



Libro degli

ABSTRACTS

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CONGRESSO NAZIONALE

16 - 18 maggio 2019

BOLOGNA



Istruzioni per la consultazione degli abstracts

Alle pagine 3 e 4 trovate *l'indice*:

- * L'indice delle sessioni, cui afferiscono gli abstract, del giorno e le sale in cui i corrispondenti lavori vengono presentati.
- * L'elenco degli Autori e delle loro corrispondenti sessioni



Moderatori: John Rossi, Giuseppe Smith

Le *sessioni di Abstracts* sono identificate con colori in base al **giorno**, alla **sala di presentazione** e al **tipo di presentazione** come nell'esempio sopraesposto.

Gli abstracts sono esposti consecutivamente nelle rispettive sessioni di presentazione, come da programma.

Pertanto a seconda delle giornate, delle sessioni (comunicazioni, video, poster) e degli orari, potete identificare l'abstract desiderato.

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

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11:00 - 12:30

sala A

Video 1 - Chirurgia Ricostruttiva

Moderatori: Michele Di Dio, Pietro Belmonte

1. #123: MINIMAL INVASIVE TECHNIQUE FOR DORSAL FEMALE URETHROPLASTY BY ASOPA PROCEDURE

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During the last years urethral surgery is linked to the concept of urethra-sparing. We present a minimal-invasive technique female urethroplasty (MIFU) with dorsal buccal mucosa graft (BMG).

Between December 2017 to June 2018 six patients were treated with MIFU, for distal urethral stricture. The cause of stricture was iatrogenic in all patients and these have undergone multiple dilatations. The preoperative evaluation was: medical history, physical examination, urine culture, uroflowmetry, voiding cystourethrography. Cystoscopy was executed before surgery to insert sensor guidewire in the urethra. Without mobilization of the urethra, the dorsal plate was incised and an elliptical raw area was created over the periurethral tissue where a free full-thickness BMG was sutured.

Median patient age was 48 years (33-68). Mean operative time was 1 hour. No perioperative complications occurred. Hospitalization 2 days. Catheter was removed after 3 weeks without any cystourethrography control because of the low risk of urethral fistulae in absence of urethral mobilization. All patients had complete restore of the urinary flow.

The MIFU preserves the urethra, avoiding urinary incontinence. This experience suggests the feasibility of this technique.

2. #230: RICOSTRUZIONE DEL GLANDE E DEL NEOMEATO URETRALE IN PAZIENTE ADULTO IPOSPADICO VERGINE E.

Palminteri¹, M. Preto², O. Sedigh², P. Gontero², F. Porpiglia³

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Il Video mostra la ricostruzione step by step dell'uretra, del neomeato uretrale e del glande in un paziente adulto con ipospadia vergine. Questa chirurgia è caratterizzata dal 70% di successo e da un 30% di insuccessi. Le più frequenti cause di insuccesso si traducono in: fistole uretrali, cedimento completo della ricostruzione, stenosi uretrale, non soddisfacente ricostruzione estetica del pene.

Nel Video vengono evidenziati i trucchi tecnici per ridurre i rischi di complicanze ed ottenere una soddisfacente ricostruzione estetica del glande e del neomeato.

3. #232: RICOSTRUZIONE DELL'URETRA E DEL PENE IN PAZIENTE AFFETTO DA LICHEN SCLEROSUS GENITALE ED URETRALE

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Il Video mostra la ricostruzione dell'uretra e del mantello prepuziale in un paziente affetto da Lichen Sclerosus genito-uretrale.

Il paziente presenta il neo-piatto uretrale ricostruito con la mucosa buccale al momento del precedente intervento avvenuto 6 mesi prima per la cura della stenosi uretrale peniena.

La stomia uretrale ed i tessuti prepuziali adiacenti sono coinvolti dal Lichen Sclerosus che ha derterminato la formazione di sinechie alla base del pene.

Nel Video vengono evidenziati i passaggi tecnici per:

1- Ricostruire l'uretra utilizzando il piatto di mucosa buccale

2- Asportare i tessuti prepuziali coinvolti dal lichen sclerosus recidivante

3- Ricostruire il mantello prepuziale mobilizzando adeguatamente i lembi cutanei

4. #284: MANAGEMENT DELL'IPOSPADIA FALLITA PERINEALE: URETROPLASTICA PENIENA E BULBARE IN DUE TEMPI IN PAZIENTE CON STENOSI URETRALE, CALCOLOSI URETRALE E FISTOLA URETRO-CUTANEA

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⁴ Ospedale Cardarelli (Napoli)

⁵ Hospital Clinic (Barcelona)

In questo video mostreremo un'intervento in due tempi di un paziente con ipospadia fallita (Ipospazia perineale), stenosi uretra peniena e bulbare, calcolosi uretrale e fistola uretro-cutanea.

Nel primo tempo chirurgico è stata effettuata l'apertura mediana ventrale dell'uretra, per tutta la lunghezza della stenosi peniena fino al raggiungimento di due grossi calcoli centimetrici. Si confeziona uretrotomia alla base del pene ed i margini dell'uretra aperta vengono suturati alla cute peniena (sec. Johanson).

Si procede a incisione e rimozione dei tramiti fistoloso uretro-cutaneo. Uretroplastica bulbare con innesto dorsale di mucosa buccale che viene tubularizzata.

Posizionamento del catetere vescicale Foley ch 16.

Nel secondo tempo si procede a incisione laterale del piatto uretrale e tubularizzazione della neo-uretra su catetere Foley ch 16. Ricostruzione delle ali del glande e del neo-meato. Spongioplastica e copertura dell'uretra con strati di dartos. Chiusura della cute in punti staccati.

5. #100: A RARE CASE OF COWPER'S GLAND SYRINGOCELE: COMPLETE EXCISION AND URETHROPLASTY WITH A FLAP OF SYRINGOCELE MUCOSA

G. Romeo¹, R. Olianas², L. Pucci¹, F. Chiancone¹, M. Fabiano¹, P. Fedelini¹, M. Carrino¹

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Cowper glands are paired structures that reside within the urogenital diaphragm, and gland secretions provide urethral lubrication. A Cowper gland syringocele is cystic dilatation of the main duct of the gland. The 4 types of syringocele are type I—a simple syringocele with mild dilatation of the duct, type II—a perforated syringocele with dilated distal (downstream) duct that communicates with the urethra via a patulous ostium, type III—an imperforate syringocele that does not communicate with the urethra and type IV—a ruptured syringocele in which a fragile membrane that was previously part of the dilated distal duct remains in the urethra after the distal duct has ruptured.1 Functionally and radiographically, types I, II and IV are considered "open" lesions and are more likely to cause symptoms such as post-void dribbling and hematuria. Type III lesions can be thought of as "closed" lesions and are more likely to cause obstructive symptoms such as dysuria and urinary retention.

It is an uncommon condition and is usually reported in children. There are only few previous case reports of late presentation in adulthood to the best of our knowledge. We present a case in a 33 years old man.

6. #247: LAPAROSCOPIC URETEROLYSIS AND OMENTAL WRAPPING IN IDIOPATHIC RETROPERITONEAL FIBROSIS

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Retroperitoneal fibrosis is a rare disease that may involve various organs, mainly upper urinary tract. Its etiology and pathogenesis are unclear. The video shows a case of retroperitoneal fibrosis with ureteral stenosis treated by laparoscopic ureterolysis and intraperitoneal transposition and omental wrapping.

A 52 years old female referred at our institution for abdominal and lumbar pain. CT scan showed right hydronephrosis and retroperitoneal fibrosis. A transperitoneal laparoscopic ureterolysis with transposition of the ureter within peritoneal cavity was performed. The procedure was completed with ureteral wrapping with omentum to prevent a new entrapment.

Mean operative and blood loss were 180 minutes and 40 ml, respectively. No postoperative complications occurred. Patients was discharged after 3 days.

Retroperitoneal fibrosis is an uncommon and fearsome disease. Laparoscopic ureterolysis with omental wrapping, despite being complex, represents a valid and safe option with low morbidity and short hospital stay.

7. #273: URETERAL STENT ALLIUM

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¹ Policlinico "Umberto I" (Roma)

Chronic ureteral strictures and ureteral fistulas are managed with urinary diversion using percutaneous nephrostomy or double pigtail stent. Both these techniques require the replacement of these devices every few months to prevent encrustations and obstructions. We evaluated the use of new expandable ureteral stent Allium as an alternative to standard indwelling ureteral stent or reconstructive surgery.

The video shows 3 clinical cases from our experience: a bilateral ureteral stricture, a PUJ obstruction syndrome, a uretero-vaginal fistula. The video ends with an example of an Allium removal.

8. #274: TRATTAMENTO VIDEOLAPAROSCOPICO DI LESIONE DEL NERVO OTTURATORIO IN CORSO DI CHIRURGIA PELVICA

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Il video mostra 3 casi di lesione del nervo otturatorio, prodotti in corso di linfadenectomia durante chirurgia pelvica maggiore (prostatectomia radicale e cistectomia radicale). In particolare vengono mostrate le fasi della produzione, del riconoscimento e della riparazione del danno. In tutti i pazienti la lesione una volta riconosciuta è stata prontamente riparata mediante rafia VLP con punti di sutura in Vycril. Il decorso postoperatorio è stato del tutto regolare ed i pazienti hanno ricominciato a deambulare prontamente e senza nessuna difficoltà in seconda giornata. Un'elettromiografia eseguita dopo 3 settimane dall'intervento non ha mostrato in nessun caso anomalie di rilievo.

9. #97: TECHNICAL NUANCES FOR RETROPERITONEOSCOPIC LIVING DONOR NEPHRECTOMY (LEFT AND RIGHT KIDNEY)

S. Masciovecchio¹, A.B. Di Pasquale¹, G. Romano¹, G. Ranieri¹, L. Di Clemente¹

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Laparoscopic living donor nephrectomy (LLDN) is a routine modality for donor nephrectomy in kidney transplantation (KT) in the world. Since conventional lldn was introduced in 1995, LLDN has been a standard modality and primary choice for donor nephrectomy in KT with bridging of hand assisted living donor nephrectomy. And, LLDN has been evolved into single-port LLDN, natural orifice transluminal endoscopic surgery (notes) and robotic donor nephrectomy. Retroperitoneoscopic donor nephrectomy (RDN) has the added advantage of early vascular pedicle visualization and avoidance of any intraperitoneal organ injury besides having shorter hospitalization, faster recovery, and less analgesic requirement in the postoperative period. Complex vascular anatomy poses a major challenge to the donor surgeon during rdn. However, with the availability of better imaging modality and surgical expertise RDN can also be extended to donors having complex vascular anatomy. The purpose of this video is to describe the technical nuances for retroperitoneoscopic living donor nephrectomy for the left and right kidney

16 maggio 2019

11:00 - 12:30

sala B

Comunicazioni 1 - Andrologia e Calcolosi

giovedì 16 maggio 2019

Moderatori: Mario Melis, Ferdinando De Marco

1. #266: SYNCHRONOUS, PALPABLE, BILATERAL TESTICULAR TUMOR (SEMINOMA) IN A YOUNG MAN: A SURGICAL AND CLINICAL CHALLENGE TO AVOID BILATERAL ORCHIFUNICOLECTOMY

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Objective

To describe clinical and surgical management on a case of synchronous, bilateral, palpable testis seminoma performing a testis sparing surgery to avoid androgen deprivation in a young man.

Materials and Methods

A.R. is a 26 years old caucasian man presenting at our attention for a bilateral, synchronous, testis palpable mass. He was a 10 cigarettes/day smoker, no previous surgery and no other clinical problems in his history. In December 2017 he presented to our observation in outpatient clinical structure for a palpable, nodular and solid mass in his right testicle. Testicular ultrasound (US) shows: bilateral parenchymal microlithiasis, a 18x14x26 mm hypoechoic lesion to the lower pole of the left testicle and a 58x22 mm hypoechoic lesion involving the majority of the right testis. The tumor markers (α -FP e β -hCG) were negative as thoracic and abdominal CT scan that do not show lymphatic and distant metastases. Total testosterone, FSH and LH blood levels were in the normal range at the time of diagnosis.

Considering the age and the risk of clinical castration in a young man, we chose a conservative approach. Surgical management was oriented to a right classic orchifuniclectomy (previous nodular intraoperative biopsy confirming seminoma) with implant of silicon testicular prosthesis and to a left testis sparing tumorectomy. In this site, histological frozen section shows: seminoma from the sample of the nodular lesion that underwent tumorectomy and no evidence of cancer in the biopsy sample from surrounding and closer tissue.

Results

Definitive histological report describes: for the right testis, seminoma pT1a without vascular, albuginea, epididymal and funicular infiltration; for the left testis (tumorectomy testis sparing) seminoma pT1a without vascular infiltration.

No major post-operative complications had been presented. Patient was discharged from hospital the day after surgery.

Follow-up at 3, 6, 9 and 12 months does not show any increase of the tumor markers, as physical examination, at the same time, to not find palpable nodes in the left testis.

The US of the left testis at 6 and 12 months after surgery shows normal echogenicity in the testicle without any hypoechoic suspected images.

Total testosterone blood level rises every time in the normal range at 3, 6 and 12 months from surgery. The patient refers normal erectile (spontaneous, nocturnal and reflex erection) activity from a few weeks after surgery and does not refer, during

follow up, any erectile dysfunction experience.

Discussions

Bilateral, synchronous testicular germ cell tumours (TGCT) are rare. In a large series describe in literature (1), of 5132 patients with TGCT, 128 (2.5%) had bilateral TGCT and the synchronous cases of TGCT, in the bilateral group, had 20 (57%) (1). Concordant tumor histology is more frequent than unconcordant and seminoma is the histological type more frequent and concordant at the same time (1, 2). It presents with a low stage at diagnosis, and mixed histology tumours, both with a good overall survival. On the other hand, cases with bilateral non-seminoma histology are associated with poor prognosis and high stage at presentation. Testis-sparing surgery should be an eligible choice in selected cases, to preserve fertility and avoid testosterone deficiency (2). Multiple biopsies are recommended in these patients (2, 3). In cases of bilateral presentation, accurate histological evaluation may allow the option of testis-sparing surgery (3).

In our experience this case has been represented a clinical and surgical challenge considering the age of the patient and the impact of the andrological complication related to a testosterone deprivation (that conduce patient to live-replacement therapy) in case of bilateral orchidectomy. An extensive dialogue with the patient has been essential to establish an emphatic relation with him to support a testis-sparing surgery.

Conclusion

Considering the poor number of cases describe in the literature, based on a clear and realistic dialogue with the patient this experience suggest us that testis-sparing approach could be proposed in case of bilateral, synchronous testis tumor in all young, fertile and sexually active man.

Reference

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- (2) Campobasso D, Ferretti S, Frattini A. Synchronous bilateral testis cancer: clinical and oncological management. *Contemp Oncol (Pozn)*. 2017;21(1):70-76. doi: 10.5114/wo.2017.66660. Epub 2017 Mar 22.
- (3) Østergren P, Salami SS, Udager A, Sønksen J, Ohl D, Palapattu GS. A rare case of bilateral synchronous spermatocytic tumours in a young man seeking fertility preservation. *Scand J Urol*. 2017 Feb;51(1):78-80. doi: 10.1080/21681805.2016.1249515. Epub 2016 Nov 4

2. #265: SPONTANEOUS CONCEPTION AFTER ARTIFICIAL REPRODUCTIVE TECHNIQUE (ART) FAILURE. ANDROLOGICAL EVIDENCES BASED ON CLINICAL PRACTICE

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³ ASLCN1, SC Urologia (Savigliano)

Objective

To describe our clinical practice as andrological consultant in an ART third level center, focussing our attention on the case of spontaneous conception and live birth after ART failure and some possible association with L-Arginine utilization.

Materials and Methods

From January 2014 and January 2018, 398 patient, male partner of infertile couples, underwent our clinical attention in our andrological center. We perform a retrospective analysis, based on phone call, to assess the ART success or failure, and the couples follow up. We focussed the attention on the couples, male partner electively, that have experienced a spontaneous conception and live baby birth after the last ART failure.

Results

Twenty-four couples referred to have experienced a spontaneous conception after ART failure (13 ICSI, 5 IVE, 6 IUI). In 19 couples we found pregnancy with live baby birth. In particular 21 live-baby were born (17 single pregnancy and 4 twin pregnancy).

Mean age at the spontaneous pregnancy was 36,5 years for male and 32,8 years for female partners.

The mean time from last ART failure and pregnancy was 17.3 months (raising from 3 to 26 months).

In 13 male partner (54,1%) we found the presence of varicocele as new diagnosis. All these patient underwent microsurgical subinguinal varicocelectomy.

We have used L-Arginine (2.5 g two times a day for at least 4 months) in 15 patients (10/15 as monotherapy; 5/15 in association with Inostithol).

Discussions

Spontaneous conceive after an ART failure is an uncommon but clinical evidence in physicians that expertise andrological approach to male partner of infertile couples (1,2). Our experience, without any statistical significance due to the lower number of cases, suggest that the role of andrologist in the management of the couples infertility, it is important to diagnose and treat pathologies, varicocele for example, that involves the male partner and that lead to a spontaneous conceive otherwise classical ART or in case of repeated ART procedure without a clear male partners evaluation.

Reference

- (1) Ohannessian A, Loundou A, Gnisci A, Paulmyer-Lacroix O, Perrin J, Courbiere B. Unexplained infertility: live-birth's prognostic factors to determine the ART management. *Minerva Ginecol*. 2017 Dec;69(6):526-532. doi: 10.23736/S0026-4784.17.04085-0. Epub 2017 Jun 9
- (2) Farquhar C, Rishworth JR, Brown J, Nelen WL, Marjoribanks J Assisted reproductive technology: an overview of Cochrane Reviews. *Cochrane Database Syst Rev*. 2015 Jul 15;(7):CD010537. doi: 10.1002/14651858.CD010537.pub4

3. #63: EFFECTS OF VARICOCECTOMY ON SERUM LEVELS OF TESTOSTERONE, LH AND FSH AMONG EUGONADAL MEN WITH VARICOCELE

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Objective

Varicocele is one of the most common diseases among men. The adverse effects of varicocele on spermatogenesis and fertility are known, but the association between varicocele and gonadal function is not clear (1). We aimed to evaluate the serum levels of testosterone, luteinizing hormone (LH) and follicle-stimulating hormone (FSH) in eugonadal patients with varicocele after varicocelectomy.

Materials and Methods

250 eugonadal patients (testosterone > 350 ng/dL) with varicocele who underwent to varicocelectomy from January 2014 to May 2017 were included into the study. All data were collected in a prospective database and retrospectively analysed. Only patients with Grade III varicocele according to Dubin classification were included in this study. All patients received varicocelectomy with Marmar technique by a single operator. Serum levels of testosterone, FSH, and LH were measured before and 6 and 12 months after surgery. Exclusion criteria were as follows: recurrent varicocele, history of inguinoscrotal surgery, history of cryptorchidism, trauma, or testicular torsion, endocrine disease (thyroid disorders, pituitary and so on), chronic hepatic disease and chronic renal diseases, azoospermia, and a therapy with androgen, clomiphene, or aromatase inhibitors. Mean values with standard deviations (\pm SD) were computed and reported for all items. Statistical significance was achieved if p-value was ≤ 0.05 (two-sides).

Results

The average age of patients was 27.55 ± 5.45 years. The mean body mass index of patients was 25.30 ± 3.67 . In eugonadal group, a significant improvement of testosterone level was seen after surgery at 6-month follow-up (434.54 ± 342.67 ng/dL vs 490.43 ± 132.71 ng/dL; $p=0.0156$) and at 12-month follow-up (434.54 ± 342.67 ng/dL vs 489.13 ± 232.17 p=0.375). There was no significant decrease in the mean FSH level at 6-month follow-up (4.9 ± 1.2 vs 5.1 ± 1.3 ; $p=0.0745$) and at 12-month follow-up (4.9 ± 1.2 vs 5 ± 1.7 ; $p=0.4477$), but there was a significant decrease in the mean LH level at 6-month follow-up (6.5 ± 1.7 vs 6.1 ± 1.5 ; $p=0.0055$) and at 12-month LH (6.5 ± 1.7 vs 5.9 ± 1.6 ; $p=0.0001$).

Discussions

Varicocele determines an increase in internal scrotal temperature that can cause not only a damage of germinal cells and a decrease of Sertoli cell function, but also a reduction of testosterone synthesis by Leydig cells.

Goldstein proposed that the hyperthermia produced by varicocele may inhibit 17 α -hydroxyprogesterone aldolase, an enzyme involved in the conversion of 17 α -hydroxyprogesterone to testosterone (2). Ishikawa suggests that varicocele indirectly determined oxidative stress in the seminiferous tubules (3).

Several studies demonstrated that hypogonadal men who underwent to varicocelectomy showed a postoperative improvement of their hormonal parameters.

In 1995, Su and colleagues reviewed that in a group of 53 patients undergoing varicocelectomy, there was a statistically significant increase of serum testosterone from a mean preoperative level of 319 ng/dL to a postoperative value of 409 ng/dL (4). Rodriguez-Pena and colleagues reported a group of 202 patients with grade II or III varicoceles. Their results demonstrated a mean testosterone increase of 61 ng/dL, although it was not statistically significant (5).

Nonetheless, the association between varicocelectomy and testosterone in eugonadal patients remains unclear, and many of the studies did not notice significant improvements. For example, the study of Rodriguez-Pena et al. (5) had a mean preoperative testosterone level of 648 ng/dL. Pierik et al. found that varicocele treatment improved inhibin B levels but not serum levels of FSH, LH and testosterone (6).

Cayan et al. evaluated 78 men who underwent varicocelectomy; the authors found an improvement of mean serum testosterone from 563 to 837 ng/dL (7).

Our study finds that varicocele repair improves testosterone levels in eugonadal patients, reflecting Leydig cells function.

The main limitations for our study are its nonrandomization and the short follow-up period. Furthermore, we did not evaluate aromatase and estradiol levels in our patients.

Conclusion

Eugonadal patients with varicocele who underwent varicocelectomy showed an improvement in testosterone levels. Decrease in LH levels was seen after varicocelectomy, which can be due to increase in testosterone levels. Further studies are required to clarify if varicocele repair in eugonadal patients would reduce the likelihood of later hypogonadism.

Reference

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- Cayan S et al. The effect of microsurgical varicocelectomy on serum follicle stimulating hormone, testosterone and free testosterone levels in infertile men with varicocele. BJU Int 1999;84(9):1046-9

4. #64: PENILE SCLEROEMBOLIZATION FOR ERECTILE DYSFUNCTION RESULTING FROM VENOUS LEAKAGE. A SINGLE INSTITUTION EXPERIENCE

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Objective

To evaluate the venous drainage modifications after surgical correction of erectile dysfunction (ED) resulting from venous leakage highlighted by Caverno-Computed Tomography (CCT) in patients no-responders to the maximum dosage of various phosphodiesterase type 5 inhibitors (PDE5i).

Materials and Methods

The study enrolled 38 consecutive patients (age 18-38 years old) from January 2016 to October 2018 with a CCT venous leak at the level of the deep dorsal penile vein (single or double branches), superficial penile vein or both. Each patient gave his informed consent for the study and International Index of Erectile Function-Erectile Function Domain (IIEF-EF) questionnaire, medical history, physical examination, routine blood analysis, hormonal analysis were checked. Venous leak was firstly studied by penile dynamic doppler ultrasound and then confirmed by dynamic infusion cavernosometry (DIC) using flow-to-maintain measurement (FTM) as the defining parameter; FTM value upon 5 ml/minute and end-diastolic velocity (EDV) > 5 cm/sec defined a venous leak. We firstly detected the venous leak site using a CCT that consisted in an intracavernous injection (ICI) of 1 mL of alprostadil (10 mcg), an ICI of 20-60 cc of diluted contrast media (1/3) using 20 cc of Ioprimide (300 mg/mL) and a spiral multidetector computer tomography acquisition and three dimensional volume rendering. We did not enroll for surgical treatment the patients with crural or very complex venous drainage because of their high rate of insuccess as highlighted from our previous study (1). Under local anesthesia with mepivacaine, we performed a short penile dorsal midline incision at the corona of the glans penis in order to ligate the superficial dorsal vein. The deep dorsal vein was distally ligated with absorbable suture. Conversely the proximal end was catheterized with a 20 Gauge steel needle after placing a tourniquet at the root of the penis and 3 ml aethoxysklerol foam 3% was injected for venoablation. Each patient was then evaluated at 6 and 12 months after surgery. At 12 months, we performed a new CCT to reveal any change in venous drainage. The Statistical analyses were conducted using SAS version 9.3 software (SAS Institute, Inc., NC). Mean values with standard deviations (\pm SD) were computed and reported for all items. Statistical significance was achieved if p-value was ≤ 0.05 (two-sides).

Results

No intraoperative complications were demonstrated. We just reported minor and transient side effects (hematoma and painful erections in 1 and 4 patients respectively). The CCT showed several patterns of penile venous drainage causing venous leak: 1) drainage through the deep penile vein in 23 out of 38 (60 %) patients, with a single branch vein in 13 out of 23 patients and a double branches vein in 11 out of 23 patients, 2) drainage through the superficial penile vein in 6 out of 38 (16%) patients, 3) drainage through both superficial and deep penile vein in 9 out of 38 (24%) patients. At 6-months follow-up, 32 out of 38 (84%) patients reported acceptable erections with or without the use of low - moderate dose of PDE5i while at 12-months follow-up, 28 out of 38 patients (74%) reported the same sexual improvement. At 12 months follow-up, the post-operative CCT findings showed no venous leak in 22 out of 38 (58 %) patients and a single or multiple venous leak recurrence in 16 out of 38 patients (42 %). In the group of patients with venous leak recurrence, 10 out of 16 patients did not have any sexual intercourse while 6 out of 16 patients had a sexual activity with or without the use of low-moderate dose of PDE5i. Preoperative IIEF-EF scores changed significantly at 6 and 12-months follow-up ($p < 0,05$). Volumetric analysis of the penis showed a significant increase ($p < 0,05$) at 6 and 12-months follow-up.

