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abstracts

libro degli Abstracts e degli Autori

Istruzioni
per la consultazione degli abstracts

A pagina 3 l'**Indice:**

L'indice delle sessioni cui afferiscono gli abstract
L' elenco degli Autori e delle loro corrispondenti sessioni

Le **sessioni** di Abstracts sono identificate con colori in base al **tipo di presentazione**:

Blu i video

Rosso le comunicazioni

Gli **abstracts** sono esposti consecutivamente nelle rispettive sessioni di presentazione, come da programma. Pertanto a seconda delle sessioni (comunicazioni o video) potete identificare l'abstract desiderato.
La responsabilità dei **testi** (linguaggio e contenuti) è esclusivamente degli Autori.

Nell' **indice degli Autori** potete trovare l'elenco degli Abstract che ciascuno ha presentato con le indicazioni delle pagine dove sono pubblicati.

Indice

Video 1-
Chirurgia ricostruttiva

#143: MANAGEMENT DEL LICHEN SCLEROSUS PENIENO : RICOSTRUZIONE DELLA CUTE PENIENA UTILIZZANDO FLAP SCROTALI

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In questo video mostriamo la gestione chirurgica del Lichen sclerosus penieno utilizzando due flap scrotali. L'intervento è stato effettuato in anestesia locale. La cute sclerotica interessata dalla patologia è stata incisa ed eliminata col Dartos sottostante. Una volta rimosso il tessuto malato si evidenzia la mancanza di cute peniena necessaria a ricoprire l'asta senza determinare un accorciamento dell'organo. Si incide lo scroto medialmente e si rimuove lo strato di Darto più profondo per conferire maggiore elasticità alla cute scrotale. Si proede ad effettuare una plastica peniena utilizzando i due flap scrotali precedentemente preparati. Un bendaggio compressivo viene lasciato per 5 giorni. Secondo la nostra esperienza l'utilizzo di flap di cute scrotale rappresenta la migliore soluzione per sostituire la cute peniena colpita dal Lichen sclerosus.

#132: URETROPLASTICA IN UN SINGOLO TEMPO CON INNESTO DI MUCOSA BUCCALE (TECNICA DI KULKARNI) NEL TRATTAMENTO DELLA STENOSI PANURETRALEA.

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In questo video mostriamo un'intervento di uretroplastica con innesto di mucosa buccale eseguita in un singolo tempo con approccio dorsale (Tecnica di Kulkarni) per una stenosi panuretrale (panuretrite steno-

sante). L'intervento viene eseguito con un'accesso perineale. Si incide ventralmente il muscolo bulbo- spongioso, la dissezione dell'uretra viene eseguita da un solo lato per cercare di preservare la vascolarizzazione. L'uretra bulbare stenotica viene incisa dorsalmente e prossimalmente fino all'esposizione di mucosa sana. Il pene viene invaginato per poter esporre tutta l'uretra peniena che viene incisa dorsalmente. Si preleva un singolo graft di mucosa buccale buccale che viene suturato dorsalmente in punti Vicryl e PDS 5.0. Si richiude l'uretra con una sutura continua in PDS 5.0. Viene inserito un catetere vescicale Foley ch16 per due settimane. Si richiude il muscolo bulbo-spongioso e l'incisione perinale. All'uroflussometria di controllo a 3 mesi il paziente presenta un QMax di 18ml/sec. L'uretroplastica in un singolo stage con mucosa buccale, secondo la nostra esperienza è la tecnica di scelta nei casi di stenosi panuretrale.

#144: URETROPLASTICA CON ANASTOMOSI BULBO-PROSTATICA IN PAZIENTE CON STENOSI DELL'URETRA POSTERIORE POST-TRAUMATICA

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In questo video mostreremo un'intervento di uretroplastica con anastomosi bulbo-prostatica in un paziente di 36 anni con stenosi dell'uretra posteriore post-traumatica (incidente d'auto). Si effettua una cistoscopia dignostica e si inserisce una guida in vescica. Si procede con un'incisione perineale. Aperuta del muscolo bulbo-spongioso. L'uretra bulbare viene separata dai corpi cavernosi e mobilizzata in modo da evitare tensione sull'anastomosi. Vengono sezionate le aderenze cicatriziali e del residuo del centro tendineo del perineo in modo tale da permettere una migliore mobilizzazione dell'uretra bulbare prossimale. Si incide l'uretra a livello del tratto membranoso e si rimuove il tessuto fibrotico cicatriziale e si spatolano i due monconi uretrali. Si procede ad anastomosi con 8 punti staccati in Vicryl 5.0 dopo aver inserito il catetere vescicale Foley ch 16 che verrà tenuto per 2 settimane.

#71: URETROPLASTICA PENIENA DI AMPLIAMENTO DORSALE SEC ASOPA CON INNESTO DI MUCOSA BUCCALE

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Il video mostra il caso di un uomo di 40 anni con due stenosi peniene, una a livello del meato ed una a livello penieno medio prossimale. Descriviamo i passaggi per confezionare un ampliamento dorsale dell'uretra peniena. Previo posizionamento di guida Sensor e dopo aver eseguito meatotomia a livello della stenosi distale, si procede con l'identificazione della stenosi peniena medio-prossimale mediante Nelaton 16ch. Incisione cutanea peniena ventrale- longitudinale. Cauto isolamento dell'uretra senza eccedere nello scollamento laterale delle pareti uretrali onde evitarne una eccessiva devascolarizzazione. Apertura ventrale dell'uretra, identificazione del lume stenotico. Incisione del piatto uretrale dorsale preparato. Lateralizzazione delle due strip uretrali avendo cura di seguire il piano anatomico tra corpi cavernosi e corpo spongioso uretrale. Ampliamento con innesto di mucosa buccale sec Asopa fissandolo ai corpi cavernosi sottostanti mediante punti quilted a ricoprire l'area di denudazione creatasi. Chiusura ventrale dell'uretra ampliata. Spongiosplastica in più strati in suture continue in Vicryl 5- 4/0. Chiusura degli strati dartoici e cutaneo. L'uretroplastica peniena di ampliamento dorsale con innesti sec. Asopa tramite approccio uretrotomico ventrale è una tecnica facile che riduce i rischi delle complicanze legate alla chirurgia con i lembi.

#142: IMPIANTO DI PROTESI PENIENA E CORPOROPLASTICA CON MULTIPLE INCISIONI DELL'ALBUGINEA NEL TRATTAMENTO DELLA MALATTIA DI LA PEYRONIE. APPROCCIO MININVASIVO PENOSCROTALE

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In questo video mostriamo una nuova tecnica per il trattamento chirurgico della malatttia di la Peyronie: multiple incisioni della tunica albuginea ed impianto di protesi peniena tricomponente utilizzando un accesso unico penoscrotale. La procedura incomincia effettuando un'erezione passiva con fisiologica per stimare la curvatura del pene. Si effettua un incisione penoscrotale, evitando il degloving penieno per esse minimamente invasivi sul fascio vascolo-nervoso. La fasca di Buck viene dissezionata insieme al Dartos e alla cuta dalla tunica albuginea, in modo da lasciare intatte le connessioni vascolari e linfatiche tra queste strutture. Si praticano multiple incisioni dell'albuginea fibrotica in modo da correggere la curvatura. Si procede quindi all'impianto di protesi peniena tricomponente dallo stesso accesso penoscrotale. La protesi viene lasciata attivata al 70% per 2 settimane per evitare la retrazione cicatriziale dell'albuginea. Secondo la nostra esperienza questa tecnica garantisce diversi vantaggi preservando maggiormente le strutture anatomica del pene.

#135: CHIRURGIA DI RIASSEGNAZIONE DEL SESSO FEMMINA-MASCHIO (FTM). FALLOPLASTICA CON LEMBO LIBERO DI GRAN DORSALE (MLD)

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In questo video vengono mostrati i primi due step della chirurgia di riassegnazione del sesso femmina- maschio (FTM) in un paziente con disforia di genere. Utilizziamo il lembo libero di gran dorsale per effettuare la ricostruzione del neofallo. Il paziente era gia stato sottoposto precedentemente a isterectomia con annesiectomia e a mastectomia bilaterale. Nel 1°intervento si procede a colpocleisi e chiusura del pavimento vaginale. Si procede a ricostruzione dello scroto utilizzando le grandi labbra e a uretroplastica prossimale. Il clitoride viene scheletrizzato e posizionato lateralmente all'uretra. Si preleva il lembo libero di gran dorsale con vasi e nervi. Questo viene anastomizzato a livello dell'arteria femorale e della vena safena.per ricostruire l'uretra distale si utilizza un graft di cute. Dopo 6 mesi viene effettuato il 2°step. Si ricostruisce l'uretra. Si rimuove il grasso in eccesso dal neofallo e lo si tubularizza donandolgi l'aspetto finale. Si procede a formazione del glande incidendo la cute distale. Vengono inserite le protesi testicolari. Nel 3° step verrà impiantata la protesi peniena.

#152: LAPAROSCOPIC VESCICOVAGINAL FISTULA REPAIR

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In this video we present a case of vesicovaginal fistula repair in a patient previously undergoing hysterectomy. The vescicovaginal fistula was treated using a laparoscopic technique and a bovine dermal matrix was used as an interposition patch over the repair.

158: ROBOTIC PYELOPLASTY IN PATIENT WITH HORSESHOE KIDNEY AND EXTRACTION OF LOWER CALYX STONES WITH A FLEXIBLE INSTRUMENT.

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61-year-old man with horseshoe kidney with bilateral hydronephrosis and complex stones in both kidneys. After CT abdomen with accurate 3D reconstruction and renal scintigraphy, the procedure is planned for the right side, which is more affected. The procedure consists of opening the renal pelvis, introduction of a flexible cystoscope with 0- tip basket for the removal of stones located in the lower calyx, difficult to manage with robotic arms. Subsequent removal of the stenotic ureteral tract and execution of pyeloplasty according to the technique Anderson-Hynes. The video shows the execution of a hard procedure due to the anatomical complexity with the use of the flexible cystoscope intracorporeally

Video 2 -
Carcinoma Renale

#120: TRANSPERITONEAL LAPAROSCOPIC RADICAL NEPHRECTOMY FOR LARGE (MORE THAN 7 CM) RENAL MASSE: IS IT AN EFFECTIVE PROCEDURE? OUR EXPERIENCE

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Laparoscopic radical nephrectomy is becoming the reference standard for treating large renal masses not amenable to nephron-sparing surgery. We present the case of a 68-year-old patient who had undergone laparoscopic radical nephrectomy for a voluminous incidental mass, 9 cm in diameter, borne by the lower pole of the left kidney. The operation lasted a total of two hours and thirty minutes, with a loss of about 200 cc of blood and two hemoglobin points (from 14,8 gr/ dL to 12,8 gr/dL. At the end of the operation, the operative piece was weighed which resulted equal to 2053 gr. At the histopathological examination, macroscopically, at the cut there is a neoformation of 8,5 cm, partly necrotic. The histopathological diagnosis was the following: papillary renal cell carcinoma, type 2 according to WHO and grade 3 according to Furhman/ ISUP (UICC classification 2010: pT2a). The patient was discharged in the week day later surgery, removing the only drainage on the second day after surgery. Our case have clearly shown that larger tumors can safely be resected with transperitoneal laparoscopic nephrectomy. Open nephrectomy for large tumors can be associated with increased morbidity and the use of LRN could minimize this increased risk. Urologists with laparoscopic experience should consider expanding their indication for LRN.

#115: "NO CLAMP" 3-D LAPAROSCOPIC TRANSPERITONEAL PARTIAL NEPHRECTOMY: CAN THE 3D VISION GUARANTEE A BETTER NEGATIVITY OF THE SURGICAL MARGINS FOR TUMORS WITH INTERMEDIATE VALUES OF R.E.N.A.L. AND PADUA SCORES? OUR EXPERIENCE

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Partial nephrectomy is considered as the first-line treatment in small renal masses, especially in T1/2 tumors. "Zero ischemia partial nephrectomy" is performed without clamping the main renal artery (in order to protect the renal parenchyma from ischemic injury), reducing the blood pressure ("controlled hypo-

tension") and increasing the intra-abdominal pressure of the pneumoperitoneum to 20 mmHg, timed to precisely coincide with excision of the tumour. In October 2020, we performed clampless Laparoscopic Partial Nephrectomy in a 68 years old male patient with a solid mass, approximately 38 x 31 mm in size, affecting the posterior side of the lower pole of the left kidney. The R.E.NAL and PADUA scores were 8p; C index value was 2,5. The tumor was resected in situ with cold scissor and Ligasure, performing a minimal dissection. The tumor bed was sutured in two layers, using a Monocryl 2-0 suture thread for the renal medulla and a Vicryl 0 suture thread for the cortex. Tumour resection time was only 7 minutes. Use of 3D Vision System in similar surgeries is safe and effective, allowing surgeon to treat renal masses even in case of complex location, with better renal function preservation and a more accurate view of the lesion margins (increasing the possibility of negative surgical margins).

#97: PURELY OFF-CLAMP ROBOT-ASSISTED PARTIAL NEPHRECTOMY FOR TOTALLY ENDOPHYTIC RENAL TUMORS: SURGICAL TECHNIQUE AND MID-TERM OUTCOMES OF A SINGLE CENTER SERIES

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We report surgical technique, perioperative, oncologic, and functional outcomes of a single center purely off- clamp robotic PN series for totally endophytic masses. Surgical steps were ICG guide to identify the mass and margins scoring, simultaneous use of two suction devices combining irrigation and suction to maintain a bloodless and clear operative field, enucleative strategy and a selective renorraphy to avoid any unintentional injury to hilar vessels. Between January 2013 and December 2020, 56 patients were treated. Median tumor diameter was 3 cm, both median PADUA and RENAL scores were 10. Median operative time was 82 minutes. Low grade Clavien complications occurred in two patients, high grade Clavien complication were observed in four patients. Positive margins were detected in one case; 2-yr recurrence-free, cancer specific and overall survival rates were 100, 100 and 98.2 %, respectively. At a median follow-up of 24 months, newly onset of CKD stage 3b occurred in 1 case. At last follow-up median eGFR was 77 ml/min, with a median eGFR percent decrease of 5.5%. Trifecta was achieved in 91% of patients. Purely off-clamp Robotic PN seems a feasible and safe surgical approach, even in totally endophytic renal tumors, providing favorable perioperative complications rate, excellent oncological outcomes, and negligible impact on renal function at mid-term follow-up.

#117: SUTURELESS PURELY OFF-CLAMP ROBOT ASSISTED PARTIAL NEPHRECTOMY

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We present our technique of sutureless purely off-clamp robotic partial nephrectomy (ocRPN) and report its surgical and functional outcomes.

Once the colon in medialized, the Gerota's fascia is incised. Regardless tumor complexity, location and size, it is directly chased and the surrounding perinephric fat excised to obtain a clear and wide surgical field. Before starting enucleation, the boundaries of the tumor are marked with cautery. Purely off-clamp enucleation in carried on mainly with blunt dissection, through the coordinated action of the prograsp forceps and the two laparoscopic suction cannulas; pulsating irrigation allows the console surgeon to identify bleeding vessels and further control them with monopolar energy. Once the tumor is excised, its bed is cauterized and the hemostasis is progressively improved. To prevent the escar from sticking on the scissor blades, monopolar energy is delivered in a quasi-contact manner and generous irrigation is essential. At the end of the surgery, inspection of the surgical field is routinely performed and hemostasis further checked.

From January 2019, 172 sutureless ocRPN were performed and trifecta rate was 85%. When compared with previous series of ocRPN with renorrapy, no differences were observed in patients' baseline characteristics and surgical outcomes. According to Kaplan Maier analisys, the sutureless approach does not affect renal function deterioration.

#103: TRANS-ARTERIAL ICG DELIVERY BEFORE PURELY OFF-CLAMP ROBOT-ASSISTED PARTIAL NEPHRECTOMY FOR TOTALLY ENDOPHYTIC RENAL TUMORS: SURGICAL TECHNIQUE AND MID-TERM OUTCOMES

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In this video we report surgical technique and mid-term outcomes of our single center series of ICG- guided purely OC RAPN. In this video we present two cases of ICG- guided OC RAPN. Between October 2017 and December 2020, 33 patients with totally endophytic renal masses were treated. Baseline, perioperative, pathologic, oncologic and functional follow-up data were collected. Median PADUA and RENAL score were 11 and 10, respectively. One patient (3%) required blood transfusion (Clavien grade 2); one patient (3%) had a post-operative paralytic ileus, which solved spontaneously. A post- operative urinary fistula occurs in 2 patients (Clavien 3), treated with JJ ureteral stent placement. Median hospital stay was 3 days. Surgical margins were negative in all cases. At a median follow-up of 24 months no recurrence was detected. Median last eGFR was 77.5 ml/min, with a median percent change of -5.5%. Only one patient experienced a newly onset of CKD stage 3b. Trifecta was achieved in 93.9% of patients. ICG preoperative marking of endophytic renal tumor represents a useful tool for a quick intraoperative identification of the mass. Thanks to the improved visualization and real-time control of resection margins during Off-clamp Robotic partial nephrectomy, complications rate was negligible, without significant renal function deterioration.

#113: SINGLE-SESSION LAPAROSCOPIC CYSTECTOMY AND NEPHROURETERECTOMY: IS IT REAL AND USEFUL CHOICE OF TREATMENT OR FICTION? OUR EXPERIENCE

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Open radical cystectomy is the gold standard for muscle-invasive bladder urothelial carcinoma. However, the reconstruction part of the operation is time-consuming and demanding. Nevertheless, patients with recurrent high grade and/or muscle invasive bladder cancer and concomitant upper urinary tract disease, for example urothelial tumors or afunctional hydronephrotic kidneys, may be candidates for simultaneous laparoscopic cystectomy and nephroureterectomy. In this way, such patients, especially when they are affected by multiple comorbidities, can benefit from the avoidance of extended laparotomy. We report our experience with simultaneous laparoscopic radical cystectomy and right nephroureterectomy in a 67 years old male patient. In March 2020, this patient with recurrent polyfocal high grade bladder cancer and an associated renal pathology (right upper tract carcinoma of 16 mm in diameter on CT scan) was treated at our institution. The right nephroureterectomy was the first part of the surgery. Then, after changing the patient's position, we performed radical cystectomy with pelvic lymph node dissection in the same session. Urinary diversion as a unilateral ureterocutaneostomy was constructed by pulling the left ureter through the hand port incision. This laparoscopic approach, first in the right antero-lateral position and then in the supine position, was technically successful without the need for conversion to open surgery.

Video 3 -
Chirurgia pelvica radicale

#88: CISTECTOMIA RADICALE VIDEOLAPAROSCOPICA NELL'ANZIANO COMORBIDE

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Il tumore vescicale muscolo-invasivo (MIBC) è una patologia tipica dell'età avanzata con età media alla diagnosi di 73 anni e 30% di nuovi casi tra 75 ed 85 anni. I pazienti anziani, specie comorbidi, vengono esclusi dalle metodiche invasive in elezione, per essere solitamente trattati con protocolli conservativi (TURB emostatica, radioterapia emostatica, embolizzazione delle arterie vescicali, posizionamento di nefrostomie, terapia del dolore). Benché tali trattamenti siano mini-invasivi, l'alto tasso di ospedalizzazione dovuto alle complicanze della malattia avanzata (macroematuria, anemizzazione, insufficienza renale, dolore oncologico, etc.) comporta elevati costi di gestione ospedaliera, unitamente ai costi umani in termini di QoL dei pazienti e dei loro familiari. Il video mostra la tecnica video-laparoscopica di cistoprostatectomia radicale e linfadenectomia locoregionale con confezionamento di ureterocutaneostomia bilaterale a canna di fucile intracorporea. La cistectomia radicale video-laparoscopica nel paziente anziano comorbide rappresenta un alternativa valida e fattibile ai trattamenti palliativi, consentendo al paziente un miglioramento della qualità della vita con basso tasso di complicanze e riduzione dei costi gestionali.

#116: NEAR-INFRARED FLUORESCENCE IMAGING WITH INTRAOPERATIVE ADMINISTRATION OF INDOCYANINE GREEN FOR LAPAROSCOPIC RADICAL PROSTATECTOMY: IS IT A USEFUL WEAPON FOR PELVIC LYMPH NODE DISSECTION? OUR EXPERIENCE

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ICG is a nontoxic water-soluble dye that fluoresces bright green when viewed under near-infrared light. It is strongly used in robotic surgery. To date, bilateral pelvic lymph node dissection (PLND) represents the most accurate staging procedure for the detection of lymph node invasion in prostate cancer. Intraoperative lymphatic mapping with ICG represents an absolute novelty in the urological laparoscopy. In November 2020, during a laparoscopic radical prostatectomy with pelvic lymphadenectomy, we injected ICG in the prostatic tissue of the patient transrectally through ultrasound identification of the organ. A dedicated la-

paroscopic high-definition camera system was used. Soon after ICG injection, the lymphatic vessels were identified in the pelvic cavity as fluorescent linear structures running side by side to the iliac vessels. Surgical dissection was therefore performed; in lymph node dissection of prostate cancer, ICG has a high detection rate, although its specificity to predict LN invasion remains poor. In our case, the pathological examination did not demonstrate an involvement of the pelvic lymph nodes; however, this imaging system has allowed us to remove the main lymphatic networks involved in the drainage of the gland (thus ensuring an accurate staging of the disease), with the possibility at the same time to recognize any serious damage to the lymphatic vessels during dissection.

#96: NERVE-SPARING ROBOT-ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL NEOBLADDER IN MALE PATIENTS: SURGICAL TECHNIQUE, PERIOPERATIVE, ONCOLOGIC AND FUNCTIONAL OUTCOMES OF A SINGLE CENTER SERIES

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We reported surgical technique, perioperative, oncologic and functional outcomes of our series of Nerve- sparing Robot-assisted radical cystectomy (RARC) with intracorporeal neobladder (iN) in male. Key surgical steps are: isolation of the ureters; preparation of Douglas space and athermal isolation of seminal vesicles; development of posterior intrafascial dissection plane, endopelvic fascia incision and antegrade intrafascial dissection of neurovascular bundles up to prostatic apex. Finally, intracorporeal Padua ileal neobladder was performed. Baseline demographic, clinical, perioperative, oncologic and functional data were reported. Overall, 17 male patients underwent nerve sparing RARC with iN between February 2017 and January 2020. Low grade Clavien complications occurred in 5 patients (29.4%), while high grade complications were not observed. At a median follow-up of 21 months, DFS, CSS and OS were 82.3%, 94.1% and 94.1%, respectively. Concerning functional outcomes, median last eGFR was 73 ml/min, with one case of new onset of CKD stage 3b. One-year day-time and night-time continence recovery probabilities, were 100% and 80.1%, respectively. Erectile function returned to normal in 76.4 % of patients, with a median Post-operative IIEF-5 score of 21. In select population, nerve-sparing RARC-iN can be offered to male patients motivated to preserve erectile function, as an oncologically safe procedure, associated with favorable functional outcomes.

