR PROPOSAL

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INTRODUCTION

Disorders of Sexual Development (DSD) encompasses a heterogeneous group of conditions characterized by a discrepancy between chromosomal, gonadal, and anatomical sex, commonly based on the karyotype. The common denominator of these disorders lies in genital abnormalities, caused by alterations occurring during throughout the stages of the embryogenesis. These disorders present with phenotypes of different severity. Given the patients' complexity, a multidisciplinary management is crucial for their assessment especially during a crucial phase such as the transition to adult care healthcare system.

METHODS

The study is a retrospective study on DSD patients, with the aim of analyzing the process of care which has been used up to now, thereof providing a more comprehensive and customized approach. Regarding the population of DSD patients raised as males, the entire patient cohort has been longitudinally followed-up with regular outpatient clinical assessments. Regarding the population of DSD patients raised as females, apart from regular outpatient clinical assessment, data regarding previous procedures were collected.

RESULTS

Overall, sociodemographic, clinical, surgical and therapeutic data were collected about a cohort of 19 DSD patients referred to out transition of care program; an in-depth investigation of their hormonal production, genetic profile, gonadal function and fertility was carried out.
Regarding DSD patients raised as females, data regarding a cohort of 71 patients, both 46,XX and 46 XY enrolled in our Transition of care, were collected.

INTERPRETATIONS OF RESULTS

Major complaints of DSD patients raised as males that emerged during the medical appointments were collected and interpretated following evidence-based literature. Regarding patients raised as females, 46,XX patients' main problems were related to the presence of vaginal stenosis, the need of a psychological support, LUTS, non-satisfactory genital cosmetic aspect, poor endocrinological management and altered clitoris sensation; while for the 46,XY cohort the main complaints were the need of gonadectomy, the presence of vaginal stenosis, need of psychological support, one case of gender dysphoria was reported.

CONCLUSIONS

Through a multidisciplinary assessment, we have explored the main needs expressed by these patients regarding their therapeutic journey, as well as collected their uncertainties on various topics, including fertility, sexual functioning, therapeutic possibilities, and implications related to the diagnosis. In this context we have outlined a protocol of transition of care, involving both pediatric and non-pediatric specialists. Finally, we have examined the challenges encountered in the pathway of care and explored future perspectives with the goal of improving the quality of life for these patients.

51. LONG-TERM HISTOLOGICAL ONABOTULIN TOXIN A (BTX-A) EFFECTS ON BLADDER WALL IN PAEDIATRIC NEUROGENIC BLADDER DYSFUNCTION

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INTRODUCTION AND AIM OF THE STUDY

In the last years BTX-A has gained increasing popularity for neurogenic bladder dysfunction (NBD). To maintain its efficacy, repeated BTX-A intradetrusor injections (BTX-AI) are required over time, with unknow effects on bladder wall in children. We analysed histological bladder modification in children treated with repeated BTX-AI.

MATERIALS AND METHODS

Children with NBD not responsive to I line therapy have been treated with BTX-A, according to protocol approved by our Ethical Committee (200602R001820). To evaluate edema, inflammation and fibrosis and any other histological change, protocol included bladder wall surveillance with endoscopic cold cup biopsy. Edema, inflammation and fibrosis were classified as 0: none, 1: mild, 2: moderate, 3: severe. Patients who underwent ≥ 5 BTX-AI were considered. Results of biopsies at T0 (baseline, no previous BTX-AI) were statistically compared with those at T4 (4 previous BTX-AI), T5 (5 previous BTX-AI) and T6 (6 previous BTX-AI). Moreover, data were statistically compared between patients with congenital and acquired neurologic lesion. Fisher exact test, Wilcoxon matched pairs test and nonparametric Mann-Whitney U test were used for statistical analysis. A p-value ≤0.05 was considered statistically significant.

