SC92 Microsurgical pre-peritoneal lymphatic sparing varicocelectomy in adolescents: Results on a large series of patients

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Aim of the study: Controversy still exists regarding the most appropriate surgical management of varicocele in children and adolescents. Several options are today available ranging from sclerotherapy to laparoscopy, high and sub-inguinal open and microsurgical correction. We present our results after lymphatic sparing varicocelectomy with pre-peritoneal approach on a large series of patients.
Materials and methods: A retrospective analysis of patients who underwent pre-peritoneal lymphatic sparing varicocelectomy from 2010 onwards was performed. Surgical treatment was offered to children with grade II-III left sided varicocele. The procedure was performed under combined local and general anesthesia, without intubation. After surgical incision at mid-distance from the pubic tubercle and the iliac spine, muscles were split 2–3 cm above the internal inguinal ring and the spermatic vessels were identified and exposed. Using an operating microscope (10–15x), some lymphatic vessels were prepared and spared, and the spermatic pedicle was tied and divided. Clinical and ultrasonographic testicular characteristics, assessed at baseline and at 1- and 2-years follow-up, were considered for the analysis. Operation time (OT), post-operative complications and length of hospital stay (LOS) were also analyzed.
Results: Overall, 602 patients were included with a median age of 13.6 years (IQR: 11/15). Grade II and III varicocele were observed in 14 (2.4%) and 588 (97.6%) patients, respectively: 8 (1.3%) of these cases were relapses after previous varicocelectomy (3 after sclerotherapy; 5 after surgery); 2 (0.3%) were monorchid. At baseline, 103 (17.1%) patients complained of left scrotal pain. Mean OT was 23 ± 7 min. According to Clavien-Dindo classification system, no complications grade ≥ II were reported. Mean LOS was 4 ± 2 hours. At a mean follow-up of 27 ± 15 months, persistence/recurrence of varicocele was observed in 18 (2.9%) patients: 10 (55.5%) Grade I-II and 8 (44.5%) Grade III recurrences. Postoperative hydrocele occurred in 4 (0.6%) patients. No testicular atrophies were reported.
Discussion: According to our results, pre-peritoneal lymphatic sparing varicocelectomy is an effective treatment option in children and adolescents with varicocele, with minimal recurrences and a very low complications rate.

SC93 Prevalence and surgical management of pubic hypertrophy in hypospadias patients: Results from a high-volume surgeon

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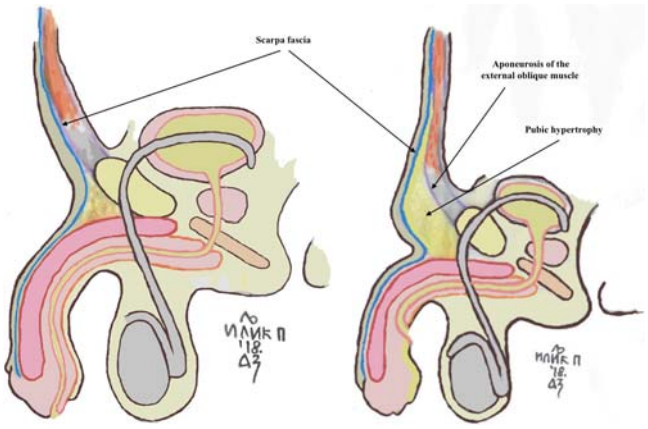
Aim of the study: Pubic hypertrophy (PH), defined as an abnormal and abundant round mass of fatty tissue located over the pubic symphysis that mimics the mons veneris, is frequently underestimated in hypospadias patients. We examined the prevalence of this condition, as well as the outcomes associated with its surgical treatment.
Materials and methods: Between Jan 2014 and Apr 2018, 266 patients were referred for hypospadias repair at our center. We treated all patients presenting PH with pubic lipectomy following precise steps. After penile degloving, we divided suspensory ligament releasing the skin and the Scarpa fascia from the body of the penis: such was made in order to get access to the suprapubic fat. The Scarpa fascia was carefully preserved in order to avoid any damage of the blood vessels and the nerves directed to the penile skin. The abundant fat was detached from the aponeurosis of the external oblique muscle and then resected. The procedure was completed with the fixation of the tunica albuginea to the periosteum of the symphysis pubis and with the fixation of the penile skin to the Buck's fascia (Fig). Urethroplasty was subsequently performed using tailored surgical techniques. Multivariable logistic regression (MLR) tested for predictors of PH. Finally, separate MLRs tested for predictors of fistula and any complications after pubic lipectomy.
Results: Of 266 hypospadias patients, 100 (37.6%) presented PH and underwent pubic lipectomy. Overall, we found that patients with PH more frequently had proximal hypospadias (44 vs. 7.8%), disorders of sex development (10 vs. 0.6%), cryptorchidism (12 vs. 2.4%), and moderate (30°-60°) or severe (>60°) penile curvature (33 vs. 4.2%). In MLR, the location of urethral meatus (proximal, Odds ratio [OR]: 10.1, $p < 0.001$) was the only significant predictor of PH. Finally, pubic lipectomy was not associated with increased risk of fistula (OR: 1.12, $p = 0.7$) or any complications (OR: 1.37, 95% CI: 0.64–2.88, $p = 0.4$) after multivariable adjustment.