Comunicazioni 1 - Andrologia e Chirurgia Ricostruttiva

#43: THE IMPACT ON CORPOREAL LENGTH PRESERVATION OF IMMEDIATE SALVAGE SURGERY IN PATIENTS WITH PENILE IMPLANT INFECTION. A SINGLE CENTER ANALYSIS

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Objective

Infections are the most common complications of penile prosthesis implantation and are commonly treated with antibiotics and the explantation of the prosthesis (1-2). According to the literature, the incidence of infection following first implant is up to 3%. Unfortunately, in cases of redo surgery, the infection rate can reach as high as 18%. As a consequence, not all patients underwent simultaneous removal/implant of the penile prosthesis. The aim of this study was to evaluate the impact on corporeal length preservation of immediate salvage surgery in patients with penile implant infection.

Materials and Methods

In this retrospective study we enrolled 16 patients who underwent penile prosthesis explantation due to infection from January 2017 to September 2020. 4 out of 16 patients (25%) underwent the first surgery at our hospital. 9 out of 16 patients (56.25%) underwent immediate re-implantation of a new prosthesis (Group A) while 7 out of 16 patients (43.75%) underwent deferred re-implantation of the device due to personal choice of the patient or due to fear and anxiety of COVID-19 pandemic (Group B) (3). We compared corporal cavernosa length before and after immediate salvage or delayed reimplantation. Patients' satisfaction after penile prosthesis implantation was assessed using a 37-item version of the QoLSPP (Quality of Life and Sexuality with Penile Prosthesis) (4). Mean values with standard deviations (±SD) were computed and reported for all items. Student-t test was used to compare the statistical significance of differences in means. A p-value ≤ 0.05 was considered statistically significant.

Results

No significant differences were detected among the two groups regarding patient age, diabetes, body mass index, bacterial species and other baseline and demographics characteristics (p>0.05). Group B patients underwent penile prosthesis implantation 8.43±4.96 months after the explantation. All salvage cases were successful and no major complications occurred. The mean reduction of corporal cavernosa length was 0.61±0.21cm for Group A and 1.77±0.64cm for Group B (p=0.0002), respectively. Interestingly, no significant differences were found among the two groups according to QoLSPP questionnaires (four domains: functional, personal, relational, and social) (p=0.4188).

Discussions

Penile prosthesis implantation is often the surgical treatment of choice for men with refractory erectile dysfunction (ED) (5). Penile prosthesis infection is the most significant complication. Moreover, it is associated to postoperative morbidity, increased health care costs, and psychological stress for the patient. Other complications include hematoma formation, floppy glans, penile deformity, cavernosal crossover, proximal and distal corporal perforation, urethral injury, erosion, and glandular problems. Infected penile prosthesis generally requires explantation and reimplantation. Early reimplantation is often technically feasible. In our experience, we detected a significantly reduction in corpora length in the group of patients in which the re- implantation was deferred. However, the clinical importance of this finding is unclear because the satisfaction of these patients remains high. This study has several limitations. First, the retrospective nature of the study. Furthermore, the small cohort of patients and short-term functional data may also affect the results.

Conclusion

Our data suggested that, when feasible, salvage surgery should be offered to patients with penile implant infection. However, the effect on quality of life remains unclear. Counselling plays a critical role in these patients.

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#51: TIME DELAYS IN TREATMENT OF SPERMATIC CORD TORSION. THE POTENTIAL IMPACT OF COVID-19 PANDEMIC

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Objective

Testicular torsion occurs when a testicle rotates, twisting the spermatic cord that brings blood to the scrotum. It is a painful and very serious condition and affects 3.8 per 100,000 males younger than 18 years annually (1). Despite this, it can occur at any age. Sign and symptoms of testicular torsion include: severe pain and swelling of the scrotum, abdominal pain, nausea and vomiting, fever and lower urinary tract

symptoms. The clinical examination usually reveals a testicle that's positioned higher than normal or at an unusual angle. Scrotal ultrasound helps in confirming the diagnosis. Despite this, surgical scrotal exploration remain the gold standard in both the diagnosis and treatment of testicular torsion. Delayed treatment increase the risk of orchiectomy and may promote damage to fertility. We aimed to evaluate the factors associated with a delay in surgery of patients with a testicular torsion.

Materials and Methods

From September 2019 to December 2020, 28 patients with testicular torsion reached our Emergency Department. The patients underwent surgical exploration, spermatic cord derotation and thermal shock using hot and cold water. All data were collected in a prospectively maintained database and retrospectively analyzed. Descriptive statistics of categorical variables focused on frequencies and proportions. Mean values with standard deviations (±SD) were computed and reported for continuous variables.

Results

The mean age of patients was 18.61±3.27 years. The average time from presentation to theatre was 242.86±125.96 minutes. Delay in scrotal exploration >6 hours increased the risk of orchiectomy (6 patients, 100%). 2 out of 4 patients (50%) in which the waiting time for surgery was 5 hours needed orchiectomy. A surgical exploration performed within 4 hours from clinical presentation guaranteed 44.4% (8 out 18 patients) of testicular savage. Reasons for surgical delay (5 and 6 hours) were: transfer from peripheral hospital (1 patients), misdiagnosis (2 patients), fear of contagion regarding COVID-19 infection (3 patients) and representation after manual detorsion of testis (2 patients).

Discussions

Scrotal exploration is considered the gold standard treatment for torsion of the spermatic cord (2). Early diagnosis and immediate surgery are required in order to save the testis and preserve normal function. Literature data demonstrated that testicular function after testicular torsion can be impaired. Jacobsen FM et al. (2020) (3) demonstrated that the endocrine function of the testes seems not compromised while semen quality is more frequently impaired. Manual detorsion of testes can be also performed after the diagnosis of testicular torsion. This maneuver can immediately decrease the ischemia time. Despite this all patients should undergo also prompt scrotal exploration and testicular fixation. In our experience, two patients returned at the Emergency Department after manual detorsion of testis for a recurrent torsion during the first 24 hours. Moreover, special attention should be paid to differential diagnosis with inflammatory conditions of the testis like epididymitis. Finally, the COVID-19 pandemic has caused significant reduction to first care due to the fear of a greater risk of contagion regarding COVID-19 infection (4) (5).

Conclusion

Delay in management of urological emergency is a globally recognized phenomenon. During the last year, COVID-19 pandemic contributed to significantly higher rates of orchiectomy for spermatic cord torsion. Increasing adolescents' knowledge of this condition could help to not neglet the testicular pain.

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#45: SURGICAL TREATMENT OF GUNSHOT WOUNDS TO THE MALE GENITALIA. A SINGLE INSTITUTE EXPERIENCE

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Objective

Genital injuries are an uncommon type of trauma. In Italy, gunshot wounds (GSWs) to the male genitalia are less common than blunt injuries (1). GSWs can determine vascular and internal organ lesions. Moreover, sexual dysfunction and changes in endocrine, psychological and relationship status of the patients have been described. We reported our experience in management of GSWs to the male genitalia.

Materials and Methods

We retrospectively reviewed the records of all patients who were admitted to our emergency department for a GSWs to the external genitalia from 2010 to 2020. 6 patients had a scrotal injury while 2 patients experienced a concomitant penile injury.

Results

All patients were initially managed by standard trauma protocols and underwent ultrasonography and Computed Tomography-scan in order to detect associated injuries. On presentation, three patients were clinically instable and were transfused for severe anemia. By protocol, all patients underwent surgical exploration to determine the extent of testicular damage, to debride necrotic tissues, and to control bleeding. Of the injured testicles, five (83%) could not be salvaged and required orchiectomy, while one (17%) was repaired. The two patients with concomitant penile injuries where managed with a suture of the corpora cavernosa. In one case, the penile urethra was involved by the trauma and a termino-terminal anastomosis on Foley catheter was performed. In three cases, we used a skin graft to manage the loss of substance with functional and cosmetically acceptable results. In one case, the intraoperative findings showed an active bleeding from the left testicular artery at the level of superficial inguinal ring. Dartos fascia and tunica vaginalis were thickened and testis was ischemic but not directly injured by GSW (2). Postoperative complications occurred in one patient that was re-admitted for late haematoma evacuation.

Discussions

There are only a few studies about the incidence, clinical characteristics, management and outcomes of GSWs because few institutions have the volume to report their experience. GSWs to the male genitalia, and their sequelae, can affect patients of any age or background and are frequently life-threatening, in particular when a vascular injury occurred. Surgical exploration should be promptly performed in all cases, except for the most insignificant and superficial wounds. Jay S et al, in a series of 97 patients, reported that scrotal exploration was performed in 91 (94%) patients while six (6%) patients were treated nonoperatively (3). Spermatogenesis can be impaired by unilateral orchiectomy. Jacobsen et al demonstrated that initial damage on spermatogenesis recovered during the first year after orchiectomy, especially if baseline serum FSH is normal (4). Salvage of viable testicular tissue may maintain endocrine function and provide psychological benefit of preserving the native testicle.

In our experience, penile trauma is a rare event. The two patients with concomitant penile injuries underwent low-grade erectile dysfunction and penile curvature. We did not notice consequences on the urination like urethral strictures.

Finally, we emphasize that the impact on functional and aesthetic aspects is crucial. Many injured patients experienced negative psychological responses such as helplessness, humiliation and frustration. The involvement of the psychologist in the management of these patients is mandatory.

Conclusion

Our single institute experience confirms that most patients with GSWs to the male genitalia should undergo immediate surgical exploration. Select patients with superficial scrotal or penile injuries may undergo conservative management with minimal morbidity.

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#67: LONG-TERM FOLLOWUP OF TWO-SIDED DORSAL PLUS VENTRAL ORAL GRAFT BULBAR URETHROPLASTY: SINGLE CENTER EXPERIENCE ON 216 PATIENTS

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Objective

Bulbar urethral strictures can be carried out using various reconstructive techniques [1-4]. Traditional transecting anastomotic urethroplasty and then non transecting and oral graft patch urethroplasty [3-7] have been widely described [8-10]. Unfortunately procedures augmenting the preserved urethral plate by using one-side grafts might be unable to provide an adequate lumen in very tight strictures [11-13]. In 2008 a non transecting two-sided dorsal plus ventral oral graft urethroplasty has been described [14].
The aim of the present study is to extend our previously published short-term follow-up [14, 15], by reporting a long-term follow-up in a wide series of patients. To our knowledge, this is the study on two-sided dorsal plus ventral oral graft bulbar urethroplasty with the longest follow-up and the largest series of patients. Furthermore, we have investigated which factors might influence long-term outcome and deterioration of the success rate.

Materials and Methods

A descriptive retrospective study was conducted on 216 patients undergone dorsal plus ventral graft (DVOG) urethroplasty for bulbar strictures between 2002 and 2018 in a single high-volume center by a single surgeon (EP). Exclusion criteria were penile or panurethral strictures, obliterative traumatic strictures, lichen sclerosus, and failed hypospadias. The study was approved by the local Ethics Committee and all patients signed a dedicated informed consent. After DVOG a 16 Fr silicone Foley catheter was left in situ for 3 weeks and then removed after voiding cystourethrography (VCU). The oral graft was harvested from the cheek and the donor site closed with 4-0 polyglactin interrupted stitches or running suture. Followup assessment included uroflowmetry and urine culture every 4 months in first postoperative year and annually thereafter. Urethrography and urethroscopy were performed in patients presenting with obstructive symptoms or urinary peak flow (Qmax) less than 14 mL/s. The primary outcome measure was stricture recurrence after DVOG. Clinical outcome was considered a failure when any postoperative procedure was needed, including dilatation Continuous variables were described using median and interquartile range (IQR) value whilst categorical variables were reported using frequency and percentage. Statistical analysis was performed with STATA statistical software package (v.14), two-sided $p<0.05$ was considered to be statistically significant. Non- parametric test, Kruskal-Wallis and univariate and multivariate logistic regression analysis with relevant covariates for success predictors were performed.

Results

A total of 216 patients were enrolled in the present study according to the inclusion and exclusion criteria. Data on the stricture etiology, previous treatments, stricture length and preoperative flow were recorded for all patients. Mean stricture length was 2 (IQR 2-3) cm, but in failure group a significant longer stricture were reported (mean 3cm – IQR 2-4) compared to success patients ($p=0.0009$). Regarding preoperative

urinary flow (Qmax), no significant difference was found between the two groups (p=0.12), the mean preoperative value was 6 (IQR 3-8) mL/s. The median available follow-up is 98 (IQR 41-131) months. Overall, 188 patients (87%) were considered successful and 28 as failures (13%). Mean postoperative Qmax was 25 mL/s (IQR 17- 32) with a predictable and significant higher rate in the success group (p=0.0001). Overall, mean length of the dorsal graft augmentation was 2 cm (range: 1.5-2) and mean length of the ventral graft augmentation was 4 cm (range: 3-4). Regarding the oral harvesting one patient reported a persistent discomforting scar at the check. With reference to timing of stricture recurrence, it was found that failure occurred more often during the first 3 years of follow up (50%) and this rate increased up to 78.4% 7 years after the procedure. Median time to failure was 37 (IQR 13-78) months. According to logistic regression results, stricture length <1.5cm and the absence of previous treatments resulted as independent success predictors for DVOG (respectively p-value=0.04 and p-value=0.02). Age, preoperative flow and stricture etiology were not significant predictors of surgical outcome.

Discussions

Traditionally, short bulbar strictures are treated by transecting anastomotic urethroplasty, while longer strictures are usually repaired by oral patch graft urethroplasty [3]. Some data reported how transecting procedures might impair sexual function as a consequence of the vascular damage and urethral shortening, [2, 8, 9] therefore patch grafting without transecting procedures have become more common[7-10, 12]. On the other hand, one-side graft procedures augmenting the preserved urethral plate might be unable to provide an adequate lumen in very tight strictures [11, 12]. In this context, new non transecting and urethra-sparing techniques have been promoted. [10-16] In 2008 the two-sided DVOG urethroplasty was introduced [14]. DVOG consists of a semi-circumferential mucosal reconstruction, circumferential in some cases, but with the advantage of maintaining the total coverage of the spongiosum and avoiding the collapse of the traditional tubular repairs. Another advantage is that the technique is suitable to treat very narrow strictures focally or for longer sections. Furthermore, the double incision of the urethral plate allows to remove part of the scarred tissues but preserving enough spongiosum to support the grafts.
In our first report with DVOG we reported 89.6% of success at short-term follow-up (mean 22 months). In the present study, our procedure has confirmed to maintain over time a high success rate (87%) at long-term follow up (median 98months). The limitation of our survey is that it is a retrospective single centre experience where all the procedure were performed by the same surgeon (EP) who originally described this technique. Multicentre experiences from different centres and surgeons should be performed to confirm our data and support this technique as one of the possible options for the management of bulbar strictures.

Conclusion

In patients with tight bulbar strictures, after long-term follow-up in our wide series, the two-sided dorsal plus ventral oral graft bulbar urethroplasty showed a high success rate. Stricture length <1.5cm and the absence of previous treatments resulted as independent success predictors.

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#68: NON-TRANSECTING DORSAL MUCOSAL ANASTOMOSIS PLUS VENTRAL ORAL GRAFT FOR THE TREATMENT OF BULBAR STRICTURES

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Objective

Traditionally transecting anastomotic techniques have represented the preferred treatment for short bulbar strictures while longer strictures are repaired by oral graft urethroplasty. [1-4] The risk of complications due to the impairment of the spongiosum vascularity or to the urethral shortening after transecting techniques has led to extend the grafting procedures even to the short strictures [4]. However, graft urethroplasties could be insufficient to augment adequately strictures with a particularly narrow area. Furthermore, dorsal or ventral placement of the graft and dorsal or ventral urethrotomy approach has become a contentious issue. [5-7] Recently Andrich proposed a new anastomotic technique which allows the stricture excision without spongiosum-transecting and the augmentation of the reconstructed urethral plate with a dorsal oral graft. The Authors used a dorsal urethrotomy approach. [8] We report our experience with the Non-Transecting dorsal mucosal Anastomosis plus Ventral Oral Grafting (NTAVOG) urethroplasty using a ventral urethrotomy approach.

Materials and Methods

A series of 68 patients with bulbar strictures who underwent NTAVOG urethroplasty using a ventral urethrotomy approach among January 2012 and January 2019 was retrospectively reviewed. The study was conducted in accordance with the Standards of Good Clinical Practice and the Declaration of Helsinki and all patients signed a dedicated written informed consent. The exclusion criteria were penile or panurethral strictures, lichen sclerosus, and failed hypospadias. Preoperative evaluation included clinical history, physical examination, urine culture, uroflowmetry, retrograde-voiding cystourethrography (R-VCU), and urethroscopy. The surgical procedure started with the placement of a floppy-tipped hydrophilic 3Fr guidewire across the stricture. Methylene blue is injected into the urethra to facilitate the identification of the lumen once the stricturotomy was performed. An inverted-Y perineal incision was carried out and the bulbospongiosus muscles were separated, exposing the bulbar urethra. A 16Fr Foley catheter was passed up the urethra to identify the distal end of the stricture and the ventral stricturotomy was performed by cutting onto its tip. Once the urethral lumen was identified, the stricturotomy is extended proximally and distally into normal calibre urethra then NTAVOG procedure was performed. The scarred mucosa and the scarred portion of the spongiosum in the strictured tract were excised, leaving intact most of the underlying well vascularised spongiosum. The proximal and distal mucosal edges were mobilized for 1 cm and then anastomosed in an end-to-end fashion using interrupted 5/0 Vicryl®sutures. Finally, the repaired urethral plate is ventrally augmented with an OG. At the end the OG was covered by the preserved spongiosum, closed in multilayer sutures. A 16 Fr silicone Foley catheter was left in place for 3 weeks when a VCU was performed

upon catheter removal.
Follow- up assessment included uroflowmetry, postvoid residual urine evaluation every 4 months in the first year and annually thereafter. Clinical outcome was considered a failure when any postoperative procedure was need, including dilatation. Postoperative sexual disorders were investigated 12 months postoperatively, through validated questionnaire, [9-10], delivered by mail to sexually active patients.

Results

Patients have been subdivided in two groups according to the surgical result (Success 82.4% vs Failure 17.6) after a mean follow up of 58 months(IQR38-63). Stricture recurrences developed on average within 26 months(IQR14-33) after surgery. No significant differences were detected in terms of age, stricture etiology and preoperative flow (p- value>0.05). Considering the previous treatments, there were no significant differences in between the 2 groups for single or multiple procedures performed (p-value>0.05). Median stricture length was 1cm(IQR1- 1.5) and no significant difference in between the 2 groups was recorded (p-value=0.34). Neither major intraoperative complications nor early postoperative complications, such as wound infections, hematomas, bleeding were recorded. Considering the late postoperative complication, in 5 cases(7.3%), at the VCU following catheter removal at 3 weeks, specifically 4 cases(7.1%) in the success group and 1case(8.3%) in the failure one. All fistulas resolved spontaneously with a 14 Fr catheter for two additional weeks.
Considering functional result, significant difference in-between groups was detected (p-value=0.001) in median postoperative urinary flow. In the success group the median postoperative Qmax was 20mL/s(IQR15– 27), while in the failure group the median postoperative Qmax was 14.5mL/s(IQR10–15). Among the covariates (age, stricture length, previous treatments, suprapubic catheter, preoperative urinary flow, stricture aetiology) analysed by univariate and multivariate logistic regression tests, no predictive factor for the success of the surgical procedure have been identified in our series (p-value>0.05). A postoperative urinary flow lower than 14 mL/s resulted as a predictive factor for failure in our series (p-value=0.005 at the univariate and p-value=0.01 at the multivariate analysis). All of 53 preoperatively sexually active patients reported no postoperative erectile impairment and all were satisfied with their sexual life.

Discussions

The optimal technique for bulbar urethral strictures repair should guarantee good urinary and sexual outcomes. Traditional transecting anastomotic techniques have been considered the gold standard for many years for short bulbar strictures[1-4, 11, 12] but a risk of sexual complications which may be related to the urethral shortening and to vascular injury in the spongiosum distally to the transection has been described[11,12]. Following this risk, patch graft urethroplasty has become more common.[13,14].
Different options have been suggested: one-side patch grafting[1-4,14] two-sided dorsal plus ventral grafting and the new anastomotic technique spongiosum preserving[8, 15-16]. This new technique allows the stricture excision without transecting the spongiosum and the augmentation of the reconstructed urethral plate with OG using a dorsal approach to the urethra. The rationale is that some strictures are not associated with full- thickness spongiofibrosis, thereby making complete section of the urethra unnecessary. Moreover, the feasibility to reconfigure the urethral plate after the short excision of the scarred mucosa and mucosal mobilization of the two urethral stumps could give the further advantage in reducing the lenght of needed OG. Conversely to transecting techniques[16] NTAVOG technique showed no postoperative erectile impairment or overall dissatisfaction regarding sexual life.
Larger series with longer follow up are necessary to establish whether non-transecting techniques represent an alternative to traditional anastomotic techniques or simple grafting augmentation for the treatment of tight bulbar stritures.

Conclusion

NTAVOG urethroplasty seems a valid technique that offers the possibility of performing a wide urethral enlargement by preserving the spongiosum and providing good urinary and sexual outcomes.

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#78: THE ROUTINE USE OF SONOGRAPHY IN THE ANDROLOGY UNIT. OUR EXPERIENCE WITH INFERTILE PATIENTS

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Objective

Ultrasonography (US) is a non-invasive, real-time, highly sensitive and low-cost diagnostic tool, currently used in all clinical applications. In our Andrology Unit, we routinely perform a scrotal US in all patients during the first visit. Scrotal US allows the andrologist to assess in a few minutes the volume and the anatomy of the testes and extratesticular structures [1]. Testicular volume is an index of male fertility [2] and it is closely associated to sperm and hormonal parameters. Moreover, Color and spectral Doppler ultrasound have a sensitivity of 97% and specificity of 94% to diagnose varicocele, the most common correctable cause of male infertility [3] [4]. US can detect epididymis dilatation, suggestive of male genital tract obstruction, while calcifications and increased vascularity to Color Doppler flow imaging may indicate a chronic infective epididymitis. Scrotal and transrectal ultrasound (TRUS) are useful in detecting congenital absence of vas deferens, which may be associated with epididymis, seminal vesicles or kidney abnormalities [5]. The aim of this study was to evaluate the role of scrotal US in detecting testicular diseases that may be missed during the initial assessment.

Materials and Methods

We retrospectively analysed the data 113 patients naïve for andrological visit who came to our andrology unit for infertility from January to December 2020. All of these patients had never performed a scrotal US and/or hormone screening before. All testicular ultrasound examinations were performed by two trained physicians with the same type of ultrasound equipment (GE Healthcare: LOGIQ E9), with a linear high-frequency small- parts transducer 7.5 MHz. All included patients underwent native B-mode and Color Doppler; in selected patients with suspicious lesions, we performed Contrast-Enhanced Ultrasound (CEUS) scans and shear wave elastography (SWE). All study data were gathered according to the principles expressed in the Declaration of Helsinki/Edinburgh 2002. Oral and written informed consent of all patients were given before (CEUS) examination.