RESULTS

From 1997 to 2022, 70 patients received ≥ 5 BTX-AI: 36/70 children were included, having all biopsy's specimen eligible for histological examination. NBD was due to congenital anomalies in 25 patients and to acquired disorders in 11 cases. 27 patients showed detrusor overactivity; the remaining 9 children had high-pressure low compliant bladder. Mean age at T0 was 5.6 (range:1.8-18.5) years; mean number of BTX-AI was 7.4 (range: 5-16). BTX-AI were repeated every 12.3 months (range: 3.6-33.4 months).
Histological findings are shown in Table. No statistical differences were found between congenital and acquired lesions.

INTERPRETATION OF RESULTS

Although not statistically significant, progressive reduction of fibrosis with increasing number of treatments was found. This data seem to confirm that repeated BTX-AI can prevent fibrosis, reducing risk of evolution towards low compliant bladder. Slight increase in edema and inflammation is difficult to explain: it might be due to recurrent urinary tract infections in some patients.

CONCLUSIONS

As in adult population, repeated BTX-AI are not correlated to significant histological alterations in children.

	T0	T4	T5	T6
Patients (number)	36	36	25	17
EDEMA: No of pts (%)	20 (56%)	24 (67%)	19 (76%)	13 (76%)
Mild	15 (75%)	19 (79%)	19 (100%)	12 (92%)
Moderate	3 (15%)	4 (17%)	0	1 (8%)
Severe	2 (10%)	1 (4%)	0	0
P value (vs T0)*		0.47	0.12	0.23
INFLAMMATION: No of pts (%)	27 (75%)	32 (89%)	19 (76%)	15 (88%)
Mild	20 (74%)	22 (69%)	17 (89%)	13 (87%)
Moderate	5 (19%)	9 (28%)	2 (11%)	2 (13%)
Severe	2 (7%)	1 (3%)	0	0
P value (vs T0)*		0.22	1	0.47
FIBROSIS: No of pts (%)	12 (33%)	8 (22%)	8 (32%)	5 (29%)
Mild	10 (83%)	8 (100%)	8 (100%)	5 (100%)
Moderate	2 (17%)	0	0	0
Severe	0	0	0	0
P value (vs T0)*		0.43	1	1

52. SEXUALITY IN WOMEN WITH SPINA BIFIDA, A CHALLENGE TO OVERCOME

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INTRODUCTION

Spina bifida (SB) is a neural tube defect with a wide range of neurological sequelae, including motor, sensibility and continence disfunctions. Impact of this condition on sexual life may vary from irrelevant to prominent.
Our goal is to investigate the impact of SB on young women sexuality.

MATERIALS AND METHODS

An anonymous questionnaire divided in four sections (demographic data with self-awareness, sexual activity with related problems, sexual education and eventual pregnancies), addressed to female patients older than 13 years old registered to regional and national SB associations, was uploaded through a link on the associations websites.

RESULTS

There were 83 responders to the questionnaire, of which 76% (57/83) older than 30 years old. 94% (78/83) had different degree of urinary and faecal incontinence. 57% (48/83) were sexually active, with 83% (40/83) asserting that their experience was significantly influenced by SB. The major problems reported were sensibility (8%, 7/83) and continence (15%, 12/83), however 86% (71/83) patients felt pleasure during sex. Only 51% (42/83) of responders affirmed to have an appropriate sexual education. 39% (32/83) of sexually active subjects used contraceptives, especially condoms. 56% (46/83) have not approached a gynaecologist til date.

DISCUSSION

From the questionnaire it was found that young women with SB are not less interested in sexual life, contrary to what society and medical professionals tend to believe. Incontinence was found to be a highly discouraging parameter as it induces shame with consequent decrease in libido and sexual pleasure. SB is a condition which needs deep understanding regarding the consequences in everyday life, including the sexuality, and there is no consensus described so far as such regarding sexual education for SB patients. Awareness regarding safe sexual practices such as the use of condoms and other contraceptives must be given in order to improve the quality of life of people suffering from this condition and to reduce the incidence of sexually transmitted infections and unplanned pregnancies, remembering that there is a high prevalence of severe latex allergy in these patients.