Discussion: One out of 3 hypospadias patients, referred to our center, presented PH and received pubic lipectomy. This rate was higher in patients with proximal hypospadias suggesting a correlation between PH and severity of hypospadias. Noteworthy, pubic lipectomy was not associated with increased risk of fistula or any complications.

SC94 Vacuum physiotherapy after first stage buccal mucosa graft (BMG) urethroplasty in proximal hypospadias: A feasibility, safety and protocol compliance assessment study

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Aim of the study: Two-stage BMG urethroplasty represents the referral option in proximal hypospadias repair. However, after the first stage, approximately 8–13% of patients experience graft shrinkage, which prevents graft tubularization at the second stage and/or compromise the urinary stream. We aimed to assess the feasibility of vacuum physiotherapy meant to decrease graft contraction rate and hence successful tubularization.
Materials and methods: Between Jan 2014 and May 2018, we enrolled 59 two-stage BMG urethroplasties performed at our referral center. After first stage, we recommended five vacuum induced erections of the penis twice a day followed by a massage of the BMG with Bepanthen® ointment, every day till second stage surgery. Parents were instructed on how to use the vacuum device and were asked to continue it until the second stage surgery. An internal, self-

administered, semiquantitative, non-validated questionnaire was designed to record parent and patient adherence to the vacuum physiotherapy and parent satisfaction. Success rate of graft tubularization and status of early (4 months) postoperative urinary stream were evaluated.
Results: Of 45/59 (76.3%), who returned the questionnaire, 77.8% followed the recommended vacuum protocol. 93.3% of parents replied that the use of the vacuum was easy or moderately easy. None of the parents interrupted the physiotherapy because of perceived difficulty or intolerability. 100% of parents would have repeated the physiotherapy, if they had to. In 58/59 (98.3%) patients, BMGs were considered favorable for tubularization and these patients underwent second stage surgery. Only one graft was considered unfavorable for tubularization. Additionally, 47/59 (80%) patients presented a powerful and straight urinary stream, four months after the second stage of surgery.
Discussion: Vacuum physiotherapy is practically feasible, safe and easy to use. Our vacuum physiotherapy protocol had high compliance rate (77.8%). Moreover, our results compared favorably (98.3%) with previous reports, where success rate of tubularization varied between 92 and 87%. Vacuum physiotherapy is an appropriate candidate for further assessment in patients undergoing two stage hypospadias repair using buccal mucosa.

SC95 Ureteral reimplantation in paediatric urology for obstructive megaureter: A comparison of robotic and open technique from a single referral center