Results

113 patients were included in the study. Multiparametric ultrasonographic examination was performed in 10 (8.85%) patients without the occurrence of any adverse effects. The mean age of the patients was 41.2 years (range: 35 to 47 years). In 41 patients (36.28%), we found an high grade varicocele (grade 4 to 5 of

Sarteschi classification). 6 patients (5.31%) showed a noticeable reduction of intraparenchymal vascularization of testis, probably related to previous relapsing sub-torsions. Moreover, in 3 cases (2.65%) we noticed bilaterally hypotrophic testes with diffuse microlithiasis (so-called "starry sky" appearance). Interestingly, we found a 39-year-old patient with undiagnosed monolateral cryptorchidism. In another case, SWE and CEUS detected a suspicious non-palpable testicular lesion. This patient underwent explorative inguinotomy and extemporaneous histological examination confirmed the diagnosis of seminoma.

Discussions

Infertility is defined as the inability to achieve pregnancy after regular and unprotected sexual intercourses for one year. This condition affects about 15-20% of the reproductive age range population. The male factor accounts for up to 40-60% in couple infertility [6] [7]. Moreover, several studies reported that infertile men are at an elevated risk to develop genitourinary malignancies such as testicular and prostate cancer [8]. Multiparametric ultrasound (MPUS), combining conventional techniques (greyscale and colour Doppler ultrasound), ultrasound strain elastography, and contrast-enhanced ultrasound (CEUS), has been successfully used in the assessment of adult scrotal pathology and provided additional informations on the testicular and extratesticular structures [9]. The main limitation of the present study is the retrospective study design. Moreover, US is an operator dependent technique and its results depend on the experience of the physician. However, the excellent safety profile, the lower financial costs and morbidity of US and of MPUS in comparison with more elaborate imaging techniques like Magnetic Resonance Imaging (MRI) imaging of the testes is of relevance.

Conclusion

US is the first-line imaging method for the evaluation of scrotal pathology. In the appropriate clinical indications, MPUS, in particular with CEUS, could increase operator diagnostic confidence and has the potential to influence, or even change, the diagnostic and therapeutic pathway.

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#81: LOW-INTENSITY EXTRACORPOREAL SHOCK WAVE THERAPY. LONG TERM FOLLOW UP IN ERECTILE DYSFUNCTION

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Low-intensity extracorporeal shock wave therapy (ESWT) is a novel promising method of treatment for men with erectile dysfunction (ED).(1) Whilst there is a growing evidence base for its efficacy, its use is still considered experimental by many organizations. Furthermore there is little consensus on the long term efficacy.(2) The aim of this study was to investigate 12 months follow up safety, feasibility and effectiveness of ESWT for treating men with organic vascular ED who failed to respond to oral PDE5i.

Materials and Methods

This study included 70 patients with ED of vascular origin who failed to respond to oral PDE5i. It consisted of a screening phase, a treatment phase and 12 month follow up phase. The International Index of erectile function (IIEF-5) and Erection Hardness Score (EHS) questionnaires were used to evaluate EF. All patients had an erection hardness score of 2 or less with PDE5i. The patients had 1 session of ESWT per week for 6 weeks. During each session 3000 shocks (energy density 0,009 mJ/mm2) were applied at 5 different penile areas: 3 along the penile shaft (upper, middle and lower aspects) and 2 at the left and right crura. All sessions were outpatient visits and no anesthetic was used. Patients were considered responders to ESWT whenever they showed improvement in erection parameters (IIEF-EF) and EHS 3 or greater (erection hard enough for vaginal penetration). Adverse reactions were recorded.

Results

70 patents completed the treatment and 12 month follow up. Median age was 63.6 (32-81) years and duration of ED was 21 months (6-38). The IIEF-5 score at baseline was 11.3, at 3 months 21 and at 12 months 18.1. In the first examination, the EHS improved in 68% (48/70) of patients with erection hard enough for penetration. During follow up, a gradual decrease in efficacy was observed. Younger men (aged < 45 years), short ED duration (< 1 year) and moderate ED severity responded better to ESWT. After the 12 months follow up 65% (31/48) of responders maintained efficacy parameters. No study participant reported pain or other adverse event during treatment or follow up.

Discussions

ESWT is effective in the short term even in men with severe ED who are no longer able to achieve satisfactory sexual intercourse with PDE5i medications. This study assesses the long term effect of ESWT on vasculogenic patient who respond poorly to PDE5i therapy. ESWT may be a safe and acceptable potential ED treatment with demonstrated benefits even at 12 months post treatment follow up.(3) ESWT applied to the corpora cavernosa showed a significant improvement in the quality of erections. However the response wanes gradually over time raising the possibility of prolonging therapy for better results. This is important to acknowledge in frank discussion with the patients in order to manage ongoing expectations of treatment. Nevertheless, ESWT has a good safety profile with no adverse event reported.

Conclusion

ESWT offers a treatment modality which improves erectile function with results lasting up to more than 12 months. The improvement effect diminished slightly in the final assessment. However, there is a need for large scale multicentre controlled studies with long follow up to validate our present findings.

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#82: EXTRACORPOREAL SHOCK WAVE THERAPY IN THE MANAGEMENT OF PEYRONIE'S DISEASE: INITIAL EXPERIENCE

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Peyronie's disease is an acquired condition of the connective tissue of the penis that affects 0.5-20% of the male population and is characterized by the presence of fibrotic plaques in the tunica albuginea. It can cause penile curvature / deviation, painful erections and erectile dysfunction.(1) Different treatment modalities have been proposed, of which interesting studies from the last decade investigate the potential effectiveness

of extracorporeal shock wave therapy (ESWT).(2,3,4,5) In this study we evaluate the effectiveness of ESWT using our HMT Orthogold 100 lithotripter with OE50 head for the treatment of Peyronie's disease, by monitoring modifications in the penile curvature, erectile function and penile pain in erection.

Materials and Methods

86 patients with diagnosis of penile Peyronie's disease were selected from our andrology clinic in the period between January 2018 and December 2019. All patients were selected after failure of oral medical therapy. Before and after the treatment, the penile angulation was calculated by self-photography after induced erection with a vacuum device. This also allowed the evaluation of the intensity of pain during erection, which was measured using the Wong-Baker visual one-dimensional analog pain scale, or the Facies Pain Scale (0- 10). For erectile disfunction, the IEFF-V self-assessment questionnaire (international index of erectile function: IEFF-V) was used. The HMT Orthogold 100 lithotripter was used as the lithotripsy machine. The plaque was localized by clinical palpation and clinical ultrasound. Each patient received six weekly sessions of extracorporeal shock waves (3000 strokes per treatment at an intensity of 0.15mJ/mm2) applied to the flaccid penis. Each treatment lasted for 10 minutes.

Results

All 86 patients completed the protocol. Each patient presented with at least one symptom: specifically, 56 patients reported pain during erection (with average on the visual scale between 6 and 8), 81 patients had a mean angulation of 40 degrees (range 15-60), and 40 patients presented with a mild to moderate maintenance erectile dysfunction (with a score of the IEFF-V questionnaire between the value of 10 and the value of 18). The mean disease duration was 19 months (range 4-60) and the mean follow-up was 9 months (range 6-12). Of the 56 patients who presented with pain during erection, 51 (91%) reported relief immediately after ESWT treatment (with an average reduction in the score of 2.9 on the visual pain analog scale). An improvement in angulation (greater than 5 degrees) was observed for 30 patients (37%), with an average reduction of 15 degrees. For patients with erectile dysfunction, 31 (78%) had an increased questionnaire score (greater than 4). Finally, 25 patients (31%) expressed satisfaction reporting that the plaque on self-examination was smoother.

Discussion

Tolerance to the procedure and safety proved to be excellent, in line with international statistics.(2,4,5) In our experience, ESWT, performed with HMT Orthogold 100 lithotripter head OE 50, for the treatment of Peyronie's disease has proven to be a feasible, reproducible, painless, safe and effective treatment for reducing pain during erection. It has shown a poor ability to improve the angle of curvature of the penis, confirming that shockwaves are of considerable help in treating only mild to moderate erectile dysfunction.

Conclusion

Extracorporeal shockwave therapy can be useful in the management of refractory Peyronie's disease, efficiently reducing the pain, and with some improvement in the erectile dysfunction. However, penile pain generally resolves spontaneously over time and shock wave therapy can represent a significant financial burden for patients. A multicenter randomized controlled trial with standardized methods and strict inclusion criteria regarding disease duration would be useful in determining the true efficacy of shock wave therapy in Peyronie's disease.

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#87: SPERMATIC CORD TORSION DELAYED DIAGNOSIS DURING COVID-19 LOCKDOWN

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Objective

During the first lockdown due to Covid-19 emergency in spring 2020 our hospital became the referring hospital for the surgical urological emergencies in our province. Aim of our study is to analyze the pitfalls of the organization since we had to remove one testis from 4 patients because of delayed diagnosis of testis torsion.

Materials and Methods

According to the regional organization of the hospitals to face Covid-19 emergency, from March 10th to May 18th, 2020, all the urological emergencies of our province, in patients without Covid-19 symptoms and without history of contact with positive patients, were directed to our hospital. The patient was first evaluated by a urologist at the emergency room of an hospital of this network and then transferred to our hospital, in case a surgical procedure was required. The distance between hospitals was up to 75 km, that is equivalent to approximately 1 hour driving. At the arrival to our hospital the patients were immediately treated, being all the required exams already performed and sent during the transfer. In the 69 days of the lockdown period we had to perform 4 monolateral orchiectomies out of 8 surgical procedure for testis torsion (50%). All of them because of testis necrosis due to spermatic cord torsion delayed diagnosis, 50 percent of the patients that presented a spermatic cord torsion is really an uncommon outcome. After the operations we administered a questionnaire to the patients (or to their parents, for patient not older than 18) in order to try to understand the causes of the delayed diagnosis that took to the necrosis of the testis.

Results

The average beginning of the testis pain was 37 hours (range 15 -72 hours) before the patients went to the first hospital; the average time for the evaluation at the emergency room was 42 minutes (range 15 – 60 minutes); the average time for transportation by ambulance to our hospital was 150 minutes (range 120 -180 minutes); in those cases it was not possible to perform manual restore of the blood flow and at the color doppler ultrasound scan there was no signal of venous or arterial perfusion of the painful testis; because of persistent black or hemorrhagic color 10 minutes after surgical untwist of the spermatic cord, the 4 testis were removed and orchiopexy of the unaffected testicle was performed in order to prevent recurrence. Histology finding was in all of them: “diffuse infarction of parenchyma and necrosis”. All patients referred that they delayed to go to the hospital because of the fear of the pandemic and the fear of getting infected in the hospital.

Discussions

The COVID-19 pandemic required several changes in any disease management and it may have influenced some clinical or functional aspects. In vascular related emergencies such as stroke(1), myocardial infarction(2) and spermatic cord torsion the time is the main factor for the functional outcomes.

Conclusion

According to other Authors the treatment (manual or surgical) has to restore the blood flow within 6 hours in order to have more chances to save the testis function.

Even if in those 4 cases the delay in diagnosis and treatment was due to the patient latency between the beginning of the symptoms and the entrance to the first hospital, we believe that should have been done a campaign to stress the importance of going to the so called Covid free hospital in case of important symptoms such as that related to heart attack, stroke(3) and also acute testis pain. We also believe that an improvement of the emergency medical system is also necessary to face the no-Covid disease during this pandemic period.

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Comunicazioni 2 - Calcolosi

#41: COMPARISON BETWEEN DIFFERENT DILATATION TECHNIQUES DURING MINI AND STANDARD PCNL. A SINGLE CENTER RETROSPECTIVE STUDY

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Objective

Urolithiasis is a common disease, with a lifetime prevalence rising globally in the adult population. PCNL was first described by Fernström and Johansson in 1976. The European Association of Urology (EAU) Guidelines recommend percutaneous nephrolithotomy (PCNL) as the first line of treatment for renal stones more than 20 mm in size. The "mini-PCNL" technique have gained increased popularity in recent years due to its lower morbidity and complication rates. We aimed to compare one-shot 16-F mini-PCNL (OS-16) with three different 30-F PCNL dilatation techniques: one-shot (OS-30), telescopic metallic coaxial dilation (TMD) and balloon dilation (BD).

Materials and Methods

This was a retrospective, non-randomized study. We analysed the data of 437 patients who underwent PCNL for renal stones from January 2015 to December 2019. The patients were divided in four groups; OS-16 group included 87 subjects, OS 30 106 subjects, TMD 146 subjects, BD 98 subjects, respectively. All procedures were performed under spinal anaesthesia (1). Multinomial logistic regression analysis was performed to evaluate all variables influencing the surgical approach of choice. Non-normal parameters for more than two groups were compared using Kruskal-Wallis test. Chi-square test was used to compare the statistical significance of differences in proportions. A p-value ≤ 0.05) was considered statistically significant.

Results

All groups were similar for baseline characteristics. Fluoroscopy time was significantly shorter in one-shot groups (OS-16 and OS-30) (p<0.0001). The haemoglobin drop was significantly lower in OS-16 group (p<0.0001). Nevertheless, the transfusion rate was similar in the groups (p=0.837). Postoperative morbidities (timing to nephrostomy removal, hospitalization time, VAS scale) were lower in OS-16. We found no significant differences in term of stone-free rate (p=0.964) and postoperative complications (p=0.683). Body mass-index, stone diameter and previous stone surgery were independent predictive factors associated with the choice of mini-PCNL technique.

Discussions

Currently, improvements in surgical devices innovate more safer and effective alternatives for urolithiasis management. Dehong et al. (2) demonstrated that one-shot dilation is safer and more effective than progressive dilation. Moreover, mini-PCNL was associated with significantly lower blood loss than standard PCNL (3). However, Wu et al. demonstrated that mini-PCNL was associated with higher rate of postoperative fever compared with standard PCNL (4). In our experience, we reported two cases of sepsis in OS-16F group; these patients were treated with antibiotics and they did not experienced organ failure. Interestingly, Clavien Dindo grade ≥3 complication's rate was similar among all groups. Recently, new devices such as Clear Petra nephrostomy sheath were introduced during PCNL. Clear Petra system allows continuous suction of stone fragments ensuring low intrarenal pressure and reducing infective complications (5).
This study has several limitations. First, this study was a retrospective, single center study. Moreover, all procedures were performed by a single surgical team with high experience in PCNL.

Conclusion

Our study revealed that all dilation techniques are safe and effective to treat renal stones. X-ray exposure time for patients and operators was shorter in one-shot groups. Mini-PCNL resulted in clear advances in decreasing postoperative morbidity. Multicenter randomized studies with subgroup analysis are needed to confirm these encouraging preliminary results.

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#50: INTERNALLY VALIDATION OF "R.I.R.S. SCORING SYSTEM" FOR PREDICTING STONE-FREE STATUS AND POST-OPERATIVE COMPLICATIONS OF RETROGRADE INTRARENAL SURGERY

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Objective

In the last years, several scoring systems have been developed to predict outcomes and complications after retrograde intrarenal surgery (RIRS). The most commonly used in clinical practise are the Resorlu-Unsal Stone score (RUSS), the Modified Seoul National University Renal Stone Complexity (S-ReSC) score, and the "R.I.R.S. scoring system score". Several studies showed that RIRS scoring system has an higher predictive value than RUSS and S-ReSC to predict the stone-free status (SFR) after RIRS. However, none of the

scoring systems was directly proportional to complications of RIRS. The aim of this study was to internally validate the ability of R.I.R.S. scoring system in predicting SFR and complication rate for renal stones treated by RIRS.

Materials and Methods

We retrospectively evaluated 42 patients who underwent RIRS between January 2018 and January 2020 in our Department. Patients who received multi-step procedures, patients with pelviureteric mass, musculoskeletal or renal malformation were excluded. Despite European Association of Urology Guidelines recommend percutaneous nephrolithotomy as the gold standard treatment for renal stones more than 20 mm, in our Department we performed RIRS in selected patients with stone diameter >20 mm. However, they were included in the analysis. All measurements of the R.I.R.S. scoring system [renal stone density (HU), inferior pole stone with RIPA renal infundibulopelvic angle > or < of 30°, RIL (mm) (the distance from most distal point at bottom stone-containing calix to midpoint of lip of renal pelvis) and stone burden (mm)], were obtained by computed tomography (CT). SFR was assessed at 1 month follow-up by noncontrast CT. Treatment success was defined as stone-free or clinically insignificant residual fragments (residual fragment <1 mm). All procedures were performed by the same surgical team under spinal anaesthesia. Postoperative complications were evaluated according to Clavien-Dindo (CD) classification. Yates's chi-squared ($\chi 2$) was used to compare the statistical significance of differences in proportions. Statistical significance was achieved if p-value was ≤ 0.05 (two-sides).

Results

Patients were divided in three groups according to the R.I.R.S. scoring system (Mild: 4-5 [15 patients], Moderate: 6-7-8 [14 patients]; Severe: 9-10 [13 patients]). SFR was reached in 14 (93.3%), 12 (85.7%) and 8 (61.5%) patients for "Mild", "Moderate" and "Severe" group, respectively. We found a statistically significant difference in SFR between "Moderate" and "Severe" groups (0.0322). 8 out of 42 patients (19 %) experienced post-operative complications. In "Moderate" group, we described one case of fever (> 38.0 °C) (CD I) and one case of urinary tract infection (CD II) who required prolonged antibiotic therapy. In "Severe" group, we experienced one case of severe bleeding (CDII), two cases of postoperative fever (CDII), one case of malposition of ureteral stent (CD III) and one case of urosepsis without organ failure (CD III). We found no statistically significance for post-operative complications among "Mild" and "Moderate" (p=0.4331) and "Moderate" and "Severe" (p=0.1645) groups. Conversely, a statistically difference was observed comparing "Mild" and "Severe" groups (p=0.0122).

Discussions

In the last years, with the advent of new-generation flexible ureteroscopes and new lasers, the indications for RIRS increased. Several recent reports demonstrated that RIRS has lower morbidity rate and shorter admission time compared to PCNL (2) (3). However, the role of scoring systems in predicting SFR and complication rate for renal stones treated by RIRS is still unclear. Xiao et al, in a series of 382 patients, demonstrated that R.I.R.S. scoring system could preoperatively assess treatment success after RIRS (4). Ozbek et al., in a retrospective series of 280 patients who underwent RIRS for kidney stones, reported that the R.I.R.S. scoring system had a higher predictive value than RUSS and S-ReSC to predict SFR following RIRS (5). Our data confirmed the good performance of R.I.R.S. scoring system in predicting the SFR. However, we found that this scoring system was not directly proportional to complications of RIRS. We noticed that most of the complications were of low grade. Major complications were relatively uncommon (6) and were more frequent in patients with R.I.R.S. scoring system 9-10. This study has several limitations, including the small number of patients and the potential selection bias due to its retrospective nature.

Conclusion

Our study confirmed that R.I.R.S. scoring system is helpful for patient counseling and surgeon decision-making regarding the treatment of renal stones. In fact it is associated with SFR and can preoperatively assess treatment success after single session RIRS.

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#52: COVID-19 PANDEMIC IS ASSOCIATED TO SEVERE PRESENTATIONS OF BENIGN UROLOGICAL CONDITIONS

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Objective

Restrictions to fight the spread of COVID-19 have important consequences on non-COVID-19 health care services. Particularly, the treatment of benign conditions have to be reduced. Delay in clinical management of urological benign conditions like ureteral stones can lead to an increased risk of severe complications (1). The aim of this study was to compare all patients with ureteral stones who reached our Emergency Department during the second period of COVID-19 restrictions (October-December 2020) with the same period of 2019 (2).

Materials and Methods

Data of 39 patients (20 patients of Group A [2020] and 19 patients of Group B [2019] were prospectively collected and retrospectively reviewed. The evaluation was concerned with clinical characteristics of patients and interventions performed (ureteral stent versus percutaneous nephrostomy tube). All patient underwent computed tomography of the abdomen and pelvis. Descriptive statistics of categorical variables focused on frequencies and proportions. Mean values with standard deviations (±SD) were computed and reported for all items. Yates' chi-square and Student's t-tests were used to compare the statistical significance of differences in proportions and means, respectively. Statistical significance was achieved if p-value was ≤0.05 (two-sides). Statistical analyses were performed using SPSS version 23.0 (Armonk, NY: IBM Corp.).

Results

No significantly differences were found in mean age (Group A 55.7±17.2 vs Group B 52.1 ±16.6; p=0.5105) and stone characteristics [stone side (right, Group A 40% vs Group B 32.14%; p=0.7987) and stone location (distal, Group A 20% vs Group B 21.5%; p=0.7525)] between the two groups. Maximum diameter of stone was higher in Group A but this difference did not reach statistical significance (1.61±0.52 vs 1.29±0.57; p=0.0748). WBC (white blood cell count) at admission was similar (Group A 10.49±4.3 vs Group B 9.36±3.2; p=0.3599) while C-reactive protein levels (69.25±51.16 vs 34.47±29.78; p=0.0141) and creatinine levels (1.64±0.47 vs 1.28±0.37; p=0.0118) are significantly higher in Group A. An increased rates of grade III-IV hydronephrosis at admission (65% vs 26.32; p=0.0356) and a preference for percutaneous nephrostomy tube was reported in Group A (60% vs 21.05; p=0.0319). Demand for health care occurred after 15.75±13.30 days in Group A and 4.89±2.23 days in Group B (p=0.0012). 12 out 20 patients in group A reported late admission to the hospital (≥7 days) due to the fear of COVID-19 transmission (7 patients), be suffering from COVID-19 (2 patients) and isolation restriction orders (3 patients).

Discussions

The COVID-19 pandemic has changed health system organization. Benign urological surgical procedures have been suspended and urological emergency activities during COVID- 19 pandemic are more appropriate (3) (4). Despite this, a lot of patients with unstable benign conditions did not refer to emergency

department due to the fear of COVID-19 transmission (5). Our data indicate a more severe presentation for ureteral stones during the first period of COVID-19 restriction. In this period, maximum diameter of stone resulted just slightly higher but patients experienced a more severe hydronephrosis with impaired renal function. Moreover, C-reactive protein levels were significantly higher despite WBC levels were similar. For these reasons, we preferred the placement of a percutaneous nephrostomy tube in these patients. One patient was excluded from this analysis. He reached our emergency department with acute left flank pain and hypovolemic shock. White blood cell count was 24.140 cells/mm3, C-reactive protein was 198.52 mg/L and creatinine level was 3.4 mg/dL. The CT images showed left kidney explosion associated to significant perirenal haematoma. The patient underwent extrafascial nephrectomy but he died because of a cardiac arrest 12 h after surgery probably related to severe haemorrhagic and septic shock (1).

Conclusion

The fear of a greater risk of contagion regarding COVID-19 infection can lead to severe presentation of ureteral stones. Urologists should be ready of the possible management of more severe cases in case of future restrictions for COVID-19.

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#80: ENDOUROLOGICAL MANAGEMENT OF FORGOTTEN URETERAL STENTS

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Objective

Double J–stents are widely used in urology practice, and removal of these stents can sometimes be forgotten. A well-known complication of this situation is stent encrustation, which can result in significant morbidity such as stone formation, recurrent obstruction and urinary infection. Multiple urological approaches may be needed because of encrustation and stone burden on the stent.(1,2,3) We present our experience with the management of this complication adopting different techniques.