CONCLUSIONS

Sexuality is an often overlooked topic in clinical practice with regards to this particular population; our study demonstrates how both patients and their clinicians do not understand and adequately apply the need for specific sex education, based on the peculiarities and needs of these patients.

53. 3D-VIRTUAL RECONSTRUCTION: USEFULNESS IN PREOPERATIVE PLANNING FOR ONCOLOGIC RENAL SURGERY IN CHILDREN

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INTRODUCTION AND AIM OF THE STUDY

Preoperative planning for surgery of complex renal masses in children can be challenging, particularly in those cases where nephron sparing surgery (NSS) is desirable. We report our experience on the use of 3D virtual reconstruction (3D-VR) for complex renal masses in children.

MATERIALS AND METHODS

Included in the study were patients with a diagnosis of a renal mass with high grade of complexity either for extension and vascular anomalies or for definition of surgical approach. DICOM data were obtained from a preoperative abdominal MRI or CT scan, submitted to a process of a 2D manual segmentation and followed by a 3D reconstruction using specialized computer software. All data were deidentified. 3D-VR were used to assess anatomy (tumor, arteries, veins, and urinary collecting structures), and help in the decisional process on nephrectomy versus NSS.

RESULTS

5 patients (3♂,1♀) were studied. Clinical data summarized in Table 1. Age range 1- 15 years. 3D reconstructions were presented and discussed at the oncologic multidisciplinary meetings. One patient underwent open right nephrectomy, two open NSS, two Robotic-Assisted NSS. Mean operative time 230 ± 48 mins (range 200-260). No intraoperative or postoperative complications occurred. The volumetric reconstruction in case 1, 3, 4 and 5 defined the relationship between tumor and healthy renal tissue, the feasibility of NSS and optimized the selective clamping strategy. In case 2, the 3D-VR made clear the extent of the mass and identified vascular anomalies.

INTERPRETATION OF RESULTS

3D-VR construction proved a useful tool in the preoperative evaluation of children with complex renal masses.

CONCLUSIONS

3D-VR Limits of the study are the reduced number of patients and the subjective nature of the evaluation. Future research and multicenter prospective studies should be aimed at improving the speed, accuracy, and automation of the segmentation process for the 3-D visualization and expanding its clinical use in pediatric oncologic surgery.

N° Patient/sex	Age (years)	Type of renal tumor	Side	Preoperative Conventional Image	Surgery	Surgical time (min)	Tumor size (cm)
1/F	4	Wilms tumor	Right	MRI/CT	RAL NSS Enucleation	210	3.2
2/M	15	Tubulocystic renal cell carcinoma	Left	MRI/CT	RAL NSS Enucleation	200	5
3/M	1	Cystic Nephroma	Left	MRI	Open Nephrectomy	240	16
4/M	3	Wilms tumor	Left (right nephroblastomatosis)	MRI	Open NSS Multiple enucleation	260	2-1.8-0.8- 5 -1.2-1
5/M	3	Wilms tumor	Right	MRI/CT	Open NSS Enucleation	240	3.2

Table 1

54. PRELIMINARY RESULTS OF TAILORED DAILY TRANSDERMAL TESTOSTERONE TREATMENT BEFORE SURGICAL REPAIR OF SEVERE HYPOSPADIAS

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INTRODUCTION AND AIM OF THE STUDY

The severity of hypospadias is considered the main predictor of the surgical outcomes. Complications could affect up to 60% of children suffering from proximal hypospadias. For this reason, several factors have been investigated. The effect of preoperative testosterone treatment is still controversial, as well as the best regimen of administration. The aim of the study was to report our preliminary experience with the use of transdermal testosterone (TDT) before severe hypospadias repair. Secondary aims were the assessment of the penile tissue response and surgical short-term outcomes.