Discussions

The CCT is an accurate and low invasive way to study vasculogenic ED due to venous leakage (2,3,4). Thanks to its three-dimensional volume rendering, we are able to discover the site of venous drainage in order to program the best surgical approach to correct venous leakage in ED patients unresponsive to oral medical treatments (5). In our study we performed a modified technique of embolization of the deep dorsal penile vein achieving similar results to other studies (6). An interesting aspect was the fact that at 12-months follow-up nearly half of the patients had venous leak recurrence strictly related with ED while the "no leak" ones were totally or partially potent. Another important consideration was that more complex was the venous leak at 12-months, more likely was the impotence rate, as demonstrated in 6 patients who maintained their sexual activity despite the single venous leak.

Conclusion

This study confirms that the positive effect of penile scleroembolization on ED lasts at least 12 months after surgery. In our opinion, the lower rate of success compared to 6 months follow-up is due to the rise of collateral veins causing a recurrent venous leak process. Despite at the actual state of the art is not possible to predict if and when the neoangiogenic process will occur, with this technique we could posticipate or avoid the prosthesis implant that is nowadays the standard of care for patients with venous ED no-responders to PDE5i.

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5. #67: IS CONFIRMED AN ASSOCIATION BETWEEN TESTICULAR MICROLITHIASIS, TESTICULAR DYSGENESIS SYNDROME AND INFERTILITY? OUR PRELIMINARY EXPERIENCE IN AN HIGH-VOLUME CENTER

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Objective

Testicular microlithiasis (TML) or “snow storm” testis is a pathologic condition that is commonly diagnosed by scrotal ultrasonography. The evidence of literature suggests that this syndrome may be associated with an increased risk of testicular dysgenesis syndrome (TDS) and infertility. Recently observations assumed a strong correlation between TML and hypospadias, cryptorchidism, Leydig and Sertoli cell dysfunction manifested in infertility, hypogonadism, Klinefelter’s syndrome, testicular cancer. The aim of our study is to determine the association between TML, sperm parameters and the present of TDS components in the male component of infertile couples.

Materials and Methods

Preliminary results of a prospective, cross-sectional controlled study are analyzed to compare fertility data of TML positive (TML+) patients to age matched TML negative (TML-) controls in our Andrology Unit. Results are correlated with the data of voluntary sperm donors (DONOR) to represent unscreened fertile population. Microscopic evaluation (based on WHO 5th Guidelines for Evaluation of Human Semen), computer assisted sperm analysis (SCA CASA Microptic) and testicular ultrasound evaluation were performed. Sonographic examination was done by Toshiba Aplio 300 machine with color-power-doppler module and high frequency (7.5 – 12 MHz) linear probe. Moreover, the presence of TDS components was also assessed. Statistical analysis was performed using independent two-sample t-test, Welch test and chi-square test.

Results

125 patients from infertile couples were detected with TML (mean age of TML+ group: 36.3 years) from 2013 to 2018. Sperm parameters and the presence of TDS components were compared to 30 TML negative (mean age of TML- group: 36.8 years) patients from infertile groups and 19 voluntary sperm donors (mean age of DONOR group: 28.3 years). Lowest mean sperm concentration (13.27 M/ml), progressive motility (12.87%) and normal sperm morphology (2.65%) was found in the TML+ group patients. Sperm concentration and progressive motility were significantly higher in the TML- group patients (29,12 M/ml, $p<0.05$ and 25.1%, $p<0.05$). Normal morphology was higher (4.8%) in the TML- group without a statistical significance. Moreover, significantly higher parameters were obtained in the DONOR group [76.12 M/ml $p<0.05$, 65.24% $p<0.05$ and 10.32% $p<0.05$, respectively]. The rate of oligoasthenoteratospermia (OAT) / azoospermia was 75.2% and 20.4% in the TML+ group compared to 39.1% ($p<0.05$) and 14.8% ($p<0.05$) in the TML- group. No OAT or azoospermia was diagnosed in the DONOR group. The average number of TDS components was 2.37% in the TML+ group, 1.12% in the TML- group and 0.07% in the DONOR group ($p<0.05$ and $p<0.01$, respectively).

Discussions

Clinical evidences indicates that TML is associated with TDS. Xu et al. [5] have shown that the reduction of sperm count and sperm motility in a man with TML is attributable to the related obstruction of the seminiferous tubules present in 30-60% of cases. Obstruction of the seminiferous tubules may result in secondary inflammation, increased intraseminiform pressure, and change the blood supply to the testes. Inflammation and calcification in the area of seminiferous tubules cause deterioration of sperm quality, causing infertility conditions.

Conclusion

Sperm parameters (concentration and progressive motility) were lower in patients of TML+ group, compared to TML- group and DONOR group, confirming a statistically significant negative correlation, meanwhile the rate of OAT / azoospermia were significantly higher in TML+ group. TDS components occurred in a significantly higher number in the TML+ group. Our results support the theory that TML can be a component of TDS and TML+ group patients are at higher risk of infertility. Our data call the attention to the clinical impact of TML and indicates andrological assessment of TML positive patients.

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6. #78: CAN AN INFLATABLE PENILE PROSTHESIS CONTROL THE STRESS URINARY INCONTINENCE DUE TO RADICAL PROSTATECTOMY?

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Objective

The objective of our study was to verify whether an inflatable penile prosthesis implant could control mild stress urinary incontinence (SUI) in patients with both erectile dysfunction (ED) and incontinence.

Materials and Methods

From January 2017 to January 2018, 31 patients underwent an AMS 700 three-piece inflatable penile prosthesis implantation. All patients had previously undergone radical prostatectomy (RP) for prostate cancer (PCa). They referred to our Unit of Andrological Surgery both for SUI problems and for ED that did not respond to oral or injective therapy. The degree of incontinence was classified according to the International Consultation on the Incontinence Questionnaire – Short Form (ICIQ-SF) [SLIGHT 1-5, MODERATE 6-12, SEVERE 13-18, VERY SEVERE 19-21]. Erection was assessed with the penile dynamic colour doppler ultrasonography (alprostadil 10 µg intracavernosal). All data were collected in a prospectively maintained database and retrospectively 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

For about a month after implantation, the penile prosthesis was maintained with partial inflation. This precaution avoids a further reduction in length and the circumference of the corpora cavernosa. Furthermore, the partial inflation of the prosthesis cylinders allowed to progressively monitor the urine losses under stress.

Of the 31 patients treated, 26 were classified with slight or moderate SUI (8.42±2.82). All 26 patients achieved good control of incontinence already seen in the first month after prosthetic surgery (6.23±2.49; p=0.0046). The remaining 5 patients were classified with severe incontinence. Of these 5 patients, 4 managed to control incontinence with complete inflation of the penile prosthesis. Only one of these patient continued to have problems of total incontinence, even at fully inflated prosthesis.

Discussions

All patients undergoing RP are at risk of developing SUI. The risk is not directly related to the surgical technique used (robot-assisted, laparoscopic or open technique). During the procedure, the prostate, which controls continence by being part of the proximal sphincter unit, is removed. In addition, the proximal urethral sphincter suffers injuries. The post-RP protocol for SUI management is based on performing muscular reinforcement exercises of pelvic floor for the improvement of symptoms. Antimuscarinic therapy may be prescribed in patients who show symptoms of overactive bladder. This study showed that it is possible to control the urinary leakage with an inflatable penile prosthesis. The inflating of the prosthesis causes an increase of bulbar urethral closing pressure. In this way, the patients can control the symptoms of slight to moderate SUI.

Conclusion

Implanting an inflatable penile prosthesis is strongly recommended in patients undergoing RP who do not respond to oral or injective therapies for ED. Performing a prosthetic implant at short distance from radical prostatectomy (no more than a year), not only prevents excessive retraction of the corpora cavernosa, but allows optimal management of mild to moderate stress urinary incontinence.

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7. #68: TREATMENT OF ERECTILE DYSFUNCTION WITH AUTOLOGOUS PLATELET-RICH PLASMA (PRP). OUR PRELIMINARY EXPERIENCE

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Objective

In recent years there has been an increasing interest in regenerative medicine thanks to its high efficacy, low costs and a good

safety profile. In fact, the autologous transplant of Platelet-rich plasma (PRP) has been used successfully in various branches of medicine (orthopedics, plastic surgery, dermatology, etc.). As it is highlighted in many published research that blood-based biomaterials are promising therapeutic options for varied uro-andrological pathologies, such as erectile dysfunction (ED). The pathophysiology of ED is multifactorial, but there is a strong correlation with endothelial dysfunction that disrupts the homeostatic mechanisms responsible for regulation of smooth muscle contraction and penile vascular tone. Endothelial dysfunction is caused by a reduced nitric oxide (NO) availability secondary to an enhanced oxidative stress production. Inflammation is a major mechanism associated with a reduced NO availability. Therefore, we wanted to evaluate efficacy and safety of a treatment with optimized PRP for ED.

Materials and Methods

27 patients aged 47.76 (SD=6.92) affected by severe vasculogenic ED (IIEF score=7.38±1.53) non-responder to oral therapy with PDE5 inhibitors (PDE5-i), with no evidence of induratio penis plastica (IPP), underwent intracavernosal injections of PRP. The patients who fulfilled the following criteria were included in the study:

- past medical and surgical history negative for diabetes and pelvic surgery;
- discontinuation of PDE5-i therapy for at least 1 month;
- Erection Hardness Score (EHS) <2;
- International Index of Erectile Dysfunction (IIEF) score ≤10;
- penile peak systolic velocity (PSV) <35 cm/s.

Before, at the end of the treatment and after 2 months, patients were evaluated with EHS, IIEF questionnaire and penile Doppler ultrasound (PDU) to evaluate the efficacy of treatment with PRP.

At blood bank and transfusion Department of our hospital, the venous whole blood performed immediately after the sampling, was centrifuged at 6000 rpm for 6 minutes with a separator gel to remove red and white blood cells. For this study, we have chosen to use an optimized PRP prepared with the Anticoagulant Citrate Dextrose Solution, Solution A (ACD-A). PRP, before being incubated at -20°C for 15 days, has been added to chitosan gel.

At the Andrology Unit, the PRP after a defrosting process, was injected directly into the corpus cavernosum. Patients received 5 ml of autologous PRP once a week for 4 weeks for 30 days. After each procedure, the patients remained under observation for about an hour to assess the presence of potential complications and systemic or local side effects.

Results

At the two months follow-up andrological consultation, the IIEF score increased significantly (8.65±1.50; p=0.0033). 20 out of 27 patients (74.1%) showed an EHS score 3, 1 out of 27 patients (3.7%) an EHS score 4 while 6 out of 27 patients (22.2%) showed an EHS score 2. The mean PSV increased significantly from 25.57±3.9 cm/s to 36.11±3.67 cm/s (p=0). Moreover, during the interview, 6 patients reported having had a recovery of spontaneous morning erections. Only one patient decided to suspend the cycle of PRP injections because he moved to another city. During the treatment and at the follow-up visit, no major adverse events were observed (penile compartment syndrome, infection and bleeding). Post-procedural minor adverse events were seen in 5 out of 27 patients (18.5%): penile bruising (2 patients) and mild pain at injection site (3 patients).

Discussions

Optimized PRP induces more cell recruitment, angiogenesis and tissue building capacity compared to PRP-only. This is related to a greater amount of growth factors, in particular insulin-like growth factor-1 (IGF-1), transforming growth factor β (TGF-β), platelet-derived growth factor (PDGF) – isoforms AB and BB, vascular endothelial growth factor (VEGF). Banno et al. [1] and Matz EL et al. [4] used intracavernosal injections of PRP in patients with ED and showed an improved recovery of erectile function without major adverse events and complications. Unfortunately, limited and few studies have been published.

Conclusion

Intracavernosal injections of optimized PRP statistically significantly improved erectile function. PRP treatment, thanks to the numerous growth factors it contains, seems to be helpful to regenerate the cavernous tissue and improve the quality of life of patients with no serious adverse events after injection or during follow-up. As an autologous product, we expect that reabsorption rates are high, such that a repetitive therapy will be required. Further studies are necessary to evaluate long-term results.

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8. #103: HOW MUCH DO PEOPLE KNOW OF MALE SEXUAL PROBLEMS? A SURVEY IN A SELECTED POPULATION SAMPLE

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Objective

The purpose of this survey has been to investigate by an ad hoc questionnaire the knowledge of several aspects of male sexual dysfunctions in a significant sample of men and women (largely not physicians) attending an International Health Care Exhibition, held in Italy.

Materials and Methods

Setting: The International Exhibition where the survey took place was Exposanità, 2018 edition (www.exposanita.it), held in Bologna from 18 to 21 April, 2018. Exposanità is the second largest European International Health Care Exhibition in terms of number of exhibitors and product range; it is aimed at all medical and non-medical professionals.

An ad hoc anonymous questionnaire has been created in two versions, one for each sex.

Eleven core questions addressed the following areas:

- -subject's knowledge (Q1-Q6) of: prevalence of erectile dysfunction (ED) and of premature ejaculation (PE), ED causes, ED as a early sign of coronary heart disease / myocardial infarction, risks linked to penile trauma during intercourse, available ED treatments;
- -attitudes toward penile prosthesis surgery in case of severe ED (Q7, Q8);
- -personal opinion if ED treatments should be reimbursed by the National Health System (Q9);
- -attitudes towards sexual/reproductive screening for female versus male children (Q10, Q11).

Questionnaires administration:

Questionnaires were handed out to men and women attending Exposanità Conventions during the first three days of the event; questionnaires were self-administered.

Results

The total number of respondents were 1094 Convention attendees (495 men and 599 women), accounting for approximately 5% of total attendees.

Mean sample age was 40,5 years in men and 39,9 years in women.

Forty-three percent of the sample worked in health-related professions but 4,2% only of men were physicians.

Sample knowledge/awareness on investigated male sexual areas (Q1-Q6):

Respondents globally over-estimated the prevalence of both ED and PE.

Both responding men and women rated psychologic and lifestyle factors as the most frequent causes of ED.

The majority of responders of both sexes and all ages did not regard ED as a possible predictor of coronary heart disease / myocardial infarction.

A significant percentage of both men (31,9%) and women (28,1%) did not consider coital trauma as risk factor for significant penile conditions.

Oral pills resulted the most known ED treatment by both men (77,2%) and women (79,1). Psychotherapy ranked as the second most known treatment approach for both sexes: 38,4% in men, and 41,9% in women, respectively. The other listed effective ED treatments (intracavernosal injections, VED, penile prostheses) were known by a minority of men (22,2 - 27,9%) and women (19,2 - 20,2%).

Attitudes toward penile prosthesis surgery in case of severe ED (Q7, Q8)

The first question explored the willingness to choose (men) or to support (women) the penile prosthesis option: roughly half of the sample (50,7% of men and 48,4% of women) were in favor of this choice.

The second question investigated possible resistances to the use of penile prostheses: majority of both sexes expressed no resistances to the prosthesis option (71,3 of men and 76,3 of women).

Personal opinion if ED treatments should be reimbursed (Q9)

Vast majority of both responding men (80,3%) and women (80,4%) considered that coverage for ED treatment should be provided by the National Health System.

Attitudes towards sexual/reproductive screening for female versus male children (Q10, Q11)

Evaluated men and women were more likely to consider carrying out or had already carried out a gynecologic screening in daughter/s, versus an andrologic screening in son/s.

Discussions

Male sexual dysfunctions is a medical area heavily investigated in many perspectives, but surprisingly minimal attention has been given to what lay people know of this area. This is a potential significant bias when planning effective strategies to promote male sexual health and better access to effective treatments.

The outcomes of our survey show several scenarios that we feel worth considering.

Respondents globally over-estimated the prevalence of both ED and PE (1, 2), respectively. One possible meaning of this finding is that both problems draw the attention of lay public, to the extent that they are perceived more prevalent than their

reality.

When requested their opinion on the most frequent ED causes, responders incorrectly selected psychological issues. Similarly, the majority of responders did not regard ED as a possible predictor of coronary heart disease and myocardial infarction.

A significant percentage of men and women did not consider that inadvertent coital trauma may cause possible severe penile damages.

Interestingly, the penile prosthesis option is only marginally known by respondents, that nonetheless conceptually accept it, should it represent the only possibility to resume sexual activity. Furthermore, a sharp majority of the sample (both sexes) would not foresee any problem/resistance in having intercourse by means of the penile prosthesis. This clashes with the attitude of the medical community not dedicated to penile surgery, that too often negatively depicts the prosthesis option.

The vast majority of our sample considered that coverage for ED treatment should be provided by the National Health System. This suggests that ED is viewed as a significant condition, that deserves treatment, and that treatments for ED are not lifestyle issues.

Both responding men and women were more likely to consider a gynecologic screening for daughter/s, than an andrologic screening for son/s; this suggests less awareness of sexual/reproductive problems in the young male population than in the female one.

Conclusion

Our findings show that in a selected population sample (i.e. professionals working in the area of health care, a very minor part only represented by physicians), there are many misconceptions on male sexual issues. The extent of such misconceptions are likely to be even greater in the general lay public.

It clearly appears that there is a strong need for educational programs aimed to promote population awareness on the several aspects of sexual dysfunctions. In particular we feel it is of paramount importance to let people know the role of ED risk factors, and their tight correlation with cardiovascular conditions: it is expected that ultimately informed men can adopt healthy lifestyles that could promote both sexual and cardiovascular health.

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9. #229: NARRATIVE BASED MEDICINE AS THE FIRST APPROACH TO URO-ANDROLOGICAL PATIENTS: KNOWING QUESTIONNAIRE TO NURSE IN TRAINING

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Objective

Narrative based medicine considers listening to the patient narration of his illness with equal dignity of detection of signs and symptoms of the disease. Realizing the difference between illness and disease, the narrative based medicine joins the evidence based medicine in the diagnosis and treatment of disorders of the lower urinary tract and of the sexual sphere in man

Aim of the work: emotional evaluation in progressive listening and approaching to the uro-andrological patients with particular reference to progressive contact

Materials and Methods

11 question knowing questionnaire was submitted to 46 nurse in training :16 males and 30 females

First type of questions (1) : objective (evidence based medicine) Time spending during various phases of contact with the patients were investigated: DATA COLLECTION interview; VISIT ; HYGIENE; CATHETER management

Second type of questions (2) : subjective in favourable position : personal emotions during the various phases of contact with the patients

Third type of questions (3) : subjective in unfavourable position : personal emotions during the contact with the tutor

Results

(1) The time dedicated to the interview for data collection was more than 10 minutes in 95.6%, while between 5 and 10 minutes for VISIT, HYGIENE, CATHETER management in 78.2, 69.5 and 91.3% respectively : statistically significant difference : chi square test with $p < 0.000000 \dots 9 (-13)$

(2) The emotions were positive in all cases during the interview for data collection and the visit, no positive emotion during hygiene in all cases, mostly negative in the catheter management; the only positive emotion was feeling valorized during catheter management in : 21.7% of the interviewed

Empathy level resulted independent of the patient's sex in 56.5% of cases

(3) 100% of the interviewed reported that they had narrated SOMETHING personal to the patients, while 21.7% never do the same with the Tutor. The tutor was felt overwhelming in 8.6% of the cases and embarrassing in 26% of the cases : statistically significant difference with Chi square test $p = 0.002$

Discussions

Decreased time dedicated to listening and increasing emotional difficulties in relation to progressive contact with the patient were reported. Difficulty in empathy when change in dialog perspective

When the relationships between the speaker and listener change, the need for a wise and empathetic listening is highlighted. Listening as an operator involves the need to communicate and open up to the interview. Listening as an interviewed like a patient is more difficult with more and different emotional involvement. Listening to questions "like a patient" leads to embarrassment: the same that one must know and recognize when switching to "operator" level

Listening time reduction from data collection to catheter management confirmed the progressive emotional difficulties that begin to have a name, neologism among the various emotions proposed (frustration)

Conclusion

In conclusion a certain expertising in narrative medicine is needed and it will be a bidirectional issue in order to improve uroandro patient care.

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10. #95: URATE AND CALCIUM UROLITHIASIS: COMPARISON OF SECONDARY SIGNS AS SHOWN BY UNENHANCED COMPUTED TOMOGRAPHY

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Objective

Unenhanced computed tomography (CT) is the "gold standard" diagnostic method in patients with suspected ureterolithiasis. CT not only shows stones within the lumen of the ureter, it also permits evaluation of the secondary signs associated with ureteral obstruction from stones. However, we find few data on how secondary signs might differ in relation to different compositions of ureteral stones (1). In this study, we compared the degree of secondary signs revealed by CT in uric acid stone and in calcium stone

Materials and methods

We enrolled 57 patients with a ureteral stone who underwent uhct and stone analysis after ureteroscopy or extracorporeal shock wave lithotripsy. The patients were divided into two groups: those with a uric acid stone (group a) and those with a calcium stone (group b). Laboratoristic (estimated glomerular filtration rate – eGFR) and radiological data (hydroureter proximal to the stone, perinephritic stranding, the tissue rim sign, and kidney density difference) were compared between the two groups

Results

The uric acid stone formers had significantly lower egfr in comparison to calcium stone formers, and on uhct they also had a higher percentage of the secondary signs, including rim sign (81,4% vs.80%), Hydroureter (92.5% Vs. 90%), Perirenal stranding (74% vs. 46,6%) And kidney density difference (70.3% Vs. 70.0%). The radiological difference was statistically significant for perirenal stranding (p < 0.05). The mean egfr was found to be significantly lower for group a than group b

Discussions

In agreement with the scarce scientific literature present, our experience shows that radiological signs secondary to urinary tract obstruction and renal functional damage are more frequent in uric calculi than in calcium. This tendency can be, in our opinion, explained by a local flogogen trigger and by an environment unfavorable to the renoureteral function sustained by uric stones.

Conclusion

Uric acid stone formers have a higher percentage of secondary signs on uhct in comparison with calcium stone formers.

Reference

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11. #121: WHOLE URETERAL STENT ENCRUSTATION AND CHALLENGING RETROGRADE ENDOSCOPIC REMOVAL

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Objective

Stent encrustation is often found on the bladder J without bothering too much. Early Whole Ureteral Stent Encrustation (EWUSE) is an uncommon but challenging adverse event that may occur and progress without symptoms. Treatment of this complication is not standardized and in literature there are often described percutaneous anterograde removals. We treated six EWUSE cases by retrograde endoscopic approach.

Materials and Methods

From Jan the 1st 2017 to Oct the 30th 2018 we indwelled in 137 patients a double J (JJ) ureteral stent (size 5 or 6 Fr., length 24 or 26 cm), because of stone related hydronephrosis with or without sepsis. Five EWUSE cases occurred in year 2017 and one in year 2018, all of them brought the JJ during one or more summer months (4.4%). Only one of the EWUSE cases had the stent

placed because of sepsis. We did not consider patients with encrustation on distal J that could be removed in the endoscopic office. The endoscopic approach was performed under X-ray control. All patients underwent first to cystoscopy and we tried to remove the stent by straitening it inserting a wire guide through the extracted distal J. If removal was not possible we went on performing an uretero-nephroscopy (using a rigid 4.5/6.5 Fr fiber ureteroscopy with double operative channel) parallel to the encrusted stent and we treated the encrustation by lithotripsy using a 365 μ m fiber and 100 W Holmium laser.

Results

It was possible to remove all the six stents using the retrograde approach. All the stents removed showed encrustations on the whole stent, three cases had also the proximal J encrustation fused in circle, thus not allowing the proximal pigtail to be straighten. Only in one female patient the removal was possible straitening the proximal J by simply inserting a wire guide using its hard distal tip. Uretero-nephroscopy parallel to the encrusted stent with holmium laser lithotripsy through the ureter was performed in two patients and in the other three patients it was necessary to reach the proximal encrusted and fused J inside the renal pelvis. The mean operative time of the procedure was 55 min (range 20 – 110 min). Hospitalization time was two days. No one developed further infective or mechanical complication such as urinoma or ureteral damage. Only one, the patient with sepsis, had residual fragments that we are now threatening by oral chemolysis as the chemical analysis of the fragments showed uric acid stone. A new JJ stent was indwelled for safety and immediately removed after 2-3 weeks in the endoscopic office, except the patient that is still under oral treatment.

Discussions

The patients developed an EWUSE in few months even if only one had sepsis as a known risk factor. The PCNL approach is usually preferred by many Authors for the stents with encrustation also in the renal pelvis. In a review the ureteroscopy approach solved only 57.89% of the cases[1], while we showed that this approach may solve also the most complicated cases in an acceptable surgical time. In a series of 38 kidney unit (36 patients) with encrusted whole stent treated by PCNL approach the mean operative time was 162 min and it was not the definitive treatment for many of them[2]. ESWL is not a recommended treatment and it may be used for the fragments remaining after stent removal[3].

Conclusion

We believe that retrograde endoscopy must be the first attempt and it may be a solution for this challenging stent complication, avoiding more complex procedures. It may be also performed when the EWUSE is diagnosed without the need of a second surgical approach. However the best treatment for encrusted indwelled stents still remains prevention.

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16 maggio 2019

11:00 - 12:30

sala C

Comunicazioni 2 - Tumori del Pene e altre Rarità

Moderatori: Giancamillo Carluccio, Giuseppe Di Giovacchino

1. #32: CARBON DIOXIDE LASER THERAPY FOR PENILE KAPOSÍ'S SARCOMA IN THREE HIV-NEGATIVE HHV-8 POSITIVE PATIENTS

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Objective

Kaposi's sarcoma (KS) is a lesion of vascular origin, known since 19th century. It is rarely located on the glans penis (37 cases) some involving HIV-negative patients (19 patients) (1).

We report three cases involving HIV-negative patients with lesions on the mucosa of glans penis, from which tumor-cells were positive for KS-associated HHV-8 (2).

Materials and Methods

Three patients (mean age 69 years) from Southern Italy were examined in our Urologic Unit for small lesions of glans and penile shaft. Two of them had undergone a surgical excision of a small lesion in other hospitals two years before so that a diagnosis of Kaposi's Sarcoma (KS) was made. The third one had multiple lesions of foreskin and glans mucosa. None of them was HIV-positive. All of them underwent radical carbon dioxide laser excision of the lesions and in every specimen KS-associated HHV-8 was found. Total body TC scan was negative in every patient and we recorded only local relapse (mean follow up 22 months) in two patients and a perimaleolar skin relapse in the third one after two years. Actually, two patients are still alive and NED while the third one died of icterus after two years from diagnosis. The perimaleolar lesions were still present.