Materials and Methods

The data of 11 patients who were treated for forgotten ureteral stents between January 2010 and December 2020 was evaluated retrospectively. Information was obtained through a retrospective study of the patients' records. The details reviewed included the indwelling time, presenting complaints, radiological and laboratory investigations, their management techniques and complications of the interventions. Urine culture, serum creatinine and white blood cell counts were evaluated in all patients. Indwelling DJs in the body, stent incrustation and associated stone burden were evaluated using non contrast enhancement stone protocol computerized tomography (CT).

If encrustation involved the lower coil of the stent, fragmentation was performed using a rigid grasper or transurethral cystolithotripsy. A retrograde ureteroscopy and intracorporeal lithotripsy with holmium laser were used for encrustation involving the stent body. The ureteroscope was advanced beside the retained stent and lithotripsy was used to fragment encrustation around the stent. Thereafter an attempt was made to retrieve the stent with the help of a ureteroscopic grasper. A plain abdominal X-ray was performed to all patients postoperatively to ensure that they became stent and stone-free.

Results

The mean patients' age was 54 years (42-78 years). Stents were left in place for a mean of 18 months (range 11-69). Out of these 12 patients, 4 had broken stent, 7 encrusted calcified stent, while one was migrated to upper ureter. The reason for the insertion of stents were urolitihiasis (no.7), reconstructive urological interventions (no.4) or for oncological disorders (no.1). Severe encrustation was observed on intrarenal (no.8) intravescical (no.3) or intraurethral (no.1) segments of stents. Renal function was preserved in all cases. Urinary tract infection was found in 5 cases. For lower coil encrustation, fragmentation by grasper and /or cystolithotripsy was attempted in 2 cases. For upper coil encrustation, retrograde rigid and flexible ureterorenoscopy was performed in 10 cases. Laser lithotripsy was performed using a Holmium laser at various power, frequencies and fiber sizes. A second session was necessary in 4 patients due to breakage of the stent at the first removal attempt, or in order to render them stone and stent free. The ureteral stent was replaced by a new one. No intraoperative complication occurred in any patient. The mean hospital stay was 2.8 days.

Discussions

Forgotten stents are observed in urological practice due to inadequate compliance by the patient or when the patient is insufficiently informed by the physician.(4) These forgotten stents can produce considerable morbidities such as haematuria, urinary tract obstruction, renal failure and recurrent urinary tract infection. Presently, there is no pre-defined algorithm for the management of the forgotten DJ stents and it depends on factors like the site of encrustion, the site of the stone burden and the function of the affected kidney and the management may often required endourological approaches and/or open surgeries.(2)

Conclusion

The combination of several surgical techniques is often necessary to solve solve ureteral stents, but the best treatment remains the prevention of this problem by providing patient education.

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#85: ENDOSCOPIC RENAL AND URETERAL LITHOTRIPSY WITHOUT URINARY DIVERSION: GAMBLING?

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Objective

Surgical management of ureteral stones has faced huge changes during the last years due to the technologic progress including the availability of thinner and flexible instrument, and the advent of laser technology. The latter allows a faster, safer and more efficient endoscopical treatment of upper tract stone disease. A ureteral catheter is usually positioned after an upper tract endoscopic stone surgery, especially in high risk patients (pregnant women, solitary kidney,transplanted kidney or renal insufficiency) or after complicated procedures (by bleeding, reno-ureteral trauma or significant residual stone burden). There is no consensus on whether a stent should be placed after a non-complicated procedure, as well as on the definition of a 'non complicated procedure'. Temporary urinary stenting (single or double-J) is commonly used after long procedures, aiming to reduce the risk of ureteral stenosis and /or renal colic. Many studies lately failed to show the benefit of stent positioning after 'non-complicated' ureteral endoscopic procedures.(1,2,3). Our retrospective study aims to compare the outcome (tolerability and complicationrate) of our endoscopic procedures, receiving or not a single-J or double J ureteral catheter.

Materials and Methods

Between December 2018 and December 2019, our team performed 242 endoscopic upper tract procedures. We retrospectively collected patients operatory and perioperatory data. The procedure was performed using either a rigid or a flexible ureteroscope, and at the end of the procedure patients received or not (NS) an internal ureteral stent: double J (DJ), single-J stent (SJ). The DJ was removed endoscopically after 2 weeks, while the SJ was removed with the urethral catheter after 24 h. Antibiotic prophylaxis was given prior to the procedure (ceftriaxone) in all patients with negative urine culture. The patients were discharged with alpha-blocker therapy (tamsulosin), and none received prolonged antibiotic therapy. The patients were followed up at 3 weeks and at 3 months. The stone free rate was evaluated with an abdominal CT scan at 3 mo. The IPPS questionnaire was used to evaluate lower urinary tract symptoms. Stent tolerability was measured by evaluating the lumbar and/or suprapubic pain using the VAS scale. Complication rate included Emergency Room access (ERA) record, hematuria, urinary tract infections (UTI) and fever.

Results

The median age of patients was 48.4 years old, with a male to female ratio of 1.7 (151:91).
Results are shown, divided by group:
DJ group: 130 cases, 32 (47%) with flexible and 98 (56%) with rigid instrument. 128 (98,5%) patients were stone free at 3 months. Stone diameter, average: 7.5 mm. Operatory time, average: 25.2 min. LUTS at 3 weeks: 85 (65%). LUTS at 3 months: 0. Pain (VAS >4) at 3 weeks: 25 (19%). ER access at 3 weeks: 25 (19%). ER access at 3 months: 5 (4%). Hematuria at 3 weeks: 13 (10%). Hematuria at 3 months: 0. Fever or UTI at 3 weeks: 25 (19%). Fever or UTI at 3 months: 9 (7%).
MJ group: 50 cases, 15 (22%) with flexible and 35 (20%) with rigid instrument. 50 (100%) patients were stone free at 3 months. Stone diameter, average: 7.1 mm. Operatory time, average: 21.1 min. LUTS at 3 weeks: 12 (24%). LUTS at 3 months: 0. Pain (VAS >4) at 3 weeks: 2 (4%). ER access at 3 weeks: 3 (6%). ER access at 3 months: 0. Hematuria at 3 weeks: 0. Hematuria at 3 months: 0. Fever or UTI at 3 weeks: 2 (4%). Fever or UTI at 3 months: 1 (2%).
NJ group: 62 cases, 21 (31%) with flexible and 41 (24%) with rigid instrument. 62 (100%) patients were stone free at 3 months. Stone diameter, average: 7.0 mm. Operatory time, average: 17.3 min. LUTS at 3 weeks: 3 (4%). LUTS at 3 months: 0. Pain (VAS >4) at 3 weeks: 0. ER access at 3 weeks: 2 (3%). ER access at 3 months: 0. Hematuria at 3 weeks: 0. Hematuria at 3 months: 0. Fever or UTI at 3 weeks: 1 (2%). Fever or UTI at 3 months: 0.

Discussions

The operatory time was shorter if no stent or SJ stent was placed.
Most of the procedures (74%) were performed using a rigid ureteroscope. Ureteric stenting rate was similar regardless of the type (rigid or flexible) of the instrument used, showing that the complexity of the procedure required the subsequent need for an indwelling stent rather than the use of a flexible device.
Only 2 (1.5%) patients in the DJ group had still stone burden at the 3 months follow up, accordingly to a more complicated operative case.
Urinary symptoms (pain, hematuria, ERA and UTI) were notably higher in the DJ compared with the SJ and NS subgroups (65%, 19%,19%, 10%, 19% versus 24%, 4%, 6%, 0%, 4% and 4%, 0%, 3%, 0%, 2%, respectively). This might be related both to the presence of the stent and to the procedure complexity.
In the DJ group, 5% had ERA within 3 months while in the same period, fever or UTI were reported in 7%, 2% and 0% in the DJ, SJ and NS respectively reflecting a more complicated case upfront.
No urinary symptoms or hematuria were reported after 3 months.

Conclusion

Whether ureteral stenting following upper tract procedures reduces peri-operative morbidity rates remains controversial. Moreover there is a growing evidence of morbidity caused by uretral stent, with reassuring data of a very low incidence of complications in 'non-stented' patients.(4)
In our opinion DJ stents should be reserved only for selected cases, of high complexity procedures (long operative time, residual stone burden, or ureteral injury). In all other cases, a SJ stent maintained

for 24 hours should be preferred in intermediate/high complexity procedures whereas simple procedures may be performed without stenting.

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#112: THE EFFICACY AND THE SAFETY OF THE J FIL STENT IN THE POST OPERATIVE ENDOSCOPIC PROCEDURES: THE EXPERIENCE ON 237 CASES

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Objective

The insertion of a drainage device into the urinary tract, after an endoscopic procedures, is sometimes controversial. Usually the double J insertion after a "simple" ureterolithotripsy is not indicated but very often in the real life the urologists leave it in situ. The use of a drainage after an endoscopic procedure is necessary to drain the urinary tract, to facilitate the passage of residual fragments, to permit a safe healing of the ureter and in two steps procedures to prepare the ureter. In some cases the insertion of a stent is the first step for the 2 staged F-URS. Despite all these advantages the presence of a double J stent is very often responsible in the patients for back pain, lower urinary tract symptoms, sexual dysfunction and social impaiment.

Materials and Methods

We evaluted the efficacy, the safety and the tolerability of a new design drainage device: the J Fil. This new designed device consists of a proximal part ring with a shaft of 16 or 8 cm and a 3 cm distal part cut in angled way where two, 14 or 22 cm, 5/0 prolene strings are connected. In a series of 237 patients who underwent to an endoscopic procedures we inserted the J Fil (228 the 16 cm and 9 the 8 cm). The series included 109 renal stones, 111 ureteral stones and 7 patients with other ureteral disorders. All the patients the insertion was obtained under fluoroscopy and an endoscopic control of the right positioning into the bladder at the end of the application. All the patients were followed up at 30 days using an KUB and ultrasound scan. The evaluated the efficacy of the J Fil as drainage and the tolerability using the USSQ. We evaluated also the best way and the problems due to the JFil removal.

Results

We reported 2 cases of the upward dislocation of the strings into the ureter during the first period of the learning curve. One case of self expulsion of the mini Jfil. One early removal of the Jfil due to fever. We removed the Jfil on 150 patients at 30-60 days of the follow up using the Perez Castro forceps without technical problems. The ultrasound renal scan revealed a reduction of the hydronephrosys in 144 of 150 patients (96%). In 6 patients we reported back pain who requested some more drugs: the kub evaluation revealed a wrong positioning of the ring of the Jfil in the upper calyx (learning curve). In 2 patients we observed very small rounded calcification of the strings. The evaluation of the USSQ showed a very low impact of the Jfil insertion on the quality of life. In particular all the patients who were stented in the past referred a "completely different and better tolerance" with the Jfil

Discussions

The stenting of the urinary tract is very common after the endourological procedures. The reasons for the

stent is largely approved among the urologists: the need for drainage and the unpained elimination of the fragments. But the presence of a Double J has a important impact on the quality of life of the patients. The Jfil seems to be effective as drainage and on the reducing the lower urinary tract symptoms associated to its presence.

Conclusion

The JFil represents a new concept of drainage of the upper urinary tract in post endourological procedures. Its capability to dilate the ureter in the distal part after 30 days could open new indications such as the preparation of the ureter in two staged flexible ureterorenoscopy and prior of a eswl session.

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#126: THE USE OF AUTOEXPANDABLE URETERAL PROSTHESYS ALLIUM FOR THE POST URETERORENOSCOPIC URETERAL STRICTURES TREATMENT

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Objective

Ureteral strictures are severe and difficult to treat disorders and significantly affects the quality of life of patients. Usually the definitive resolution required laser incision or surgical reconstructive procedures or ureteral stent replacement. In our experience we evaluate the use of new expandable ureteral stent (ALLIUM®) in the post endourological ureteral strictures as alternative to standard ureteral stent or reconstructive surgery.

Materials and Methods

From September 2013 to Febraury 2020, 146 patients were enrolled in the study and underwent to endoscopic positioning of the urinary tract autoexpandable prosthesys Allium® for different ureteral disorders. We selected 74 out of 146 patients with ureteral strictures ost-ureterolithotripsy. In this group the location and the lenght of the stenosys were evaluated , such as , the presence and the grade of hydroneprosys. In these patients an ureteral balloon dilatation was always performed and the positioning of the Allium was obtaining by both endoscopic and Xray control. The lenght and the design of the Allium depended on the location and the lenght of the strictures. All the patients were followed up by ultrasound adn KUB after 30 , 90 and 180 days. At 6 months the Allium system was removed and patients re-evaluated.

Results

In 54 out of 74 patient the Allium was removed at 6-12 months and 20 patients are still ongoing . In 44 out of 54 patients (78.5 %) we obtained the absence of hydronephosis at 6 months and the resolution of the strictures. 10 patients required reconstructive surgery for the persistence of the strictures. We reported 3 cases of stent migration and no infective complications were reported.

Discussions

The autoexpandablre ureteral prosthesys Allium® can be considered an option in the treatment of postoperative ureteral strictures with a succes rate of 78.5%. It requires, as usually, a learning curve, it has minimal post-operative complications and lower negative impact on the quality of life of patients. In our experience all the failures and complications were reported in the first period of learning curve.

Conclusion

The self expandable ureteral prosthesys should be considered an option in the treatment of emerging ureteral disorders such as the post endourological procedures. A very short learning curve is needed.

#134: LITHIASIS IN THE NEOBLADDER

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Objective

Neobladder stones are a complication of urinary diversions. It can cause symptoms such as abdominal-pelvic pain, dysuria, hematuria, urinary infections, as well as it can be completely asymptomatic and diagnosed incidentally, usually with instrumental tests. We report the case of giant lithiasis in neo-bladder.

Materials and Methods

A 78-year-old man with a neobladder came to the attention of the urologist for a sense of suprapubic weight and asthenia. On physical examination, a moderately mobile hard, palpable hypogastric mass of the apparent size of a hand was found. A catheter with post-voiding stagnation of 600 ml was placed.
The patient had undergone radical cystectomy for bladder cancer 23 years earlier with orthotopic ileal neobladder reconstruction. He had no further pathologies. His abdomen was x-rayed, which showed multiple coarse radiopaque formations indicative of stones (fig.1). Subsequently a uro-CT confirmed the presence of multiple stones of the neobladder, with a maximum diameter of 10 cm, with a maximum overall diameter of 18 cm and with a value of HU varying between 829.00 and 1323.00. The kidneys were functioning well and without signs of obstruction (fig.2). A cystotomy was performed with the removal of 20 stones in total, with a diameter ranging from 1 cm to 12 cm. The weight in grams was 1 kg the heaviest and 1,273 grams the total of all stones (fig.3-4-5-6). The neobladder suture was performed with Endo GIA tri-staple plus reinforcement stitches on the wall. A bladder catheter and drainage were placed. The surgical time was 106 minutes. During the course, the patient always remained apyretic and was canalized on the second post-operative day. A mucous secretion of the neobladder higher than usual was found, which required the use of oral acetylcysteine and the execution of washing of the bladder catheter. There were no significant changes in laboratory test values. In particular, glycaemia and renal function values remained stable. There was an increase in PCR compatible with the surgical act, without changes in white blood cells. It was not necessary to perform transfusions, in particular the hemoglobin pre-surgery was 15.4 g / dl versus 12.7 g / dl at ninth post-operative day. One month after the operation, the patient was fine and the post-voiding residue was negligible. The physico-chemical analysis of the stones showed a composition based on bicarbonates, calcium, ammonium, phosphate and magnesium. A histological examination of fragments of the neovesical wall was performed which was found to be compatible with ileal neobladder characterized by intestinal mucosa with edema, vascular congestion and chronic inflammatory infiltrate at the level of the lamina propria, without dysplasia. After 3 months of follow-up, the patient had no pain or infection and the imaging showed no recurrence of stones.

Results

See it on "Matherials and Methods"

Discussions

Stone formation in a continent reservoir is a fairly common complication. Turk et al. speak of an incidence of 5% at 5 years in patients undergoing cystectomy with continent urinary derivation, with stones up to 940 grams. It is not always possible to demonstrate whether the formation of these stones is primitive, i.e. it occurs directly in the neobladder or comes from the upper urinary tract. There are several predisposing etiological factors: the presence of infections, foreign bodies such as metal sutures, metabolic factors. The chemical composition of these stones is often the phospho-ammonium-magnease one, directing the etiology towards infectious factors. The same cannot be said of the chemical composition of the stones in normal bladders, which are various. It could be hypothesized that the typical hypotonia of a neobladder, therefore the presence of urine stagnation and the frequent need for intermittent self-catheterization, are all predisposing factors to urinary infections and therefore to the genesis of infected stones. As well as the hypocontractility of the intestinal wall compared to that of a normal detrusor, preventing the spontaneous expulsion of a stone when still small, it would favor its growth to a considerable size. In particular, our case exceeds in weight than of the stones described in the literature, reaching 1,273 grams in total with 1 Kg for the largest, having been documented up to now to be 940 grams for the heaviest (M Slojewski and all). The stones of

the neobladders are usually associated with a variable symptomatology, but never really significant. There may be a feeling of weight or abdominal pain, urinary tract infection, general malaise and asthenia. But often these are occasional findings that occur exclusively as a result of ultrasound and radiological investigations. In our clinical case the symptom was only a sense of general malaise, especially abdominal, not even realizing, partly due to age, partly due to the absence of regular medical checks, of the presence of such a palpable suprapubic mass or the presence of a significant post-voiding residue. As for the treatment, if in normal bladders, thanks to the wide diffusion of endourological techniques, we tend to prefer an endoscopic approach, in the neobladders on the contrary, almost all the cases described in the literature have been treated surgically "open". Only Macieij Kupajski et al. describe an endoscopic approach successfully conducted in the treatment of an 800-gram stone in a VIP (Paduan ileal neobladder). The comment that can be made is that if the "open" surgical approach is a procedure in which particular attention must be paid not to damage the mesenteric arterial branch serving the neobladder, the endoscopic approach in case of large stones can result incomplete and expose the patient to further surgical treatments, moreover it can cause lesions of the sphincter near the anastomosis and finally perforation of the neobladder during lithotripsy. The authors argue that the introduction of the instrument from an anterior perspective allows the sphincter to be respected and the use of pneumobalistic lithotripsy if well conducted does not involve the risk of perforation of the neobladder.
Claus et all. they also described the treatment of stones in 2 patients with neobladder through ESWL: the stones were completely shattered with the advantage of not risking endoscopically damaging the mechanisms of continence. What is certain is that when you are faced with lithiasis of a certain weight and volume, the surgical treatment, even if it is more invasive, remains even more rapidly resolving.

Conclusion

The case described confirms the fact that lithiasis is a possible complication of neobladders and that, given the frequent pauci-asymptomaticity, if an appropriate follow-up is not performed, it can remain undetected for a long time, so that it can reach considerable size, with need for major surgical therapies.

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#140: SELF-REMOVAL STENT PROPOSAL AFTER ENDOUROLOGICAL PROCEDURES DURING SARS-COV-2 EMERGENCY

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Objective

Ureteroscopy for removal of ureteral stones (URS), Retrograde Intrarenal Surgery (RIRS) and percutaneous nephrolithotomy (PCNL) often require the placement of a temporary Double J ureteral stent. The Double J stent is generally removed endoscopically without anesthesia a few days or weeks after the procedure. This procedure requires an access to the hospital and often an access to an operating room or

endoscopy room. During the Sars-Cov2 emergency, hospital admissions for patients were sometimes difficult, and the availability of operating and endoscopic theaters, as well as urologists and nurses, were reduced. Outbreaks of covid-19 infections caused by patients who came to the clinic have also been described. In order to reduce hospital accesses and possibility of contagion inside hospital, during Sars-Cov2 emergency, we proposed a new management of Double J stent removal. Thus, the aim of this study is to evaluate its feasibility and safety.

Materials and Methods

Data of patients underwent URS, RIRS and PCNL with subsequent Double J stent positioning in our center were collected. For our purposes we used a Boston Scientific Percuflex Plus Double J stents with a string in the distal portion of the stent. The string was then attached to the skin of the penis in males and of pubis in females. We proposed to all these patients self-removal of Double J stent at home one week after surgery. Patients were instructed on self removal of the stent at discharge using a "home-made" plastic model. We prospectively evaluated the efficacy of the stent self-removal and the possible complications through a phone interview after the day expected for the removal.

Results

Ten patients underwent URS, RIRS and PCNL with subsequent stent with string positioning during January 2021 at U.O.C. Urologia Ospedale Camposampiero. They were 5 males and 5 females aged between 24 and 76 years-old (mean age 53 years-old). Three patient did not accept the self-removal of the double J ureteral stent because of fear of potential little pain during the maneuver. The other seven patients, that accepted the stent self-removal, referred to have successfully removed the Double J stent by themselves. One patient removed the stent two days before the scheduled day due to accidental string pull. No complications were reported during and after the maneuver.

Discussions

In the past, self-removal of ureteral stents had already been shown to be effective with a low complication rate and lower cost than endoscopic. Inoue et al. in 2018 have described that ureteral stent removal by string after ureteroscopy significantly provides less pain than those by cystoscope for male patients. No increased complications in terms of urinary infections or accidental dislodgement in the string group were also described. Oliver et al. described that stents with extraction strings are easy for patient self-removal and can reduce the stent dwell time for patients, thus reducing the duration of morbidity and physical and financial burden to patients. However, this must be balanced against a risk of stent dislodgement and, hence, may not be a good option in all patients. In a complex period such as the one we are experiencing, during which any activity in the hospital can be a source of contagion of Sars-Cov-2, the self-removal of the ureteral Double J stent at home reduces hospital accesses and the need of nasal swab for Covid-19 screening. The fewer visits to the hospital reduce the sources of contagion from Covid-19 for patients and for urologists and nurses, too. Another positive aspect is that the self-removal of stents in Covid-19 patients can take place at home without the need of a doctor or nurse.

Conclusion

In our experience, the self-removal maneuver of the ureteral stent is safe and well tolerated by the patients. In our opinion the self-removal of Double J stent with string represents an interesting alternative to endoscopic removal without anesthesia, in particular to avoid unnecessary hospital accesses, like during Sars- Cov-2 emergency.

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#141: FLOSEAL® PERCUTANEOUS DIRECT APPLICATION IN TUBELESS PERCUTANEOUS NEPHROLITHOTOMY

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Objective

Percutaneous nephrolithotomy is a consolidated technique for the treatment of kidney stones >2 cm in endourology units. It requires subsequent ureteral stent and nephrostomy positioning, but for experienced surgeons tubeless option is feasible. In the latter case, percutaneous tract closure using haemostatic agents is a valid option to prevent complications, such as bleeding and urinary fistula. The aim of this study is to evaluate the outcome of patients treated with Floseal® direct application.