MATERIALS AND METHODS

The design was single-centred and retrospective. The study period ranged from December 2020 to February 2023. Inclusion criteria for preoperative TDT were midshaft/proximal hypospadias with glans circumference (GC) < 14 mm or clinically relevant penile ventral curvature. Daily treatment with topical testosterone gel (2%) at a standard dose of 2 mg/day was administered for 30 to 60 days, according to the clinical response. The surgical repair was ideally performed after one-month from the interruption of TDT. Clinical records were reviewed to collect the following outcomes: penile length (PL) and GC, adverse events (painful erection, scrotal hyperpigmentation, pubic hair, skin irritation) and surgical complications. TDT administration and its clinical response was monitored by the same Paediatric Endocrinologist, as well as the surgical repairs were performed and followed-up by the same Paediatric Surgeon.

RESULTS

Ten patients (aged 2.67 ± 1.60 years) were enrolled. Six of them (60%) were proximal hypospadias. The mean length of TDT was 43 ± 15 days. The mean interval between TDT and surgery was 52 ± 23 days. A staged surgical correction was performed in five patients (50%). TIP urethroplasty was used for single-stage repair. No adverse events secondary to TDT were reported. A mean increase of 0.76 ± 0.27 cm (+37%) for PL and of 0.42 ± 0.26 cm (+ 40%) for GC were measured. After a mean follow-up of 9.9 ± 10 months, three patients (50%) with proximal hypospadias suffered from urethral fistula or glandular dehiscence. No complications were reported in mid-shaft cases. The complication rate was 30% in the overall population.

INTERPRETATION OF RESULTS

These preliminary results highlighted the feasibility of preoperative TDT. First, this regimen was well-tolerated without any adverse event or parental complain. Second, the increase of PL and GC was considered clinically relevant. Finally, the rate of surgical complications was consistent with the current literature. However, the sample size and the follow-up should be implemented to gather further evidence.

CONCLUSIONS

TDT is a non-invasive and well-accepted treatment which might positively impact on severe hypospadias repair. Further studies were needed to confirm these preliminary results.

55. EPIDEMIOLOGY AND TREATMENT OF PAEDIATRIC URINARY STONE DISEASE IN TWO LARGE-VOLUME CENTERS

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INTRODUCTION AND AIM OF THE STUDY

Paediatric stone disease is a relevant problem in clinical paediatric urology. Given the nature of the disease and the patients' population, choosing the most appropriate treatment is key and this is best accomplished in a specialized centre. The aim of this study is to describe the patients' population and the results of urological treatment of urinary stones at two referral centres.

MATERIALS AND METHODS

Data of paediatric patients evaluated at two referral centres from 2009 to 2022 were retrospectively collected. Detailed information about patients' characteristics were gathered, including family history, associated urological conditions, and presenting symptoms. For patients who underwent active treatment, data about treatment modality, complications and stone-free rate were analysed. Descriptive statistics were used to present the results.

RESULTS

354 patients were included. Median age at diagnosis was 69.5 months (IQR 25.2-125). Median age at treatment was 88.5 months (IQR 42.7-143). The size (mm) of the largest stone at the diagnosis was 9 (IQR 5-14). 56% of the patients were male and 44% female. 102 patients (30.5%) had familiarity for stone disease. 81 patients (24.3) were diagnosed under the age of 2 years, and 46 (13.8) under one year. Overall, 65 children (19.5%) had other urological conditions (VUR in 2.5%, GPU in 2.3%, POM in 1.7%, duplex system in 1.1). 216 patients underwent urological treatment of the stone disease. Specifically, ESWL was performed in 19.3%, URS in 20.8%, RIRS in 28.8%, PCNL in 18.4%; surgical treatment was carried out in 8% (including pyelolithotomy, pyeloplasty, ureterolithotomy). Intraoperative complications presented in 2% of the cases, including bleeding and urine leak, while 22 (10.8%) had early complications (more commonly fever). 19 patients (9.2%) experienced late complications. Regardless of the procedure modality, 124 patients (58.2%) were stone-free after the 1st procedure. Among the treated patients, 52 (25.4%) presented a relapse or worsening at a median follow-up of 47.5 months.