Main surgical aspects (T.T.): all the lesions on the glans penis and penile shaft were locally anesthetized with 2% lidocaine and ablation was done with a high-energy pulsed carbon-dioxide laser at a power of 10 watts with a 6-mm spot size (SHARPLAN 40 C CO2 40 Watt, 10600 nm, KOSMO).

Material and immunohistochemical analysis (B.P.): the biopsy specimen was routinely fixed in formalin (10%), embedded in paraffin and then cut at 4 µm and stained with hematoxylin-eosin. The immunohistochemical studies were performed on paraffin tissue sections of the lesion with use of antibodies against CD34 and factor VIII-related antigen (HHV8, clone LN53, Novus; DAKO autostainer).

Results

From a surgical point of view, there was very little bleeding during the procedure and the lesions healed rapidly in a few days, leaving good cosmetic results.

Histologically, the lesion is a nodule in the lamina propria, with thinning of the overlying squamous epithelium. Some dilated and irregular vascular channels can be seen in the top of the lesion while the other part is formed by more compact cellular proliferation with ill defined borders. There are typical spindle cells of the nodular Kaposi's Sarcoma with vascular channels formation filled by red blood cells and sprinkling chronic inflammation. Normally, Kaposi's cells show slight nuclear atypia and very low mitotic count. Immunohistochemical analysis shows nuclear positivity for HHV8 only in the neoplastic cells but not in the surrounding ones.

Discussions

Penile primary Kaposi's sarcoma is very rare in healthy males: in English literature only 19 immunocompetent patients are described (even if HIV or HHV tests are not performed in every patient) (3).

The pathogenesis of KS is still uncertain, but recent data showed a strong correlation between all forms of KS and HHV-8 infections. High HHV-8 seroprevalence in individuals with high risk sexual activity or HIV-seropositive patients denotes the route of sexual transmission while the detection of HHV-8 antibodies in children also suggests a non sexual route.

Among patients with classic KS, primary penile lesions usually present as single reddish-purple to bluish nodule. Multiple papules, nodules, plaques and wart-like or pedunculated lesions are less common presentations.

Local therapies for KS include simple excision, crioterapy, radiation (4) and intralesional therapy. Laser therapy is seldom used: in English literature only a case was found (5). Carbon dioxide laser has not been popular due to the possible risk of infectious viral particles in the vapor plume. However, our patients have no major diseases, particularly they have no evidence of HIV infection or immunosuppression, and KS forms very-well demarcated intradermal nodules. This means that CO₂ laser treatment is easy, fast and relatively safe, with good cosmetic results. On the other side, there are some theoretic drawbacks to laser therapy due to clinical experience suggesting that the real margins of Kaposi's lesion may be quite far from the macroscopic one and that the process of wound healing stimulates growth of KS. This could explain local relapse even if, in our experience, they were late (median follow up 22 months in two patients) or absent even if the disease relapsed in perimaleolar skin after two years from laser treatment.

Conclusion

Primary penile Kaposi's sarcoma is quite rare in immunocompetent patients. In every case, this disease may be kept in mind when treating aspecific penile lesions. A histologic evaluation of the lesion may be useful for planning the right treatment, its clinical staging and its follow up even if the small number of patients doesn't allow to draw conclusive guidelines. Infact there is no treatment capable of eradicating HHV8. For these reason, the main goal of KS treatment is to alleviate the symptoms of the disease, to reduce the size and numbers of cutaneous and visceral lesions and to reduce or delay the progression of disease. Considering our positive experience, it seems that it is a slowly progressive disease, as showed by other authors(6), that may be cured by local therapies, like laser ones.

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2. #267: TESTIS-SPARING SURGERY IN A SINGLE, INTRATESTICULAR, UNPALPABLE, HYPOECHOIC LESION IN MONORCHID MAN: SURGICAL MANAGEMENT AND PERSONAL EXPERIENCE IN UNPALPABLE, ULTRASOUND DETECTED, TESTICULAR MASSES

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Objective

We describe a case underwent our observation about a single, unpalpable, ultrasound (US) detected testicular lesion in bilateral cryptorchid man who underwent contralateral orchidectomy in the past. At the same time, we review and describe our experience in the management of the patients affected by single, small and unpalpable, hypoechoic testicular masses (Small Testicular Masses - STMs) using a testis-sparing surgical approach with intraoperative US detection and intraoperative microscopical assisted enucleation.

Materials and Methods

A.G. was a 47 years old caucasian male man affected by bilateral cryptorchidism. In his late childhood he underwent a right orchidectomy, no other surgery was attempted on the left testis until 10 years ago when, he underwent two microTeSE on the left testis trying to sperm recover for an non obstructive azoospermia developed as consequence of the cryptorchidism. No sperm recover was gained in both microTeSE, and testicle biopsies showed maturative arrest and focal germinal aplasia. During the following years the patients performing a left testicle US examination each years. In November 2018 he present to our observation for a single, 3 mm diameter, hypoechoic lesion of the left testis (US dimension 14x25x20 mm). The lesion was unpalpable at clinical examination and the left testis, located just below the external inguinal ring, appear hypotrophic. Tumor marker (alfa-FP and beta-hCG) were negative as soon as toracic and abdominal CT scan do not show linfatic or distant metastases. An inguinal left incision was performed with exposure of the testis previous venous clamping of the chord. With the use of intaoperative US with 15 MHz 7 cm linear probe we detect the hypoechoic lesion, 3x3 mm in the central portion of the testicle and mark it with a insuline-like needle. With the support of the intraoperative 10x microscope, we perform a little albugineal incision e a gently enucleation of a single, round, yellowish, 3 mm diameter, solid neofomation that underwent frozen intraoperative histological

examination together with peritumoral biopsy tissue. Pathologist do not refer any malignant lesion in both samples. It is so possible to proceed with a testis-sparing surgery. Mobilization of the chord and the scrotal layers and fixation of the testis as distal as possible.

Results

The patient was discharged from hospital the day after operation without any complications. Definitive histological report shows a Leydig Cells Tumors sized 3 mm in accordance with intraoperative enucleation and preoperative US. Histological report of testicular tissue closer to the mass reports scleroalinosi of the parenchima without any sign of tumor growth.

Discussions

No randomized controlled trials comparing Testis Sparing Surgery (TSS) with radical orchiectomy have been reported yet. In those patients with normal contra-lateral testis, the use of TSS is still controversial. In selected cases of gonadal masses < 2 cm, TSS seems to be a safe and feasible treatment option. Frozen section examination allows us to discriminate between benign and malignant neoplasms during TSS (1, 2). In this case the reason to achieve a sparing surgery is indicated due to a monorchid condition and a very lower diameter of the testicular mass (3 mm) as described at the preoperative US and confirmed during operation time and at histological definitive report. Intraoperative management must be conducted as adequate instruments to lead to a precise definition of the lesion with ultrasound (3) and to avoid as lower as possible testis damage using microscopical magnification. Leydig Cells Tumors is a relative frequent histotype found in SMTs with diameter lower than 15 mm (4). In the last 18 months, in our institution, we have experienced the 3 cases of SMTs (single, non palpable, < 10 mm, incidental, hypoechoic, intraparenchymal testicular masses) in patient with age range from 48 to 70 years, with negative pre operative assessment (tumor markers and CT scan). In every three cases we have chosen a conservative testis-sparing approach and pathological reports demonstrate Leydig Cell Tumors for each case. Follow up range from 18 to 6 months, US of the testis and tumoral markers are still negative.

Conclusion

Nongerminoma cell tumors should be considered when small testicular masses have a diameter of less than 15 mm and there are normal tumor markers. Immediate orchiectomy should be avoided, favoring testis sparing surgery (particular in monorchid, infertile and younger patients). We underline that this surgical approach required a complete surgical skill in management of the testicular intraoperative US as the management of the microscopical intraoperative device to magnification avoiding damage of residual testicular structure.

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3. #272: RETROPERITONEAL MASS WITH HYDRONEPHROSIS IN PATIENT LOST AT FOLLOW UP AFTER RADICAL ORCHIFUNICOLECTOMY FOR TESTICULAR CANCER: A MULTIDISCIPLINAR APPROACH

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Objective

We present a case of large retroperitoneal and pelvic mass with hydronephrosis in a patient, 34 years old, that underwent radical orchiectomy for a teratoma (mature-immature) 18 years ago and early lost at follow up 2 months after orchiectomy. We focus the attention on the multidisciplinary approach that, at the moment, have led to an unexpected and excellent response.

Materials and Methods

F.A. 34 years old caucasian male, underwent left radical orchiectomy at our institution on February 2000. Definitive histological report was teratoma (mature-immature) of the left testis without lymphatic or distant metastases at the thoraco-abdominal CT scan and with normal tumor markers. He was immediately lost at follow up and did not present at periodical appointments to check the follow up exams. On June 2018 he referred to our emergency room for left flank pain without evidence of renal failure or urosepsis. A CT scan showed left hydronephrosis (2°) due to large retroperitoneal and pelvic cystic mass 15 cm in length that surrounded and comprised the left ureter, the left side of the bladder and the prostate without sign of infiltration. α -Fp was 2.1 and beta-hCG was 56533. Physical examination of the right testis did not show palpable nodules as US of the testis did not show any hypoechoic image suggestive for a new testicular tumour. Thoracic CT scan was negative too. The first approach was a US-guided 8 Fr left kidney pielo-stomy to reduce kidney damage. Then, we performed a US-guided 20G needle transperineal biopsy of the mass. Histological report describes seminoma. The patient was discharged from our institution and

referred to oncological team that start a Cis-Platinum Bleomycin and Etoposide chemotherapy protocol (3 complete cycles, one cycle every three weeks).

Results

The patient underwent periodical follow up as outpatient clinic at our institution during the oncological treatment and after its conclusion (September 2018). We observed a progressive normalization of tumor markers. He underwent 2 abdominal CT scan in September and December 2018 that shows a progressive reduction of the retroperitoneal masses. In particular, in the last CT scan there are a minimal, residual, adenopathy on the left iliac external artery (reducing from 30x18 mm in September to 23x16 mm in December) and on the space closer to left seminal vesicle where is still present residual tissue decreasing from 48x17x37 mm on September to 40x15x25 mm on December. The patient underwent also an antegrade transpyelostomy pyelography that exclude left upper urinary tract obstruction by external compression. For that reason pyelostomy were removed and, at the moment, patient do not experience left flank pain or colic.

Discussions

Testicular Germ cell tumor diagnosis is based on physical examination, biology tests (serum tumor markers AFP, hCG, LDH) and radiological assessment (scrotal ultrasound and chest, abdomen and pelvis computerized tomography). Total inguinal orchiectomy is the first-line treatment allowing characterization of the histological type, local staging and identification of risk factors for micrometastases (1). Metastatic germ cell tumors are usually treated by PEB chemotherapy according to IGCCCG prognostic classification. Residual masses should be evaluated by biological and radiological assessment 3 to 4 weeks after the end of chemotherapy (1, 2). Clinical stage II (CSII) seminoma is defined by the presence of pure seminoma accompanied by retroperitoneal lymph node metastases. In patients with bulky disease (lymph nodes > 5 cm in diameter), platinum-based chemotherapy is the widely accepted standard of care (3).

Conclusion

This case do not represent a particular rare condition in uro-oncology. We focused the attention on the real importance of a straight collaboration of a multidisciplinary team (urologist, radiologist, pathologist and oncologist) to give the best chance for the patients and, from an urological point of view, to permit a future surgical approach on a retroperitoneal and pelvic mass as lower as possible due to the as better as possible success of the chemotherapy protocols at the moment available in a structured oncological team.

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4. #114: ADRENAL MASS

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Objective

The pathology of the adrenal gland includes a considerable amount of diseases, many of which are non-surgical: adrenal cysts, often asymptomatic; the angiomyolipoma; hyperplasia of the adrenal cortex with hyperproduction syndrome of glucocorticoids, of aldosterone or of sex hormones, the latter conditions, which recognize a hypophyseal genesis from hyperincrement of ACTH or reno-vascular and which therefore deserve a completely therapeutic approach. (1,2,3,4,8,9)

Surgical strictly relevance are instead the adenomas, which may be non-functioning or functioning and express one of the three different hormonal lines of the gland, and, above all, the adrenal carcinoma. (5,6,7,8,9,10,11)

Materials and Methods

Patrizia R. aged 54, arrived at our observation following the occasional finding of right adrenal mass during the execution of an abdominal ultrasound for gynecological control. In the absence of any other clinical symptomatology URO-CT was performed with contrast agent that confirmed and specified the position, size and morphology of the neoformation: a round mass of about 5 cm of maximum diameter on the right adrenal, with clear delimitation in the regards the liver, kidney and vena cava. Within the same neoformation areas of irregular density were noted, as for the presence of hemorrhagic and necrotic areas. The subsequent evaluation of urinary catecholamines gave negative results. It was decided to subject the patient to surgery for both diagnostic and therapeutic purposes, not having sufficient information and assessments on the exact nature of the new formation. The patient underwent a laparotomic intervention of right adrenalectomy.

Discussions

The exact diagnosis of an adrenal formation takes on a very important role the hormone study related to clinical manifestations, but it is clear that the most important data are taken from imaging, which has become very widespread in recent years. Ultrasound, CT and MRI are methods, however, of great use in the diagnosis of masses even small, but very inaccurate as regards the diagnosis of the nature of the lesion identified. In this way we tried to obtain more reliable data by using these methods to precisely reach the suspicious lesions and to practice an agobiopsy. However, the needle biopsy and the echo/TAC cytology show a good ability to discriminate the primitively adrenal masses from the metastatic ones, but within the first the diagnosis of malignancy is difficult to obtain. Infact, the most certain criteria of malignancy are not so much based on the cellular

anomalies, as on the finding of a capsular invasion or of the surrounding tissues. It is obvious that this last information is rarely provided by a biopsy. Flow cytometry alone is able to identify and distinguish benign lesions: unfortunately, this investigation has value only if carried out on operating parts and not on cyto-aspirates. (8,9)

Conclusion

The conclusion drawn from all this is that, despite the vast number of investigations available today, it is still not possible to rule out with certainty the malignant nature of a non-functioning adrenal tumor discovered occasionally, if not by resorting to surgery. (10,11,12,13,14,15)

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5. #110: ORGAN SPARING SURGERY: IS THE CONSERVATIVE MANAGEMENT AN OPTION IN STAGE I TESTICULAR TUMORS?

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Objective

We present the oncological results of a series of 21 testicular tumors in 19 patients, treated with testis sparing surgery (TSS) with the aim to assess the safety of this procedure in selected cases.

Materials and Methods

Between 2005 and 2018, 21 TSS were performed at our department. Four patients were monorchid and 1 had a bilateral testicular cancer. The age ranged from 14 to 83 years (mean 38.4). Tumor markers were assessed preoperative in all patients. All patients underwent inguinal access to the testis; frozen-sections were request during the operation, associated, in case of TSS, with biopsies of the surrounding tissue. A staging computed tomography was performed after the surgery in all cases.

Results

The tumor markers were negative in all patients except 3, where they were only mildly elevated. Frozen sections showed a stromal tumor in 10 patients and a germ-cell tumor (GCT) in the other 11 cases. All lesions were intraparenchymal, simply to resect and tumor size ranged from 7 to 40 mm (mean 14.2 mm). The definitive histology confirmed the results of frozen sections in all cases.

None of the 10 patients with stromal tumors showed histopathological risk-factors and none showed relapse after a mean follow up of 48 months (range 18-108).

Of the 11 cases of GCT, 6 TSSs were performed in 4 patients, due to solitary testis or synchronous bilateral tumor: in 4 cases a germ-cell neoplasia in situ (GCNIS) was found in the definitive histology: in 2 patients a radiotherapy (RT) was immediately performed, while the other 2 patients underwent active surveillance. The other 5 patients underwent elective TSS, because the tumor size was less than 2 cm; in 1 of these patients an orchiectomy was subsequently performed, for concomitant GCNIS in the definitive histology, because a RT could damage the contralateral healthy testis. No GCNIS was found in the other 4 patients.

All patients underwent regular follow-up (range 3-120; mean 36 months); one of the 2 patients under active surveillance for GCNIS had relapse after 20 months and was treated with repeated TSS and RT with the intent to preserve his hormonal production. In the other patient with GCNIS under active surveillance, an orchiectomy for endocrine insufficiency was performed after 98 months, without finding a relapse. Anyway 3 of the 4 patients, who underwent imperative TSS, needed hormonal replacement therapy (but the level of testosterone in 2 of the 3 patients was borderline).

Discussions

Testicular cancer represents 1% of male neoplasms and 5% of all urological tumors. Despite its relative low incidence and the lack of data, the survival rate is very high, due to its high chemo- and radio-sensitivity. The EAU guidelines suggest to perform

an orchiectomy, if a malignant tumor is found on frozen sections, without distinction about the tumor-size; only in case of synchronous bilateral tumors or in solitary testis, when the tumor volume is less than 30%, a TSS could be performed, if the levels of preoperative testosterone are normal (1).

However in the last years the increasing use of the ultrasound has led to an increased number of patients with small testicular cancers, which have a very high rate of survival and a life expectancy as healthy people (2); furthermore some studies have showed, that even in patients with a normal contralateral testis, the loss of one testis is associated with alterations of fertility, with hypogonadism after several years and with sexual and psychosocial implications (2,3,4). The first TSS in a solitary testis after radical orchiectomy for germ cell tumor was performed from Seppelt in 1982 (5). Since then, some case series (6,7,8) and some case reports showed the feasibility and safety of TSS in patients with solitary testis or synchronous bilateral tumors with very low rate of recurrence and in patients with stromal tumors. Based on these good results and considering the possible side effects of an orchiectomy, TSS could be considered a treatment option, even in patients with normal contralateral testis, in case of intraparenchymal small testicular masses. Also our series of TSS showed good oncological outcomes with only one patient, who developed a local recurrence under active surveillance in presence of GCNIS. Regarding the functional outcomes in our series 21% of the patients required hormonal replacement but we didn't investigate this issue further.

Conclusion

In selected cases, after adequate patient information, a TSS can be offered without compromising the oncological safety, even in case of a normal contralateral testis, to avoid a possible overtreatment, attempting to preserve the endocrine functions, the fertility and the male body image. A delayed radical orchiectomy or RT could be offered to prevent recurrence in presence of GCNIS.

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6.#76: A RARE CASE OF METASTATIC EPIDERMOID CARCINOMA OF THE URETHRA

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Objective

A 50-year-old male man referred to our emergency department for acute urinary retention and severe pelvic pain. After several attempts at catheterization with Foley and Mercier catheters, the patients underwent a suprapubic epicistostomy catheter placement. The patient was hospitalized in the urology unit for further investigation.

When assessing the history of present illness, the patient's history was as follows:

- he was an ex-smoker (stopped 1 year ago) with an history of mild hypertension treated with lisinopril;
- past surgical history was negative;
- he was previous treated for a scrotal abscess but with spontaneous urination. In both cases, it was discharged with topical home therapy (dressings with povidone-iodine).

On physical examination of the pelvis were noted a scrotum of increased size with a 3 cm fistula from which purulent serum emerged (Fournier's gangrene?). At the deep palpation of the shaft of the penis, a hard-wood area was appreciated. Inguinal lymph nodes were palpable bilaterally. No other alterations in the examination were found.

Materials and Methods

The investigations performed at the hospital were:

- an ultrasound scan performed with a 7.5-12 MHz linear probe and a 3.5-5 MHz convex probe that showed the presence in the scrotum of a complex hypo-hyperechoic mass of considerable size, of uncertain nature, which extends to the penile shaft, with normoconformed testis that does not show focal lesions;
- an abdomen contrast-enhanced CT (CECT) that showed an extensive expansive mass (13 x 18 cm) affecting the shaft and the scrotum, characterized by a large central necrotic-colliquation component and by an extensive erosion of the left side of the sac scrotal with loss of substance and filtration of air cores in the colliquated component. There is also a neoplastic infiltration of the bulb-cavernous muscles of the perineum, of the ischio-rectal fossa, of the anus, of the rectum and of the base of the prostate. Also, is present an adenopathy at the bilateral inguinal site (10-18 mm) and at the lumbo-aortic site (8-10 mm);
- a contrast-enhanced abdominal MRI that showed a thick complex formation (8.5 x 9 x 10 cm) with a discrete post-contrast impregnation pattern and restriction / inversion of the medial third and penis base. Signal, of pathological significance, in the DWI / ADC sequences. The same conglomerates the corpora cavernosa, the spongiosa and the relative urethral segment that appear poorly recognizable infiltrating, at the base, the spongiosa bulbous and the perineo-crural region with prevalence on the right

extending, from this side, to the ischio-anal fossa up to contact and infiltrating the ipsilateral pubo-rectal muscle at 11 o'clock and 12 o'clock. Both scrotal sacs appear to infiltrate, defining a relative, slender, cleavage plane with both didymes showing parenchymal signal intensity within bounds. Nodular subcutaneous implants are observed in particular, at the left inguino-scrotal site (diameter: 1.6 cm) and homolaterally at the posterior paramedian caudo-scrotal site (diameter: 2 cm) and posterolateral caudo-scrotal (diameter: 1.5 cm) where contact, at the last level, in depth. Two inguinal lymphadenomegalies are present bilaterally (diameter: 2.5 cm);

- a ^{99m}Tc-HMDP total-body bone scintigraphy that showed an hyperaccumulation of the radioisotope at the level of the lumbosacral transition, to be correlated with the morphological examination due to the clinical question;
- dosing of tumor markers (AFP, CEA, CA 125, CA 15.3 and CA 19.9) all of which were negative

Results

After a careful assessment of the situation, we decided to perform a surgical exploration of the scrotum to be practiced under general anesthesia. Then we proceed to the removal of the colliqued necrotic material and the portions of urethra that appears completely destroyed and we performe the drainage of abscess collections of ischio-rectal and paratesticular recesses.

The histopathological examination of specimens (colliquated material, resection margins of scrotal fistula, multiple samples of periurethral tissue, left paracural tissue) was suggestive for moderately differentiated epidermoid carcinoma (G2) of the urethra, widely infiltrating.

One months after the surgery the patient experience a local recurrence and distant metastasis (pulmonar and lymph nodes metastasis). He was referred to oncological consultation. At present (three months after surgery), the patient is hospitalized in the palliative care department.

Discussions

Squamous cell carcinoma of the male urethra is exceptional, as all urethral tumours represent less than 1% of urinary tract tumours. Treatment depends on the stage and site of the lesion, but the prognosis remains very poor despite aggressive treatment, including mutilating resection surgery with or without associated radiotherapy (1). The prognosis is usually poor. In our clinical case, the surgery was imperative due to the very important scrotal infection.

Conclusion

Considering the locally infiltrating and metastatic disease, the patient was transferred to the oncology unit to continue with appropriate chemotherapy program.

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7. #227: PROSTATIC LYMPHOMA: CASE REPORT

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Objective

Prostate lymphomas can be primitive or secondary. Given their rarity they are not always considered in cases of enlarged prostate or in the presence of urinary symptoms, however it is important to do so, as they usually present, if not treated, an aggressive attitude and poor prognosis, yet often complete regression of disease to following specific chemotherapy treatment. We report the case of a 71-year-old man, known for chronic lymphatic leukemia (LLC), who underwent radical prostatectomy for Ca prostatic, with confirmation of the definitive histological examination of double neoplasia: primitive prostatic and secondary chronic lymphatic leukemia.

Materials and Methods

A 71-year-old man, known to be affected by LLC in follow-up, following the finding of elevated PSA (8.5 ng / ml) and a positive palpatory finding at DRE (increased consistency nodule on the right prostatic lobe), was subjected to biopsy assessment, diagnosed with prostate adenocarcinoma with Gleason 4 + 3.

It was then subjected to a staging by CT complete abdomen with contrast, negative for secondarisms and total-body bone scintigraphy, indicative of hyper-localization at the level of the spine, then to RX targeted on doubt scintigraphic, which was also negative for secondarisms.

Candidate for surgery, he underwent radical prostatectomy with bilateral loco-regional lymphadenectomy (removal of 4 left and 3 right pelvic lymph nodes).

Results

The course was devoid of complications. The definitive histological examination showed the presence of prostatic adenocarcinoma with acinar cells with Gleason score 4 + 3, extended locally at the extracapsular level and on a margin resection and lymph nodes free of carcinoma of prostatic origin. pTNM Staging (VIII Edition 2017): pT3a N0.

In the remaining prostate parenchyma and in all the lymph nodes removed the histological findings showed mature B-cell neoplasia, with the characteristics of lymphoma with small lymphocytes / chronic lymphatic leukemia.

Discussions

LLC is a lymphoproliferative syndrome characterized by the medullary proliferation of a clone of B lymphocytes that invades blood and lymphatic organs. Prostate carcinoma is an epithelial neoplasm starting in the vast majority of cases by epithelial cells of acini or prostate ducts. The reported clinical case is that of a man who has presented both diseases, in particular with the

localization of prostate leukemia.

The involvement of the prostate by the LLC is rare. It is known that patients with LLC have an increased risk of the appearance of further neoplasia, up to 3 times for all neoplasms and up to 8 times for skin cancers. In a study of 12,373 patients with LLC, prostate cancer was diagnosed in 57 patients (5.1%). In other studies, prostate cancer accounts for 13% of secondary cancers.

There are several explanations to justify this relationship between LLC and prostate adenocarcinoma. The deficit of anti-tumor immunity, genetic predisposition and the chemotherapeutic treatment are potentially carcinogenic, even if there are studies that are partly contradictory in this regard.

Therefore, in patients with LLC investigating the possible presence of prostate cancer (rectal exploration and PSA) seems to have a strong justification.

On the contrary, in the diagnostic process of a prostatic nodule and / or an obstructive symptomatology, it is useful to investigate the presence of a concomitant lympho-myeloproliferative pathology, local or distant.