Materials and Methods

Patients consecutively treated in our center from February, 2017 to December, 2019 for kidney stones > 2 cm via percutaneous nephrolithotomy, who underwent Floseal® direct application (i.e., through the 24 Fr Amplatz sheat used for the procedure) for percutaneous via closure, were selected. Data regarding gender, age, duration of surgery, successful (i.e., procedure completed), stone free rate (i.e., absence of stones > 5 mm at CT after 3 months) and complications related to the procedure (i.e., major bleedings and, necessity of blood transfusion, urinary fistulas) were collected. Our closing technique is described and outcome of patients considering success of the procedure, stone free rate and intra- or post-operative complications is then analyzed. The severity of complications was measured according to the Clavien-Dindo score. Descriptive statistics was applied.

Results

Sixty-seven patients aged between 21 and 81 years-old (mean age 58 years-old) were treated for urolithiasis via percutaneous nephrolithotomy at U.O.C. Urologia Ospedale Camposampiero from February, 2017 to December, 2019. They were 45 males and 22 females. After the procedure in all these patients a Double J ureteral stent was inserted and Floseal® haemostatic agent was then injected directly, from the renal calix and through the percutaneous tract, till the skin. No other devices, such as inflated occlusion balloon catheter, were used. The mean duration of surgery was 96 minutes (range 30-210 minutes). All procedures were successful. Stone free rate was 76%. No patients experienced intraoperative complications. Regarding post-operative complications, five patients experienced fever (Clavien-Dindo score of 1), one patient had urinary tract infection at urine colture (Clavien-Dindo score 2). Nobody experienced major bleeding or underwent blood transfusion. The mean hemoglobin reduction was 1.1 g/L.

Discussions

Some studies have already documented the efficacy of hemostatic agents in closing the percutaneous tract in tubeless percutaneous nephrolithotomy. A potential problem highlighted by the scientific literature, however, was the possibility that hemostatic agents occluded the urinary pathway. To overcome this problem, in 2009 Irvine technique was developed at the University of California, for closure and skin treatment after tubeless percutaneous nephrolithotomy using gelatin matrix hemostatic sealant FloSeal®. The authors used an inflated 7F 11.5-mm occlusion balloon catheter and a 30F Amplatz sheath pulled back to the torn edge of the calix through which the nephrostomy tract enters the kidney. FloSeal is then injected through the sheath until it encounters resistance from the occlusion balloon catheter, and the sheath is slowly withdrawn simultaneously with the FloSeal applicator. In our series, FloSeal® is injected directly into the Amplatz sheath, without the need of an occluding balloon catheter, and without obstructive complications. Although tubeless percutaneous nephrolithotomy is already known as a valid technique in endourology units, to our knowledge to date no data are available about Floseal® direct application for closing the percutaneous tract.

Conclusion

In our experience, Floseal® direct application, for percutaneous tract closure, turned out to be a safe and effective technique in patients treated for nephrolithiasis, with a low post-operative complication rate. No urinary system obstructions due to Floseal® haemostatic agent or major bleedings were observed.

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Comunicazioni 3 - Neoplasie del Rene

#111: ROBOT-ASSISTED PARTIAL ADRENALECTOMY FOR CONN SYNDROME: SINGLE CENTER LONG TERM FUNCTIONAL OUTCOMES

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Objective

Total adrenalectomy represents the first line treatment recommended by European Association of Urology guidelines for benign adrenal masses requiring surgical resection. As for other organ preserving approaches, systematic review on Robotic Assisted Partial Adrenalectomy (RAPA) showed functional advantages when compared to total adrenalectomy, obviating for the need of steroid replacement. Conn Syndrome primary hyper Aldosteronism typically presents with hypernatremia, hypokalemia, hypertension, fatigue, and polyuria. In 2019 we have described our RAPA technique and reported encouraging perioperative outcomes, suggesting that RAPA can be performed when technically feasible. Here we report our single center, long term functional outcomes.

Materials and Methods

Between November 2011 and November 2019, data of 17 consecutive patients undergone RAPA in our center, for Conn Syndrome were prospectively collected. Once the Institutional Review Board protocol approval was obtained, every patient was administered with a written informed consent. Patients' arterial blood pressure, BMI, ASA score, adenoma size, plasmatic Aldosterone concentration (PAC), plasmatic Renin concentration (PRC), Aldosterone/Renin ratio (ARR), as well as symptoms such as polyuria or fatigue were assessed following the Endocrine Society clinical practice guidelines flowcharts. RAPA was performed by two experienced surgeons according to the same surgical technique previously described. Data at last f-up were statistically analyzed by IBM® SPSS® software.

Results

Data from 17 patients were considered for analysis after the histology report confirmed the diagnosis. Demographics are reported in Table 1. Median Adenoma size was 1,8cm. Median follow-up was 44 months. Preoperatively all the patients presented with hypertension (82% stage 2 and 18% stage 3). Functional outcomes are reported in Table 2. At last follow-up only one patient required hypertensive medications. None of them required steroid replacement. Post-operatively there was a statistically significant difference in PAC, PRC and ARR, which were found within the normal range (p=0.008, p=0.008, p 0.001 respectively).

Plasmatic electrolytes were found within the normal range in every patient. Ultimately a statistically significant improvement was found in polyuria prevalence (p=0.02).

Conclusion

In our experience, RAPA for Conn Syndrome hyperaldosteronism treatment is a feasible and safe surgical technique which combines the advantages of a minimally invasive approach with long term functional outcomes comparable to those of total adrenalectomy, avoiding the need of steroid replacement therapy.

#42: ELEVATED NEUTROPHIL-TO-LYMPHOCYTE RATIO (NLR) IS ASSOCIATED WITH FAILURE TO HYPERTHERMIC INTRAVESICAL CHEMOTHERAPY (HIVECTM) IN HIGH-RISK NON MUSCLE INVASIVE BLADDER CANCER (HR-NMIBC)

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Objective

Bladder cancer is the 9th most commonly diagnosed cancer worldwide and the 13th most frequent cause of cancer death worldwide (1). The aim of this study was to evaluate the neutrophil-to-lymphocyte ratio (NLR) as a predictive factor for response of high risk non muscle invasive bladder cancer (HR-NMIBC) treated with HIVECTM (hyperthermic intravesical chemotherapy) therapy (2).

Materials and Methods

Between March 2017 to December 2019, 72 consecutive patients with HR-NMIBC treated with HIVECTM therapy (six weekly instillations) were retrospectively analysed. For each patient, we reported the pre-HIVEC and post-HIVEC hematologic and chemical data, including the total number of white blood cells (WBC), neutrophils (N) and lymphocytes (L). Patients underwent blood sampling the day before the first HIVECTM instillation and the day after the last HIVECTM instillation, in the morning, after at least 6 hours of fasting. We enrolled only patients without haematuria in order to avoid any sort of bias, especially in terms of total blood count. The NLR ratio was calculated by dividing the value of N by the value of L. All data were collected in a prospectively maintained database and analyzed. Mean values with standard deviations (±SD) were computed and reported for all items. Statistical significance was achieved if p-value was ≤0.05 (two-sides).

Results

Higher post-treatment CRP (C-reactive protein)(p=.021), Erythrocyte Sedimentation Rate (ESR) (p=.027)], pre-treatment(p=.014) and post-treatment(p=.004) NLR(neutrophils/lymphocytes ratio) were significantly associated with a worst response to chemohypertermia, including both recurrence and progression. In the multivariate model, only pre-treatment(p=.023) and post-treatment NLR values(p=.046) appear to be related to the HIVEC regimen response.

Discussions

There are few studies on the association between SIR (Systemic inflammatory response) markers and NMIBC. Most studies have been performed on muscle invasive bladder cancer (MIBC) and radical cystectomy. These studies suggest that NLR before radical cystectomy may help predict tumour prognosis (3).
Yuk HD et al (2019), demonstrated that NLR before treatment was correlated with both oncological outcomes and survival outcome in NMIBC patients undergoing initial intravesical BCG treatment after TURB. Increased NLR reflects poor prognosis of these outcomes (4).
Thermotherapy has profound effects on the immune system resulting in increased activation of more natural killer cells (NKC) The consequence is that the cancer cells actively participate in their own demise through the natural process of apoptosis (5). In our study, NLR measured at the beginning and at the end of the HIVECTM induction course were correlated with the response to the therapy. In particular, an higher proportion of lymphocytes was revealed in the group of patients who response to the therapy (and then achieve an immune response against the bladder tumour).

This study has several limitations. First, it was a retrospective study of a single institution. Thus, it cannot be free from selection bias. Second, a single test does not represent the entire systemic immune response state. Third, large-scale prospective studies are needed to apply NLR to clinical practice.

Conclusion

NLR value could be a useful tool to predict bladder cancer response to HIVECTM therapy. These results could lead to the development of more studies to assess the real prognostic value of NLR in HR-NMIBC.

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#145: INCIDENCE OF BENIGN TUMORS AT PARTIAL NEPHRECTOMY FOR SOLITARY RENAL MASS PRESUMED TO BE RENAL CELL CARCINOMA: OUR EXPERIENCE OF 195 CASES

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Objective

In contemporary practice, a significant proportion of renal tumors are incidentally detected on cross-sectional imaging studies [1]. Improvements in technology and more intensive imaging have increased the proportion of tumors detected in this manner. This has resulted in smaller lesions being detected. Some recent series have revealed that up to 27% of small enhancing renal masses are benign at surgery [2]. This high level of non-cancerous lesions challenges the appropriateness of surgery for all suspicious lesions, given the morbidity associated with such an intervention. The objective of this study was to determine the incidence of benign pathologic findings at partial nephrectomy for a solitary renal lesion.

Materials and Methods

A total of 195 patients who each underwent one partial nephrectomy for a solitary renal lesion with the intent to cure RCC were included in the final retrospective analysis. A benign neoplasm was found in 30 of these patients, including 19 males and 11 females, with 15 cases on the left side and 15 cases on the right side. Their age was between 29,9 to 79 years (average: 60,9 years). The tumor size was between 1,5 cm to 7 cm (average: 3 cm). Of the 30 cases, 9 were located in the middle of kidney, 15 were located in the upper pole and 6 were located in the lower pole.

Results

All the operations were successful. In only three cases of these 30 partial nephrectomy, conversion to open surgery was required. The blood loss ranged from 150 to 1800 mL (mean: 523 mL) while the operation time ranged from 75 to 330 min (mean: 186 min). The pathological results were renal oncocytoma in 26 cases, AngioMyoLipomas (AML) in 2 cases and cysts in the remaining two cases.

Discussions

Historically, urologists have counseled patients that more than 90% of solid renal masses prove to be RCC at nephrectomy. However, contemporary reports have indicated that up to 27% of renal masses are benign at surgery [2, 3]. The greatest incidence of benign pathologic features is found in patients with a solitary small renal lesion; therefore, we retrospectively reviewed all partial nephrectomies for a solitary renal mass performed at our institution. We excluded patients with a known genetic predisposition to RCC or those

who underwent resection of more than one lesion. We found that 15,4% of partial nephrectomies performed for a suspected solitary Renal Cell Carcinoma (RCC) revealed benign pathologic features (30 of 195). Computed tomography (CT) and magnetic resonance imaging are the most sensitive and specific methods of characterizing small renal masses [4]. Such masses are usually characterized as either solid or cystic. In adults, almost all solid renal masses fall into three pathologic categories: RCC, angiomyolipoma or oncocytoma. With the injection of iodinated contrast at CT, most solid masses enhance more than 20 Hounsfield units; however, enhancement of more than 10 Hounsfield units is sufficient to classify a lesion as suspicious for RCC [4]. The presence of fat on cross-sectional imaging, measuring less than 20 Hounsfield units on unenhanced CT, within a solid renal mass is indicative of angiomyolipoma. Only isolated case reports of RCC containing macroscopic fat have been reported [5]. However, approximately 5% of AMLs do not exhibit detectable macroscopic fat on CT or magnetic resonance imaging, making them difficult to differentiate from RCC [4, 6]. In our series, 2 AMLs were surgically removed. To date, no imaging feature can accurately distinguish oncocytoma from RCC. Although large oncocytomas may exhibit a central stellate scar, smaller lesions do not have this finding [7]. 26 oncocytomas were resected in our series. Cystic masses are the most common lesions detected when kidneys are imaged [4]. The vast majority of these lesions are simple cysts that need no further follow-up. The Bosniak system has been adopted in an attempt to stratify cystic masses into surgical and non-surgical categories. Bosniak class III and IV categories include lesions with more than two or thickened septations, irregular margins and with solid components that enhance with contrast injection [8]. Although some of Bosniak class III cysts have proved to be benign at surgery, by definition they cannot be distinguished from RCC on imaging. Bosniak class IV lesions have solid enhancing components and almost always prove to be malignant at surgery [4]. In our series, two lesions were benign cysts on final pathologic examination.

Conclusion

We have shown in our present series the rate of benign lesions found on final pathologic examination after patients with a suspect solitary renal mass undergo partial nephrectomy. In view of these results, when surgery is elected, not only must one counsel the patient about the perioperative risks but a discussion must also take place about the dual therapeutic and diagnostic role of partial nephrectomy. The patient must be well informed that the odds of the final pathologic examination revealing a benign result are considerable.

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#138: TRANSPERITONEAL VERSUS RETROPERITONEAL LAPAROSCOPIC RADICAL NEPHRECTOMY: CAN THE OPERATIVE APPROACH PREDICT THE RATE OF BLOOD LOSSES? A COMPARATIVE RETROSPECTIVE STUDY

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Objective

To determine the impact of choosing the operative approach (transperitoneal versus retroperitoneal) on blood losses during laparoscopic radical nephrectomy (LRN), in order to identify selection criteria for

each approach.

Materials and Methods

Intraoperative blood losses were calculated for 104 consecutive patients (median age 56 years, range 19-85) who underwent LRN for a renal tumor with clinical stage T1a-T3a in the last four years. The first choice approach was transperitoneal, with 84 patients undergoing the transperitoneal approach; the retroperitoneal approach was chosen in selected cases based on patients characteristics and 20 of them had the retroperitoneal approach. Blood losses, an important perioperative parameter, were retrospectively analyzed.

Results

Overall, 84 (80,7%) transperitoneal laparoscopic radical nephrectomies (TLRN) and 20 (19,3%) retroperitoneal laparoscopic radical nephrectomies (RLRN) were performed by the same surgeon. In 6 out of 84 cases (7,14%) of radical nephrectomy with laparoscopic approach, transfusion of one or more blood units was required during surgery or in the immediate post-operative period. Instead, in 2 out of 20 cases (10%) of radical nephrectomy with a retroperitoneal approach, the administration of blood units was performed. In 4 cases (4,7%) of radical nephrectomy with transperitoneal approach, conversion to open surgery was necessary while the conversion rate to open surgery was 0% in cases treated with retroperitoneal approach. There was no a statistically significant difference between the two groups in terms of blood loss (417 for transperitoneal approach vs 421 for retroperitoneal approach; $P < 0.05$ and $P < 0,01$).

Discussions

Laparoscopic surgery is a safe and reliable option for kidney surgery, presenting possible advantages over open procedures; it is associated with a lower degree of post-operative morbidity and pain; moreover, discharge to home is much more rapid [1]. Many renal procedures are currently carried out laparoscopically via two possible approaches, namely TLRN (Transperitoneal Laparoscopic Radical Nephrectomy) and RLRN (Retroperitoneal Laparoscopic Radical Nephrectomy). In 1991, Clayman et al. reported the first transperitoneal laparoscopic nephrectomy [2]. Today again, the transperitoneal approach was subject to much criticism. The transperitoneal approach offers a greater working space and familiar landmarks but requires bowel mobilization to expose the kidney. Critics of the retroperitoneal approach include a small working space, the presence of limited landmarks and the risk of becoming disoriented and causing inadvertent injury [3]. While each approach has its advantages and disadvantages, very few controlled randomized studies have compared the two approaches, especially considering the rate of blood losses. In effect, in most cases, the choice of surgical approach remains a matter of the surgeon's preference. In the present study, we evaluated the impact of choosing the operative approach (transperitoneal versus retroperitoneal) on blood losses during laparoscopic radical nephrectomy (LRN), in order to identify selection criteria for each approach. Negoro et al. suggested that, based on a total of 21 patients, there were significant differences between TLRN and RLRN cases in mean blood loss (548 vs 81 mL, $P < 0.05$) [4]. Our experience of 104 cases does not confirm the Negoro's results. During TLRN, sufficient care must be taken to avoid vascular injury in patients in which the vessels cannot be approached easily due to large tumor size, as well as in cases where a large number of vessels or complex branches are present. For such patients, it is important to carry out surgery with the utmost care while keeping in mind the potential need for open conversion and then, if necessary, convert to open surgery at the appropriate time. On contrary, the RLRN approach was selected in cases with prior abdominal surgery so that surgery could be done safely without complications. TLRN and RLRN are both excellent approaches. In some institutions, only one approach is used but not in our institute where the choice of approach depends on tumor characteristics. In this way, surgeons are able to choose the appropriate approach for each patient's needs.

Conclusion

The retroperitoneal and transperitoneal approaches have produced excellent surgical results, with a similar yield in terms of blood losses. Therefore, the surgical approach cannot be considered a valid predictor of blood losses (significant or not) during surgery, for which other parameters (such as the size of the tumor and its location, in order to minimize vascular injury) prove to be more influential.

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#118: LAPAROSCOPIC VS ROBOT-ASSISTED NEPHROURETERECTOMY: PROPENSITY SCORE MATCHED COMPARISON OF SURGICAL AND EARLY ONCOLOGIC OUTCOMES

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Objective

We compared surgical and early oncologic outcomes of laparoscopic (LNU) and robot-assisted nephroureterectomy (RANU) for upper tract urothelial carcinomas (UTUC).

Materials and Methods

the prospectively maintained database was queried for patients with UTUC undergone LNU or RANU at our centre, from 2007 onwards. Baseline anthropometric and demographic characteristics were recorded, together with surgical and oncologic outcomes. The study population was divided into 2 groups according to the surgical approach. A 1:1 propensity score matched (PSM) analysis generated two populations homogeneous for demographic, anthropometric and oncologic characteristics. Categorical and continuous variables were compared by $\chi 2$- and t-tests. Kaplan-Meier analysis and Log Rank test assessed differences in disease-free survival (DFS).

Results

overall, 156 patients were included in the analysis. Patients undergone RANU showed longer operation times (OT) (150 min vs 100 min; $p<0.001$) and a higher incidence of major complications (0.036); no differences in terms of lymphadenectomy rate and hospital stay were observed (Tab. 1). The PSM analysis generated 2 cohorts of 20 patients (Tab. 2) homogeneous for age, gender, BMI, ASA score and pathologic tumor stage: these groups only differed for OT, which was significantly longer in RANU ($p=0.009$). DFS probabilities were comparable at KM analysis (Log Rank = 0.267).

Conclusion

although large randomized controlled trial are needed to determine the best surgical approach for UTUC, RANU appears as a viable option to LNU with comparable post-operative morbidity and DFS probabilities.

#119: ROLE OF LYMPH NODE DISSECTION DURING MINIMALLY-INVASIVE NEPHROURETERECTOMY FOR NON-METASTATIC UPPER URINARY TRACT UROTHELIAL CARCINOMA

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Objective

Lymph node dissection (LND) during radical nephroureterectomy (NU) for upper tract urothelial cancer (UTUC) may improve disease staging but its impact on survival. We assessed the role of LND on metastasis-free (MFS) and cancer-specific survival (CSS) in patients undergone minimally-invasive nephroureterectomy (MINU) for non-metastatic UTUC.

Materials and Methods

We performed a retrospective analysis of patients with non-metastatic UTUC undergone MINU at our

centre, from 2007 onwards. The included cases were split into organ confined (Stage 0-II) and non-organ confined (stage III). LND was considered as a binary variable to divide the two groups into subgroups whose characteristics were compared: χ2-test was used for categorical variables, t-test for continuous ones. Kaplan- Meier (KM) analysis assessed the impact of LND on metastasis-free (MFS) and cancer-specific survival (CSS) in these subgroups.

Results

Overall, 146 patients with a median follow-up of 30 months were included in the analysis (Tab 1). Patients undergone LND presented longer operation times (OT) and length of stay (LOS) (all $p < 0.05$) while complications rate was not affected. At KM analysis, no survival benefit was observed in the organ-confined cohort while LND significantly improved both MFS and CSS in Stage III patients.

Conclusion

Although selection bias must be acknowledged, according to our results, LND improves survival in patients undergoing NU for T3 UTUC.

#122: INCIDENCE RATE AND MANAGEMENT OF DIAPHRAGMATIC INJURY DURING LAPAROSCOPIC NEPHRECTOMIES: OUR EXPERIENCE

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Objective

To investigate the incidence rate of diaphragmatic injury in our experience of laparoscopic renal surgery, taking into account the operative access, the type of intervention, the character of the pathology (neoplastic or other), the site of the intervention, as well as the localization of the lesion (in case of malignant pathology).

Materials and Methods

A total of 384 laparoscopic nephrectomies were reviewed at our institution. All procedures were performed by the same surgeon and included 204 partial nephrectomies, 65 simple nephrectomies and 115 radical nephrectomies. Mean patient age was 59, 7 years (range from 18,5 to 85,3). Mean BMI was 27,85 Kg/m2 (range from 19,5 to 43.9).

Results

A total of 4 cases (1,04%) of diaphragmatic injury were found, two of which occurred during partial nephrectomy, one during radical nephrectomy and another during simple nephrectomy. All four cases of diaphragmatic lesion occurred in the presence of a transperitoneal access and all in the course of left nephrectomy. As regards the pathology, in only one case the pathology was of a benign nature (being hydropionephrosis). As regards the localization of the lesion, the distribution of the three malignant pathologies was as follows: 1 case with localization of the lower hemi-kidney and 2 cases with lesion of the upper pole of the kidney. Diaphragmatic repair was always carried out by intracorporeal suturing. All patients evolved uneventfully.

Discussions

Pneumothorax is a rare complication in laparoscopic renal surgery. However, due to the increasing renal pathologies managed by laparoscopic technique, this infrequent complication is a potential risk. The occasional occurrence of this complication is due to the clear separation that exists between the kidneys and the diaphragm (1). In laparoscopic renal and
adrenal surgery this complication does not exceed 0,6% in the largest series (2). However, with the advances made in laparoscopic renal and adrenal surgery, more surgeons are expanding the limits for laparoscopy by attempting very demanding procedures. This may sustain or even increase the incidence of iatrogenic diaphragmatic injuries. It is noteworthy that this reflects the surgeon's experience overcoming the learning curve of standardized techniques. Diaphragmatic injury can originate from improper trocar placement or direct contact with laparoscopic instruments (2). When the retroperitoneal approach is preferred for renal or adrenal surgery improper trocar placement can easily lead to diaphragm injury (2). The lesion

can appear as an evident tear of the diaphragm or be invisible to the surgeon's inspection and be alerted by changes in patient cardiopulmonary status. Pneumothorax may produce changes in auscultation, end inspiratory pressure, blood pressure and arterial blood gasses (3). Several reports confirm the feasibility of diaphragmatic repair by means of intracorporeal suturing (2,3,4). We believe that diaphragm suturing must always be attempted due to the simplicity and reliability of this technique. To reach an effective repair of the diaphragm, air must be evacuated before the stitches are secured by means of the administration of a long forced inspiratory breath. Pneumothorax greater than 20% of lung volume or associated with hemodynamic or ventilatory changes is managed with thoracostomy (4).