INTERPRETATION OF RESULTS

Paediatric stone disease is rather uncommon in the general population, and the presentation modalities are rather peculiar of the paediatric age, with a quarter of all patients presenting under the age of 2. Overall, retrograde endourology is the preferred treatment modality. Regardless of treatment choice, 60% of the patients are stone-free after one procedure, with the others requiring additional treatments. Long follow-up is mandatory since more than 25% of the patients will experience relapse.

CONCLUSIONS

Urolithiasis is a relevant clinical problem for paediatric urology centres. Overall, for patients requiting operative treatment, the stone-free rate after a single procedure is about 60% and the relapse rate about 25%: appropriate patients' selection for each treatment modality and long follow-up are key.

56. ROBOTIC-ASSISTED PYELOPLASTY IN CHILDREN: OUTCOMES FROM TWO TERTIARY REFERRAL CENTERS

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INTRODUCTION AND AIM OF THE STUDY

We aim to report outcomes and complications of patients (pts) treated with robot-assisted Anderson-Hynes pyeloplasty in two tertiary referral centers.

MATERIALS AND METHODS

We prospectively included all the consecutive pts treated from July 2012 to September 2021. We analyzed pts characteristics, intra-operative(op) data, postop outcomes, and follow-up planned as ultrasound (US) and clinical evaluation at 3, 6 and every 12 months. Exclusion criteria were follow-up<12 months or age >20 years. Pelvis diameter (PD) reduction was used as early marker of success.

RESULTS

142 pts matched our criteria. Pts' characteristics are listed in Table1. Da Vinci Si robot was used in 92 pts (64.7%), Da Vinci Xi in 50 (35.2%). Mean op time was 147min (55-360). In 135 pts (95.1%) the colon was medialized; in 7 (4.9%) the approach was transmesocolic (2 right side, 5 left). 55 (38.7%) presented a crossing vessel. The 3 children with urolithiasis were treated with trans-trocar intraop RIRS in 2 cases and with pyelolithotomy in 1 case. 2 (1.4%) required conversion to open surgery. Abdominal drain was placed in 45 pts (31.6%) and removed after a mean of 3.7 days (3-7). A stent was placed in 99.3% of pts and maintained a mean of 44.6 days (23-201). No other intraop complications or bleedings> 50 ml were reported. Mean length of hospital stay was 3.8 days (2-14). 5 pts (3.5%) presented Clavien-Dindo I complications (3 paralytic ileus, 2 colic pain following the removal of the ureteral stent). 7 pts (4.9%) presented Clavien-Dindo III complications (5 stent malfunctioning or displacement, 2 laparoceles).
Mean follow-up was 35.2 months (12-99). Mean postop PD was 13.8 mm (1-50). Mean reduction of the PD was 20.9 mm (-11 to 57) (57.3% (-68.8% to 98.0%) of the preopPD) ($p<0.001$). It was reduced in 135 pts (95.1%), the same in 4 (2.8%) and increased in 3 (2.1%). 2 pts (1.4%) required reintervention. The rest showed acceptable renography and did not manifest recurrent symptoms, therefore they continued the follow up.

INTERPRETATION OF RESULTS

Our results are in line with the current literature in terms of success and complications reported. The main limit of our study is the variability of the preoperative evaluation and of the follow up. We also aim to increase the number of pts.

CONCLUSIONS

Robot-assisted pyeloplasty confirms to be safe and effective in pediatric pts.