Conclusion

This case report, in line with current literature, confirms that the association between LLC and prostate cancer can be considered more than occasional. Factors such as advanced age, alteration of antitumor immunity, genetic predisposition, prior treatment of chemotherapy, appear to be the greatest risk factors. Further investigations are desirable to define this link, but in the meantime it seems prudent on the one hand to recommend prostate screening in patients known for LLC, on the other to investigate the presence of a lymphoproliferative pathology in the case of obstructive-neoplastic prostatic disease.

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8. #226: NEPHROGENIC ADENOMA OF THE PROSTATE: CASE REPORT

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Objective

Nephrogenic adenoma is a benign lesion of the urinary system, which resembles urothelial tumors.

We report the case of a 71 years-old man, know for previous intervention of prostate adenoma Holmium laser enucleations whit and subsequent obstruction of low urinary tract, whit nephrogenic adenoma of the bladder at subsequent intervention.

The aim is to describe our experience with a clinical case, to disseminate knowledge of the nephrogenic adenoma of the urinary tract, which remains a rare condition.

Materials and Methods

A 71-year-old man, due to cervico-urethral obstruction, was subjected in February 2015 at enucleation of prostate adenoma with Holmium laser (Holep).

The post-operative course took place without complications.

In 2016, the patient underwent thoracotomy for resection of pulmonary neoplasm.

Later he presented a relapse of LUTS.

On 26/2/2018, he underwent coronary angioplasty with a favorable outcome.

For the protracted of the discomfort symptomatology, the patient consented on 8/6/2018 to perform urethrocystoscopy, which documented the presence of a pre-membranous stenotic ring, resolved with the simple pressure of the instrument.

The prostatic lodge appeared regular in outcomes of disostructive intervention; on the other hand, on the bladder neck from 12 o'clock to 3 o'clock, there was the presence of a protruding nodule, of non-obstructive appearance, covered with a papillary lining, suspected for urothelial neoplasia.

For suspected urothelial neoplasia, the suspected area was resected and sent for histological examination.

The patient presented a post-operative course in the standard. At the removal of the catheter it presented a regular urinary flow, clear urine and still reports absence of disuria.

Results

Histological examination revealed: nephrogenic adenoma in the context of glandular hyperplasia and stromal prostate; focal areas of chronic prostatitis and post-inflammatory glandular atrophy. Immunohistochemical stains for PAX 8 and P63 coherent.

After 6 months from the intervention, there was no urinary symptomatology and the flowmeter was a max Q of 32 ml/sec with negligible RPM.

Discussions

Nephrogenic adenoma is a rare benign disease of the urinary tract, which appears to develop in response to chronic irritation or trauma. His diagnosis, staging and treatment are not yet well defined.

All patients described in the literature had a history of inflammation of the urinary tract.

But what is it and what is the etiopathogenesis of nephrogenic adenoma?

Histology first of all shows cytoarchitectural analogies with the nephronic structure, as documented by the earliest works of literature.

Immunohistochemistry has recently allowed us to confirm this pathogenetic hypothesis.

Recent evidence has shown that nephrogenic adenoma is a truly "nephrogenic" lesion, resulting from the proliferation of renal tubular cells exfoliated and implanted in the urinary tract, a process that would greatly resemble endometriosis.

This new concept led to the identification of a renal transcription factor, called PAX2 and PAX 8. Both are transcription factors of renal tubule cells, normal and neoplastic.

The studies suggest that PAX 8 is a new marker to identify nephrogenic adenoma.

The expression of PAX 8 and PAX 2 in both entities (nephrogenic adenoma and adenocarcinoma of the low clear-cell urinary tract), could indicate a common origin of these 2 lesions.

Furthermore, the identification of PAX 8 or PAX 2 in clear cell adenocarcinoma of the lower urinary tract may help to differentiate this type of tumor from urothelial carcinoma and from bladder or prostatic adenocarcinoma.

The similarity with the renal tubule cell on the one hand and the frequent finding of infection / inflammation of the lower urinary tract on the other, would lead to the pathogenetic hypothesis for which the renal cells in exfoliation, taking better on an inflamed tissue, proliferating would lead to the growth of nephrogenic adenoma.

Conclusion

Nephrogenic adenoma of the lower urinary tract genit is a benign, rare pathology, but of possible confirmation in the clinical practice of any urologist. It can be mistaken for urothelial carcinoma.

The trans-urethral resection allows today a precise diagnosis and symptomatic relief.

The recurrence is high, but there is currently no evidence of the most appropriate follow-up.

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9. #262: BLADDER SCHISTOSOMIASIS: OUR EXPERIENCE

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Objective

We describe 5 consecutive cases of Bladder Schistosomiasis underwent our observation since 2016

Materials and Methods

Schistosomiasis (bilharzia) is a neglected tropical disease caused by parasitic flatworms of the genus Schistosoma, with considerable morbidity in parts of the Middle East, South America, Southeast Asia and, particularly, in sub-Saharan Africa. Infective larvae grow in an intermediate host before penetrating the skin of the definitive human host. Mature adult worms reside

in the mesenteric (*Schistosoma mansoni* and *Schistosoma japonicum*) or pelvic (*Schistosoma haematobium*) veins, where female worms lay eggs, which are secreted in stool or urine. Eggs trapped in the surrounding tissues and organs, such as the liver and bladder, cause inflammatory immune responses (including granulomas) that result in intestinal, hepato-splenic or urogenital disease (1). From August 2016 to October 2018, 5 male patients (age from 18 to 26 years) immigrating from South-East of Africa underwent TURB for ultrasound evidence of suspected bladder tumor. In 4 patients gross hematuria were present.

Results

Histological samples from TURB do not show any bladder cancer. In 4 patients we found *Schistosoma* eggs in the sub-epithelial layer; in one case we found a calcification of the epithelial tissue containing the *Schistosoma* calcified too. No morbidity after TUR. All patients underwent clinical management for therapy and follow up to infectiological department.

Discussions

Diagnosis requires the detection of eggs in excreta or worm antigens in the serum, and sensitive, rapid, point-of-care tests for populations living in endemic areas are needed. The anti-schistosomal drug praziquantel is safe and efficacious against adult worms of all the six *Schistosoma* spp. infecting humans; however, it does not prevent reinfection and the emergence of drug resistance is a concern. Schistosomiasis elimination will require a multifaceted approach, including: treatment; snail control; information, education and communication; improved water, sanitation and hygiene; accurate diagnostics; and surveillance-response systems that are readily tailored to social-ecological settings (1).

Infection with *Schistosoma haematobium* leads to urogenital schistosomiasis, which has been correlated with the occurrence of bladder cancer. However, mechanisms responsible for this association have not yet been clearly identified (2).

Conclusion

It is now time to learn lessons from these outbreaks and to implement concrete procedures in order to better quantify the risks and prevent future outbreaks of schistosomiasis (3).

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10. #263: BLADDER PSEUDOSARCOMATOUS FIBROMYXOID TUMORS (PFT). A CASE REPORT

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Objective

We describe an uncommon bladder lesion with benign clinical evolution and its unusual surgical management.

Materials and Methods

This case is of a 54 year old female with incidental US and abdominal CT scan 30 mm neoplasm of the bladder (right site). Histological report of TURB do not show neoplasm. Trans vaginal US guided biopsy has been suggested for myofibroblastic pseudosarcomatous inflammatory lesion of the bladder. This histological report led to an open surgical approach with an open bladder enucleation of the bladder neoplasm that does not involve right ureteral meatus.

Results

Definitive histological diagnosis has been as Pseudosarcomatous Fibromyxoid Tumor (PFT) of the bladder, an uncommon lesion that occurs most frequently among females and must be distinguished from other malignant lesions, as treatment may differ.

Discussions

Pseudosarcomatous fibromyxoid tumors (PFT), also known as inflammatory myofibroblastic tumor or pseudosarcomatous myofibroblastic proliferation, are uncommon lesions that can be encountered in the bladder. First described in the bladder by Roth, they have been documented in multiple other organs, such as the prostate, urethra, and ureter (1-3). According to previous case reports, these lesions appear to be more common in young females and may be located at the anterior bladder/dome, both of which are true in this case report. It has been suggested that the development of PFT may be associated with pregnancy and subclinical trauma to the bladder, however this has never been proven (2-5). The most common clinical presentation is gross, painless hematuria and occasional suprapubic pain (2,3,5).

Histological characteristics of PFT show proliferation of myofibroblastic cells with focal atypia and features mimicking nodular fasciitis with no atypical mitoses. They frequently contain large atypical nuclei with the myofibroblastic cells mixed with lymphocytic inflammatory cells and positive staining for cytokeratin (3-5). These lesions have an excellent prognosis with no incidences of metastasis (3).

Conclusion

Pseudosarcomatous fibromyxoid tumors (PFT) are uncommon lesions that are composed of atypical myofibroblastic cells mixed within a myxoid stroma with some inflammatory cells. Typically, they most often occur in young females and must be distinguished from malignant lesions. PFT of the urinary bladder is a benign non-neoplastic myofibroblastic proliferative lesion.

Morphology is extremely easy to be misdiagnosed as malignant tumors, and therefore more attention should be paid to avoid this misdiagnosis.

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11. #66: BLADDER LOCALIZED AMYLOIDOSIS: A CASE REPORT

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Objective

Amyloidosis can be considered as a metabolic disease characterized by extracellular deposits of the fibrillar protein, amyloid [1]. The organs commonly involved are urinary bladder, lung, larynx, skin, tongue and the region around the eye. In the urinary tract, amyloid deposition usually starts from kidney to renal pelvis, ureters, urinary bladder and urethra. The kidney is nearly always involved in secondary amyloidosis and in approximately 50% of the cases of primary amyloidosis. However, in primary amyloidosis urinary bladder is usually involved [2]. The main symptoms are painless gross or microscopic hematuria, dysuria and irritative voiding symptoms. The diagnosis can be confirmed by the positive staining of Congo-red [3]. Recurrence rate post-resection is estimated to be as high as 54%. Primary localized amyloidosis of the bladder is very rare and can mimic bladder cancer in its presentation with hematuria, lower urinary tract symptoms or a mass on imaging. We report a rare case of bladder primary amyloidosis. The purpose is to create awareness among the clinicians to think for the rare entity of urinary amyloidosis especially if the histopathology is negative for the malignancy.

Materials and Methods

A 37-year-old woman, was admitted to our emergency department with gross hematuria for 5 days without urinary frequency, urgency and dysuria. He was not a smoker. His past medical history was negative for bladder cancer. The patient underwent an ultrasonography that suggested the diagnosis of bladder cancer. Other laboratory examinations were negative. Cystoscopy and transurethral resection were performed. Cystoscopy revealed a solid mass involving the bladder trigone and a localized uplift of the prostatic urethra. A deep resection involving muscular layer was performed. Histopathology of the biopsy material was negative for the malignancy. The pathologic examination demonstrated localized atypical hyperplasia, infiltration of lymphocytes and eosinophils. The specimen showed accumulation of acellular eosinophilic material in suburothelial connective tissue positive to Congo-red stain suitable for amyloidosis. The patient was discharged after 3 days and no intraoperative and postoperative complications occurred. The Dufour catheter was removed after 2 days. Hematuria did not show anymore. At 6 months follow-up the ultrasonography was negative. The cystoscopy showed a relapse in the area of previous resection.

Results

The patient has been sent to a national reference center for amyloidosis. He underwent a navel biopsy that was negative for a systemic disease. A second evaluation of bladder specimen suggests a primary disease characterized by a light chain deposit produced by a lympho-plasmacellular clone.

Discussions

Bladder amyloidosis was first described in 1897 by Solomin during an autopsy [4]. Less than 200 cases were reported in the literature [1]. The average age at presentation is 52 years (range 23 to 80). Both sexes are equally affected [5]. The lesion most commonly involves the trigone and, in order of decreasing frequency, the lateral bladder wall, base and anterior walls, base and posterior walls, and bladder neck [6]. Amyloidosis results from abnormal folding of protein which is deposited as fibrils in the extracellular space. Broadly amyloidosis is classified into primary (AL), secondary (AA) and hereditary (ATTR). [7] Amyloidosis does not present its own specific manifestations, can often exchange with a malignancy. Most patients complain about painless gross hematuria. Definitive diagnosis depends largely on histopathology. [8] Further examinations including navel biopsy, bone marrow, serum/urine electrophoresis, and immunofixation studies are necessary to exclude systemic amyloid involvement. [9] The first-line treatment of primary amyloidosis is surgical excision. Intravesical (Dimethyl Sulfoxide) and systemic (colchicine) treatments have been described, but these are generally not required [7]. Although there are no clinical guidelines regarding the length of follow up, previous authors have suggested follow up with cystoscopy every 1 year [10].

Conclusion

Primary amyloidosis of the urinary bladder is a rare disease, imaging studies and cystoscopy can not distinguish it from malignancy. Biopsy is necessary to make a diagnosis. Endoscopic surgical excision is the first-line therapy. A careful follow-up is recommended because of the high recurrence rate.

Reference

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12. #129: URINARY ENDOMETRIOSIS: THE UROLOGIST'S ROLE

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Objective

Urinary tract endometriosis is the second most common site of extrapelvic endometriosis. According to the literature, it refers to approximately 0.3 to even 12% of all women with endometriosis [1]. Therapy includes both medical and surgical options. Choice of treatment depends on patient's age, fertility desire, severity of lower urinary tract symptoms and presence of other pelvic disease. Our aim is to describe our experience in the multidisciplinary management of endometriosis with urinary tract involvement.

Materials and Methods

We performed a retrospective analysis of all the surgical procedures performed at the University Hospital of Parma for urinary tract endometriosis by a joint team of gynecologists and urologists in the last 13 years (May 2005-August 2018). Inclusion criteria was surgical procedure with open or laparoscopic approach involving both gynecologist and urologist in the same intervention or endoscopic resection of bladder endometriosis performed by urologist with curative intent. The procedures were performed by means of open or laparoscopic approach in consideration of the severity of the endometriosis and previous surgery. Pre or post-operative application of an ureteral stent or nephrostomy tube or subsequent bladder or ureteral repair after gynecological operation for endometriosis were not considered.

Results

46 cases of urinary tract endometriosis for a total of 60 procedures undergoing surgical treatment by a joint team of gynecologist and urologist were recorded. Mean patients' age was 37.08 years (28 – 49 years). We reported cases with 13 bladder and 47 cases with ureteral involvement. In 8 cases of bladder involvement a partial cystectomy was required. In patients with ureteral involvement we performed 45 ureterolysis (4 open and 41 laparoscopic), 1 open ureteroneocystostomy, and 1 laparoscopic segmentary ureteral resection. In 11 cases an ureteral stent was applied before surgery. In 5 cases a concomitant bowel resection was needed for deep endometriosis of the rectovaginal septum. A total of 10 complications (16.6%) at 90 days in the post-operative period were recorded. In two cases an intra-operative ureteral lesion occurred during dissection which was treated with suture and application of an ureteral stent. Five patients had post-operative fever treated with antibiotics (Clavien Grade II- 8.3%) and one patient required blood transfusion (Clavien Grade II- 1.7%). One patient had wall hematoma treated conservatively (Clavien Grade I- 1.7%). Three cases of Clavien Grade III occurred (4.8%). One ureteral fistula following ureterolysis was detected after the removal of the ureteral stent after 6 weeks and was treated with ureteral stent application (Clavien Grade IIIa). One patient developed a vesico-vaginal fistula after partial cystectomy of bladder endometriosis located in the trigone, which underwent open repair (Clavien Grade IIIa) and one patient undergoing bowel resection developed an enteric fistula which required surgical revision (Clavien Grade IIIa).

Conclusion

Urinary endometriosis is not only a gynecological disease. The risk of postoperative complications is not negligible. In the literature Clavien grade III are reported with a rate of 16 and 8% for ureter and bladder involvement respectively [2]. Management of urinary endometriosis requires collaboration between gynecologists and urologists with a great surgical experience and confidence in both mini-invasive, such as laparoscopy and endourology, and traditional surgery considering urinary and potential extra-urinary localizations and the high rate of complications.

Reference

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17 maggio 2019

11:20 - 12:05

sala C

Comunicazioni 3 - Carcinoma della Prostata

Moderatori: Andrea Prati, Aldo Brassetti

1.#59: THE IMPACT OF AN EXTENDED PELVIC LYMPH NODE DISSECTION (EPLND) ON THE PERIOPERATIVE OUTCOMES AND THE COMPLICATIONS OF ROBOT-ASSISTED RADICAL PROSTATECTOMY (RARP)?

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Objective

The aim of this study was to evaluate the impact of extended pelvic lymph node dissection (ePLND) on perioperative outcomes and complications of robot-assisted radical prostatectomy (RARP) (1).

Materials and Methods

We enrolled 120 consecutive patients who underwent RARP at our institution from July 2016 to January 2018. All procedures were performed by a single surgical team with a transperitoneal approach. 58 patients underwent a RARP with an extended lymphadenectomy (Group A) and 62 underwent a RARP alone (Group B). 41 out of 62 patients (66.1%) underwent an unilateral or bilateral nerve-sparing surgery. Intraoperative and postoperative outcomes were collected in a prospectively maintained database and retrospectively analyzed. Intraoperative and postoperative complications have been classified according to the Satava and the Clavien-Dindo system. Mean values with standard deviations (\pm SD) were computed and reported for all items. Statistical significance was achieved if p-value was ≤ 0.05 (two-sided).

Results

No significant differences were found in terms of patients' demographics characteristics in all variables. Group B had shorter total operative time (Group A = 142.07 ± 22.69 ; Group B = 104.19 ± 22.58 ; $p=0$), whereas Group A had shorter time of prostatectomy (Group A = 89.14 ± 20.54 ; Group B = 104.19 ± 22.58 ; $p=0.0002$). The estimated blood loss (Group A = 213.79 ± 293.17 ; Group B = 206.45 ± 153.51 ; $p=0.8626$) and the normalization of the intestinal canalization (Group A = 2.34 ± 0.76 ; Group B = 2.62 ± 1.04 ; $p=0.0967$) were found to be similar in the two groups. The time of drain removal was significantly lower in Group B (Group A = 3.38 ± 1.04 ; Group B = 2.74 ± 0.72 ; $p=0.0001$). The time of discharge from hospital (Group A = 3.84 ± 1.12 ; Group B = 3.52 ± 0.58 ; $p=0.0704$) was found to be similar in the two groups. The rate of intraoperative ($p=0.63$) and postoperative ($p=0.86$) complications was similar in both groups (Table 1).

Discussions

In our experience RARP associated with an ePLND showed longer total operative time than simple RARP. Nevertheless in the Group A the time of "radical prostatectomy" is shorter. This can be due to limited number of patients who underwent a nerve-sparing procedure in this group, that is a more meticulous procedure. The estimated blood loss are minimal and similar in the two groups. This can be related to the fact that both the ePLND and the "nerve-sparing" procedures (66.1% of the procedures in Group B) were performed by a single very experienced surgeon. In Group A we experienced 4 cases of lymphoceles. In fact, the

time of drain removal was significantly lower in the Group B even if it does not influence the time of discharge from the hospital. Hospitalization time results shorter in the group B but it does not reach statistically significant result. There were no significant differences between the two groups in terms of intraoperative and postoperative complications rate (2).

Conclusion

In conclusion, in our experience the ePLND does not influence the perioperative outcomes and the rate of complications of the RARP in high-volume centers.

Reference

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2. #195: SBRT FOR PROSTATE CANCER IN 3 FRACTIONS: ACUTE TOXICITY RATES FROM A PROSPECTIVE MULTICENTER STUDY

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Objective

Five-fraction hypo-fractionated SBRT is an acceptable option for low/favorable intermediate risk prostate cancer (NCCN 2018). The aim of the present study was to further reduce the number of treatment sessions to 3. Here we report acute toxicity rates on the patients treated so far.

Materials and Methods

This phase I-II prospective study is enrolling patients with low and intermediate risk prostate cancer at 3 Institutions. The prescribed dose to the target (prostate+4 mm isotropic) is 40 Gy in 3 fractions while prioritizing a 30 Gy Dmax limit to the rectum (1cc), the bladder trigone (1cc) and the urethra (0.1cc). A gel spacer (along with gold fiducials) is placed before simulation to dislocate the rectum. Patients are simulated and treated with a urethral catheter and controlled bladder filling. Prostate had to be < 80 cc at diagnosis or after 3 months of androgen deprivation and IPSS <16. Toxicity was graded according to the CTCAE v4.0 scale at the 3rd fraction and every 3 months afterwards. Toxicity developing within 3 months from end of treatment was considered "acute".

Results

Twenty-eight patients (19, 7, 2 at each Institution) have been treated and have a 3-month minimum follow up. All patients had low (n=20) or intermediate risk (n=8) prostate cancer; mean (SD) age was 73 (5.2) years and mean (SD) PSA at diagnosis was 6.9 (2.8) ng/ml. At planning, average (SD) prostate volume (CTV) was 51.4 (17.8) cc, 3 patients after 3-month neoadjuvant androgen deprivation. On average (SD) 95% of the PTV was covered by the isodose 85.4 (4.7)% while the isodose 38 Gy covered 61.8 (19.0)% of the PTV. Mean (SD) Dmax to rectum (1cc), bladder trigone (1cc) and urethra (0.1cc) were 28.9 (1.9) Gy, 22.1 (9.0) Gy and 30.8 (1.6) Gy, respectively. Peak acute GR0,GR1,GR2,GR3 gastrointestinal (GI) and genitourinary (GU) toxicity rates developed in 18,7,3,0 and 19,6,2,1 patients, respectively. Overall, 4 GR2+ GU events (2 urinary tract pain, 2 cystitis and 1 urinary retention) were recorded in 3 patients. The only grade 3 event consisted in urinary retention requiring transurethral resection 3 months after treatment completion. All three GR2 GI events consisted in mild proctitis. No GR4-5 GU or GI events were recorded as well as no other GR2+ event was observed.

Conclusion

The technical and dosimetric conditions set here, prostate SBRT in 3 fractions is associated with a favorable acute toxicity profile.

3. #248: COMPARISON OF TWO TEMPLATES OF LYMPHADENECTOMY IN PATIENTS AFFECTED BY HIGH RISK PROSTATE CANCER

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Objective

High risk prostate cancer treatment considers an extended lymphadenectomy. We have compared two templates of pelvic lymphadenectomy in high risk patients undergone an extraperitoneal or transperitoneal laparoscopic radical prostatectomy.

Materials and Methods

Two consecutive series of patients affected by high risk prostate cancer underwent laparoscopic radical prostatectomy. In group 1 (129 pts), the procedure was realized by a preperitoneal access with an extended lymphadenectomy including external iliac and obturator nodes; in group 2 (59 pts), access was transperitoneal with a broader lymphadenectomy consisting of common

iliac, external iliac, hypogastric and obturator nodes. We have compared perioperative outcomes in terms of number of nodes removed, positive nodes, complications in the two groups of patients. Statistical analysis has been realized using SPSS 24.

Results

Data on 178 patients were analyzed. Baseline characteristics are reported in table 1. Preoperative data were balanced between two groups of patients except for biopsy Gleason score and positive cores percentage. Postoperative outcomes are listed in table 2: Group 2 patients presented longer operative time, worse pathological stage, more positive margins, more nodes removed (mean 32.2 vs 17.0 $p<0.001$) and more positive nodes patients (20.4 vs 2.3%, $p<0.001$). Moreover, a wider lymphadenectomy template was not associated to greater risk of complications or lymphocele.

Discussions

Pelvic lymphadenectomy remains the gold standard for providing a diagnosis of lymph node metastasis in prostate cancer patients. A limited lymphadenectomy to the obturator fossa was the standard technique until a few years ago when it was replaced by extended lymphadenectomy. We describe our experience in two consecutive series of high risk patients undergone to two lymphadenectomy templates. Preoperative were balanced between two groups of patients except for biopsy Gleason score that resulted higher in the second group. Regarding postoperative outcomes, Group 2 patients presented longer operative time, worse pathological stage, more positive margins, more nodes removed (mean 32.2 vs 17.0 $p<0.001$) and more positive nodes patients (20.4 vs 2.3%, $p<0.001$).

Moreover, a wider lymphadenectomy template was not associated to greater risk of any complications or lymphocele. Increasing the NLN may have a therapeutic effect on the outcome of prostate cancer, but this feature needs more documentation. Our study cannot evaluate this issue.

Conclusion

In our retrospective analysis, a transperitoneal laparoscopic radical prostatectomy with an extended lymphadenectomy template including obturator, external iliac, common iliac and hypogastric nodes allows to remove a greater number of nodes, to obtain a more positive nodes without increasing risk of complications.

Reference

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4. #62: THE "ROBOTIC ACADEMY INTUITIVE NAPLES" (RAIN). OUR EXPERIENCE IN THE FIRST ITALIAN TRAINING CENTRE FOR ROBOTIC SURGERY

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Objective

The intuitive global training centers have the objective to train surgeons in the use of the "da Vinci Surgical System". All over the world 19 centers have been founded. Two of these centers are in Europe (CASE-Istanbul, Turkey and RAIN-Naples, Italy). The Robotic Academy Intuitive Naples (RAIN) was born in Naples in the April 2017.

Materials and Methods

From April 2017 to May 2018, 58 events were organized by Intuitive Surgical, Inc. and 2 courses were organized by scientific societies [SICO (Italian Society of hospital surgeons); URO-AUC (Advanced urology community)]. About 20 events will take place in the next year. The surgeons came from 10 country (Italy, Cyprus, Greece, Israel, Portugal, Czech Republic, Romania, Spain, Slovenia, U.K.) and 6 medical specialties (Urology, Pediatric Surgery, General Surgery, Thoracic Surgery and Gynecology) and were involved in the training programme. All training were conducted at the Centre of Biotechnology-Hospital "A.Cardarelli" (Naples). At the end of the training each surgeon completed a post-training evaluation questionnaire (score from 0 to 10). Mean values with Standard Deviations (\pm SD) were computed and reported for all outcomes of the training in a prospectively maintained database. Statistical significance was achieved if p-value was ≤ 0.05 (two-sides).