Conclusion

Repair of diaphragmatic injuries should always be attempted with intracorporeal suture since this is a safe and effective technique. Then, although when the retroperitoneal approach is preferred for renal or adrenal surgery improper trocar placement can easily lead to diaphragm injury, our experience has shown that transperitoneal access is not free from this complication.

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151: LEARNING CURVE IN ROBOTIC PARTIAL NEPHRECTOMY (RAPN): COMPARISON BETWEEN EXPERT SURGEON AND TEAM IN TRAINING IN SINGLE-CENTER EXPERIENCE.

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Introduction.

Renal cell carcinoma (RCC) is the 9th most common cancer in men and 14th most common cancer in women worldwide [1] . The widespread use of abdominal imaging has affected the epidemiology of RCC [2]. The incidence of kidney cancer rises globally with the highest rates in developed countries. This demonstrates the impact of advanced diagnostic imaging but also rising prevalence of modifiable risk factors such as smoking, obesity and hypertension[3].

Robotic approaches are on the rise and have become the standard approach to prostatectomy and for partial nephrectomy and cystectomy too [4]. Currently there are several nephrometric scores (the most used are RENAL and PADUA score) which are used to predict any post operative complications, therefore to plan preoperatively the clamping of the vascular pedicle. Other scores are available today, such as the Arterial Based Complexity (ABC) that can be used to evaluate the complexity of a renal tumor and predict how difficult the tumor resection (partial nephrectomy) may be [5].

R.E.N.A.L. score consists in Radius (tumour size as maximal diameter), Exophytic/endophytic properties of the tumour, Nearness of tumour deepest portion to the collecting system or sinus, Anterior (a)/posterior (p) descriptor and the Location relative to the polar line [6]. PADUA and R.E.N.A.L. scores were significantly associated with predicting prolonged warm ischaemia time and high-grade postoperative complications after RAPN [7].

Another important issue is the training of urologists and the learning curve to perform a RAPN, especially for those procedures that require vascular clamping. In a study of Omidele et al the learning curve for achieving positive outcomes, for a single, fellowship-trained surgeon from October 2007 through June 2015, was noted in >61-90 cases after 66-80 months of performing minimally invasive partial nephrectomy surgeries at a rate of 20 cases per year [8].

Materials and methods.

We have enrolled 333 patients, undergoing RAPN in the period between 01/2014 and 12/2020.
Age, performance status through the Charlson score, surgical complexity through the RENAL score, surgery duration, intra and postoperative complications (classified through Clavien), possible clamping and its duration, histological, positivity of the margins and TNM staging were evalueted for each patient. The comparison was made between an experienced surgeon, chief of the division and in charge for team training, and 3 urologists with initial experience in robotic surgery. We compared the performance of each surgery, considering for the team those performed in total independence. The median value for the performance status, assessed according to the Charlson score, was 4 (range 1-8) and for age 65 (range 19-87). Surgical complexity was divided into low complexity (score 4-5), intermediate (6-7), high (8-9). Scoring 9 corresponds to the maximum score in our series. the performances were evaluated throughout the period, observing the progression over time, up to obtaining a satisfactory performance in tumors with high complexity and independence in performing vascular clamping.

Results.

Total number of RAPN was 333, 172 performed by the chief and 142 by the team (42 + 55 + 45 respectively). 17 made in mixed form (not to be allocated to a single surgeon). Histology showed 165 clear cell RCC, 49 oncocytoma, 36 papillary RCC type 1 , 20 papillary RCC type 2 , 29 Chromophobe , 13 angiomiolipoma, 1 follicular carcinoma "tyroid-like", 1 paraganglioma, 1 non- Hodgkin lymphoma. The remainder are rarer benign lesions or chronic inflammations. Pathological staging (pTNM) showed 80 T0 (for benign neoplasm or chronic inflammations), 175 T1a, 60 T1b, 3 T1b + T1a (for bilateral RAPN), 7 T2a and 8 T3 (tumors classified in clinical staging as T1 lesions but with perirenal fat infiltration on histology). The median value for duration of surgery was slightly less for the chief, but without a substantial difference. Obviously this data must be analyzed considering also the surgical complexity, which in the early years was much greater for the chief. The progression of highly complex surgery has been gradual over the years for the team, until satisfactory independence was achieved between 2018 and 2019. Positive margins were not significantly different between the chief and the team : 14 for chief (8.13%), and respectively 4 (9.5 %), 6 (10.9%); and 2 (4.4%) for team. Intraoperative complications occurred in 3 patients: 1 for chief with perforation of the ileum, which required OPEN conversion, with course in intensive care and subsequent death of the patient,1 for surgeon 2 splenic injury, resolved with the application of Tachosil and subsequent regular course until discharge, 1 for surgeon 3 with colon injury, resolved with intracorporeal suture and subsequent regular course until discharge. Postoperative complications occurred in 14 patients: 12 for chief (6.9%) of which 8 Clavien 1 and 2 Clavien 3 (1 for pulmonary embolism, treated with medical therapy and course in intensive care, 1 for extravasation of urine, treated with DJ ureteral catheter placement), 1 for surgeon 1 (2.3%) for anemia, treated with blood transfusion (Clavien 2), and 1 for surgeon 3 (2.2%) Clavien 1. Median value for length of stay is 3 days (range 2-25). Analyzing the data it is clear, in our experience, that after an initial training in robotic surgery, which allows the approach to low complexity tumors (RENAL score 4-5), it is possible to perform surgery of medium complexity (RENAL socre 6-7) after 15 procedures performed in total independence. To proceed with complexity tumors (RENAL score 8-9) with possible vascular clamping with satisfactory duration (<25 minutes), analyzing our data, at least 25 completely independent procedures are required.

Discussion.

Defining the exact number of operations to proceed to the next step in the RAPN is very difficult. The impact of surgical training on health care costs and clinical outcomes should be a priority for future studies [9].
There are some limits in our study : it is a retrospective study, the surgeons involved in the study had an initial robotic experience and this does not allow to evaluate the initial progression to surgical ability, but only to evaluate the progression between those of low complexity and high complexity with clamping. Data in the literature vary greatly on this surgical progression.
A study of David J Paulucci et al shows that although RAPN can consistently be performed safely with acceptable outcomes after a small number of cases, improvement in trifecta achievement, warm ischaemia time, estimated blood loss , blood transfusions and a shorter hospitalization continues to occur up to 300 procedures [10]. Another limit is that in our study we consider the progression and the minimum limit to be able to perform complex procedures, but the presence of the chief is still present to interact in case of need.

The possibility of performing RAPN with the help of an expert surgeon in case of need allows the surgeon in training to be able to work in less stressful conditions. Another consideration in our study is emulation, as we believe that observing (even without performing) procedures by surgeons at the same level allows for improvement for subsequent procedures.
However there is currently a great need for a standardized curriculum to be developed and employed for the use of training and credentialing future and current robotic surgeons [11]
The training of future generations will also be able to rely on simulators because there are many benefits to utilizing virtual reality simulation for robotic skills acquisition, including advanced procedural-based training [12]

Conclusion.

Robotic training for complex procedures in safety, with low intra and postoperative complication rate, acceptable positive margin rate and sustainable cost-effective durations , requires a minimum number, which in our study we have identified in 25 procedures, considering initial ability to approach simple procedures of our 3 surgeons in training. Probably in the future this learning curve will be reduced due to the advent of simulators available to residents , already available in many centers (including ours).

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Comunicazioni 4 - Miscellanea

#133: XANTOGRANULOMATOUS CYSTITIS AND LITERATURE REVIEW: A SINGULAR CASE

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Objective

Xanthogranulomatous cystitis is a rare chronic inflammatory disease, with characteristics of benignity, with an unclear etiology, first described in 1932. In cystoscopy it may not be easily distinguishable from an infiltrating bladder growth. To date, 28 papers are reported in the literature that refer to this pathology. We report the case of a 76-year-old woman, very obese, hospitalized for pulmonary thromboembolism, with occasional CT finding of an abscess of the right iliopsoas muscle in close contact with the ipsilateral bladder wall and an overhang of the bladder wall itself. In the suspicion of bladder neoplasia, after adequate control of the pathology that led to hospitalization, we subjected the patient to endoscopic resection of the neoformation. The histological diagnosis was xanthogranulomatous cystitis.

Materials and Methods

76-year-old patient, obese, with a history of hypertension and hyperuricaemia under medical treatment, hysteroannexectomy for cancer in 1991, respiratory failure due to alveolar hypoventilation secondary to obesity, Sleep Apnea syndrome in nocturnal BPAP for 16 years, hypothyroidism, permanent AF in NAO (edoxaban), previous congestive heart failure, admitted to the cardiology department of our hospital for bilateral pulmonary embolism, with right popliteal-twin deep vein thrombosis and superficial thrombosis of the left great saphenous vein. Oral anticoagulant therapy (Warfarin) was set and after 19 days of hospitalization the patient was transferred in stable conditions to the sub-acute care ward. Here the course was complicated by a hypokinetic bed rest syndrome, a urinary infection with urine culture positive for E.coli and Proteus Mirabilis and enteric from Clostridium difficile was diagnosed; CT scan of the abdomen was performed with an abscess of the ileo-psoas muscle in the right iliac fossa (fig. 1), in close contiguity with the homolateral bladder wall, which was locally thickened, with protruding endoluminal tissue, suspected for bladder cancer (fig 2). A course of antibiotic therapy was set with a good clinical response and a clear reduction in the size of the abscess formation, while the bladder picture remained unchanged. In the suspicion of cancer, the patient underwent diagnostic cystoscopy and simultaneous endoscopic resection. Intraoperatively, the medium was turbid due to the presence of fibrinoid material. . The presence, on the

right lateral wall, of irregular tissue, protruding into the bladder lumen, covered with velvety mucosa, with extension towards the posterior wall up to the trine, was confirmed. Complete endoscopic resection of the mass and biopsy resection of other areas of velvety appearance were performed. The post-operative course did not present complications and the catheter was removed on the third day. Histological examination showed xanthogranulomatous cystitis with associated urothelial hyperplasia, with consistent immunohistochemical stains for AE1 / AE3m (anticytokeratin antibodies) CD68, ALK1, actin-ml. On the posterior wall the diagnosis was chronic cystitis, on the trigone findings of normality. The patient was discharged in good general condition with indication to perform urine examination and urine culture and complete abdomen ultrasound at 3-6-12 months, then annually and urgent urological re-evaluation if symptomatic.

Results

see it on "Materials and Methods"

Discussions

Xanthogranulomatous inflammation is a type of chronic granulomatous inflammation characterized histologically by the presence of lipid-laden macrophages, multinucleated giant cells, accumulations of cholesterol, polymorphonuclear leukocytes, plasma cells and lymphocytes. Xanthogranulomatous lesions of the gallbladder, pancreas, appendix, colon, ovary, endometrium, brain and kidney have been reported, with macroscopic features similar to malignant neoplasms. Xanthogranulomatous cystitis is a particularly rare chronic inflammatory disease, of unknown etiology, first described by Wassiljew in 1932. To date, 28 cases described in literature are reported. Of these, 16 located at the anterior wall of the bladder and 12 at the dome. Our case, on the other hand, concerns an unusual area, the right side wall with no topographical relationship with any uracal residue. Some of the cases reported in the literature show association with bladder urothelioma, only one with adenocarcinoma of the prostate. Bladder cancer and malacoplakia must be considered in the differential diagnosis. The malacoplakia is also a rare form of granulomatous inflammatory disease of the bladder which most often affects adults, immunologically compromised or carriers of debilitating pathologies, and is diagnosed histologically with the finding of foamy histiocytes in which Michaelis-Gutman bodies are recognized (characteristics basophilic inclusions). The etiology of xanthgranulomatous cystitis is not yet clear. The proposed theories suggest the presence of a chronic inflammatory process caused either by an immunological defect of macrophages or by Gram negative or anaerobic bacteria typical of urinary infections, or by infections of uracal cysts or diverticula, or by foreign bodies such as residues of post- surgical, from abnormal responses of the host to malignancy, from lipid dysmetabolisms with a disordered accumulation of lipids in macrophages. From a clinical point of view, the symptoms are non-specific and can be confused with other bladder pathologies; patients generally complain of lower abdominal pain and irritation symptoms. If uracal residue is present, umbilical discharge and hematuria may occur. Also in this respect the case we have described is singular, as it is completely asymptomatic and diagnosed incidentally. Furthermore, the relationship of contiguity with the abscess of the right ileus psoas muscle remains to be clarified, probably originating from a hematoma following a fall, although it can also be considered completely random.

On iconographic investigations, xanthogranulomatous cystitis appears as a mass or thickening of the bladder wall, similar to cancer. For this reason, the diagnosis cannot be separated from a histological examination. Typical histological findings are those of foamy cytoplasmic cells with inflammatory infiltrate and abundance of lipids. Special stains with immunohistochemical technique are used in diagnostics, CD68, vimentin, Ki-67 and cytokeratins. In particular, CD68 has a high positivity for this pathology, followed by Vimentina. Medical therapy has rarely been proposed or proved effective; in case it was only antibiotic therapy. Rajiv Goel reports, with a 4-week broad-spectrum antibiotic therapy, the disappearance in cystoscopy of the polypoid lesions previously found and the histological negativization of the previous findings of xanthogranulomatous cystitis to biopsies. Therapy has to be chirurgical. If it's localized with endoscopic resection or with a partial cistectomy if the disease is associated with urachal adenoma.

Conclusion

Although rarely, xanthgranulomatous cystitis can be the cause of symptoms frequently encountered in clinical practice, as well as instrumental, ultrasound or CT pictures, strongly suspected for oncological pathology. It must therefore be considered by the general practitioner and more by specialist like urologist.

Further studies are desirable to better understand their pathogenesis. Diagnosis and treatment are based on surgical approaches.

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#53: PRELIMINARY EXPERIENCE WITH A NEW NUTRACEUTICAL COMPOUND FOR THE TREATMENT OF SYMPTOMS ASSOCIATED TO ACUTE PROSTATITIS

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Objective

Lower urinary tract symptoms (LUTS) and pelvic pain due to prostatitis have always considerably affected quality of life of men of all ages. The treatment of prostatitis depends on the underlying cause and includes: antibiotics, alpha-blockers, anti-inflammatory agents, corticosteroids, nutraceuticals (1) (2). Corticosteroids are widely used as potent anti-inflammatory and immunosuppressive drugs to treat a wide range of diseases. However, they are associated with relevant side effects, including new-onset hyperglycemia in patients without a history of Diabetes Mellitus (DM) or severely uncontrolled hyperglycemia in patients with known DM (3). Phytotherapeutics are an interesting option due to their generally minimal side-effects; however, few have been subjected to controlled clinical trials (4). Several studies reported that sodium butyrate linked to hyaluronic acid (5-6) had an important anti-inflammatory activity. The aim of this study was to compare the efficacy and tolerability of a new drug (suppositories of sodium hyaluronate butyrate) in comparison with Topster® suppositories in order to improve the quality of life of patients affected by lower urinary tract symptoms (LUTS) due to acute prostatitis. Sodium Hyaluronate Butyrate is an amphiphilic molecule that contains Hyaluronan (hydrophilic) and Butyric Acid (lipophilic) moieties.

Materials and Methods

We performed a non-randomised, non-inferiority clinical study. 40 consecutive patients with clinical and instrumental diagnosis of acute prostatitis attending our Department between September 2020 and December 2020 were enrolled. All patients with DM underwent Sodium Hyaluronate Butyrate suppositories (once a day) + targeted antibiotic therapy for 2 weeks (Group A), while patients without DM underwent Topster® suppositories (once a day) + targeted antibiotic therapy for 2 weeks (Group B). Patients' demographics and baseline characteristics [age, BMI, weight, height, comorbidity, prostate volume, voiding parameters(Vol, Qmax, Qave, PVR), IPSS score, VAS score] were collected. The main outcome measure was the improvement of quality of life at the end of the whole study period, measured by IPSS score and VAS score after two weeks of therapy.

Data analysis: Statistical analyses was conducted using SAS version 9.3 software (SAS Institute, Inc., NC). Mean values with standard deviations(±SD) will be computed and reported for all items. Statistical significance will be achieved if p-value was ≤0.05 (two-sides).

Results

The baseline characteristics did not differ significantly among the two groups (P>0.05). The baseline questionnaires were as follows: IPSS, 16.75±4.39 in group A and 17.05±6.3 in group B (P=0.8622); Baseline VAS score, 3.85±1.18 in group A and 4.05±1.19 in group B (0.5966). After two weeks of therapy, IPSS was significantly reduced in both groups (Group A: 5.95±2.06; P<0.001; Group B: 6.65±2.76; P<0.001). Moreover, VAS score was significantly reduced in both groups (Group A: 1.2±0.77; P<0.001; Group B: 1.55±0.89; P<0.001).

Discussions

According to our preliminary results, the treatment with this new nutraceutical compound is able to provide early pain relief and improve quality of life of men with LUTS associated to acute prostatitis, when compared with Topster®. Sodium butyrate linked to hyaluronic acid has a demonstrated anti-inflammatory activity. Austin et al reported that hyaluronic acid reduced inflammation blocking the induction of inflammatory signalling (7). Moreover, it decreases the expression of lipopolysaccharides mediated IL-1β, IL-6, and Tumor necrosis factor-α gene and IL-6 and nitric oxide production. Sodium butyrate is widely used in the treatment of acute radiation–induced proctitis in patients with prostate cancer (8) and has demonstrated epigenetic effects on prostate cancer cells (9). The present study had several limitations that should be considered: the small number of participants, a selected patient population, a short follow-up period without including prostatitis recurrences. Given the lack of prove efficacy of conventional drugs, alternative treatment options are urgently needed and the association of sodium butyrate and hyaluronic acid should be an interesting option due to its generally low side-effects and promising results in terms of quality of life improvement.

Conclusion

This new drug is a safe and viable alternative option, compared with conventional therapy with corticosteroids, in patients with acute prostatitis. These suppositories seem particularly advantageous avoiding possible adverse drug effects, particularly in patients with DM.

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#109: LARGE VOLUME PROSTATES AND BIPOLAR PLASMA TURP: 2 YEARS EXPERIENCE

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Objective

Trans Urethral Resection of Prostate (TURP) remains still the gold standard and it is strongly recommen-

ded for the treatment of patient with moderate-to-severe LUTS (Lower Urinary Tract Symptoms) with prostate size of 30-80 mL(1). Patients with oversized prostates > 80-100 mL undergo to traditional open prostatectomy or to a laser enucleation. Aim of our study is to analyze the surgical outcomes and the safety of bipolar plasma TURP extended to oversized prostate.

Materials and Methods

Since November 2018 to February 2021 we treated with bipolar plasma TURP 19 patients with a prostate volume larger than 100 mL and up to 180 mL. Due to the Covid lockdown the number of procedures were limited. The average age was 69.6 years (range 51-82); the average prostate size, measured before the procedure by ultrasound, was 122.37 mL (range 100-180); at the moment of the procedure 8 patients had a bladder catheter (1 suprapubic and 7 transurethral), 15 had history of acute urinary retention, 2 had also bladder stones, and 4 had severe LUTS and Qmax between 5 and 8 ml/s at the uroflowmetry; all of them previously received pharmacological treatment for LUTS (2 only 5α-reductase inhibitor, 4 only α-blocker, and 13 combined therapy with α-blocker and 5α-reductase inhibitor). Only 1 patient (with a prostate size of 165 mL) had concomitant anticoagulant treatment (subcutaneous Enoxaparin 4000 IU twice in day) because of atrial fibrillation. The TURP was performed using the bipolar plasma edge technology by Lamidey Noury Medical, saline solution as medium, instrument for resection with continuous irrigation system, and high definition video camera and 16:9 high definition monitor. The approach for those oversized prostate was modified, mainly it was a posterior approach to remove first the large medium lobe and then the lateral lobes. The medium lobe was first isolated between 2 tunnels at 5 and 7 o'clock deep to the capsule and extended to apex preserving the veru montanum; the resection was than performed between the 2 tunnels going parallel to the posterior wall, from one side to the other, and upward to downward. For both the large lateral lobes a deep tunnel between the lobe and the prostate capsule (starting at 1 o'clock for the left lobe down to almost 4 o'clock; and at 11 o'clock for the right lobe down to almost 8 o'clock) was first made in order to allow the resection of each lobe from the lateral side to the median part. The 2 patients with large bladder stone had the stones fragmented and removed during the same procedure, but before starting the TURP (for statistical purpose only the TURP time was calculated).

Results

Average operative time was 73 minutes (range 50-115); mean hospitalization time was 3.7 days (range 2-9); no patient had TUR syndrome, neither serum sodium level drop; no one required blood transfusion or iron intravenous implementation; only the above mentioned patient, who received subcutaneous Enoxaparin, had persistent mild haematuria that just prolonged his hospitalization time, in fact his hemoglobin concentration varied from 17.7 (before the operation) to 15.7 g/dL after 9 days, when he was dismissed without catheter; no other adverse events were registered. If we do not consider the patient with concomitant anticoagulant treatment than mean hospitalization time was 3.4 days (range 2-5). Catheter was removed after 6.84 days (range 3-18) and all of them could void again. After 2 months, one patient, who suffered also Parkinson's disease preferred to have the catheter indwelled again to better manage, according to his opinion, the relapse of severe LUTS.

Discussions

The bipolar plasma TURP was performed using normal saline solution (NaCl 0.9%) as fluid for continuous irrigation, instead of a nonconductive solution, offering the advantage of minimal absorption by the open vessels and eliminating the risk of electrolytic disorders, both TUR syndrome and the serum sodium level drop. (2) The resection with the bipolar plasma edge technology is faster with less bleeding because of the attitude of the instrument to cut, vaporize and coagulate smaller vessels at the same time. After the cutting the prostate tissue looks white, not carbonized and it is still soft for further cuttings.

We believe that the modified approach for the large lateral lobes gives 2 other important advantages. One is to set immediately the capsular limit of the resection. The second is to create a flap from the lateral lobe which is already ischemized and ready to be fast removed by lateral to median resection going from upward to downward. We believe that both the ultimate plasma technology and the modified approach contributed to a faster and less bleeding resection, allowing a safe operative time for those oversized prostate with volume up to 180 mL.

Conclusion

According to other Authors(3) the treatment of oversized prostate with bipolar plasma TURP is an effective endoscopic technique and seems to offer surgical results equivalent to those encountered for smaller prostate volumes. The use of saline solution and short operative time confirm the safety of the procedure also for large size prostate. In our single center study bipolar plasma TURP represents a valid alternative to open prostatectomy in large benign prostatic hyperplasia < 180 mL, up today. Because of the low cost, comparable to standard TURP, it may be used in centers that do not have yet laser equipment. Larger studies and longer follow up are mandatory to confirm our results.

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#110: ROBOTIC ASSISTED SIMPLE PROSTATECTOMY: LONG TERM, TRIFECTA AND PENTAFECTA BASED, ANALYSIS OF FUNCTIONAL OUTCOMES

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Objective

Robotic-assisted simple prostatectomy (RASP) proved to be a sound and effective procedure for bladder outlet obstructive symptoms relief. We routinely perform RASP according to the "urethra-sparing" (Madigan) technique, in selected patients, or according to a non "urethra-sparing" technique such as: transvesical (Freyer) or trans-capsular (Millin).
In this study we report our long-term, single center, functional outcomes.