Table1- Patients' characteristics

n°	142 pts
male	86
female	56
Age (years)	9.6 (1.1 – 20)
Weight (kg)	34.8 (10-90)
Laterality	
Left	82 (57.7%)
Right	60 (42.3%)
Symptoms	77 (54.2%)
-flank pain	*48 (33.8%)*
-UTIs	*17 (11.9%)*
Asymptomatic	65 (45.7%)
Urinary tract malformations	13 (9.2%)
Urolithiasis	3 (2.1%)
Previous treatment	8 (5.6%)
Pre-stented	6 (4.2%)
Nephrosomy	2 (1.4%)
Pyeloplasty	12 (8.4%)
Renography	performed in 98 (69.0%) pts
Mean transit time (s)	353.0 (147-584)
Mean split renal function (%)	40.5 (10-57)
Mean preop pelvis diameter (PD) (mm)	34.7 (12-90)

57. PSYCHOSOCIAL AND PSYCHOSEXUAL ADJUSTMENT IN ADULT PATIENTS BORN WITH CLASSIC BLADDER EXSTROPHY: LONG-TERM OUTCOMES OF A HIGH-VOLUME TERTIARY REFERRAL CENTER.

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INTRODUCTION AND AIM OF THE STUDY

To examine long-term psychosocial and psychosexual outcomes of adult patients born with classic bladder exstrophy (BE).

MATERIALS AND METHODS

The validated Sexrelation Evaluation Schedule Assessment MOnitoring (SESAMO) questionnaire was used to assess the psychosocial and psychosexual adjustment of BE patients followed up for at least 20 years. Section I investigated items common to all patients, section II singles, section III couples. Z-scores were calculated for each item and compared in relation to patients' gender, relationship status, and the voiding technique used to empty the bladder.

RESULTS

A total of 33 (F:M 12:21; singles:couples 11:22) BE patients were enrolled in the study at a median age of 39 (32-47) years. The results of the questionnaire showed mild to moderate dysfunctions in all the items investigated, with no significant differences between the different voiding techniques used to empty the bladder. Lower z-scores were recorded for psychosexual identity (z-score:-1.282), pleasure (z-score:-0.915) and desire (z-score:-0.583); singles for relational attitude (z-score:-1.751) and imaginative eroticism (z-score:-0.806); couples for extramarital sexuality (z-score:-1.175) and sexual communication (z-score:-0.255). Women performed significantly worse than men regarding psychosexual identity, areas of pleasure, and actual masturbation, men on relational attitude and sexual intercourse.

INTERPRETATION OF RESULTS

Several psychosocial and psychosexual outcomes were affected in BE adults, regardless of the voiding technique used to empty the bladder.

CONCLUSIONS

A long-term psychosexuological follow-up is required to help them cope with their past medical experience and actual clinical condition.

58. IS THERE ANY DIFFERENCE IN THE INCIDENCE OF URINARY TRACT INFECTIONS DURING STENTING IN PATIENTS UNDERGOING PYELOPLASTY VS. HIGH-PRESSURE BALOON DILATION OF THE VESICO-URETERAL JUNCTION?

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INTRODUCTION AND AIM OF THE STUDY

Children with severe ureteropelvic junction obstruction (UPJ) and vesico-ureteral junction (VUJ) obstruction are at increased risk of urinary tract infection (UTI).
Minimally invasive approaches including pyeloplasty and high-pressure balloon dilation for megaureter are currently used worldwide and the placement of ureteral double J (DJ) stent for urinary diversion remain the standard of care after treatment.
However, every type of catheter is an ideal surface for bacterial colonization, with consequent risk of urinary tract infection (UTI).
Aim of this study was to evaluate the UTI rate in patients treated for Obstructive UPJ and VUJ with DJ placement, pointing out possible risk factors and comparing pyeloplasty with balloon dilatation.

MATERIALS AND METHODS

A retrospective review of all medical records of patients how had DJ stent placement after pyeloplasty and high-pressure balloon dilation of the VUJ for primary megaureter between November 2017 to May 2020 was performed.
The primary outcome was the incidence of urinary tract infection from the time of postoperative discharge until ureteral stent removal.
Ureteral stent dwelling time, urinary tract infection, age, gender and more than one procedure were analysed. We had two groups: group 1 pyeloplasty and group 2 balloon dilation. All patients were under antibiotic prophylaxis after the procedures until the ureteral stent removal.