Results

21 out 58 surgeon (36.2%) were urologist. All urologist were male and the mean age was 41.9 ± 4.3 . The first phase of the training was performed using pelvic trainer stations and robotic simulators with specific exercises. The second phase was performed on anesthetized pigs using the da Vinci Xi[®] dual console robotic surgical system. The robotic training focused especially on the radical nephrectomy and the radical cystectomy. Each surgeon performed the radical nephrectomy on both sides and the radical cystectomy during the training. The mean time of port placement and robot docking was 23.3 ± 4.1 minutes. The first radical nephrectomy was completed in 46.6 ± 12.8 minutes. The second radical nephrectomy was completed in 36.8 ± 11.6 minutes ($p<0.013$). The radical cystectomy (including radical prostatectomy or hysteronephrectomy) was completed in 42.6 ± 14.8 . Some intraoperative complications occurred (five bowel injuries and three vessel injuries). The mean score of the questionnaire was 9.14 ± 0.99 .

Discussions

The transforming field of urological surgery continues to demand development of novel training devices and curricula for its trainees. There is good evidence for the beneficial effect of dry lab simulators on robotic skills acquisition, but less for cadaveric

and animal models (1). There was a significant difference between the mean operative time of the first and the second radical nephrectomy performed by the same surgeon. This indicates the usefulness of the training in improving the learning curve of the robotic surgery. In conclusion, according to post-training questionnaire, all the surgeons found the training courses very useful in developing robotic skills. A limitation of this study was that there are not follow-up about surgeons' learning curve and the immediate application of their training in the clinical practice.

Conclusion

The RAIN (Robotic Academy Intuitive Naples) is the first and unique Italian center that offers a complete training for the robotic surgery. In our experience the animal models have a high grade of satisfaction among surgeons.

Reference

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5. #172: MANAGING CASTRATION RESISTANT PROSTATE CANCER: REAL LIFE SNAPSHOT FROM A MULTICENTER COHORT

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Objective

Available evidences on medical treatment of castration resistant prostate cancer (CRPC), derived from clinical trials on Abiraterone (AA) and Enzalutamide (EZ), with consequent intrinsic selection biases. In this study, we provide a snapshot of toxicities and oncologic outcomes of AA, and EZ in a chemo-naïve CRPC population from a longitudinal real life multicenter cohort.

Materials and Methods

We prospectively collected data on chemo-naïve CRPC patients, who received either AA or EZ as first or second line treatment between Oct-2012 and Jul-2018 at 4 centers. Primary outcomes included PSA response, progression free survival and toxicity profile at both first line and second line. The therapeutic effectiveness of AA vs EZ and the role of established prognosticators were assessed with the Kaplan Meier method and the log-rank test was applied to assess statistical significance between groups. Survival probabilities were computed at 3,6,12,18 and 24 months after treatment start.

Results

Overall, 105 chemo-naïve CRPC patients received a first line therapy. Baseline clinical features of the cohort are reported in Table 1. Fiftyseven (54.3%) patients received AA and 48 (45.7%) received EZ. The PSA response rate was 95.2% (93.7% and 97.9% for AA and EZ, respectively, $p=0.37$). Toxicity rate was 11.5% (10.5% and 12.5% for AA and EZ, respectively $p=0.75$). Seven (6.6%) patients underwent salvage chemotherapy after first line failure. Two-yr progression-free, cancer-specific and overall survival probabilities were 16.2%, 82.8% and 80.3% respectively. At Kaplan Meier analysis, metastatic CRPC and AA as first line treatment were significant predictors of lower PFS probabilities (log rank $p=0.014$ and 0.031 , respectively).

Overall, 26 patients shifted to a second line therapy: EZ was prescribed in 20 cases and radiometabolic therapy in 6 patients. On second line, toxicity profile was comparable to first-line (10.5% vs 11.5%, $p=0.87$) and the PSA response probability was significantly lower than first line (73.1% vs 95.2%, $p=0.002$). Notwithstanding, 2-yr progression-free, cancer-specific and overall survival probabilities were comparable to those displayed on first line (12.1% vs 16.2% [$p=0.07$], 71% vs 82.8% [$p=0.44$] and 71% vs 80.3% [$p=0.66$], respectively. Four (3.8%) patients underwent salvage chemotherapy after progression.

Conclusion

We report clinical data from a real-life setting about toxicity and oncologic outcomes of patients treated with either AA or EZ for CRPC. Our data support evidences from clinical trials about safety and oncologic effectiveness in both first-line and second-line setting. Patients fit for a second line treatment had comparable toxicity profile and displayed comparable survival probabilities of first-line cohort.

6. #221: 68GA-PSMA PET/CT IN RECURRENT PROSTATE CANCER AFTER RADICAL TREATMENT: PROSPECTIVE RESULTS AFTER THREE YEARS EXPERIENCE

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Objective

Prostate-specific membrane antigen (PSMA) is a membrane carboxypeptidase type II, widely over-expressed in prostate

cancer cells. Recently, an innovative ⁶⁸Ga-labeled ligand have been designed to target membrane PSMA in diagnostic PET/CT (1).

We report three years experience with ⁶⁸Ga-Prostate Specific Membrane Antigen (PSMA) PET/CT for detecting prostate cancer (PCa) disease in patients with biochemical recurrence (BCR) after primary radical treatment.

Materials and Methods

This prospective single-center trial was approved by the Local Ethical Committee (Protocol Code: IRST185.02; Eudract: 2015-003397-33). Inclusion criteria: proven PCa, radical therapy (surgery and/or radiotherapy with/without ADT) with curative intent, proven BCR (PSA increasing). ⁶⁸Ga-PSMA PET/CT scans, performed from mid thighs to top of skull 60 minutes after intravenous injection of 150±50 MBq of ⁶⁸Ga-PSMA were interpreted by two nuclear medicine experts physicians.

⁶⁸Ga-PSMA PET / CT scans were performed on an integrated PET / CT system (Biograph mCT Flow® Siemens Healthineers, Germania) in 3D Flow acquisition (0,7 mm / sec).

Results were correlated to PSA at the time of the scan (trigger), staging PSA (iPSA), PSA doubling time (PSAdt), Gleason Score (GS), Tumor Stage (T, N), tumor residual after surgery (R+), time from primary therapy to BCR (TTR) and age. When available, ⁶⁸Ga-PSMA PET/CT were compared to negative ¹⁸F-choline PET/CT routinely performed within 28 days (2,3).

Results

From November 2015 to October 2018, 405 PCa patients with BCR were enrolled in this study (mean age=69 years old; median trigger PSA 0.74 ng/mL). ⁶⁸Ga-PSMA resulted positive, detecting at least one site of suspected PCa lesion, in 260 (65%) patients. On a patient-based analysis, local lesions limited to the pelvis (prostate/prostate bed and/or pelvic LNs) were detected in 152/260 patients (58.4%). At least one distant lesion (distant LNs, bone, other organs; separately or combined with local lesions) was detected in 132/260 patients (41.6%). Trigger PSA and iPSA were higher in PET positive vs. PET negative patients (respectively $p<0.0001$ and $p<0.007$). Higher GS and shorter PSAdt, neither significant, were observed in patients with a positive scan ($P = 0.53$ and $P = 0.27$, respectively).

Discussions

A whole-body imaging technique detecting the source and extent of prostate recurrence in radically-treated patients experiencing biochemical recurrence is essential to inform the selection of the most appropriate therapeutic strategy. Currently, Choline PET / CT is used as gold standard in clinical practice, but suboptimal diagnostic accuracy has been reported in large cohorts, mainly due to a lack of specificity (4). In order to overcome this drawback a novel tracer, ⁶⁸Ga-PSMA, is currently being tested in the biochemical recurrence scenario showing promising results both in terms of sensitivity and specificity (5,6,7). The three years experience data at our Institution, among the first in Italy to test this novel tracer, suggest similar excellent results.

Conclusion

This prospective trial confirms the importance of ⁶⁸Ga-PSMA PET/CT in restaging PCa with BCR, its superiority compared to Choline PET/CT and safety (5,6). Higher trigger PSA is associated with higher detection rate. A major limitation of this study is the lack of histopathologic proof in most patients.

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17 maggio 2019

15:00 - 16:30

sala A

Video 2 - Chirurgia del Retroperitoneo

Moderatori: Giovanni Zarelli, Willy Giannubilo

1. #175: INDOCYANINE GREEN GUIDED ROBOT ASSISTED RADICAL NEPHRECTOMY AND LEVEL III INFERIOR VENA CAVA TUMOR THROMBECTOMY

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In this video we highlighted surgical steps of a right RN and level III IVC thrombectomy using Indocyanine green (ICG) guidance for the management of the upper boundary of IVC tumour thrombus. Preoperative embolization of renal artery is usually performed. Key surgical steps are: liver mobilization, with an extensive incision of triangular ligament to expose the retrohepatic IVC; meticulous IVC isolation, cranially and distally to the neoplastic thrombus, for tourniquets placement; ligation and dissection of all lumbar and right gonadal veins, left renal vein isolation for tourniquet encircling. After right renal arteries transection, the previously applied tourniquets were synched down after confirming, with near infrared fluorescence imaging (NIFI), the proper control of cranial thrombus edge. Cavotomy was performed and the thrombus delivered and secured into an endo catch bag. IVC lumen was copiously irrigated with heparin saline solution and IVC suture performed with 3-0 monocryl running suture. After tourniquets removal, NIFI was used to inspect IVC lumen and to confirm proper restoration of IVC flow. Finally, nephrectomy was completed. Baseline, preoperative, perioperative and pathologic characteristics were reported. NIFI represents a significant technical advancement in the management of level III tumour thrombi, to improve control of the cranial thrombus edge and to confirm proper restoration of IVC flow after Cava suture.

2. #203: MANAGING TUMORS IN SOLITARY KIDNEYS: PURELY OFF-CLAMP ROBOTIC PARTIAL NEPHRECTOMY

A. Brassetti¹, U. Anceschi¹, G. Tuderti¹, L. Misuraca¹, F. Minisola¹, M.C. Ferriero¹, R. Mastroianni², R.S. Flammia², S. Guaglianone¹, M. Costantini¹, M. Gallucci², G. Simone¹, M. Caponera³

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In the video we present an off-clamp Robot-assisted Partial Nephrectomies (RPN) for tumor in solitary kidney. We present the case of a 56 years old diabetic man, with an incidental diagnosis of cT1aN0M0 tumor, mainly endophytic, in his right solitary kidney. With monopolar cautery, the line of Toldt was incised and the ascending colon medialized. The Gerota fascia was incised and the surface of the kidney directly accessed. The hilum was neither identified nor prepared. The small exophytic surface of the tumor was identified and its peripheral limit with the healthy parenchyma was marked with monopolar coagulation. The enucleation started at the level of the coagulated tissue and the almost avascular plane of the pseudocapsule was followed with blunt dissection. Small bleeding vessels eventually encountered were promptly coagulated, thus maintaining a clear surgical field which is crucial to achieve negative surgical margins. Once the enucleation was completed, the parenchymal breach was sutured

in two layers with a sliding clips technique.

Nephron sparing surgery is a safe and feasible option, also in patients with solitary kidney. In experienced hands, a purely off-clamp approach provides a negligible impact on renal function, not jeopardizing safety and oncologic outcomes.

3. #253: RIGHT NEPHROURETERECTOMY WITH VENA CAVA RESECTION AND CLOSURE WITHOUT PROSTHETIC REPLACEMENT

A. Giacobbe¹, L. Tosco¹, D. Collura¹, E. Berdondini¹, F. Germinale¹, G. Leucci¹, N. Faraone¹, M. Kurti¹, G.L. Muto², R. Papalia³, G. Muto¹

¹ Humanitas Gradenigo (Torino)

² A.O.U. Careggi (Firenze)

³ Campus Bio-Medico (Roma)

This video shows a right open nephroureterectomy with cava resection and closure without prosthesis replacement. This patient was affected by urothelial carcinoma of the upper urinary tract (cT4 Nx Mx) with infiltration of the adjacent vena cava wall. During the last year, CT scans have demonstrated a rapid progression of the urothelial neoplasm involving and infiltrating the renal vein and the vena cava. The surgical approach was a thoraco-phreno-laparotomy starting from at 9th intercostal space. The right kidney was isolated as the renal vein and the vena cava in order to clamp cranially and caudally. The renal tumor originated from the renal hilum and during the procedure there was evidence of duodenum surface infiltration. The vena cava was involved for 4 cm along its longitudinal axis. After clamping the vena cava and the contralateral renal vein we performed the excision of the kidney together with the infiltrating neoplastic mass next to the vena cava. The circumferential infiltration of the cava was confirmed macroscopically and this venous tract was excised en bloc, leaving the left renal vein intact and draining into the correspondent segment of the vena cava. We show that the closure of the vena cava at the supra-iliac level can be performed without prosthetic replacement.

4. #261: ENLARGED RIGHT LAPAROSCOPIC NEPHRECTOMY FOR CT4 RENAL CELL CARCINOMA WITH INVASION OF LIVER AND RIGHT ADRENAL GLAND

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In this video we show a surgical technique of an enlarged right laparoscopic radical nephrectomy for a renal tumor in clinical stage T4, with invasion of adrenal gland, and suspected involvement of the liver.

A 73-years-old man has come to our attention for right flank pain, TC scan showed a 7 cm upper pole mass with massive involvement of right adrenal gland and a suspected involvement of the right lobe of the liver.

The patient underwent to right laparoscopic radical nephrectomy with transperitoneal approach, adrenal gland was removed en-bloc with the kidney, as the liver parenchyma involved by the tumor, dissection was conducted by integrated bipolar and ultrasonic harmonic scalpel.

Operative time and blood loss was respectively 185 min and 380 cc. Hospital stay was 6 days, no surgical complications were observed.

Pathological analysis showed a clear cell carcinoma Fuhrman IV, pT4 with negative surgical margins. After 4 months the patient is disease free survival on TC scan.

5. #79: OFF-CLAMP ENUCLEATION OF HIGHLY COMPLEX RENAL TUMORS

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¹ AORN A. Cardarelli, U.O.C. Urologia (Napoli)

This video shows two cases of off-clamp enucleation for highly complex renal tumors. We present these minimally invasive procedures respectively with laparoscopic and robot-assisted access. In the first case the surgeon performs an off-clamp laparoscopic enucleation of a right big renal mass closely connected with the cava. Three laparoscopic ports are placed transperitoneally. Open access technique is used for primary trocar. The enucleation of an exofit mass of about 7cm of diameter localized in the lower renal pole is performed with monopolar scissors and bipolar grasp. A sliding parenchymal suture with 0 Vicryl is operated. In the second case a robot-assisted laparoscopic right enucleation of an hilar intraparenchymal mass is performed. The patient is in left lateral position. Four robotic ports and one laparoscopic port are placed transperitoneally on the umbilical line. The Air-Seal system is used. The Gerota capsule is widely incised to identify the hilar area and to roll the kidney. An hilar tumoural artery is closed with Hem-o-Lok. The enucleation is performed with monopolar scissors and bipolar grasp. The bleeding is controlled by Floseal and Tabotamp. A 0 Vicryl parenchymal suture is operated. The Gerota capsule is closed at the end of enucleation. We consider the mini-invasive treatment of complex renal tumors a feasible and safe procedure if carried out by an expert surgeon.

6. #268: RIGHT LAPAROSCOPIC PARTIAL NEPHROURETERECTOMY OF THE UPPER DUPLICATED URINARY SYSTEM

L. Tosco¹, A. Giacobbe¹, D. Collura¹, N. Faraone¹, E. Berdondini¹, G.L. Muto², F. Germinale¹, M. Kurti¹, R. Papalia³, G. Muto¹

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We show a laparoscopic partial nephrectomy of the superior part of a double reno-ureteral system. This patient has been affected by recurrent pyelonephritis and right flank pain. The scintigraphy demonstrated a decreased renal function of the right upper renal parenchyma. The preoperative CT scan confirmed a bilateral double urinary system that was complete on the right side and incomplete on the left side, respectively. A moderate right renal atrophy was present on the upper urinary system with hydronephrosis until the bladder with maximal diameter of about 2.5 cm. This patient was placed on left flank position. We placed, through a trans-peritoneal access, the para-rectal trocar for the camera and two other operative trocars in the right hypocondrium and in the right iliac fossa. Two other trocars of 5 mm were placed on the right flank and on the epigastric position, respectively. We dissected the renal hilum of the right kidney and we identified all the anatomic elements. The renal parenchyma was incised after arterial clamping and the margins were sutured. Warm ischemia time was 25'. We identified the two ureters and we dissected the upper complete excretory system that was sutured with an endo-GIA at the limit with the bladder. The specimen was completely dissected and put in a endobag.

7. #246: LAPAROSCOPIC NEPHRECTOMY IN PATIENT WITH SITUS INVERSUS TOTALIS

R. Sanseverino¹, T. Realfonso¹, O. Intilla¹, G. Molisso¹, R. Baio¹, G. Napodano¹

¹ Ospedale Umberto I - ASL Salerno, UOC Urologia (Nocera Inferiore)

Situs inversus is a rare mirror-image reversal of the thoracic and abdominal organs with an incidence of 1/20.000 cases. The recognition of this particular condition is extremely important for patients requiring surgical intervention. The video shows a case of laparoscopic nephrectomy in a patient with situs inversus totalis. A 75 years old male referred a tour institution for a left flank pain and fever. US and CT scan revealed an urinary lithiasis complicated by idronephrosis. A transperitoneal left laparoscopic nephrectomy was realized using ligasure and Hemolock clips. Major abdominal vessels and renal vessels were inverted. Operative time and blood loss were 70 minutes and 30 ml respectively. No complications occurred. The patient was discharged on day 4. Histological evaluation revealed pyelonephritis. Situs inversus is a rare condition that should be ever recognized prior to plan surgical intervention.

8. #204: OFF-CLAMP ROBOT-ASSISTED PARTIAL NEPHRECTOMY (RPN) FOR CT2 RENAL CANCERS

A. Brassetti¹, G. Tuderti¹, L. Misuraca¹, F. Minisola¹, M.C. Ferriero¹, R. Mastroianni², R.S. Flammia², S. Guaglianone¹, U. Anceschi¹, M. Costantini¹, M. Gallucci², G. Simone¹, M. Caponera³

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To present our step by step technique of off-clamp Robot-assisted Partial Nephrectomy (RPN) for cT2 renal tumors.

In the video we present the case of a 40 years old woman, with no comorbidities, with an incidental diagnosis of cT2aN0M0 tumor, mainly endophytic, posteriorly located, at the mid third of her solitary functioning right kidney. With monopolar cautery, the line of Toltdt is incised and the ascending colon is medialized. The Gerota fascia is incised and the posterior aspect of the kidney is directly accessed. The hilum is neither identified nor prepared. The tumor is identified and its peripheral limit with the healthy parenchyma is marked with monopolar coagulation. The enucleation is started at the level of the coagulated tissue and the almost avascular plane of the pseudocapsule is followed. The table-side assistant uses the suction device to compress small bleeding vessels eventually encountered, thus contributing to maintain a clear surgical field. These are further secured with pin-point coagulation. Once the enucleation is completed, the parenchymal breach is sutured with a "sliding clips" technique. Nephron sparing surgery is a safe and feasible option, also in patients with cT2 renal masses. In experienced hands, purely off-clamp RPN is a reasonable approach, providing negligible impact on renal function.

9. #194: ROBOT-ASSISTED POST-CHEMOTHERAPY RPLND FOR NON SEMINOMATOUS GERM CELL TUMOR

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In this video we present a case of a 18-yr old male, who underwent right orchiectomy for Non seminomatous Germ Cell Tumor (NSGCT). The CT Scan showed a 3 cm retroperitoneal residual mass, anteriorly to the IVC therefore RPLND was

planned. The posterior peritoneum was incised medially to the cecum, extending the incision along the ligament of Treitz. A barbed suture was then passed through the posterior peritoneum, and then passed back through the anterior abdominal wall. This is performed on both sides of the incision of the posterior peritoneum, elevating the small bowel and exposing the retroperitoneal space. The anterior aspect of IVC and aorta is visualised, and the nodal mass is identified. Interaortocaval lymphnode dissection is progressively performed, dissecting the lymphatic tissue proximal to the nodal mass and isolating its cranial aspect. The residual mass was approached, starting from the aortic aspect. The distal aspect of the mass was identified and isolated, with a progressive dissection through the anterior wall of IVC. Interaortocaval lymphnode dissection was completed. Paracaval lymphadenectomy was performed, with the right ureter as lateral boundary. The right template lymphnode dissection was completed. Right spermatic cord was dissected and removed without any robot redocking. The operatory field was irrigated with fibrin glue to reduce lymphatic leakage.

XXVI Congresso
abstracts



17 maggio 2019

15:00 - 16:30

sala B

Comunicazioni 4 - Carcinoma della Prostata - Diagnostica

venerdì 17 maggio 2019

Moderatori: Franco Bertolotto, Andrea Spagni

1. #167: FUSION US/MRI GUIDED VERSUS SYSTEMATIC PROSTATE BIOPSY IN ACTIVE SURVEILLANCE: DETECTION AND PROGRESSION RATE

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³ Azienda Ospedaliera "Sant'Andrea" (Roma)

⁴ Ospedale Santa Chiara (Trento)

⁵ Ospedale Fabrizio Spaziani, U.O.C. Urologia (Frosinone)

Objective

Active surveillance is a viable but expensive option for low risk prostate cancer. MRI has been introduced in many protocols of surveillance in order to detect and manage disease progression. We evaluated detection and progression rate of prostate cancer using a Fusion US/MRI guided prostate biopsy compared with a series of systematic biopsy.

Materials and Methods

From October 2009 to October 2018, we collected data on 85 patients selected for active surveillance protocol who underwent a subsequent prostate biopsy. Fifty eight patients received a Fusion US/MRI guided prostate biopsy, while 27 patients underwent a systematic 12 core biopsy. We compared number of prostate biopsies, detection and progression rate of two groups. Mann Whitney and Fisher Test were used to compare continuous and categorical variables, respectively.

Results

The two groups were comparable for age, psa and volume ($p=0.19$, $p=0.13$ and $p=0.75$, respectively). Overall detection rate for any cancer was comparable between the two groups for any cancer [72.5% vs 27.5% ($p=0.23$)] and for clinically significant Pca [33.3% vs 66.7% ($p=0.80$)]. Median number of prostate biopsy was comparable between groups [2 (2-2) vs 2 (2-2) $p=0.092$]. Gleason upgrading rate and progression rate were comparable for systematic and fusion biopsy cohorts 34.5% vs 65.6%. ($p=0.66$) and 36.7% vs 63.3% ($p=0.46$), respectively. Median time to progression was significantly longer for systematic biopsy [14 (12-21.759) vs 12 (12-13.25) months, $p=0.007$].

Conclusion

These data showed how a fusion us/mri prostate biopsy did not improved detection rate of clinically significant prostate cancer in a setting of active surveillance. The rate of upgrading and progression are similar despite a target biopsy. A fusion biopsy significantly shortened time to progression, helping to early detect clinically significant prostate cancer fit for radical treatments.

2. #207: PERIPROCEDURAL AND DIAGNOSTIC OUTCOMES OF TRANSRECTAL VERSUS TRANSPERINEAL US/MRI GUIDED FUSION PROSTATE BIOPSY: MULTI-INSTITUTIONAL PROPENSITY SCORE MATCHED PAIR ANALYSIS

M.C. Ferriero¹, R.S. Flammia², M. Oderda³, V. Forte², A. Peltier⁴, P. Kumar⁵, P. Mozer⁶, A. Giacobbe⁷, R. Mastroianni², G. Tuderti¹, U. Anceschi¹, A. Brassetti¹, J.B. Roche⁸, M. Ciccariello², S. Guaglianone¹, T. Piechaud⁸, M. Rouprêt⁹, P. Gontero³, G. Muto⁷, M. Gallucci², G. Simone¹, M. Caponera¹⁰

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Objective

Many software for fusion prostate biopsy (FPB) have been developed in the last years, most of them not providing the opportunity to combine transrectal (TR) and transperineal (TP) approach. Whereas one of these two approaches is beneficial in terms of complication rates or in terms of diagnostic accuracy is yet to be determined. The aim of this study was to compare periprocedural complication rates and diagnostic performance in propensity score matched pair cohorts to minimize the selection bias of non-random assignment of patients to TP as opposed to TR FPB.

Materials and Methods

Baseline, periprocedural and pathologic data of 1197 patients who received FPB were prospectively collected in 7 different centers. TR approach was performed in most patients (1065, 89%, vs 132 TP). A 1:1 propensity score matched (PSM) analysis was employed to reduce covariate imbalances to <10%. The two selected PSM cohorts were compared for periprocedural and diagnostic performance. Chi-square or Fisher exact test and Student t test were used to compare categorical and continuous variables, respectively. Two-sided p values <0.05 were considered statistically significant.

Results

In the overall cohort, patients treated with TR-FPB had significantly lower number of target areas, of target, random and total number of cores, lower prostate volume, higher incidence of PIRADS 3 lesions and of previous negative prostate biopsy (all p values <0.001). After applying the PSM analysis, the two cohorts of 90 TR and 98 TP PFB did not differ for all covariates (Table 1; all p =0.16). TP vs TR PFB detection rates were comparable for any prostate cancer (61.2% vs 63.3%, respectively, p=0.88) as for clinically significant disease (35.7% and 38.9%, respectively p=0.76). Complication rates were comparable between approaches (2% vs 4.4%, respectively, p=0.31).

Conclusion

Transrectal and transperineal Prostate Fusion Biopsy provide comparable diagnostic accuracy and periprocedural complication rates. Prospective randomized studies are needed to confirm these data.

3. #217: FUSION US/MRI PROSTATE BIOPSY USING A COMPUTER AIDED DIAGNOSTIC (CAD) SYSTEM

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Objective

Computer aided diagnosis (CAD) systems have shown promise in identification of prostate cancer (PCa) on mpMRI in several studies. A wrong interpretation of MRI and a not appropriate contouring of targets can compromise the detection rate of a Fusion (US/MRI guided) prostate biopsy (FPB). We investigated the potential impact of CAD system on the detection rate of PCa in a series of FPB performed in two different centres.