Materials and Methods

Data from patients undergone RASP in our center were prospectively collected. Once the Institutional Review Board protocol approval was obtained, every patient was administered with a written informed consent. Demographics, prostate size and pre-operative flowmetry parameters were assessed. Validated questionnaires such as International Index of Erectile Function (IIEF), and International Consultation on Incontinence Questionnaire (ICIQ), International prostatic symptoms score (IPSS) with its quality of life (QoL) score, Male Sexual Health Questionnaire (MSHQ), Overactive bladder questionnaire (OAB-Q) were administered to every patient preoperatively. All the procedures were performed between June 2012 and May 2020, by two experienced surgeons. Yearly follow-up included Flowmetry and the validated questionnaires. Follow-up was calculated from the date of surgery to the most recent documented examination. were statistically analyzed by IBM® SPSS® software. We tested composite outcomes (Trifecta) defined as a combination of: post- operative Q-max>15 ml/sec, IPSS score<8 and absence of complications. We also tested a Pentafecta which keeps in account the persistence of antegrade ejaculation (MSHQ>0) and the Erectile function mainteinance (ΔIEEF<6).

Results

Median follow-up was 36 months. Millin, Madigan and Freyer procedures were performed in 37 (51%), 18 (25%) and 17 (24%) cases respectively. Trifecta was achieved in 43 (60%) patients (Fig.1). No significant differences were observed between the "trifecta achieved" and the "trifecta not achieved" groups for baseline ASA score, BMI, prostate volume, baseline IPSS, IIEF and MSHQ scores (all $p \geq 0.2$). Surgical technique was not related to the trifecta achievement. Preoperative ICIQ, post-operative IPSS, Post-operative OABQ and Quality of life were significantly different between groups (all $p<0.02$). Data are shown in Tab. 1. Pentafecta was achieved by 14 (20%) patients. Surgical approach was significantly related to pentafecta achievement ($p<0.01$). Fig. 2. The pentafecta group showed a statistically significant advantage in terms of

postoperative IPSS and MSHQ (both p<0.01) Tab.2.

Conclusion

RASP provides an effective and durable relief of obstructive symptoms at long term follow-up, regardless of the technique, achieving the trifecta in the majority of the patients. The Madigan technique is significantly related to the pentafecta achievement.

#46: IS LAPAROSCOPIC END-TO-END URETEROSTOMY A FEASIBLE APPROACH FOR TREATMENT OF UPPER URETERAL STRICTURE UP TO 4 CM IN LENGTH? A SINGLE INSTITUTION ANALYSIS

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Objective

Ureteral stricture (US) is a disease that can occur in both children and adults. The most common causes are ureteral stones, surgical traumas, extrinsic compression, tumours and congenital or idiopathic disorders (1-2). The management of US depends on site, length and complexity of the lesion. Ureteroureterostomy is indicated for the short defects involving the upper or the mid ureter. We aimed to describe our experience in laparoscopic management of upper US.

Materials and Methods

We retrospectively reviewed the data of 23 patients (15 females and 8 males) who underwent laparoscopic end-to-end ureteroureterostomy (LUUA) of upper ureteral strictures at our Department from January 2015 to June 2020. 9 patients presented with asymptomatic hydronephrosis (according to the renal ultrasonography), 14 with intermittent abdominal pain. Preoperative evaluation included computed tomography urography (CT urography), to confirm and assess the location and the extent of the stenosis before surgery. In our cohort of patients, the most common cause of stricture was due to previous surgeries (10 cases). Endometriosis, trauma, impacted stones have been identified for the others patients. Only one ureteric stricture had a recurrent pattern (the patients was previously treated endoscopically). All procedures were performed by a single surgical team with a trans-peritoneal approach. Three trocars were prepared for LUUA. The monopolar scissors and bipolar forceps were used. Follow-up included 6 monthly revisits for 2 years and yearly thereafter; we evaluated clinical parameters, renal profile, and ultrasonography images. Surgical success was defined by improvement in symptoms, improvement in renal functions, and resolution/improvement in hydronephrosis.

Results

The mean age was 43.91 years, mean body mass index (BMI) was 25.43. All operations were completed successfully without conversion to open surgery. The mean operative time was 123.26 minutes. Mean blood loss was 10 ml and no patients received blood transfusions. Mean length of the stricture was 2.14 cm (range 0.9 to 3.9 cm). Double-J stent was removed after 4–6 weeks postoperatively. The mean hospitalization time was 4.1 days. During surgery, a displacement of the ureteral stent occurred and was managed endoscopically. We reported also one case of post-operative urinary tract infection managed with prolonged antibiotic therapy and one case of deep venous thrombosis that required anticoagulation. The overall success rate was 96%, with a mean follow-up of 33.17 months.

Discussions

In last decades, we noticed a drastic increase in incidence of ureteral strictures, mostly as a result of the introduction and widespread use of upper urinary tract endoscopy (3). Although technically challenging, improvements in technology and technique have made the mini-invasive approach more feasible (4). Reported results of laparoscopy and robotic-assisted surgery on outcomes are equivalent to the open approach and offer several advantages, such as less postoperative pain, shorter hospital stay, and less scarring (5). Han et al., in a series of 12 cases of ureter transections in adults, reported that the damage was successfully repaired using the laparoscopic approach for 11 of the 12 patients (6). By the end of the study period, all patients had fully recovered. Schiavina et al., in a series of 62 laparoscopic (n = 36) and robotic (n = 26)

treatments for ureteral stenosis, reported no cases of recurrence in the laparoscopic group and only two stenosis recurrence in the robotic group, respectively (7). Our data confirms that LUUA is a feasible and safe option for the management of upper ureteral strictures. With the necessary expertise, it allows easier access to the retroperitoneal spaces and replication of open surgical repair techniques. Moreover, it offers good results in terms of hospitalization time and cosmesis. According to the literature, the most common complication reported is the recurrence of the stricture (8-9). However, in our series, we had only one case of stenosis recurrence.

Conclusion

Our study showed that LUUA is feasible and safe. The follow-up confirmed good functional outcomes, with a low incidence of complications and low rate of recurrence of the stenosis.

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Comunicazioni 5 - Neoplasia Prostatica

#91: THE OPTIMAL PROSTATE BIOPSY: INDICATIONS AND TECHNIQUES. DATA FROM THE GROUP FOR UPDATE OF ITALIAN GUIDELINES BIOPSY

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Objective

The gold standard for diagnosy of prostate cancer is biopsy, the only way for the detection of prostate cancer. Patient selection for prostate biopsy is complex and is influenced by emerging use of pre-biopsy imaging. The introduction of the magnetic resonance imaging (MRI)-transrectal ultrasound (TRUS) fusion prostate biopsy has clear advantages over the historical standard of care. There are several biopsy techniques currently utilized with unique advantages and disadvantages.

Materials and Methods

The work were to summarize the current body of literature pertaining to when and how a prostate biopsy should be performed. We discuss current recommendations regarding patient selection for biopsy and discuss future directions regarding prebiopsy imaging. We offer a description of the MRI-TRUS fusion biopsy technique and a comparison of many of the currently available fusion software platforms. Articles pertaining to the title were obtained via PubMed index search with relevant keywords supplemented with personal collection of related publications.

Results

Prostate biopsy should be suggested for patients with abnormal digital rectal exam (DRE) , patients with a prostate-specific antigen (PSA) greater than 4 ng/ml, and orconcomitant risk factors for prostate cancer or patients with lesions identified on multiparametric MRI (mpMRI) with Prostate Imaging Reporting and Data System 2 (PI-RADS2) score of 3 – 4 or 5. MRI-TRUS fusion biopsy has demonstrated advantages in cancer detection when compared with TRUS-guided biopsy.

Discussions

A recent Cochrane Review by Drost et al. sought to compare the diagnostic performance of four index tests to a template guided biopsy reference.(1)
The PROMIS trial, a large multicenter trial that compared the accuracy of the TRUS-guided biopsy

and the mpMRI against a reference test, determined that if used as a triage test the mpMRI could eliminate 25% of patients from undergoing a prostate biopsy.(2) The mpMRI has a sensitivity of 93% (95% CI 88–96), specificity of 41%, PPV of 51%, and NPV of 89%. The TRUS-guided biopsy, on the other hand, demonstrated a sensitivity of 48%, specificity of 96%, PPV 90%, and NPP of 74%,(2) which demonstrates the benefit of using the mpMRI as a triage tool for biopsy naïve patients with an elevated PSA. Furthermore, the PRECISION trial, which looked at 500 men who underwent either mpMRI then targeted biopsy, or standard transrectal biopsy, found that the MRI was superior at limiting the amount of men who needed biopsies and the discovery of more clinically significant cancers.(3)

Conclusion

There are currently several fusion software platforms available with a variety of biopsy approaches. The Cognitive methods is curently used with good results. The role of prebiopsy imaging as a triage tool for prostate biopsy. Consensus should be obtain regarding the preferred modality of fusion biopsy.

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#94: IMPROVEMENT OF PROSTATE CANCER DETECTION RATE THROUGH A MULTI-TEAM OF RADIOLOGISTS FOR BETTER ACCURACY OF SUSPICIOUS LESIONS TO PERFORM A MRI/TRUS FUSION GUIDED BIOPSY. OUR EXPERIENCE

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Objective

Prostate cancer (PC) is the second most commonly diagnosed cancer in men, with an estimated 1.1 million diagnoses worldwide in 2012, accounting for 15% of all cancers diagnosed [1]. Multiparametric magnetic resonance imaging (mp-MRI) combining T2-weighted (T2w) imaging with diffusion-weighted (Dw) imaging, dynamic contrast-enhanced (DCE) imaging and/or magnetic resonance spectroscopy (MRS) has yielded promising results in prostate cancer detection and localisation [2-3]. T2-weighted sequences of the prostate provide anatomic information and should include a triplanar (axial, coronal, and sagittal) or comparable sequence [4]. The PIRADS v2 has given guidance to standardize zonal reporting, which helps urologists use information from the report regarding on T2-weighted sequence and zonal location to identify suspicious areas [5].In a study of Purnell Stephanie D et al the current literature regarding the role of multiparametric MRI and fusion-guided biopsies in urologic practice was reviewed establishing improved accuracy of fusion biopsies over systematic biopsies. They are a superior method for detection of the true grade of cancer for both biopsy naïve and patients with prior negative biopsies, choosing appropriate candidates for active surveillance, and monitoring progression on active surveillance [6]. In a study of Veeru Kasivisvanathan et al the detection rate of MRI-targeted biopsies and standard biopsies were compared. In this study a total of 500 men underwent randomization. In the MRI-targeted biopsy group, 71 of 252 men (28%) had MRI results that were not suggestive of prostate cancer, so they did not undergo biopsy. Clinically significant cancer was detected in 95 men (38%) in the MRI-targeted biopsy group, as compared with 64 of 248 (26%) in the standard-biopsy group [7]. An increasing number of MRI-fusion biopsies are performed in our center. After more than two years of experience we have examined the detection rate (DR) of biopsy-naive patients and looked for possible correlations for a DR of our center higher than many data in the literature.

Materials and Methods

We've enrolled 189 biopsy-naive patients in the period between september 2018 and december 2020. Each patient underwent mp-MRI which was reviewed by our team of radiologists. In our center each exam is examined by 4 radiologists separately with an overall final result. The evaluation score system was PIRADS score v2. The median value of PSA was 8.3 ng/dL (Range 0.48-50.1). For each biopsy the starting PIRADS score, the clinical staging (cTNM) were evaluated using the MRI, the starting PSA value (iPSA) and the histological result. The concordance between the PIRADS area identified and the positive histological sample was also evaluated. Almost all biopsies were performed MRI-targeted + systematic. The procedures were performed by 4 fully trained urologists.

Results

The absolute detection rate (DR) was 69.3% (131/189 patients) . 68 patients had PIRADS score 3 on MRI, 74 patients PIRADS score 4, 47 patients PIRADS score 5. The relative DR for each PIRADS score were 41% for PIRADS 3, 70,2% for PIRADS 4, 89.3% for PIRADS 5. Clinical staging was assessed on the basis of MRI and histology. Positivity of the samples bilaterally was considered cT2c (according to the EAU guidelines, non-palpable and biopsy positive prostate cancer, with no evidence of extracapsular extension to MRI should be considered T1c, but is often discordant from the final histological examination).33 patients had 3+3 Gleason Score (GS), 44 patients had 3+4 GS, 31 patients had 4+3 GS, 11 patients had 4+4 GS, 6 patients had 4+5 GS , 1 patient had 5+4 GS and 3 patients had ASAP (Atypical small acinar proliferation). We found a high percentage of agreement between the positive biopsy samples and the suspicious area identified on MRI: 90.8% (119/131 patients). The degree of agreement was not affected by the PIRADS score. Grading of positive biopsies was not always correlated with PIRADS score, although slightly higher in patients with PIRADS 5.

Discussions

Currently the European guidelines do not oblige to perform MRI in naive patients. Nevertheless, emerging clinical trial data support the adoption of this technology as part of the standard of care for the diagnosis of PC [8]. There are many data in the literature on the DR but they are very varied and it is difficult to establish a limit within which to define the accuracy of MRI fusion-guided biopsy. In a study of Tang Y et al, which totally 13 cohorts in 12 studies, with 3,225 men were included, targeted biopsies had a DR of 43.1% [9]. Novelty in our study, which probably allowed us to have a higher DR, was having a multiteam of radiologists who made the MRI more accurate. This allows a better DR with less need of having to undergo the patients to a new biopsy. We believe that biopsies must be performed target + systematic to have a complete clinical staging and, although infrequent, be able to have positive biopsies even in areas not suspected by MRI. There are limitations to the study, such as a small number of patients and the retrospectivity of the study, but which can still offer interesting future outlook

Conclusion

MRI in the future could become the gold standard for performing MRI fusion-guided biopsies to have a better diagnostic result and avoid rebiopsies. The training of the urologist who performs the biopsy and the accuracy of the MRI are fundamental for the DR of prostate cancer through MRI fusion-guided biopsy, which in our experience has produced good results for the value of the MRI assessed by a multiteam of radiologists. There is a cost problem due to the need to carry out the MRI but it could have less impact in the future. In addition, the MRI provides useful information on the extent of the disease (e.g. cT3a / b) which allows you to better plan the surgical strategy or other therapies.

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#75: PRELIMINARY CONSIDERATIONS ON THE DIAGNOSTIC PERFORMANCE OF 68GA-PSMA PET/CT COMPARED TO PELVIC MP-3TESLA MRI IN DETECTING CLINICALLY-SIGNIFICANT PROSTATE CANCER IN PATIENTS WITH BIOCHEMICAL / CLINICAL ABNORMALITIES AND IN PATIENTS ON ACTIVE SURVEILLANCE

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Objective

To evaluate the diagnostic performance of PSMA PET compared to pelvic mpMRI in detecting clinically-significant prostate cancer (CS-PCa) in patients with biochemical / clinical abnormalities and in patients on active surveillance.

Materials and Methods

85 patients (age range: 44-78 years; mean: 64 years) of whom 71 had biochemical / clinical abnormalities suspicious for CS-PCa (range: 2 – 96.8ng/ml; mean PSA: 12.7ng/ml) and 14 patients on active surveillance (range: 3.7 – 17.9ng/ml; mean PSA: 6.1ng/ml) were prospectively enrolled. PSMA PET and mpMRI were performed and independently reported within six weeks prior to biopsy. Rigid co- registration of PSMA PET to T2-weighted MRI was used to identify all imaging-suspected PCa lesions onto a 12-segment prostate map. PSMA PET was binarily scored (positive / negative). PIRADS v.2 system was used for mpMRI reporting and any lesion with PIRADS 4-5 was deemed suspicious for CS-PCa, PIRADS 3 was considered indeterminate, and PIRADS 1-2 most likely benign. Systematic 12-segments and target prostate biopsies were used as a standard of truth.

Results

CS-PCa was correctly identified in 35 patients and correctly excluded in 14 patients by means of mpMRI; in 16 patients mpMRI resulted falsely positive and in 4 patients resulted resulted falsely positive; 16 patients showed indeterminate PIRADS3 findings. The diagnostic performance of mpMRI resulted in 89.5% sensitivity, 46.7% specificity, 68.0% positive predictive value, 77.8% negative predictive value and 70.6% accuracy. PSMA PET correctly identified CS-PCa in 25 patients and correctly excluded disease in 36 patients; PSMA resulted falsely positive in 7 patients and falsely negative in 17 patients. The diagnostic performance of PSMA PET resulted in 59.5% sensitivity, 83.7% specificity, 78.1% positive predictive value, 67.9% negative predictive value and 71.8% accuracy.

Discussions

Compared to mpMRI, PSMA PET demonstrated markedly poorer sensitivity (59.5% versus 89.5%) and negative predictive value (67.9% versus 77.8%); PSMA PET demonstrated superior specificity (83.7% versus 46.7%) and positive predictive value (78.1% versus 68.0%).

Conclusion

Our preliminary results suggest that PSMA PET might have a complementary role as a specificity enhancer in patients with unproven CS-PCa and indeterminate mpMRI findings prior to target biopsy.

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#76: 18F-PSMA PET / CT IN THE ASSESSMENT OF BIOCHEMICAL RECURRENCE IN PROSTATE CANCER PATIENTS RADICALLY TREATED.

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Objective

The aim of this prospective study was to investigate the detection rate of 18F-PSMA PET / CT in patients (pt) with biochemical recurrence (BCR) of prostate cancer and negative or inconclusive conventional imaging.

Materials and Methods

We enrolled 107 pt (median age 71 years; IQR 11) with a suspected BCR of prostate cancer, previously treated with surgery (n = 50) or curative radiotherapy (n = 10) or both (n = 47). All patients had a tumor with a GS greater than 6. At enrollment, serum PSA greater than 0.1 ng / mL (median PSA 0.6 ng / mL: IQR 1.0) and conventional negative or ambiguous images (TRUS, CT, MRI) were present, in the absence of any therapy (hormonal or radiation) for at least 6 months. 18F-PSMA 1007 has been prepared according to national regulations, good radiopharmaceutical practice (GRP) as indicated in the EANM guidelines, using the All-in-One module (Trasis SA, Belgium) Each patient underwent PET / CT (Biograph mCT Flow®, Siemens Healthineers, Germany), 60 minutes after intravenous administration of 18F-PSMA (range 100-200 MBq 18F - PSMA). The acquisition was carried out in Flow mode (0.7 mm / sec) in 3D mode.

Results

18F-PSMA PET / CT was positive in 73 patients (68.2%) and negative in the remaining 34 patients (31.8%). In particular, uptake at the level of the prostate lodge alone was seen in 23 patients (31.5%), at the lymph-node level in 16 pt (21.9%) while in 16 pt (21.9%) the only site of localization was at the skeletal level. In 5 patients there were lesions both at the level of the lodge and of the lymph nodes, while in 5 patients the relapse sites were located both at the level of the lodge and of the skeletal areas. In the 43 patients with PSA between 0.2 and 0.5 ng / mL, 18F-PSMA PET / CT was positive in 22 (positivity rate = 51%), of which 5 in the lodge alone, 3 at the lymph node level and 7 a at the skeletal level. For PSA levels between 0.5 and 1 ng / ml 68Ga-PSMA PET / CT showed pathological uptake in 19/27 patients (positivity rate = 70%).

Discussions

Our experience confirms that 18F-PSMA PET / CT is a highly accurate restaging tool in the localization of BRC of prostate cancer. In these patients, PET / CT 18F-PSMA, thanks to the reduced urinary excretion of the tracer, appears particularly effective in detecting the disease confined to the prostatic lodge; moreover, it allows to highlight skeletal lesions even in the presence of reduced PSA values, susceptible to early and targeted therapies.

Conclusion

18F-PSMA-1007 PET/CT offers high detection rates for BCR that are comparable than those published for 68Ga-labeled PSMA ligands.

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#56: FASCIAL ANASTOMOSIS SUSPENSION TECHNIQUE (FAST) DURING OPEN RETROPUBIC RADICAL PROSTATECTOMY: A NOVEL METHOD TO IMPROVE EARLY POSTOPERATIVE RECOVERY OF URINARY CONTINENCE.

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Objective

Postoperative urinary incontinence after radical prostatectomy (RP) may greatly affect patients' quality of life and may require a long time and further treatments to be addressed.
We show our results with a novel technique for urethral suspension during RP, which is a modification of the technique originally described by JW Thuroff et al. in 1992, and involves the harvesting of two fascial limbs (one on each side of the linea alba), which are then sutured to the vesico-urethral anastomosis, in order to suspend it and to avoid its downward dislocation.

Materials and Methods

From March 2018 to December 2019, 90 patients with localized prostate cancer were enrolled in a prospective randomized single blind study, and underwent nerve-, bladder neck sparing open retropubic RP at our Institution. 45 patients (group 1) had a standard vesico-urethral anastomosis without additional procedures, while 45 patients (group 2) had a suspension of the anastomosis according to FAST. The study had an internal ethical review board approval, and all patients provided a written informed consent. Our standard technique for the anastomosis included an interrupted suture with 3 stitches on both sides (at 11, 9, 7 o' clock on the left, and at 1, 3, 5 o' clock on the right), and a running suture on the posterior urethral plate. For the modified technique, once the anastomosis was sutured, 2 limbs of rectus muscle fascia on both sides of the linea alba were prepared, each 8 cm long and 1 cm wide, with a distal attachment; the free extremity was brought to the anastomosis and sutured to the peri-urethral tissue, under a mild perineal pressure to enhance urethral suspension, and solidarized to the anastomosis sutures. Catheter was removed on 5-6th day after surgery, previous retrograde cystogram. Continence results were evaluated in terms of number of pads per day at 24 and 48 hours and at 4 weeks after catheter removal (ACR); the International Consultation on Incontinence Questionnaire (ICIQ) was compiled at 4 weeks ACR. Continence was defined as the need of 0-1 pad per day. Urodynamic study was performed at 4 weeks ACR.

Results

Continence rate (CR) for group 1 and group 2 was 30% Vs. 60% at 24 hrs; 40% Vs. 80% at 48 hrs, and 70% Vs. 90% at 4 weeks respectively.
Mean ICIQ test score at 1 month was 14 Vs. 6 for group 1 and group 2 respectively. No urinary obstructive complications were recorded. Mean maximal urethral closure pressure was 23 Vs. 40 cm H2O for group 1 and group 2 respectively.

Discussions

Although on a small series of patients, our results show better early continence results for the patients who received a urethral suspension according to our technique, compared to patients who underwent RP according to a standard anastomosis technique without vesico-urethral anastomosis suspension. The mechanism on which early recovery of urinary continece following urethral suspension may be related, is basically unknown. Our hypothesis is that vesico-urethral anastomosis suspension created with 2 limbs of rectus muscle fascia may provide an additional support to the urethral striated sphincter, and a further stabilisation of posterior urethra within the pelvic diaphragm, while avoiding the potential obstructive complications on urinary flow related to sling compression.