RESULTS

160 patients were included. Median age was 2.3 (3 months-17 year) years; 76.3% were boys. 135 (84%) underwent pyeloplasty and 25 (16%) high pressure balloon dilatation. The median DJ dwelling time was 45 days (IQR 21-146) and was comparable between the two groups 48 and days and 45 days respectively for group 1 and group 2 (p=0.5).
Overall, 12/160 (8%) of patients required hospital admission for UTI without difference between groups, 6% Vs 12 %, p=0.4.
Patients with UTI had a lower age even if not statistically significant 2,1 vs 4,8 years old (p=0.07).
Comparing patients who had UTI to those without UTI there was no statistical difference in term of age, gender, and dwelling double J time and previous UTI.
A significantly higher incidence of UTI was observed in patients undergoing more than one procedure 25% vs 6% (p=0.02).

INTERPRETATION OF RESULTS

Indwelling ureteral stent are known to become colonized with bacterial in 90% of patients increasing the risk for symptomatic UTI. There is a cumulative risk for UTI correlated with stent dwelling time from 2% at 30 days to 9,2% at 90 days.
In our study all patients received antibiotic prophylaxis after the procedure until DJ stent removal with 8% incidence of UTI. This result question the indication for antibiotic prophylaxis in these patients.
In our study DJ stent dwelling time was not a risk factor for UTI, as suggested in literature, probably because of the short dwelling time, comparable with patients without UTI.
However, in our experience, patients undergoing more than one procedure presented a higher risk of UTI. We believe that more surgical urinary tract manipulation increase the bacterial exposition and Urinary tract may become more susceptible to bacterial colonization and infection.

CONCLUSIONS

The rate of UTI is comparable between patients undergoing pyeloplasty vs. balloon dilation and no predictive factor including age, gender and previous UTI correlated to the incidence of UTI.
Patients undergoing more than one procedure were more likely to have UTI suggesting the need of different approaches preventing UTI in these patients

59. THE VALUE OF PREOPERATIVE URODYNAMICS IN PREVENTIVE SPINAL CORD UNTETHERING SURGERY: SEEKING HELP TO PROGNOSTICATE LONG TERM VOIDING FUNCTION.

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PURPOSE

In asymptomatic tethered cord, the role of preoperative urodynamics (UDS) is still controversial as it has failed to reveal the benefit in surgical decision and expectation of urological outcome.
The main objective of this study was to reveal important preoperative UDS relevant to long term voiding pattern outcome.

METHODS

We retrospectively reviewed the data of 30 patients with asymptomatic tethered cord who underwent preventive spinal cord untethering (SCU). All patients underwent preoperative UDS and renal ultrasound. We considered the following UDS parameters : residual volume, compliance, detrusor-sphincter synergia
Postoperative voiding function was evaluated 6 months postoperatively and after the completion of toilet training (spontaneous or CIC).
Voiding pattern distribution at each period was described.
The relationship between preoperative UDS and voiding parameters and urinary continence after toilet training was assessed.

RESULTS

The mean age at preoperative UDS and SCU was 5.2 and 7.5 months respectively.Spinal lipoma was found in 81% of cases and lower lying conus in 69%.
Regarding preoperative UDS,75% of the patients presented normal residual volume, normal compliance in 86.4 % and detrusor-sphincter synergia in 94% of the cases.
Patients completed toilet training at the mean of 3,6 years.
Spontaneous voiding was noticed in 68.4% and 89.3% after 6 months from SCU and after completed toilet training.
There is a significant correlation between detrusor-sphincter synergia and spontaneous voiding after 6 months of SCU and urinary continence after toilet training.

CONCLUSION

This study try to clarify the role of preoperative UDS in asymptomatic tethered cord patients. Our data assess that preventive untethering is higly associated to spontaneous voiding after toilet training.
Only detrusor-sphincter synergia is correlated with spontaneous voiding after 6 months of SCU and urinary continence after toilet training.