Materials and Methods

From March 2016 to October 2018, data on FPB were collected from prospective data set at two different centres. We compared PCa detection rate with a per patient and per target area analysis, in two groups of FPB performed either with the assistance of CAD system or using MRI only. Chi Square and Student t test were used to compare categorical and continuous variables, respectively.

Results

A total of 183 FPB were performed transperineally with Biopsee Fusion System, 89 with the assistance of CAD System (Watson Elementary). The two cohorts were homogeneous for age, baseline PSA, prostate volume, number of target areas and number of target cores, while the CAD assisted group had a significantly higher number of total cores ($p < 0.001$). (Table 1) On a patient based analysis the overall detection rate of any PCa and clinically significant (cs) PCa were 56.3% and 30.6%, respectively. The same outcomes were comparable between the CAD assisted and MRI only FPB groups (59.6% vs 53.2% [$p = 0.45$] and 30.3% vs 30.9%, [$p = 0.99$]) for any prostate cancer and csPca, respectively. On a target area based analysis, the overall detection rate of any PCa was 54.1%, with non-significant differences between groups (51.5 vs 48.5, for the CAD assisted and MRI only FPB, respectively $p = 0.45$). Similarly, overall cs PCa detection rate was 29.5%, with comparable outcomes between groups (29.8% vs 29.2%, respectively $p = 0.98$). After stratifying for PI-RADS score, the use of CAD did not impact significantly on diagnosis (all $p > 0.05$). A subgroup of FPB in transitional zone lesions, detection rate of csPCa was significantly higher in the cohort of CAD assisted procedures (54.5% vs 11.1%, respectively $p = 0.028$).

Conclusion

These data showed how CAD assistance for FPB did not impact on detection rate of PCa in a per patient and per target analysis. For suspicious area located in transition zone, the use of CAD increased detection rate of csPCa.

4. #220: DIAGNOSTIC AND STAGING PERFORMANCE OF MPMRI-US FUSION PROSTATE BIOPSY: PROSPECTIVE ANALYSIS ON CONSECUTIVE RADICAL PROSTATECTOMY SPECIMENS FROM A MULTICENTRE SERIES

M.C. Ferriero¹, R.S. Flammia², G. Tuderti¹, A. Brassetti¹, R. Mastroianni², U. Anceschi¹, M. Oderda³, P. Gontero³, A. Giacobbe⁴, G. Muto⁴, G. Malossini⁵, A. Peltier⁶, K. Pradeep⁷, T. Piechaud⁸, J. Luc Descotes⁹, R. Papalia¹⁰, S. Guaglianone¹, M. Gallucci², G. Simone¹, M. Caponera¹¹

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Objective

Despite the high accuracy of MRI in detecting prostate cancer, some clinically significant lesions remained still missed. In this study we assessed the diagnostic and staging performance of mpMR comparing Fusion (US/MRI guided) biopsy findings with radical prostatectomy specimens in a multicentric series.

Materials and Methods

Data of 399 consecutive patients with prostate cancer diagnosis at mp-MRI/US guided "fusion" biopsy who underwent minimally invasive radical prostatectomy were prospectively collected in a multicentre data set. All biopsies were performed using the UroStation (Koelis, France). MRI and Fusion Biopsy findings were compared with final pathologic report. Diagnostic performance of MRI-US fusion biopsy was evaluated in terms clinically significant PCa diagnosis, Gleason score upgrading at final pathology, presence of extraprostatic extension and of nodal involvement. In a subgroup of 60 patients with whole mount assessment of pathologic specimens a per core biopsy analysis was performed to assess exact correspondence between core biopsies and final pathologic findings and proper identification of the index lesion.

Results

Clinic and pathologic data of the whole cohort are reported into Table 1. Overall, MRI-US fusion biopsy missed 35 (8.7%) clinically significant PCa. Biopsy Gleason score was confirmed on final pathology in 257 (64.4%), upgraded in 87 (21.8%) and downgrade in 55 (13.8%) cases. The staging accuracy of MRI in predicting tumor side, extraprostatic extension and nodal involvement was 77.1%, 76.9% and 86.2%, respectively. In the subgroup analysis of patients with whole mount pathologic assessment, at per core evaluation, 202/1504 (13.4%) cores were positive for GS>6 out of the suspicious ROI at MRI. The mean ratio of suspicious ROI/ pathologic tumor foci was 0.63 (SD 0.30). The pathologic index lesion was missed by mpMRI-US fusion biopsy in 25% (15/60) of the patients.

Conclusion

mpMRI and Fusion US/MRI guided prostate biopsy provided a reliable diagnostic and staging performance in detecting prostate cancer in patients receiving a surgical treatment. Despite significant improvements in diagnosis and staging, in 25% of cases the index lesion can be missed by mpMRI and Fusion US/MRI guided prostate biopsy.

5. #269: MULTIPARAMETRIC MRI AND FUSION BIOPSY. COST ANALYSIS OF THIS APPROACH: OUR DATA ON 289 PROCEDURES

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Objective

Multiparametric magnetic resonance (mpMRI) is recommended to select men candidate to prostate biopsy to improve the diagnosis of clinically significant prostate cancer; however, the good cost-effectiveness of mpMRI in reducing unnecessary procedures the high costs and the insufficient number of dedicated medical staff could result in an inhomogeneous use of mpMRI across European countries. The aim of the work is to quantify the overall costs of systematic (12 cores) ultrasound prostate biopsy combined with cognitive or software-guided fusion targeted biopsy.

Materials and Methods

The overall costs were determined by referring to the experience of 289 procedures performed in Italy in 2017 in a private Urological Center. The following cost factors were assessed: personnel, materials, maintenance-equipment depreciation, energy consumption and common costs of structure. A review of the literature was also performed to verify the correspondence of the costs that we extrapolated with those of other international operating entities (1). The cost of mpMRI was not included in our study.

Results

The overall cost of systematic plus mpMRI guided biopsy was 531,00 EURO (€) if performed with cognitive fusion; the data were obtained by adding all the costs: personnel (€ 243,00), materials (€ 178,00), maintenance-depreciation of equipment (€ 72,30), energy consumption (€ 0,20), general costs of hospital care (€ 37,50). It can be assumed that for about 300 procedures a year the impact of a mpMRI fusion device can add from 40 (ecograph supported by fusion device) to 120 € (platforms supported by software-guided fusion biopsy) to each procedure according to the initial cost of the machine, maintenance, any dedicated consumables, and operator time.

Discussions

If greater than half of prostate biopsies are negative, there is the opportunity performing mpMRI before biopsy to save health care costs by avoiding the unnecessary procedures. In fact, although mpMRI is recommended for the diagnosis of csPCa in men candidate to repeat prostate biopsy for persistent suspicious of PCa (2), mpMRI, in daily clinical practice, is often suggested also in men candidate to initial procedure.

The inclusion of fusion biopsy mpMRI-guided as a step in a protocol of early diagnosis of prostate cancer is controversial from economic points of view (3,4). The actual costs for the average patient seeking a first-line biopsy would actually include many parameters: medical instruments; surgery room (when used); mpMRI machine and the evaluation performed by an experienced and skilled urologist; systematic TRUS-guided biopsy plus MRI/TRUS fusion-guided biopsy. Although the pooled baseline resource costs were 2.3 times higher in the United States than in other countries (5), the overall cost of mpMRI cognitive fusion biopsy (6,7) resulted, in our experience, equal to € 531, substantially corresponding to data reported in the literature (5). The item that affects more between the cost factors is related to health personnel (about 64%); on this item will therefore focus attention on identifying and streamlining procedures to reduce spending, especially with regard to the corrective work is directed (14% of the total) and indirect (10%). Therefore, reported resource costs for performing mpMRI and/or biopsy should include the cost of complications resulting from these procedures. Complications from prostate biopsy are similarly expensive and methods to decrease incidence may be cost-effective (8-10); the risk of sepsis with the related costs in men submitted to transrectal biopsy is included between 2% and 3.5%. In addition, the overall costs of the follow up for clinically insignificant PCa (Active Surveillance) and/or the related overtreatment of definitive therapy (erectile dysfunction and urinary incontinence in up to 75% and 48% of patients, respectively, 5–10 years after surgery) (11) should be calculated.

Conclusion

The overall cost of a systematic prostate biopsy adding targeted mpMRI fusion cores (531,00 €) increases from 40 to 120 € depending on what fusion device is used; but, irrespective of the high cost. the feasibility of the procedure, in the immediate future, could be affected by the inhomogeneous use of mpMRI across European countries secondary the availability of mpMRI and skilled urologists.

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6. #280: RADIOMIC ANALYSIS OF MRI IN THE DIAGNOSIS OF CLINICAL SIGNIFICANT PROSTATE CANCER: A STEP FORWARD TO OVERCOME PI-RADS LIMITS?

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Objective

PI-RADS score includes the limit to be operator dependent and to give general information about tumor aggressiveness. Radiomic is emerging as a new approach to imaging. It's able to extract quantitative data from images and to build mathematic models for the diagnosis of cancers. Aim of the current study was to investigate an objective method based on Radiomic analysis to identify prostate cancer based on MRI images used for targeted biopsy and to overcome the subjective limit of the PI-RADS score.

Materials and Methods

Between June 2018 and September 2018, 65 patients underwent MRI fusion targeted biopsy at our Institution. MRI images of all the prostate gland including target lesions were used for radiomic analysis. In target lesions 99 ROI (Region of interest) were evaluated (Figure 1). From these 99 ROI 242 image features using radiomic analysis were extracted (Figure 2). Gray Level co-occurrence Matrix and Local Binary Patterns were used. A further feature the 243th was assigned to each ROI. The 243th feature was associated to the Gleason Score (GS). 90 ROI were used to teach the computer to recognize the 243th feature (ROI of training) and with the other 9 ROI we asked the computer to independently assign GS (ROI of test). The training was repeated 10 times inverting the ROI of training and the ROI of test each time.

A single core analysis of each biopsy was performed. True Positive was considered target's cores positive at pathology. True Negative were considered cores of random biopsy negative at pathology.

Results

The per core analysis revealed an accuracy of PI-RADS of 74.5% to detect clinical significant prostate cancer (GS \geq 7) and of 72.8% in all other cases.

Radiomic analysis of MRI images of patients undergoing targeted fusion biopsy allowed us to develop a tool able to predict Gleason Score. Computer identified presence of Gleason Score (GS) 6 in 67% of the patients, GS 7 in 74% and GS 8-9 in 67%, respectively.

Conclusion

This new tool could improve detection of target lesions in prostate gland in a standardized fashion and overcome the limit of subjective interpretation of MRI images avoiding useless biopsies. Furthermore, radiomic analysis may add a qualitative information: the Gleason Score.

7. #239: ANDROGEN RECEPTOR STATUS AND CHANGES DURING PROSTATE CANCER MONITORING

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Objective

Prostate cancer (PCa) represents the 7.1% of the total cases of diagnosed cancers for incidence and is the second cause of cancer death among men worldwide in 2018, accounting for 358,989 number of death [1]. Patients diagnosed with prostate cancer show a highly variable clinical behavior, with a large number of tumors remaining latent for decades following diagnosis. Prostate carcinoma patients are risk-stratified on the basis of clinical and pathological features, but foci with more aggressive features

than adjacent areas may give rise to distant and lethal metastases. Patients with advanced PCa can only benefit temporarily from androgen deprivation therapy because it entails a transitory decrease in testosterone and dihydrotestosterone synthesis, leading to biochemical recurrence and progression to a castration-resistant prostate cancer (CRPC) condition. Since androgen signaling continues to be active, therapies targeting AR pathway remain a valid chance for CRPC patients [2].

Enzalutamide and abiraterone belong to next generation anti-androgen axis that showed clinical efficacy in CRPC in terms of progression free survival (PFS) and overall survival (OS), both in pre and post chemotherapy settings [3-6].

Treatment monitoring of CRPC during enzalutamide and abiraterone treatments is clinically relevant, but to date no validated biomarkers are available. Androgen receptor (AR) gene copy number (CN) status detected in plasma DNA could be a good candidate because it is one of the main factors involved in prostate cancer and is the target of therapies such as enzalutamide and abiraterone.

Materials and Methods

Digital PCR (dPCR) technology was used to assess AR copy number on plasma DNA of castration-resistant prostate cancer during treatment with enzalutamide or abiraterone. Association between AR changes during treatment and overall survival (OS) and progression free survival (PFS) was evaluated in 154 patients at baseline of enzalutamide or abiraterone, of which 79 were reanalyzed during treatment.

Results

Among seventy-nine patients analyzed during treatments, 11 (14%) changed AR CN status from baseline time point and a significant association between AR variation and OS was found: patients changing AR CN from normal to gain status had a median OS of 19.8 months (95% CI 8.0 – 27.7) compared to patients with stable AR CN normal that presented a median OS of 22.7 months (95% CI 19.0 – 30.5), patients with stable AR CN gain had a median OS of 9.1 (95% CI 3.8 – 17.9) whereas patients changing AR CN from gain to normal status not reached ($p = 0.001$). No significant association was observed between AR variation and PFS ($p = 0.141$). Multivariable analyses suggested that plasma AR variation was an independent negative prognostic factor.

Discussions

One of the major issues today for clinicians is to predict which drugs can be effective so there is an urgent need to identify predictive biomarkers able to select the responsive patients. In this context, liquid biopsy has emerged in prostate cancer where obtaining tissue sampling from metastases is often difficult. Digital PCR is a highly sensitive and precise technology, capable of detecting low percentage of copy number differences to be identified, as it is DNA from liquid biopsy. In this study, AR changes during disease treatments were found in 11 patients (14%) and this could be partly due to the presence of different clones selected under the pressure of enzalutamide and abiraterone.

Conclusion

Plasma AR CN changes using dPCR during enzalutamide or abiraterone treatments are associated with worse OS in metastatic CRPC and further underlie the prognostic role of AR CN at baseline of these treatments [7]. Larger prospective studies that analyze AR CN at different time points are necessary to confirm our results.

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8. #251: ROLE OF THE ANDROGEN RECEPTOR IN PROSTATE CANCER-ASSOCIATED FIBROBLASTS (CAFS)

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Objective

Prostate cancer (PCa) is the second most frequently diagnosed cancer and the sixth leading cause of cancer death in males, accounting for 14% of the total new cancer cases and 6% of the total cancer deaths in males in 2008 [1]. Prostate cancer microenvironment consists of different types of cells, including myofibroblasts, fibroblasts (CAFs), endothelial cells and tumor-infiltrating immune cells [2]. Up to now, the vast majority of studies concerning the role of Androgen Receptor (AR) used to

focus on its action on prostate epithelial cells, as actual Androgen Deprivation Therapies (ADT), routinely chosen for PCA management, specifically target proliferative and transcriptional activity of the receptor, ignoring the effects on the stromal counterpart [3]. It has been proved that CAFs express AR, persistently localized in cytoplasm, being in this way not involved in transcriptional machinery carried out in epithelial cells[4]. The present study aims to investigate, focusing on patients' samples, the role and functions of stromal Androgen Receptor (AR) in PCa progression.

Materials and Methods

a patient series of 50 men undergoing prostatectomy, spanning from benign hyperplasia to Gleason Score=9 PCa, were collected and primary cell cultures were established both from tumoral epithelial cells and CAFs. All primary cultures were grown in hypoxic conditions (4% O₂). Tumor epithelial cells were maintained in Neurocult Proliferation Media (Stemcell); CAFs were grown in DMEM high glucose, 10% Fetal Bovine Serum and 1% Penicillin/Streptomycin. All samples were characterized by Western Blot analysis for AR, Pan-Cytokeratin (epithelial marker) and Vimentin (mesenchymal marker) expression. Confocal microscopy was used to assess the AR-Filamin A (FlnA) co-localization in cytoplasm. Wound-scratch and transwell migration assay were used to assess fibroblast increment of motility under androgen stimulation.

Results

Androgen Receptor expressed in CAFs does not enter nuclei, but persists in extranuclear compartment, even in presence of androgens. Here, androgen stimulation enhances AR/FlnA colocalization with the involvement of Integrin beta1. This tripartite complex induces the consequent activation of both Rac 1 and FAK, which coordinate migration in two independent mechanisms resulting in an increase of cell motility by actin cytoskeleton rearrangements and membrane ruffling formation. Rac activation simultaneously triggers p27 stabilization into the nucleus, by activation of DIRK 1B, resulting in cell cycle arrest and cell quiescence

Discussions

For decades, it has been postulated that androgens were necessary for PCa establishment and progression, mediating their primarily effects on epithelial cells, probably because primary PCa usually contain numerous carcinoma cells and fewer stromal ones [6].

Our results show that, under androgen stimulation, AR/FlnA complex assembly takes place in the extranuclear compartment of CAFs. FlnA acts as a scaffold protein for Rac 1 and FAK, whose activation contributes in the increase of the motility of CAFs, and simultaneous cell cycle arrest.

A possible consequence of these mechanisms is that stromal AR acts as an accelerator of carcinogenesis. The current standard of care for PCa is ADT, which indiscriminately targets both stromal and epithelial cells via AR, but with opposite outcomes. Thus, knowledge of androgen hormone action may provide the key to prevention of PCa progression, especially in early stages of disease, where ADT may play a major role.

Conclusion

In summary, this study reveals new insights of androgen biology, showing how classical AR can induce a migration/proliferation dichotomy via the AR/FlnA/integrin beta 1 complex. Therefore, our results might partly clarify the action of ADT in enhancing PCa progression through activation of undesired pathways in stromal cells. These data further suggest that novel approaches are urgently needed for PCa treatment. Future studies will evaluate the efficacy of therapies that target stromal factors in the prevention of PCa progression.

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9. #130: GLEASON UPGRADING DURING ACTIVE SURVEILLANCE FOR VERY LOW AND LOW RISK PROSTATE CANCER: THE ROLE OF REPEAT BIOPSIES IN THE MEDIUM TERM FOLLOW-UP

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Objective

Active Surveillance (AS) is opportunity for patients with low and very low risk prostate cancer and a long life expectancy to delay or avoid radical treatment (surgery, external radiotherapy and brachytherapy) side effects. Repeat biopsies are required at

planned check-points to detect possible tumor reclassification and switch to radical treatment. Extra-biopsies (i.e. not regularly scheduled biopsies) could be required if progression is suspected. We evaluated the proportion of upgrading reclassification during AS.

Materials and Methods

Since 2005, 1036 patients were enrolled in 2 different protocols of AS (SAINT and PRIAS). Eligibility criteria included clinical stage \leq T2a, initial PSA (iPSA $<$ 10 ng/mL and Gleason Pattern Score -GPS - \leq 3+3 (both protocols); less than 25% positive cores with a maximum core length containing cancer \leq 50% in SAINT, no more than 2 positive cores and PSA density $<$ 0.2 ng/mL/cm³ in PRIAS. Since 2016, multi-parametric MRI (mpMRI) permitted no limits in number of positive cores if it was negative or target biopsies excluded Gleason 4. Four PSA determinations and 2 visits are provided per year. Repeated biopsies are scheduled at year 1, 4, 7, and every 5 years in PRIAS protocol and at year 1, 2 then every 2 years up to 8th year and then every 5 years in SAINT protocol. Extra-biopsies might be ruled by PSA-DT $<$ 10 years, PSA values, clinical re-staging. Switching to active treatment is advised if grade re-classification to GPS 3+4 or greater occurred or if number of positive cores containing GPS 3+3 exceeding the inclusion criteria (upsizing) or, in the early years of PRIAS study, if confirmed PSA-DT $<$ 3 years develop. When mpMRI was included in AS work-up in 2016, only patients harbouring GPS \geq 3+4 at repeat random or targeted biopsies are advised to undergo active treatment.

Results

Since 2005, 1688 biopsies have been performed in 13 years: 258 (15.3%) underwent reclassification due to upgrading, as many as 140 (54.3%) occurred at the first year re-biopsy. Nonetheless, proportions of Gleason reclassification remain stable during the years (fig. 1) and also in the window between 7th and 8th years, 10 over 82 patients (12.2%) showed upgrading. Notably, no reclassification was recorded beyond 8 years, but only 22 patients reached that follow-up time.

Among patients undergoing biopsy in the 7th and 8th year window, 47/82 (57.3%) had not extra-biopsies Vs 35/82 (42.7%) who had at least one extra-biopsy. Upgrading occurred in 8/47 (17%) with no extra-biopsies Vs 2/35 (5.7%) of those who had an extra-biopsy at least. This difference do not result statistically significant at chi-square test (chi-squared 2.366, DF 1, p= 0.124).

Discussions

Most of the patients (54.3%) enrolled in AS had a Gleason reclassification due to scheduled repeat biopsy within the first year. Nonetheless, proportion of upgrading reclassifications does not reduce during time up to 8th year (ranging between 12 and 16%).

The proportion of 'late' reclassification at 7-8 years is not statistically different among patients not undergoing extra-biopsies when compared with those undergoing extra-biopsies, possibly due to small number of patients and extra-biopsies. Nonetheless, extra-biopsies may possibly select more favourable disease in the long term, but the tools in use to suggest extra-biopsy are not sufficient to reduce upgrading in the medium term.

These data need to be confirmed with a greater number of patients achieving long-term follow-up on AS.

Conclusion

Currently, surveillance pressure is not able to reduce the chance of discovering high-grade disease during observation in this series. The biological and clinical consequences remain uncertain, as no evidence is available in illustrating differences between 'early' vs 'late' reclassified diseases.

10. #240: PATHOLOGICAL OUTCOMES IN FAVOURABLE VS UNFAVOURABLE INTERMEDIATE RISK PROSTATE CANCER

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Objective

Risk classification is the cornerstone of management of prostate cancer. The most widely used system is D'Amico stratification in low, intermediate and high risk. However, a significant heterogeneity exists into each group. While low and high risk are progressively split up into two subgroups, intermediate risk remained as miscellaneous group with a wide biological and clinical behaviour. A recent subclassification of intermediate risk divided patients in favourable (FIR) and unfavourable (UIR) group, according to primary Gleason pattern, percentage of positive cores and number of intermediate risk factors. We compared pathological outcomes of FIR and UIR patients undergoing radical prostatectomy.

Materials and Methods

From database of our institution, we identified patients with intermediate risk prostate cancer undergoing laparoscopic radical prostatectomy. We defined favourable intermediate risk (FIR) as GS 3+4 and \leq 50% of positive biopsy cores and \leq 1 risk factor (cT2b-cT2c, PSA 10-20 ng/ml); the others intermediate risk patients were classified as unfavourable intermediate risk (UIR). We correlated FIR and UIR groups with upstaging (\geq pT3) (ECE), upgrading (UG), downgrading (DG), positive surgical margins (PSM), lymphonode metastases (LNI) and adverse pathological outcomes (non-organ confined disease or $>$ GS4+3 or pN1) (AP). We have also stratified patients according to number of unfavourable intermediate risk factors (UIRF) and we have analysed correlation of these groups with pathological outcomes. Statistical analysis was performed using SPSS 24 as appropriate.

Results

From our database we identified 177 intermediate risk patients. Of these 121 (68.4%) patients were classified as UIR and 56 (31.6%) as FIR. Baseline characteristics of the patients are described in table 1. UIR patients presented higher PSA, higher positive core percentage and more extended lymphonode dissection template. UIR patients had increased risk of pathological

upstaging ($p < 0.001$) and downgrading ($p < 0.01$), worse pathological grading ($p < 0.001$) and worse adverse pathological outcomes ($p < 0.001$) (table 2). There were no differences between two groups in terms of upgrading, positive surgical margins and nodal metastases (table 2). When stratified by number of UIRF, patients with more than one UIRF had higher risk of upstaging, upgrading and adverse pathology than patients with no UIRF (table 3).

Discussions

Risk classification is the cornerstone of management of prostate cancer. The most widely used system is D'Amico stratification in low, intermediate and high risk. However, a significant heterogeneity exists into each group. While low and high risk are progressively split up into two subgroups, intermediate risk remained as miscellaneous group with a wide biological and clinical behaviour. A recent subclassification of intermediate risk divided patients in favourable (FIR) and unfavourable (UIR) group, according to primary Gleason pattern, percentage of positive cores and number of intermediate risk factors. In our study, UIR patients presented worse outcomes in terms of upstaging, adverse pathology. Moreover, number of unfavourable risk factors correlated with upgrading, extracapsular extension and adverse pathology. Limits of our study are represented by low number of patients and retrospective analysis.

Conclusion

In our experience patients with unfavourable intermediate risk prostate cancer have increased risk of extracapsular extension, downgrading and adverse pathological outcomes than patients with favourable intermediate risk prostate cancer. Therefore, number of unfavourable risk factors seems to correlate with risk of extracapsular extension, upgrading and adverse pathological findings.

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11. #249: PATHOLOGIC OUTCOMES IN PATIENTS AFFECTED BY VERY LOW RISK AND LOW RISK PROSTATE CANCER AND ELIGIBLE FOR ACTIVE SURVEILLANCE

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Objective

To evaluate pathologic outcomes in patients affected by very low risk (VLR) and low risk (LR) prostate cancer and eligible for Active Surveillance.

Materials and Methods

we conducted a retrospective analysis in patients with low risk prostate cancer who underwent Laparoscopic Radical Prostatectomy (LRP) at our institution from 2005 to 2016. We identified patients with low risk (LR) PCa defined as cT1c-T2a, Gleason score < 7 , PSA ≤ 10 ng/ml and patients with very low risk (VLR) PCa as defined by Italian PRIAS (cT1c-2a, Gleason score < 7 , PSA ≤ 10 ng/ml, PSAD ≤ 0.20 ng/ml/cc, ≤ 2 positive cores). Complete information on PSA, PSA density (PSAD), clinical stage, Gleason score, percentage of positive cores, number of nodes removed, and pathological outcomes were available. We evaluate GS upgrading (to primary pattern 4), non-organ confined disease and unfavorable disease ($\geq pT3$, GS $\geq 4+3$, pN1) in LR and VLR patients. Predictive factors of unfavorable disease were analyzed by logistic regression analysis (SPSS 24).