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Aim of the study: Robotic assisted laparoscopic extravescical ureteral reimplantation (RALUR) for primary megaureter obstruction has gain popularity in the last years as an alternative approach to open surgery. Modern literature suggests that use of RALUR is increasing according to its safety and effectiveness in a better anatomical vision and its correlation with a reduction in hospitalization' length. However, there are a lack of data for what concern comparison of the two approaches. Aim of the study is to review a single centre and single surgeon experience with RALUR and to compare outcomes with the open technique.
Materials and methods: The records of all patients who underwent ureteral reimplantation at our Institute, between January 2016 and October 2018, were retrospectively collected and analysed. Inclusion criteria comprehend diagnosis of primary obstructive megaureter. Comparison was made between Group A (robotic procedure) and Group B (open approach). Preoperative, peri and postoperative data were recorded by medical doctors. Procedure success was defined as reduction of pelvis Antero Posterior Diameter (APD) at the post-operative ultrasound scan or resolution of VUR on post-operative cystourethrogram. Data were recorded in an organised chronological method in a Microsoft Excel database. The SPSS software was used for data entry and analysis. Data were tested for statistical analysis using univariate analysis.
Results: Overall, a total of 15 patients were identified and summarize in table 1. Seven (3 Males and 4 Females) belonged to Group A and eight (7 Males and 1 Female) to Group B. Bilateral disease was present in only 1 case (group B, 12.5%). Mean age at surgery was 93 months (IQR 21–206) in group A and 19 months (IQR 13–50) in group B (p 0.072). Mean weight was 24 kg (IQR 12,2–48) in group A and 14 kg (10,8–16,5) in group B (p 0,315). Median operative time was 150 minutes (IQR 110 –180) in robotic group vs 145 minutes (IQR 125–150) in open surgery (p 0,536). Median length of stay was 5 days in group A (IQR 5–6) and 7 days in group B (IQR 7–8) (p 0,001). Follow up was 20 months in group A (IQR 14–25) and 25 months in group B (IQR 14–30). Complications rate was 14,3% in group A and 12,5% in group B. Success rate was 85,7% in robotic group and 100% in patients treated with open surgery with a p value of 0,268. Only one required an endoscopic reintervention (bulking) for persisting vesical reflux with symptom.
Discussion: According to our preliminary experience, RALUR is a safe procedure and a good option for treating paediatric patients affected by primitive obstructive megaureter with comparable outcomes to the open procedure in success rate and operative time and a reduction in length of stay.

SC96 Could surgical experience of adult endourologist overcome the learning curve of retrograde intrarenal surgery in children?

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Aim of the study: With the increasing of the prevalence of pediatric urolithiasis (1–5%), retrograde intrarenal surgery (RIRS) is emerging as preferred option for the management of stones in pediatric patients. Although the principles of RIRS developed in adults can be applied in children, also expert adult endourologists feel uncomfortable to approach young patients due to long learning curve that usually is expected to be required in this particular setting. Aim of the study was to compare peri and postoperative outcomes of RIRS in pediatric and adult patients performed by a single surgeon expert in adult endourology (>500 RIRS) with no experience in pediatric urology.
Materials and methods: Data on patient characteristics of 30 consecutive patients (15 adults and 15 children) undergoing RIRS at our institution were collected prospectively from January 2016 to December 2018. All patients had undergone preoperative radiological investigations. Adult patients had CT urography. Pediatric patients had ultrasound or at least radiogram to establish localization and dimension of stones. All surgeries were performed by a single experienced adult endourologist. We evaluated peri- and post-operative features. All the data were collected by medical doctors. The SPSS software was used for data entry and analysis. Data were tested for statistical analysis using univariate analysis.
Results: Overall, 30 patients were included in the analysis and are summarized in Table 1. Mean age for the pediatric group was 11,8 years (IQR 8–16) and for the adult group was 56 years (IQR 49–58). Median stone size 121 mm2 (IQR: 100–169) in the pediatric group vs 100 mm2 (IQR:90–165) in the adult group (p = 0,653). The only differences we noticed was about preoperative JJ stent placement: it was done in 8/15 (53,3%) children and 2/15 adults (13,3%) p = 0,02. No significative differences between the two groups in terms of peri and postoperative outcomes were found. Median operative time was 60 minutes (IQR:55–80 min) in pediatric group vs 80 minutes (IQR: 63–105 minutes) in adults (p = 0,466). The most common complication was haematuria in 2/30 patients (1 children vs 1 adults) and fever 2/30 (1 pediatric patient vs 1 adult) (p = 1,00): that required antibiotic treatment (Clavien Dindo 2). Median length of stay was 1 day (IQR: 1-1days) in both groups (p = 1,00). Stone free rate was 86,7% in children and 80% in adults (p = 0,624).
Discussion: Our preliminary experience suggests that expert adult endourologist can manage successfully also pediatric cases with results comparable to adults and low complication rate.