Conclusion

We showed that post-prostatectomy incontinence can be improved using a new technique for vesicourethral anastomosis during open radical prostatectomy . Anastomosis suspension technique is a sample and feasible procedure in open Radical Prostatectomy and can improve the early return of continence after radical prostatectomy. The FAST could significantly improve the quality of life of patients after prostatectomy.

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#83: PLASMA ANDROGEN RECEPTOR STATUS AND GRADE GROUP SYSTEM IN FIRST LINE TREATMENT OF METASTATIC CASTRATION RESISTANT PROSTATE CANCER

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Objective

The Gleason score system (GS) provides a risk stratification in men with localized prostate cancer (PCa) [1]. In localized PCa, GS system predicts biochemical relapse, metastatic disease-free survival and overall survival (OS) [2]. The International Society of Urological Pathology proposed the Grade Group system (GG) to be used in parallel with GS. GS ≥ 8 as well as GG 4-5 identified men with high-risk PCa. [3] Recent studies demonstrated that GS 9-10 / GG 5 hormone sensitive PCa may benefit less from androgen deprivation therapy (ADT), whereas GS 8 or GG 4 PCa may benefit from short term or long term ADT [4,5]. However, the prognostic role of GS grading and GG systems in metastatic castration resistant prostate cancer (mCRPC) is less defined. In first-line treatment of mCRPC, androgen receptor (AR)-directed drugs (abiraterone acetate, enzalutamide) and docetaxel represent the referring options [6-10]. No clear evidence supported that the GS/GG systems can guide the choice between AR-directed drugs and docetaxel in the first line setting of mCRPC. Nowadays no validated biomarkers define patients who may benefit or not from hormonal treatments or chemotherapy. Several studies evaluated the role of androgen receptor (AR) copy number (CN) that correlates with clinical outcome in mCRPC patients treated with AR-directed therapies (abiraterone and enzalutamide), whereas no association was observed in patients treated with taxanes [11,12]. This study analysed the association of the highest GG score with AR CN and their impact on the clinical outcome of AR- directed drugs and docetaxel as first-line therapy in mCRPC patients.

Materials and Methods

We enrolled 242 men with mCRPC and GS at diagnosis of 7 to 10 (GG 2 to GG 5) treated with abiraterone/enzalutamide or docetaxel as first-line treatment from January 2007 to March 2019. Baseline peripheral blood samples from 164 patients were collected and centrifuged to obtain plasma. DNA was extracted using QIAamp Circulating Nucleic Acid Kit and quantified. CN analyses were performed by QuantStudio3D digital PCR (dPCR) System. AR CN status was evaluated with two assays and two reference genes selected as control genes: RNaseP and AGO1. DNA samples from three healthy male donors were pooled and used as calibrator. A ratio of target copies and reference copies was measured for each sample, then a ratio between sample and calibrator was calculated. Cutoff value identified was >2.01 for gain [13,14].

Results

Among the 242 patients with mCRPC, 165 and 77 patients had GG 2-4 and GG 5 at diagnosis, respectively. Among patients with GG 2-4, 74 (44.8%) patients received a first-line treatment with docetaxel, 91 (55.2%) patients received abiraterone (n=44) or enzalutamide (n=47). Among patients with GG 5, docetaxel was administered in 37 (48%) patients, the remaining 40 (52%) patients underwent abiraterone (n=18) or enzalutamide (n=22) as first-line treatment for mCRPC. In patients receiving docetaxel, median OS was 37.6 months (95% CI 30.5-48.2) in patients with GG 2-4 and 29.8 months (95%CI 22.2-46.7) in GG 5 (p= 0.09 Median PFS was 10.6 months for patients with GG 2-4 (95% CI 8.9-11.5) compared to GG 5 (9.0 months 95%CI 7.3-10.9) patients, p= 0.55. Similarly, patients treated with abiraterone or enzalutamide presented no significantly difference for median OS (p= 0.69) and PFS (p= 0.22) depending on GG 2-4 and GG 5. GG did not significantly affect PSA response rate in chemotherapy-naïve mCRPC patients treated with abiraterone or enzalutamide (p=0.57) as well as in docetaxel-treated patients (p=0.34). AR CN status was available from 164 patients (116 samples in GG 2-4 and 48 samples in GG 5) at baseline of the first-line treatment with docetaxel or AR-directed agents (abiraterone or enzalutamide). In docetaxel treated patients, AR CN

gain was detected in 15 and 8 samples of patients with GG 2-4 and GG 5, respectively. AR CN normal was observed in 32 and 15 samples of patients with GG 2-4 and GG 5, respectively. In patients treated with abiraterone or enzalutamide, 8 patients had AR CN gain with GG 2-4 and 7 patients with GG 5. AR CN normal was identified in 61 patients with GG 2-4 and 18 patients with GG 5. Overall, 20% of patients with GG 2-4 had AR CN gain compared with 31% of patients with GG 5; nevertheless, this difference was not significant. In both AR CN normal and gain patients, no significant difference in median PFS was shown in both patients treated with docetaxel (normal: HR 1.41 (0.75-2.65), p= 0.28; gain: HR 0.63 (0.24-1.66), p=0.35) and abiraterone or enzalutamide (normal: HR 0.93 (0.44-1.93), p=0.84; gain: HR 1.21 (0.36-4.04), p= 0.75), depending on the GG 2-4 or GG 5. Similarly, in docetaxel-treated patients, no difference in OS was found in patients with GG 2- 4 and GG 5 mCRPC depending on AR CN normal (HR 1.71 (0.87-3.36), p=0.11) or gain (HR 0.60 (0.21-1.68), p=0.32). Abiraterone or enzalutamide-treated patients with AR CN gain and GG 5 experienced a significantly worse median OS (20.2 months in GG 2-4 vs 7.8 months in GG 5, p=0.04) compared to patients with AR- gained and GG 2-4. No difference in median OS depending on GG 2-4 or GG 5 was observed for abiraterone or enzalutamide- treated patients with AR CN normal (HR 1.03 (0.44-2.43), p=0.94).

Discussions

No difference was found in median OS and PFS both in patients treated with docetaxel and AR-directed drugs, based on GG 2-4 and GG 5 stratification. So, the GG grading system could not be considered a predictive factor of response to the mCRPC first-line treatment with docetaxel or abiraterone/enzalutamide. However, we found an increased, albeit not significant, risk of 31% of detection of AR gain in patients with GG 5 at primary tumor compared to a risk of 20% of those patients with GG 2-4. In abiraterone/enzalutamide cohort we showed that AR CN gain identifies a subgroup with poor prognosis, which could benefit from front-line docetaxel instead of an AR-directed drug.

Conclusion

Our study suggests that AR CN status could be a useful biomarker for treatment selection in GG 5 mCRPC patients.

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Comunicazioni 6-
Neoplasia Vescicale

#49: THE IMPACT OF NEOADJUVANT CHEMOTHERAPY ON COMPLICATIONS OF RADICAL CYSTECTOMY WITH ORTHOTOPIC NEOBLADDER RECONSTRUCTION

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Objective

Currently, radical cystectomy (RC) is the gold standard treatment for patients with muscle invasive bladder cancer (MIBC) (1, 2). Orthotopic reconstruction of bladder after radical cystectomy provides recovery of urination, full social and psychological rehabilitation of patients. However, it is still considered a challenging procedure reserved only to experienced surgeons (3). Neoadjuvant chemotherapy (NAC) was introduced in the 1980s in order to improve the oncological outcomes of the RC (4). Nowadays, European Association of Urology Guidelines recommended cisplatin-based combination therapy in this setting (5). However, the optimal neoadjuvant regimen has not been established. The Methotrexate, vinblastine, doxorubicin, and cisplatin (MVAC) and the Gemcitabine, cisplatin/carboplatin (GC) regimens had similar treatment response rates but MVAC showed superior overall survival outcomes compared with GC (6). The aim of the current study was to evaluate the impact of neoadjuvant chemotherapy on intraoperative and postoperative complications in patients who underwent RC with orthotopic neobladder reconstruction. As secondary endpoint, we assessed the factors involved in the decision to perform NAC protocol.

Materials and Methods

This retrospective, single-surgeon study included 82 consecutive patients with muscle invasive bladder cancer (≥cT2) who underwent RC with orthotopic neobladder reconstruction between January 2015 and July 2020. 42 of 82 patients (Group A) were treated with RC alone while 40 patients (Group B) were treated with neoadjuvant chemotherapy (6 cycles of GC). All patients underwent total body computed tomography (CT) and bone scintigraphy before surgery. No patients underwent a perioperative "fast track" program. The radical cystectomy with pelvic lymphadenectomy was performed with an open approach. Modified detubularized U- shaped ileocystoplasty (Camey II) following demolitive time was carried out. Preopera-

tive, intraoperative and postoperative parameters were collected in a prospectively-maintained database and were retrospectively analysed. Intraoperative and post-operative complications were classified and reported according to Satava and Clavien– Dindo system. All patients signed informed consent before surgery. Descriptive statistics of categorical variables focused on frequencies and proportions. Means and standard deviation were reported for continuously coded variables. Chi-square and Student's T tests were used to compare the statistical significance of differences in proportions and means, respectively. Statistical analyses were performed using SPSS version 20.0 (IBM, Armonk, NY, USA), considering a statistical significance at $P < 0.05$.

Results

Demographics and clinic-pathological variables of the patients are summarized in Table 1. The two groups showed no differences in terms of patients' demographics parameters. However, they were significantly different regarding Clinical (BCG-resistant multifocal T1G3 [p=0.0069], T2N1M0-G3 [p=0.0356], T3N1M0-G3 [p=0.0356]) and Pathological Tumour Stage (T3N0-G3 [p=0.0160]). No significant differences between the two groups in terms of intraoperative (p= 0.7430) and post-operative complications (p = 0.7313) were found. In Group A, we observed four cases of ileo-ileal fistula (two cases involved the ileoileal anastomosis and two cases the neobladder), while in Group B we did not experienced any fistula.

Discussions

According to our results, the presence of "carcinoma in situ" (CIS) in TURB specimen did not influence the choice of perform neoadjuvant protocol. This finding was in line with literature because several studies showed that the concomitant CIS was associated with a reduction in pathologic complete response rates but this did not appear to have an impact on survival outcomes (7). In our experience, the presence of positive lymphnodes played an important role in performing a neoadjuvant protocol. Moreover, T1G3 BCG-resistant patients are not eligible for NAC protocols (8). A Population-based Study demonstrated that NAC did not appear to be associated with increased risk of postoperative morbidity and mortality (9). In our series, no differences in complications were detected between the two groups. Interestingly, ileo-ileal fistulas occurred in patients treated with RC two weeks after the last GC course. Several studies reported that pelvic radiation and chemotherapy increased the risk of fistulas (10).

Conclusion

Our results suggested that NAC did not affect the global rate of complications of RC. We suggested to delay surgery at least three weeks after the end of chemotherapy in order to reduce the risk of post-operative fistulae. Our results could lead to new trials in order to assess the real impact of timing in post-operative complications.

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#92: LAPAROSCOPIC ASSISTED RADICAL CISTECTOMY IN THE ELDERLY WITH COMORBIDITIES

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Objective

Muscle-invasive bladder cancer (MIBC) is the fifth more common cancer diagnosis, the ninth as frequency, thirteenth as absolute cause of death, with the highest mean age at diagnosis (73 years), and 30% of new cases in the age decade 75-85 [1,2]. Those characteristics, combined with a global trend of an increasing life expectancy, suggest an incoming dilemma. Elderly patients and especially comorbid ones, are often excluded from elective invasive methods [3]. Salvage open radical cystectomy, that is proven to be less suitable for comorbid patients [4 – 8], is left as an option in case of minimally invasive approach failure. Although, countries with long life expextancy and resources availability, provided solid data about LARC indication and management in this peculiar cohort [9 – 23]. This study shows results from a single-centre experience, in terms of safety, feasibility and recommendation to an elective minimally-invasive approach for radical cystectomy (LARC) in elderly comorbid patients with MIBC.

Materials and Methods

We retrospectively reviewed our LARC results from a homogeneous cohort of a continuous series, monocentric and single senior surgeon (E.C.), between January 2019 – December 2020. Twenty-three patients (17M, 6F) underwent LARC at the mean age of 78 (65-87), combined to radical prostatectomy in males or hysterectomy in females, with intracorporeal reconstruction of ureterocutaneostomy (bilateral, paired 2/23, or monolateral 3/23) or ileal conduit urinary diversion (1/23), in order to reduce overall technical complexity. PLND was performed in 4 patients. Main comorbidities from Clinical records were: cardiovascular 78%, (ischemic cardiopathy, atrial fibrillation) metabolic 45%. (NIDDM), neurological 45% (mild to moderate cognitive impairment as result from senile dementia). Prediction tools were used to assess preoperatory risk [24 – 27], resulting in modal ECOG=2 and ECOG>2 (2-3), mean Charlston score >6 pts of 7.4 mean (6-9), life expectancy >12 months.

Results

The rate of conversion and intraoperative complication amount to 0%, RBC transfusion is up to 13%, and re- entry rate is 8.7%. The average hospital stay is 6.5 days (4-13). Complications according to Clavien-Dindo classification are Grade 0: 20 cases; Grade I: 1 case (drug therapy for AF), Grade II: 1 case (blood transfusion); Grade IV: 1 case (TEP). At the mean follow-up of 468 days (20-657), overall survival is 91% and cancer-specific survival is 96%. None of the patient experienced postoperative delirium. Histological findings reported organ confined disease in 34,7%, pT3- pT4 was found in the remaining 65,3%. One case showed tumour absence at pathological staging (pT0). Men had associated incidental prostate adenocarcinoma in 7/ cases, 6/7 were Gleason Score 3+3=6 and 3+4=7 in 1/7. One patient already underwent radical prostatectomy and salvage EBRT for biochemical relapse in local recurrency. PLND performed in 4/23 provided negative oncological findings. Four patients had neoadiuvant chemoterapy, one instead has been treated by adiuvant CHT.

Discussions

The comorbid elderly patient with MIBC is usually assigned to palliative care (TURBT, bladder arteries embolization, radiation treatment, nephrostomy, pain therapy, etc). Although minimally invasive treatments, admission and hospitalization (with their costs) are frequent due to the underlying untreated disease complications as haematuria, anemization, renal failure, etc. Besides, these patients have a low Qol for the remaining lifetime. Whenever facing longevous population, when resources are available, LARC may represent a reasonable alternative to palliative care, after careful discussion with the patient considering risks and benefits about any choice, in order to allow a significant QoL improvement.

Conclusion

LARC may be indicated in comorbid elderly patients affected by MIBC with good performance status. This study confirms that the procedure is feasible, reasonably safe and offers good results better than by open

surgery, as reported in reference literature. Italy and countries with similar peculiar demography, with increasing longevity, should consider this as an appealing option.

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#105: OPEN VS ROBOT-ASSISTED RADICAL CYSTECTOMY WITH TOTALLY INTRACORPOREAL URINARY DIVERSION: PERIOPERATIVE OUTCOMES FROM A SINGLE CENTER RANDOMISED CONTROLLED TRIAL

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Objective

Radical Cystectomy (RC) with urinary diversion (UD) is still considered a complex surgery associated with significant morbidity. Open radical cystectomy (ORC) remains the reference option of treatment, even if adoption of robot-assisted RC (RARC) is rapidly increasing. This prospective randomised controlled trial (RCT) aimed at demonstrating superiority of RARC with totally intracorporeal (i) urinary diversion (UD) vs ORC in terms of transfusion rate (Clinical Trials: NCT03434132).

Materials and Methods

Institutional review board approval was obtained. Patients were eligible for randomization if they had a diagnostic TURBt with cT2-4, cN0, cM0, or recurrent high-grade non-muscle invasive bladder cancer (BC) and no anesthesiologic contraindications to robotic surgery. Between January 2018 and September 2020, 116 patients were enrolled with a covariate adaptive randomization process based on the following variables: BMI, ASA score, preoperative haemoglobin, planned UD [Padua ileal bladder (PIB) or ileal conduit], neoadiuvant chemotherapy and clinical T-stage (randomization process available at https://clinicaltrials.gov/show/NCT03434132). Primary endpoint was to demonstrate the superiority of RARC in terms of a 50% reduction of transfusion rates, secondary endpoints included perioperative outcomes. Continuous and categorical variables were compared using Student t and Chi-Square tests, respectively.

Results

Overall, 116 patients were enrolled (RARC: 58 vs ORC: 58). Most of the patients were male (RARC: 76% vs ORC: 69%; p=0.534); mean age was 62- and 64-yrs for RARC and ORC cohorts, respectively (p=0.152). Both groups were homogeneous for all clinical features (all p>0.152) (Table 1). The most commonly UD used was the PIB for both approaches (RARC: 79% vs ORC: 72%; p=0.516). In the robotic group, UD was performed in all cases with a totally intracorporeal approach, with no need of open conversion. Perioperative outcomes were reported (Table 2). Operative time was significantly longer in RARC cohort (RARC: 313min vs ORC: 196min; p<0.001), while transfusion rate was significantly lower 22% vs 41%, respectively (p=0.046). Hospital stay was comparable between groups (RARC: 9d vs ORC:10d; p=0.750). No differences

in perioperative complications rate were observed (p=0.189), neither in minor (clavien 1-2; p=0.089) nor in major complications rates (clavien≥3; p=0.205).

Conclusion

This prospective RCT confirmed superiority of RARC-iUD vs ORC in terms of transfusion rates; secondary endpoints included in perioperative outcomes were comparable between arms.

#106: IMPACT OF MICTURITION HABITS ON FUNCTIONAL OUTCOMES OF PATIENTS WITH ORTHOTOPIC NEOBLADDER: RESULTS FROM A SINGLE CENTER PROSPECTIVE RANDOMISED CONTROLLED TRIAL

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Objective

Radical cystectomy (RC) with orthotopic ileal neobladder is a complex surgery. Functional outcomes and their predictive variables remain underinvestigated. We aimed to evaluate the impact of voiding time-intervals on both day- and night-time continence in a prospective randomised controlled trial (RCT) cohort of patients comparing open RC (ORC) and robot-assisted RC (RARC) with totally intracorporeal (i) urinary diversion (UD) (Clinical Trials: NCT03434132).

Materials and Methods

Institutional review board approval was obtained. Patients were eligible for randomization if they had a diagnostic TURBt with cT2-4, cN0, cM0, or recurrent high-grade non-muscle invasive bladder cancer (BC) and no anesthesiologic contraindications to robotic surgery. Between January 2018 and September 2020, 116 patients were enrolled with a covariate adaptive randomization process based on the following variables: BMI, ASA score, preoperative haemoglobin, planned UD [Padua ileal bladder (PIB) or ileal conduit], neoadiuvant chemotherapy and clinical T-stage (randomization process available at https://clinicaltrials.gov/show/NCT03434132). In this study we assessed functional outcomes of patients who underwent PIB, describing a voiding cut-off time able to predict day- and night-time continence. Continuous and categorical variables were compared using Student t and Chi-Square tests, respectively. Logistic regression was performed to build a model to predict day- and night-time continence using a voiding cut-off time.

Results

Out of 116 patients enrolled, 88 received PIB and 71 were included in the study. Twelve 12 patients died, 1 patient was lost to follow-up, 1 patient was hypercontinent, 1 patient had a stroke postoperatively and 2 patients had permanent catheter. Baseline clinical data were reported in Table 1. RARC with intracorporeal PIB was performed in 35 patients (49%), with no need of open conversion. At a median follow-up of 16 months (IQR: 11-28), 60 patients (85%) were day-time continent, and 45 patients (63%) were night-time continent. Overall, patients who had day-time voiding time intervals <3h had significantly higher probability to be day- time continent (88.3%; vs 63.6%; p=0.037); similarly, night-time continence probabilities were significantly higher when night-time voiding intervals were <3h (75.6% vs 46.7%; p=0.012). At logistic regression analysis, for each hour increase in voiding time intervals, daytime and night-time continence probabilities decreased of 41% (HR: 0.587; 95% CI 0.424-0.813;p=0.001). In a subgroup analysis, restricted to day-time continent patients, logistic regression demonstrated that for each hour increase night-time continence probability decreased of 49% (HR: 0.514; 95% CI 0.353-0.749; p=0.001).

Conclusion

This study supports the key role of micturition habits on functional outcomes of neobladder patients. Patients should be preoperatively counseled about the need to respect voiding cut-off time of 3h to achieve optimal functional results.

#107: PENTAFECTA ACHIEVEMENT COMPARISON BETWEEN OPEN AND ROBOT-ASSISTED RADICAL CYSTECTOMY WITH TOTALLY INTRACORPOREAL URINARY DIVERSION: RESULTS FROM A RANDOMIZED CONTROLLED TRIAL

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Objective

Radical Cystectomy (RC) with urinary diversion (UD) is still considered a complex surgery associated with significant morbidity. Open radical cystectomy (ORC) remains the reference option of treatment, even if adoption of robot-assisted RC (RARC) is rapidly increasing. In this study we aimed to compare USC pentafecta achievement comparing ORC vs RARC with totally intracorporeal UD from an ongoing randomised controlled trial (RCT) (Clinical Trials: NCT03434132).

Materials and Methods

Institutional review board approval was obtained. Patients were eligible for randomization if they had a diagnostic TURBt with cT2-4, cN0, cM0, or recurrent high-grade non-muscle invasive bladder cancer (BC) and no anesthesiologic contraindications to robotic surgery. Between January 2018 and September 2020, 116 patients were enrolled with a covariate adaptive randomization process based on the following variables: BMI, ASA score, preoperative haemoglobin, planned UD [Padua ileal bladder (PIB) or ileal conduit], neoadiuvant chemotherapy and clinical T-stage (randomization process available at https://clinicaltrials.gov/show/NCT03434132). USC Institute of Urology previously described pentafecta as the combination, 1-yr after surgery, of negative soft tissue surgical margins, ≥ 16 lymph node (LN) yield, absence of major (Clavien≥3) complications at 90 days, absence of UD-related long-term sequalae and absence of clinical recurrence. Continuous and categorical variables were compared using Student t and Chi-Square tests, respectively.

Results

Out of 116 patients enrolled, 79 (RARC: 39 vs ORC: 40) reached a minimum follow-up of 1yr and were included in the study. Two (2) patients were lost to follow-up, one for each group. Baseline clinical features were described in Table 1. Analysis for each variable of pentafecta was reported in Figure 1. No statistically significant differences were observed in terms of negative soft tissue surgical margins (RARC: 0 vs ORC: 0; p=1), ≥ 16 LN yield (RARC: 88% vs ORC: 93%; p=0.48), absence of major (Clavien≥3) complications at 90 days (RARC: 80% vs ORC: 92%; p=0.11), absence of UD-related long-term sequalae (RARC: 60% vs ORC: 77%; p= 0.11) and absence of clinical recurrence (RARC: 83% vs ORC: 77%; p=0.54). No statistically significant differences were described in pentafecta achievement (RARC: 40% vs ORC: 54%; p=0.22) between groups.

Conclusion

The study demonstrated comparable perioperative morbidity and oncological outcomes between RARC and ORC. Larger cohort is needed to obtain stronger evidences.

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