Results

We identified 113 patients with LR and 68 patients with VLR cancer according with PRIAS criteria. Baseline characteristic of patients are described in table 1. There were no significant differences between LR and VLR patients. Pathological outcomes revealed upstaging in 9% and 3% of upgrading in 63% and 54.7% in LR and VLR patients, respectively. Unfavorable disease occurred in 28.3% and 23.5% of LR and VLR patients, respectively [table 2]. At multivariate analysis, PSAD was the only predictive factor of unfavorable disease in LR patients [table 3].

Discussions

Active surveillance (AS) has emerged as a valid option for the conservative management of low risk prostate cancer (PCa). The D'Amico classification is commonly used criterion for identification of low risk patients. However upgrading and upstaging at radical prostatectomy occurred in 20-54% and 6-26% of patients, respectively. Therefore more restrictive criteria are adopted in several AS protocols. Italian arm (SIURO) of Prostate Cancer Research International Active Surveillance (PRIAS) inclusion criteria are stage cT1c/T2a, Gleason score < 7 , PSA ≤ 10 ng/ml, PSA density (PSAD) ≤ 0.20 ng/ml/cc, ≤ 2 positive cores. In our study adverse pathology occurred in about one third of the patients and upgrading was common in both groups of patients without significant differences between VLR and LR patients. PSA density was the only factor correlated with unfavourable disease. Low number of patients and retrospective analysis represented main limits of our study.

Conclusion

In our experience upstaging and upgrading at Laparoscopic radical prostatectomy occurred in 9% and 63% of low risk patients and in 3% and 58% of very low risk patients. About a quarter of the patients presented unfavorable disease (non organ confined,

primary Gleason 4). PSA density was the only predictive factor of unfavorable disease.

Reference

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12. #244: PREDICTIVE FACTORS OF PATHOLOGICAL OUTCOMES IN INTERMEDIATE RISK PROSTATE CANCER

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Objective

Risk classification is the cornerstone of management of prostate cancer. intermediate risk remained as miscellaneous group with a wide biological and clinical behaviour. The definition of predictive factors of unfavourable disease allows to substratify these patients optimizing management of intermediate risk prostate cancer. In our study we evaluated the risk of pathological unfavourable outcomes and predictive factors of adverse disease in patients with intermediate risk prostate cancer.

Materials and Methods

From database of our institution, we identified patients with intermediate risk prostate cancer (GS 7, cT1c-T2b, PSA <20 ng/ml) undergoing laparoscopic radical prostatectomy. Data on age, BMI, PSA, PSAD, positive cores percentage, clinical stage, Gleason score, lymphadenectomy template, prostate volume, number of removed nodes were available. We correlated these variables with upstaging ($\geq pT3$), upgrading, positive surgical margins (SM), lymphnode metastases (LNI) and adverse pathological outcomes (AP) (non-organ confined disease or >GS4+3 or pN1). Statistical analysis was performed using SPSS 24™ as appropriate.

Results

We identified 182 intermediate risk patients. Baseline characteristics of the patients are reported in table 1. Extracapsular extension (ECE) occurred in 29.1% of the patients, upgrading in 26.9%; surgical margins were positive in 18.7% and nodal metastases was found in 3.8%. More than one third of patients (37.9%) presented adverse pathological disease (table 2). At multivariate analysis only PSA and biopsy Gleason score were found to be predictive factors of pathological outcomes (table 3). PSA was associated with downgrading (p0.02; OR 0.15) and adverse pathological disease (p0.03; OR 2.29), while Gleason score was correlated with downgrading (p<0.001; OR 16.7), adverse pathological outcomes (p<0.001; OR 4.0), upstaging (p0.01; OR 2.43) and positive surgical margins (p0.005; OR 3.46).

Discussions

Risk classification is the cornerstone of management of prostate cancer. intermediate risk remained as miscellaneous group with a wide biological and clinical behaviour. The definition of predictive factors of unfavourable disease allows to substratify these patients optimizing management of intermediate risk prostate cancer. Our outcomes seems confirm data of the literature. More than one third of the patients presented adverse pathology at radical prostatectomy. PSA and Gleason score were predictive factors of adverse pathology. Retrospective analysis and low number of patients represented main limits of our study.

Conclusion

In our experience in patients with intermediate risk prostate cancer, adverse pathological outcomes occurred in 38% of the patients. PSA and Gleason score were predictive factors of downgrading, adverse pathological outcomes, upstaging and positive surgical margins.

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13. #271: WHAT TO DO IN ASAP (ATYPICAL SMALL ACINAR PROLIFERATION) PATIENTS?

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Objective

Guidelines for atypical small acinar proliferation (ASAP) diagnosed on prostate biopsy recommend repeat biopsy within 3-6 months after diagnosis. We sought to discern the rate of detecting clinically significant prostate cancer on repeat biopsy and predictors associated with progression. Repeat biopsy (re-biopsy) has been advocated following the diagnosis of ASAP found in prostate biopsy specimens. Previous studies of repeat prostate biopsy for ASAP that report cancer detection rates of 40-70%, are based on the sextant biopsy scheme. Currently, extended prostate biopsy schemes that incorporate lateral/anterior peripheral zone are routinely utilized at most centres because of the associated increased cancer detection rate when compared to sextant biopsy. Our objective was to determine the prognostic value of multiparametric MRI in men who had a diagnosis of ASAP.

Materials and Methods

We retrospectively evaluated 840 transrectal ultrasound guided prostate biopsies between January 2012 and June 2018 in our

Urologic departments. All patients who had the initial pathological finding of ASAP were selected to have a MRI and cancer detection rate was determined in follow-up

Results

The overall detection rate of isolated ASAP lesions was 2,5% (46 patients). Of 46 patients with isolated ASAP on initial biopsy 44 (98.9%) underwent MRI . In case of positive MRI a guided biopsy was performed.

The total incidence MRI lesion suspicious of cancer rate was 45.4% (20 patients). At the biopsy 18 of them had cancer. The other 24 underwent the same to random biopsy (12 cores) but only 3 had cancer.

Discussions

ASAP, first defined by Montironi et al. [1], is “a focus of small acinar structures formed by atypical epithelial cells”, having some of the features of cancer but not all [2]. Hence, it is a diagnosis of exclusion in cases where suspicious features are present but inadequate to fulfil the diagnostic criteria for cancer [3].

The reported rates of prostate adenocarcinoma on repeat biopsy in contemporary literature are significantly variable, ranging between 30 and 55% [4-10] for ASAP. Limitations of this study include lack of whole-gland histopathological assessment. Our study benefited from a long followup time ; however, indolent significant disease may still not have been declared and the calculated NPV may be falsely elevated. The prospective study size of 840 patients provides a good quantitative cohort comparison; however, ASAP is only 46 and larger multicentre studies are needed to confirm the results.

Multi-parametric MRI was used in this population in diagnosing significant prostate cancer. Mendhiratta et al. [11] reported in a recent series of 54 patients with an initial diagnosis of HGPIN and ASAP that MRI-ultrasound fusion targeted biopsies identified a significantly larger number of prostate cancers of Gleason grades 7 or worse, compared to standard systematic prostate biopsies (similar results have been shown by Cool et al. [12]). They concluded that adequate detection of clinically significant cancers with fewer biopsy cores may be achieved in men with a prostate imaging reporting and data system (PI-RADS) score of 4 or higher. Furthermore, they suggested that, in men with previous HGPIN or ASAP, if the MRI scan shows lesions with a PI-RADS score < 4, a repeat biopsy may be unnecessary. Similarly, a retrospective review by Liddell et al. [13] also suggested that lesions of PI-RADS 3 were unlikely to be associated with clinically significant cancer. Raskolnikov et al. [14] reported on MRI-ultrasound fusion targeted re-biopsy in a series of 20 patients at a median of 11.6 months. Five patients were diagnosed with Gleason Grade 3 low-volume prostate cancer. They concluded that, when MRI/trans-rectal ultrasound fusion guided biopsy detected isolated ASAP on index biopsy, early re-biopsy was unlikely to detect clinically significant prostate cancer.

Conclusion

Our results suggest that for patients with a PSA between 4 and 10 ng/ml, whose initial biopsy by 12 cores contains ASAP but not cancer, the multiparametric MRI could avoid to re-biopsy.

In ASAP patients timing for re-biopsy, how many sample taken on re-biopsy, and how many times re-biopsy are still problems to solve, mpMRI could be the answer.

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17 maggio 2019

15:00 - 17:00

sala C

Comunicazioni 5 - IPB e Incontinenza

venerdì 17 maggio 2019

Moderatori: Roberto Migliari, Maurizio Fedelini

1. #57: THE USE OF A COMBINATION OF VACCINIUM MACRACARPON, LYCIUM BARBARUM L. AND PROBIOTICS (BIFIPROST®) FOR THE PREVENTION OF CHRONIC BACTERIAL PROSTATITIS (CBP). A DOUBLE-BLIND RANDOMIZED STUDY

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Objective

To evaluate the efficacy of Bifiprost®+Serenoa repens 320mg versus Serenoa repens 320mg alone for the prevention of Chronic bacterial prostatitis(CBP) due to enterobacteriaceae. Bifiprost® is a combination of Vaccinium macrocarpon, Lycium barbarum L. and probiotics. Cranberry fruit (Vaccinium macrocarpon) is rich in polyphenols, particularly oligomeric proanthocyanidins (PACs) possessing antimicrobial and antioxidant properties. Serenoa repens extracts are widely used to treat symptomatic BPH (1).

Materials and Methods

Between September 2016 and December 2017, 120 patients with CBP(NIH type II) caused by recurrent infections due to enterobacteriaceae (Escherichia Coli and Enterococcus faecalis), were enrolled and randomized into two groups each to receive Bifiprost®+Serenoa repens 320mg(Group A) or Serenoa repens 320mg alone(Group B) daily for 24 weeks (after receiving a proper antibiotic treatment with subsequent culture negativization). The same brand of Serenoa Repens extract was used in all patients. According to the most recent guidelines, chronic bacterial prostatitis was defined as several episodes and symptoms that persist for at least 3 months.

The primary endpoint was the reduction in the episodes of prostatitis. The secondary endpoint evaluated was the score of the National Institutes of Health-Chronic Prostatitis Symptom Index(NIH-CPSI). Evaluation was performed at baseline and at 12, 24 and 36 weeks.

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

Results

No patients withdrew from the study. The two groups showed no differences in terms of patients' demographics and baseline characteristics(age, BMI, comorbidity), number of prostatitis episodes in the last 3 months, IIEF(The International Index of Erectile Function) score, voiding parameters(Qmax, Qave, PVR), NIH-CPSI score(Group A=26,4 \pm 3,4;Group B=26,6 \pm 3,19; p=0.74) and The International Prostate Symptom Score(IPSS) score.

The patients of the Group A experienced a significantly larger reduction in the prostatitis episodes than the Group B at 24(Group A 1,15 \pm 0,8; Group B 1,53 \pm 0,9; p=0,016) and 36(Group A 1,21 \pm 0,76; Group B 1,8 \pm 0,9; p=0,0002) weeks, but they did not experience a significantly larger reduction at 12(Group A 1,08 \pm 0,83; Group B 1,31 \pm 0,81; p=0,1272) weeks.

After 12 weeks of treatment, the mean NIH-CPSI score was significantly reduced in both groups compared with baselines(from 26,4 \pm 3,4 to 17,35 \pm 3,91 (p=0) in the Group A and from 26,6 \pm 3,19 to 18,46 \pm 3,61 (p=0) in the Group B) but no significantly differences were seen between the two groups (p=0,1093).

On the contrary, we observed a significantly differences in the mean NIH-CPSI score between the two groups at 24(Group

A=9,33±2,04; Group B=11,33±3,6; p=0,0003) and at 36(Group A=5,61±1,15; Group B=7,6±1,54; p=0) weeks. No adverse events were reported in both groups.

Discussions

To date, several drugs are available to treat LUTS, including herbal remedies. Cranberry fruit (*Vaccinium macrocarpon*) was used by Native Americans to treat kidney and urinary disease(2). Cranberry fruit is recognized as a rich source of organic and phenolic acids, flavonols, flavan-3-ols, anthocyanins, proanthocyanidins (PACs), and pentacyclic triterpenoids, including ursolic and oleanic acids(3). These substances have the ability to prevent bacteria to adhere to the bladder mucosa, avoiding their growth and the development of infection. Thanks to the molecular affinity with the *E. coli* fimbriae, these substances limit the adhesion to the cells of the urinary tract epithelium, reducing the biofilm establishment and the chronicization of the infection.

Polyphenols have been associated in vitro with a strong anti-bacterial, antiviral, antimutagenic, anti-cancer, anti-inflammatory, and antioxidant properties (4). Probiotics are defined as live microorganism that resist gastric, bile and pancreatic secretions, attach to epithelial cells, and colonize the human intestine. Specific probiotic microorganisms of the intestinal microflora have been associated with beneficial effects on the host, including antagonism against pathogens and modulation of immune system (5).

Conclusion

The association of Bifiprost® and Serenoa Repens 320mg improve the prevention of the episodes of CBP due to enterobacteriaceae and ameliorates prostatitis-related symptoms, after six months of therapy. The long-term impact on the entero-urinary route was seen also three month after the end of the treatment.

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2. #188: URETHRA AND EJACULATION PRESERVING ROBOT-ASSISTED SIMPLE PROSTATECTOMY: NEAR INFRARED FLUORESCENCE IMAGING-GUIDED MADIGAN TECHNIQUE

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Objective

With the increasing adoption of novel technologies and anatomical techniques, the surgical management of benign prostatic hyperplasia (BPH) provides significant benefits in terms of obstruction relief, early urethral catheter removal and faster return to daily activities. However, the main pitfall of BPH surgery in sexually active men remains ejaculatory dysfunction (ED) which permanently affects quality of life (QoL). Our objective is to detail a novel technique for marking intraprostatic urethra through a retrograde injection of indocyanine green (ICG) to enhance a selective dissection of prostatic lobes during urethra-sparing robot-assisted simple prostatectomy (US-RASP) with the use of Near Infrared Fluorescence Imaging (NIFI).

Materials and Methods

Between January-September 2017, 12 consecutive male patients with BPH, sexually active and motivated to preserve ejaculatory function, underwent US-RASP with NIFI to enhance identification and preservation of prostatic urethra.

Clinical data were prospectively collected into our institutional RASP dataset. Perioperative and functional outcomes of US-RASP were both graded and assessed according to Clavien Grading System and validated questionnaires postoperatively (IPSS; MSHQ-EjD Short Form) at 3,12 months.

Results

Median preoperative prostate size was 102 cc (IQR 88-115). Median operative time was 150 minutes (IQR 145-170). Median estimated blood loss was 250 (IQR 200-350). Continuous bladder irrigation was avoided in 83,4% of patients. Median time to catheter removal was 7 days (IQR 7-7) with a median hospital stay of 3 days (IQR 2-3). At 1-yr follow-up median IPSS score, IIEF score and MSHQ-EjD Short Form were 5 (IQR 4-8), 27 (IQR 26-28) and 12 (IQR 3-14), respectively. A satisfactory anterograde ejaculation was reported in 8 patients (66 %).

Conclusion

We described a novel NIFI-guided technique to perform US-RASP. This technique showed promising early functional results

suggesting a significant role of intraprostatic urethral integrity for the preservation of ejaculatory function.

3. #109: THE EFFECT OF CERNILEN FLOGO® FOR PREVENTION OF PELVI/PERINEAL DISCOMFORT AFTER BIPOLAR TRANS-URETHRAL RESECTION OF THE PROSTATE

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Objective

Bipolar trans-urethral resection of the prostate (B-TURP) is considered to be a safe and efficacious treatment option for lower urinary tract symptoms (LUTS) secondary to benign prostatic enlargement (BPE). B-TURP could be associated with irritative lower urinary tract symptom and with pelvi/perineal discomfort during the early months after surgery. The main objective of our research was to evaluate the efficacy of Cernilen flogo® as a preventive strategy of storage symptoms and pelvi/perineal discomfort associated with the early postoperative period.

Materials and methods

The work is a retrospective and descriptive study with a cohort of 45 patients diagnosed with luts due to bpe underwent to b-turp at our department. Treatment prescribed to patients when discharged was retrospectively reviewed, dividing them into two groups according to whether they were prescribed cernilen flogo® (group a - n° 23) or not (group b - n° 22). Before surgery, the following measurements were collected: flowmetry (Qmax), international prostate symptom score (IPSS) and evaluation of pelvi/perineal discomfort with visual analogic scale (vas). In the first checkup after surgery (30 days) flowmetric data, scores of ipss questionnaires and vas were recorded.

Results

Mean Qmax and IPSS significantly improved in the series as a whole due to the procedure. After the surgery, there were no statistically significant differences between both groups in mean flowmetric data and ipss in the checkup that follow. There were significant differences between groups regarding the grade of pelvi/perineal discomfort evaluated with vas (group a: 3 vs. Group b: 7).

Discussions

It has not been established if there is an effective treatment for temporary storage symptoms after prostate surgery, and no predictors have been found either. Cernilen flogo® is indicated for the chronic prostatitis/chronic pelvic pain syndrome. This is the first study to determine that Cernilen flogo® after B-TURP is not an effective preventive strategy for storage symptoms associated with this procedure but improve the pelvi/perineal discomfort related to this surgery.

Conclusion

Cernilen flogo® improve the pelvi/perineal discomfort related to B-TURP

4. #105: MEATOPLASTY VS MEATOTOMY PROCEDURES IN PRE-TURP SETTING

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Objective

The presence of a non-significant urethral stricture (easy passage of a Foley catheter 16 Ch) that not permits entry of resector (24 Ch-26 Ch) is a very common occurrence during endoscopic procedures, determining the necessity of pre-operative meatotomy.

The aim of our study is evaluation of advantages of meatoplasty vs meatotomy.

Materials and Methods

We enrolled 60 patients suffered from prostatic hypertrophy and non-significant urethral stricture with indications for trans-urethral resection of the prostate.

We performed in 30 patients meatotomy (Group 1) with Otis urethrotome to facilitate the introduction of resector 26 Ch and in 30 patients a meatoplasty (Group 2) with ventral incision sutured with absorbable stiches.

Results

At one-year follow up we observed occurrence of significant urethral stricture in 3/30 patients (10%) of Group 1 and 1/30 patients (3,3 %) in Group 2.

Discussions

So, in our experience, we suggest that the execution of meatoplasty in patients with meatus stenosis is a safe and easy procedure, reducing the risk of post-operative strictures.

Conclusion

So, in our experience, we suggest that the execution of meatoplasty in patients with meatus stenosis is a safe and easy procedure, reducing the risk of post-operative strictures.

5. #212: SURVIVAL OUTCOMES OF ROBOT-ASSISTED RADICAL CYSTECTOMY AND TOTALLY INTRACORPOREAL URINARY DIVERSION FOLLOWING NEOADJUVANT CHEMOTHERAPY: RETROSPECTIVE ANALYSIS OF A SINGLE-CENTRE SERIES

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Objective

Response to neoadjuvant chemotherapy (NACT) has been proven to be an established prognostic factor after radical cystectomy (RC). There is paucity of data reported on this issue in robotic radical cystectomy (RARC) series. In this study we evaluated the impact of NACT on survival outcomes of a single-institution RARC series and we tested independent predictors of OS.

Materials and Methods

Our prospectively-maintained institutional board-approved RARC dataset was queried for "robot-assisted radical cystectomy", "neoadjuvant chemotherapy", "complete regimen", "totally intracorporeal urinary diversion". Patients receiving suboptimal NACT regimen (<3 cycles) were excluded from the analysis. From January 2012 to October 2017, 63 pts matching the inclusion criteria were identified. Baseline, demographic, perioperative and pathologic data were included in the analysis. Kaplan-Meier method with the log-rank test was used to compare overall survival differences

between complete, partial and no-NACT responders, respectively. Furthermore, univariable and multivariable Cox regression analysis were performed to identify independent predictors of OS.

Results

Complete, partial and absence of response to NACT were recorded in 40 patients (63,4%), 11 (17,4%), 12 (19,2%), respectively. At Kaplan-Meier analysis, patients who achieved a complete response displayed significantly higher OS probabilities (Fig.1; log-rank <0.001). On univariable analysis significant predictors of lower OS probability were: incontinent urinary diversion (p=0,048; OR 3; CI 95%: 1.05-9.4), pathological T3/T4 stages (p=0.006; OR 9.4; CI 95% 1.9-47), pathologic Nodal stages 2-3 (p=0.001; OR 15.7; CI 95% 4-62.1), incomplete response to NACT (p=0.003; OR 10.18; CI 95% 2.23-46.6). On multivariable analysis the only independent predictor of worse OS was pathologic N2-3 stages (p=0.049, HR 21; 95% CI 1.09- 35) (Tab.1) Small sample series and low number of events represent the main limitations of our analysis.

Conclusion

Patients achieving a complete response to NACT displayed increased OS probability on univariable analysis, but significant nodal residual disease (pathological N2-3 stages) is the only independent predictor of OS after RARC.

6. #72: PERIOPERATIVE AND EARLY CLINICAL OUTCOMES AFTER 30W VS. 70-90W THUVEP

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Objective

Treatment of lower urinary tract symptoms (LUTS) secondary to benign prostatic hyperplasia (BPH) has been challenged by new minimally-invasive, laser-based techniques. In the past 10-years different methods have been described for endoscopic enucleation of the prostate (EEP). Among these the thulium laser has been tested. Thulium vapo-enucleation of the prostate (THUVEP) showed to be safe and effective for the treatment of symptomatic BPO with low preoperative morbidity and low re-intervention rates. The best thulium power-level to use is unknown. We aim to describe differences in preoperative and early clinical outcomes when 30 and 70-90 Watt are used.

Materials and Methods

This is a retrospective study based on ThuVEP procedures for treatment of BPH. For the purpose of this analysis we considered only patients with available data at 1 month. For the assessment of the peri-operative variables only patients without anticoagulant/antiaggregant treatments were considered. We report descriptive statistics about peri-operative and early post-operative results. We performed the ThuVEP (Sfinx, LISA Laser products, Katlenburg, Germany) enucleation of the middle lobe (if present) and the two laterals lobes with subsequent morcellation of the specimen.

Results

More than 300 ThuVEP procedures were performed between 2011-2018. A total of 109 patients had data available at one month after ThuVEP. Of these patients 53 subjects underwent ThuVEP at 30W and 56 underwent 70-90 W. For the assessment of the peri-operative variables, 88 patients without anticoagulant/antiaggregant were included.

Results are summarized in table 1.

Discussions

Laser enucleation techniques such as THUVEP have emerged over the last 10 years as viable treatment options for BPH based on evidence from prospective clinical trials [1 – 4 – 5]. The thulium laser is a new technology with several potential advantages over others lasers for the treatment of BPH such as favorable hemostatic properties, a relatively shallow depth of thermal damage [7] and the ability to perform hybrid procedures utilizing both vaporization and resection properties of the laser [8, 9]. A systematic literature review was performed to identify articles that reported data on the use of low voltage THUVEP. There are no articles speaking about this. Our early experience suggested 30 Watt ThuVEP is safe and effective and is better than high voltage THUVEP concerning irritative urinary symptoms, despite a longer operative time.

Conclusion

ThuVEP at 30W power can achieve optimal early resolution from LUTS due to BPH and better improvement of overactive bladder symptoms compared to 70-90W at one-month. Perioperative results are comparable in patients without antiaggregant/anticoagulant therapy.

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7. #73: THUVEP FOR LARGE PROSTATES: A PROSPECTIVE SINGLE-CENTER STUDY

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Objective

We described our experience with THUVEP for large prostates, analyzing immediate outcomes and early and late complications.

Materials and Methods

From 2011 we prospectively included in this study 252 patients undergoing Thuvep with prostate volume >80 mL. We evaluated intraoperative parameters, early and late complications and post-operative outcomes.

Results

Median prostate size was 92 (80–255 mL). Median operative time was 60,7 (30–160) minutes with a median enucleation time of 25(12–65) minutes and median morcellation time of 8,2 (4–80) minutes. Median tissue weight was 65 (35–230) g. Median catheterization time was 55 (24–216) hours and median length of hospital stay was 3,6(2–14) days. Median maximum urinary flow rate (8 vs 20 ml/s), postpaid residual urine volume (128–10 ml) changed significantly. The serum concentration of hemoglobin was 14,5 and 13,1 before and after the procedure. The rate of early complications was 12,6% (acute urinary retention 3,9%, incontinence ,5%, clot retention 2,3%, UTI 1,9%, blood transfusion 0,7%). Only 3 patients (1,1%) reported late complications such as urinary incontinence. The functional outcomes in terms of IPSS score showed a significant improvement (20,1 vs 5,8 p < 0,05).

Conclusion

THUVEP is an effective treatment for BPH of high volume. We observed low peri- and post-operative complications and an improvement of the functional outcomes.

8. #88: FUNCTIONAL RESULTS AND SHORT-TERM COMPLICATIONS OF 96 CASES OF HOLEP: OUR EXPERIENCE

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Objective

The aim of the study is to evaluate the functional outcomes, the days of hospitalization and the possible early postoperative

complications of 96 HOLEP (bipolar enucleation with holmium laser) performed between January 2017 and October 2018 at our operative unit.

Materials and Methods

During the period between January 2017 and October 2018, we submitted 107 patients to HOLEP. Inclusion criteria were: 1. Prostate size > 70 g (suprapubic ultrasound) 2. QMax < 10 ml / sec 3. IPSS (0-35) > 19. 4. Lack or poor response to alpha-lithic or intolerance at the same before being subjected to intervention. The surgical technique involves the use of the Olmium 2100 nm laser with a 0.2 mm tip gauge and power up to 100 w. Enucleation provided for the 3-lobe technique performed by the same operator. The patients were all re-evaluated at 3 months, with IPSS, Q-Max and re-examining the volume with Suprapubic Ultrasound.

Results

No relevant intraoperative complications were recorded. In the post-operative we found: six massive hematurias (6% of patients) that imposed a hemostatic TURP with resolution of the framework; 4 patients presented an IVU that imposed antibiotic therapy, with resolution of the picture. A bladder perforation occurred in 4 patients (4% of the total) and was treated with the permanence of the catheter. All of these were cystographed after 7 days negative for spillages with consequent removal of the bladder catheter. The bladder catheter was removed, with subsequent hospital discharge, on the 2nd day in 25 patients (26%), on the 3rd day in 55 patients (57%), on the 4th day in 10 (10.4%) cases (this sample includes the six patients who performed TURP hemostasis for hematuria and the four patient with IVU who have continued antibiotic therapy at home). The remaining 6 patients are those who performed cystography on the seventh day and whose total hospitalization was 7 days. After the removal of the catheter, 10 patients (10.4%) went into Acute Urine Retention (RUA) for which they had to be recatheterized. On the second removal attempt, nobody had further incident of RUA. At 3 months from the procedure was found a mean reduction of the IPSS of 7.5 points (± 2 ds), an average increase of the QMax of 6.5 points (± 2.4 ds), an average reduction of the prostatic volume of 48 cc (± 6 ds).

Discussions

The results of the functional outcome we obtained are substantially in line with what is indicated in the literature (1-2). The data concerning the intra and post-operative complications in the first 3 months are the same in line with what is indicated in the literature. The only exception is the absence in our series of stress urinary incontinence, but we must take into account the limited follow up we performed (3 months) (3-4).

Conclusion

Our results stimulate the opinion that prostate enucleation with holmium laser results to be a procedure with excellent functional results and with low percentages of complications, so it should always be considered when we treat large prostatic adenomas (>70g) or when we have patients who do not respond to medical therapy or are intolerant

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9. #96: LEARNING CURVES AND PERIOPERATIVE OUTCOMES AFTER ENDOSCOPIC SURGERY OF THE PROSTATE: A COMPARISON BETWEEN STANDARD PHOTOSELECTIVE VAPORIZATION (GREEN LIGHT LASER XPS – 180 W) AND BIPOLAR TRANS-URETHRAL RESECTION

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Objective

The studies that compare learning curves and surgical outcomes after standard photoselective vaporization of the prostate with to other endoscopic surgical techniques trans-urethral, are lacking. The aim of this study was to compare post-operative complications and early functional outcomes of standard photoselective vaporization of the prostate (green light laser xps – 180 W) (PVP) to those of bipolar transurethral resection (B-TURP) performed by a surgeon during his learning curve.

Materials and methods

Data from the first 45 consecutive cases (prostate volume < 90 cc; IPSS ≥ 8) treated with PVP (group a) and B-TURP (group b) by the same surgeon during his “learning curve” were prospectively collected from dedicated databases and analysed retrospectively. Postoperative complications and functional outcomes after 1 and 3 months were compared between groups.

Results

Operative times were significantly shorter for PVP (group a vs. Group b: 63 min vs. 78 Min). Length of catheterization (group a vs. Group b: 3 days vs. 1,5 Day) and hospital stay (group a vs. Group b: 3 days vs. 1,5 Day) were significantly shorter in the PVP

group. Postoperative complications and functional outcomes were comparable between PVP and B-TURP.

Discussions

When learning a new procedure, performance tends to improve with experience. Surgeon inexperienced in a procedure are said to be on the early phase of their learning curve with improvements expected with increasing experience. This concept applies across the full spectrum of medical specialties and procedures; however, with the advent of technically demanding minimally invasive techniques, it is surgery in particular where there are specific and potentially dramatic implications.

Conclusion

Both PVP and B-TURP can be carried out safely by a surgeon during his learning curve

10. #104: PRELIMINARY DATA ON PROSPECTIC RANDOMIZED TRIAL ON THE COMPARISON OF HOLMIUM LASER ENUCLEATION OF THE PROSTATE (HOLEP) VS. PROSTATE ENUCLEATION WITH MOSES TECHNOLOGY (MOLEP)

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Objective

BPH is a common condition in older men. The treatment consists in ablation of prostatic tissue using a variety of techniques such as electrocautery, lasers, radiofrequency devices, microwave devices.

Several techniques use laser energy to resect, enucleate or ablate hyperplastic prostate tissue. Holmium (YAG; 2140-nm wavelength) laser is used for holmium laser enucleation of the prostate (HoLEP: H).

MoLEP(M) is a usage of HoLEP technique that endorse a modified laser pulse with Moses technology (Lumenis® MOSES Pulse™120H).

We are conducting this phase 3b study of HoLEP vs. MoLEP to expand the post-marketing data on safety and efficacy of MoLEP enucleation in BPH treatment.

Materials and Methods

We are conducting an ongoing single center phase 3b study in men with moderate to severe BPH-associated symptoms refractory or intolerant to medical therapy or with acute or chronic urinary retention and prostate volume of >80 ml. Patients were excluded if they received previous surgery, there is a suspect of prostate cancer, there is an untreated urinary infection, there are cardiovascular comorbidities or patients suffered of neurological bladder.

55 patients(28/27 H/M) were randomized preoperatively in a 1:1 fashion (Setting 2 J; 50 Hz) to H-Group or M-Group. All the procedures were performed by a single experienced operator using the traditional 3 lobes technique.

The primary endpoint is the evaluation of the difference in average treatment duration between the two procedures. Comparisons of means in the paired sample was performed with a two-tail T-test(α power of 0.05 to observe a 10% difference in time of enucleation).

Results

Mean age was 70 in both groups. Average baseline volume of prostates were 92 and 95 ml in group H and M respectively. Comparison of the 2 modalities lead to a reduced time of enucleation for M (H/M:30.5/23 minutes; $P=0.03$), time of treatment (H/M:52/46; $P=0.7$) and time to hemostasis(H/M:5.5/4.6 minutes; $P=0.28$). Total energy for Haemostasis or enucleation was similar in both arms ($P=0.85$ and 0.33 for the 2 comparisons). No bleeding was observed in both groups ($P=0.34$). Decrease in Hb levels postoperatively was 0.99 and 1.08 in H and M arms($P=0.69$). Fiber consumption length was 2.97 mm and 1.87 mm in groups H and M ($P=0.05$). Weight/energy ratio was similar in 2 arms ($P=0.78$). Interestingly, weight/time ratio (grams of morcellated prostatic tissue/minute of enucleation) was favor in M group: 2.14 vs.2.82, $P=0.32$

Discussions

This ongoing phase 3b study of HOLEP vs. MOLEP is showing significant reduction in enucleation time, however demonstrating similar short-term outcomes in terms of total timing of treatment and hemostasis, energy used, bleeding (hematuria and postoperative Hb levels).

Conclusion

This study shows a significant lower fiber consumption with MOLEP and a more efficient weight of enucleated tissue/time unit in the MOLEP group.

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11. #233: VERY EARLY PFMT WITH INDWELLING CATHETER FOR POST-PROSTATECTOMY INCONTINENCE, A RANDOMIZED CONTROLLED TRIAL

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Objective

Radical prostatectomy (RP) is the most common treatment for patients with localized prostate cancer (LPC). Urinary incontinence (UI) is a significant bothersome sequela after RP that may worsen patient's quality of life. Pelvic floor muscle training (PFMT) is the main conservative treatment for men experiencing post-prostatectomy UI; However, timing of beginning PFMT is still unclear. With this prospective, randomized, controlled study we evaluated the efficacy of very early training of the pelvic floor muscle in post-operative period with indwelling catheter in patients underwent open-RP

Materials and Methods

From May 2016 and May 2018 we prospective enrolled 31 patients affected of localized PC and underwent to open RP performed by one surgeon, inclusion criteria: PSA <10, Gleason score <= 7, no history of neurological or psychiatric disorders. Exclusion criteria: previous history of overactive bladder or urinary incontinence.

Patients were randomized in two groups: 16 patients (Group A) begun a guided PFMT, performed by a specialized nurse, in third post-operative day with indwelling catheter, 15 patients (group B) begun guided PFMT ten days after surgery when removed catheter. All patients underwent bladder diary and completed ICS male questionnaire and 24 hour pad test at 1-3-6-12 months after surgery. Primary outcome was completely continence defined as no use of pads and negative 24 hour pad test (< 3 gr). Secondary outcome was quality of life measured with ICS male questionnaire total score. Fisher's exact test was used to compare the proportion of patients in the two groups who were continent at 1, 3, 6, and 12 months. One-way Anova test was used to compare ICS male total score between the two groups

Results

4 patients (2 in group A and 2 in group B) were removed from the study because of post-operative complications (1 for post-operative bleeding with necessity of transfusion, 1 for anastomotic dehiscence, 2 for post-operative anastomotic stenosis).

In group A (14 patients) 2 patients (14%) were completely continents at 1 months, 8 patients (57%) at 3 months, 11 (84%) at 6 months and 13 (92%) at 12 months respectively. In Group B (13 patients), one (7%) patient was completely continent at 1 month, 2 (15%) at 3 months, 6 (46%) at 6 months and 11 (84%) at 12 months. The difference between the two groups was statistical relevant at 3 and 6 months (p<0.05), was not statistical significant at 1 and 12 months.

Mean ICS total score was for group A: 23.3 at one month, 16.11 at 3 months, 14 at 6 months and 12.25 at 12 months respectively. For group B was 27.1 at one month, 19.87 at 3 months, 16.57 at 6 months and 16.07 at 12 months respectively with a relevant statistical difference between the two groups (p<0.05)

Discussions

Very early PFMT with indwelling catheter exploits the presence of the catheter in the uretra to ease patient recognition of the muscles to use and rehabilitate. All those among us who rehabilitate men after RRP know the difficulty to explain which muscles the patient have to move and which they have not to contract, catheter works like a biofeedback, it is sufficiently asks patients to tighten the catheter to get the right contraction.

Conclusion

A very early PFMT with indwelling catheter is safe and effective to improve continence status after open radical prostatectomy

Reference

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12. #33: ADJUSTABLE BULBOURETHRAL MALE SLING (ARGUS): EXPERIENCE AFTER 30 CASES OF MODERATE TO SEVERE MALE STRESS URINARY INCONTINENCE

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Objective

To report our experience using the Argus perineal sling from July 2015 to April 2018 for male stress urinary incontinence (SUI) after prostatic surgery. To evaluate the safety, efficacy and health-related quality of life in patients undergoing this intervention.

Materials and Methods

The positioning of the ARGUS sling (Promedon SA, Cordoba, Argentina) provides a perineal incision, exposure of the bulbospongiosus muscle and the application of the sling bearing on it with transobturator passage of the two extremities with out-in technique. Two vials of Gentamicin 80 mg are distributed at the level of the exposed tissues following the 3 incisions and always after positioning the sling. To modulate the bearing tension on the urethra, with a rigid cystoscope (Optic 0°) the Retrograde Leak Point Pressure is measured, increasing it by 10-15 cm of H₂O from baseline without exceeding 40 cm of H₂O. We retrospectively evaluated the results of this implant performed by the same operator on 30 patients who presented post-operative SUI from medium to severe (>= 2 pads / day, Pad Test at one hour >= 11 g): 23 post Radical Prostatectomy (PR), 5 post PR + Adjuvant Radiotherapy, 1 post-TURP, 1 post-Holep. Mean operative time and possible intra and postoperative complications were evaluated. Postoperatively each patient was reassessed according to the following parameters: number of pads consumed / die, PAD TEST at one hour, ICQS-F, any related side effects.

Results

After the intervention, 21 of 30 patients (70 % of the total) were totally continent (<1 pad / day, Pad Test at 1 h <1-2 g, ICQS-F <11), of these 4 required a single adjustment of the sling 3 months after the intervention in order to achieve this result. 9 of 30 patients (30 %) found a clinically significant improvement without obtaining total continence (mean reduction of the N pads / day: - 2.5 ± 1 DS; average reduction of the Pad Test at 1 h: - 20 g ± 4 DS; ICQS-F average reduction: - 6 points ± 2 DS), of these 5 have required a 3 month adjustment to obtain these improvements resulting, 4 needed 2 adjustments (at 3 and 6 months respectively) resulting after the first adjustment still not satisfied and 1 of these pass from severe to moderate incontinence but he decided to live with this clinical condition (without trying a third adjustment)

Discussions

In our series the percentage of patients with total post-operative continence was 70 % with a median follow-up of 13.5 months. These percentages are similar to those of the current literature. Hubner WA et al demonstrated a total continence rate of 79.2% in their 101 patient series after a 2.1 year median follow up (1). Romano SV et al obtained 73% continence rates in 48 patients after a median follow-up of 7.5 months (2). Interesting data is obtained if we want to consider also the patients who have obtained a clinically significant improvement without reaching the total continence whose percentage rises to 96 %.

The extreme ease and the reduced operating times (35 min) with which the adjustments of the sling can be made make this treatment extremely personalized and adaptable to the single case. About that our percentage of sling adjustment due to persistence of incontinence or dissatisfaction by the patient was 43.3%. Hubner WA et al, markedly higher than the results obtained (1) by Romano SV et al. which made adjustments only in 8% of patients (2). As already verified by other authors the most frequently disorder reported by the patients (56.6%) was inguinal and / or perineal pain but the symptom has always been transient and has never imposed the removal of the sling. Interestingly, in our study, unlike what is reported in the literature, we have not had cases of erosion or infection of the prosthesis that needed the removal of the sling. In fact, in the literature, the infection of the sling is reported between 5.4 and 8% (3); the percentage of explant is instead 10-15% (1). This could probably be because:

1. the sling is opened only after the needle has passed through the obturator foramen,
2. the routine use of 2 vials of Gentamicin 80 mg for each operation,
3. the positioning of the sling was always performed by the same operator who already had considerable experience in the positioning of sling for male incontinence and surgery urethra.

Another important confirmation obtained from the study results in the possibility of treatment, even if with less success, radiotracted patients.

Conclusion

The results of our study show that the positioning of the Argus sling represents a valid treatment for the moderate and severe post-surgical male SUI. The technique by not providing exposure to the urethra so it found indication to radiotracted patients, minimizes the risk of iatrogenic damage, erosion and infection especially if performed by an operator who is generally involved in urethral surgery. On the other hand, the possibility of adjusting the tension of the sleeve in a "second look" makes the intervention adaptable "according to the results obtained with better patient compliance and good rates of final continence. Only multicentric clinical trials obtaining high case studies clarify and eventually confirm the clinical benefits of this sling in post-surgical male SUI.

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13. #126: "CLAM" ILEOCYSTOPLASTY: WHICH FUTURE?

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Objective

A normal urinary system works with a low pressure reservoir of good capacity that is able to contract voluntarily. The urinary bladder must have good compliance and must be normocontractile. When these two prerogatives are lost, a pathological condition is determined, characterized by incontinence and possible retrograde pressure. We consider our personal case studies for the last 22 years, noting the substantial decrease in indications and their clinical limitation.

Materials and Methods

From 1994 to 2016 we performed 37 ileocystoplasties in three groups of patients divided as follows: – Group 1: 21 Patients (13 men and 8 women) Patients with low capacity and low bladder compliance. 6 male patients had undergone transvesical adenectomy, 7 radiotherapy and 1 had several cycles of BCG for Tis. Women undergone post-hysterectomy radiotherapy in 5 cases and in 2 cases other gynecological procedures. – Group 2: 10 Patients (8 Men and 2 Women) Patients with neurological bladder, areflexia, low compliance after medullary trauma. – Group 3: (6 Men) Patients with normal compliance but low capacity and severe detrusor hyperactivity.

For each patient a thorough medical history and physical examination was performed. The second level investigations carried out on the basis of anamnestic data were urography or uro-CT, cystography, BK urinary research, cystoscopy with possible biopsy.

In all cases an ileocystoplasty was performed with the use of 45 cm of ileal segment at 15-20 cm from the ileocecal valve. The obtained cuff was implanted on the bladder dome which had previously been opened transversely. Histological samples of the entire bladder wall have always been performed which have never shown the presence of neoplasia.

Results

In 3 patients of group 3 there was a consistent improvement of symptoms with prolongation of the voiding time. In 3 patients in group 1 after the operation it was possible to implant an artificial sphincter and correct incontinence. For 3 patients in group 3 it was possible to start intermittent catheterization. In 6 patients, continence was also completely recovered. Overall, improvement in continence, increased capacity, decompression of the upper urinary tract with reduced bladder pressures and prevention of complications was achieved in most patients.

Discussions

"Clam" cystoplasty is performed in conditions of reduced compliance, reduced bladder capacity and / or severe intractable detrusor hyperactivity. The goal of "clam" cystoplasty is to increase bladder capacity by improving the patient's symptomatology, continence and decreasing the percentage of complications due to bladder-ureteral reflux. In this heterogeneous group there are very different pathological conditions. Various situations can induce these conditions: for the loss of compliance there is always a modification of the bladder wall which causes a loss of elasticity and therefore of capacity. Chronic cystitis primitives or resulting from surgery on the bladder or prostate, effects of ionizing radiation or neurological damage, may be the cause of this condition. Normal detrusor contractility is subject to a more complex control system that provides for complete integrity of the cerebro-medullary neurological axis, as well as the normal histology of the bladder wall. Bladder irritative stimuli and alterations of neurological control can modify the normal contractile functioning of the bladder inducing its release from the control mechanisms. This second problem has been gradually addressed with different methods but over time the pharmacological therapies have been imposed with anticholinergic drugs and physical therapies through electrostimulation. In the last decade, topical bladder therapy with botulinum toxin has taken great importance, which, despite the necessary repetitiveness, has become an elective therapy for these disorders. "Clam" cystoplasty is therefore nowadays limited to bladder shapes that are anatomically compromised and can not be treated with other techniques. For this reason we have seen our indications dramatically decrease over the years.

Conclusion

Our case studies confirm the current trend. Most ileocystoplasty procedures were performed between 1996 and 2006. In the last 10 years we have performed only 5 procedures. The intervention was confirmed as safe, effective and with a high degree of patient satisfaction. Even if the indications are very limited, it is important to underline that clam ileocystoplasty remains an irreplaceable procedure in all refractory cases and therefore must necessarily form part of the urological armament.

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14. #118: URETHRAL DIVERTICULA FOLLOWING EXPLANTATION OF ARTIFICIAL URINARY SPHINCTER

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Objective

The urinary incontinence caused by an injury of the distal urinary sphincter, can nowadays be treated with different surgical methods, the most successful one still being the implantation of an artificial sphincter AMS 800 [1]. Urethral erosion is one of the worse complications after implantation of artificial urinary sphincters. This dramatic event may occur both precociously (from 4.5 to 67% of all cases) and tardively (15% of all cases), due to excessive pressure applied by cuff to the urethra or due to prosthetic infection. In both cases, removal of prosthesis and curettage of the surgical area is mandatorily required. We report two cases involving urethral diverticula, as a result of prosthetic removal caused by urethral erosion.

Materials and Methods

From 1989 to 2016 we have implanted 135 AMS 800 artificial urinary sphincters (130 men and 5 women) in order to treat urinary incontinence from sphincter damage. After the implantation, a 16 Fr Foley catheter was applied for approximately 5 days (4-8) and the prosthesis was activated in the range of 31-54 days. 20 cases needed surgical revision, (17 men 3 women), from 9 days to 9 years from initial surgery. 11 explants were required due to an infection of the urethra, 8 patients required full re-implantation of the prosthesis: in 5 out of the above cases we have experienced a new urethral infection-erosion which required a new removal, after a period ranging from 6 months to 2 years. 2 of those patients showed formation of a bulky urethral diverticulum, requiring surgery.

Results

Case A: BG, 72 years old, affected by urinary incontinence post-radical prostatectomy. In 1999 the patient had an implant of artificial sphincter and recovered fully continence. In 2006 the cuff was replaced due to relapsing urinary incontinence. After five months the patient was diagnosed urethral erosion and was thus subject underwent to surgical removal of the sphincter and application of a bladder catheter for a period of 4 weeks. After 6 months, voiding cysto-urethrography showed a bulky urethral diverticulum, surgically removed, suturing the urethral injury. Case B, PF, 71 years old, affected by urinary incontinence.

After endoscopic treatment of a stenosis of the bladderurethral anastomosis. In July 2000 an AMS 800 was implanted and continence was recovered. In February 2009 the patient experienced recurrent urinary incontinence due to malfunctioning of the apparatus. The sphincter was thus removed and a new one was implanted in the same operation. In March 2012 the patient was diagnosed urethral erosion and subject to removal of the device. 3 months later a voiding cysto-urethrography showed a bulky diverticulum of the urethra starting from the organ.

Discussions

The AUS has now been in use for more than 30 years. Despite its reliability for achieving urinary continence the AMS 800 is not perfect. The AMS 800 (American Medical Systems, Minnetonka, Minnesota) provides urinary continence in 61-100% of cases (no pad or one pad per day). Dry rates (no pad) were only available in seven studies and varied from 4% to 86%. A pooled analysis showed that infection or erosion occurred in 8, 5% of cases (3, 3-27, 8%), mechanical failure

in 6,2% of cases (2-13, 8%) and urethral atrophy in 7,9% (1,9-28,6%). Re-operation rate was 26% (14, 8-44, 8%) [2]. The most serious complication of sphincter implant is infection; traditionally staphylococcus epidermidis (SE) has been the primary organism responsible for genitourinary prosthetic infection. Erosion may occur immediately or at any time after insertion (late erosion). The reported risk of early infection/erosion is about 4.5% but the risk is higher in neuropathic cases (15%), after failed sling surgery (67%) and after radical pelvic radiotherapy (57%). Mundy results indicate a late erosion rate of 15%, occurring maximally 7 years after implantation, presumably due to urethral atrophy caused by cuff pressure. Sphincter explants as a result of urethral erosion did not jeopardise a possible re-implant of the prosthesis, even because these patients are, usually, extremely motivated towards repeating the implant process. However, re-implants may pose higher risks of urethra erosion, above all if the cuff is re-implanted on the same section. Couillard et al. [3] suggested relocating the cuff to a more proximal site on the bulbar urethra, but often the cuff is already positioned as far proximal as possible. Guralnick et al. [4] presented a new technique for distal cuff placement using transcervical dissection that leaves corporal tunica albuginea on the dorsal surface of the urethra, allowing for its safer mobilization and adding to its bulk. If the patient already has 4 cm cuff, this problem cannot be remedied by simple cuff downsizing and a new cuff site must be sought or a second tandem cuff must be implanted. Christine and Knoll [5] were the first to describe placing a second artificial urinary sphincter cuff distal in tandem with a proximal cuff to improve continence in men with a functioning artificial urinary sphincter. Using this technique 90% of patients achieve satisfactory

continence. In progress literature Carpio and Cespedes [6] reported an unusual case of an acquired urethral diverticulum that developed after erosion of an artificial urinary sphincter into the bulbar urethra with subsequent use of a Cunningham penile clamp

Conclusion

Urethral erosion is a dreaded complication of the implantation of AMS800 device. Its occurrence does not prevent a possible re-implantation, in extremely motivated patients, but exposes the same to a greater risk of infections and erosions and possible formation of urethral pseudo-diverticula requiring complete removal of the diverticulum sac and concurrent perineum restoration of the urethra. In our opinion these patients are no longer eligible for urethral prosthetic surgery and the poor trophic conditions of the urethra could make any other approach, even a mini invasive one, not recommended.

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15. #107: CASE REPORT: DOUBLE ACCESS IN URETHRAL STRICTURE

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Objective

A 70-years old man undergone aneurysmectomy of common iliac artery and left internal iliac artery, with post-operative severe left urethral stricture and hydronephrosis.

At first time, we performed left nephrostomy and tried an anterograd double-J catheter positioning, unsuccessfully.

Secondly, retrograd positioning of a double-J catheter failed.

Finally, a rendez-vous procedure (kidney and bladder access) was planned and realized, using two sensor guides wire and fluoroscopy. In this procedure, we overcame urethral stricture with guide wire and attached on this one the second guide wire with a nithinol basket at extremity. So, the basket with guide wire was retracted on the kidney and, at the end of intervention, a double-J catheter was positioned on the second guide wire.

Three months after operation patients we removed double-J catheter and performed a pielography that shown no urethral stenosis or leakage.

16. #184: IMPACT OF LEARNING CURVE ON PERIOPERATIVE OUTCOMES OF ROBOT-ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL URINARY DIVERSION

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Objective

Robot assisted radical cystectomy (RARC) with intracorporeal urinary diversion (ICUD) represents a challenging surgical procedure, requiring a skilled robotic team. The aim of this study was to assess the impact of learning curve on perioperative outcomes of a single center series of RARC with ICUD.

Materials and Methods

Internal IRB approved bladder cancer database was queried for RARC and ICUD, which includes ileal conduit, Indiana Pouch and Padua Ileal Neobladder.

The study population included all patients treated between January 2012 and September 2018. The entire cohort was divided in tertiles to assess the impact of learning curve on patients's selection, perioperative outcomes and type of diversion performed. Categorical and continuous variables among the three subgroups were compared with Chi square and Kruskal-Wallis tests, respectively.

Results

Overall, 205 patients were included. Baseline, preoperative and perioperative data distribution across tertiles were reported

in Table 1. Patients treated at the beginning of learning curve were significantly older ($p=0.004$). BMI, comorbidities and preoperative renal function were comparable across the tertiles (all $p=0.26$). The incidence of low grade ($p=0.001$) and high grade ($p=0.006$) Clavien complications and mean hospital stay ($p=0.003$) decreased significantly over time.

Adoption of intracorporeal neobladder versus ileal conduit as ICUD increased from 70% to 92.8% ($p=0.001$).

Conclusion

We assessed the impact of learning curve on perioperative outcomes of a large series of patients who underwent RARC with ICUD in a tertiary referral center. Once standardized the procedure, complication rates and duration of hospital stay experienced a substantial reduction over time. Neobladder has become the mostly performed ICUD following RARC at our center.

17. #258: ROLE OF THE PATIENT MANAGER IN UROLOGY: ADVANTAGES AND CRITICAL ISSUES

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#258: ROLE OF THE PATIENT MANAGER IN UROLOGY: ADVANTAGES AND CRITICAL ISSUES

Inviato da: roberto.borsa@aslcn1.it

Argomenti: Cancro della vescica o alte vie urinarie

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Objective

The doctor "patient manager" maintains integration with the social health services, with other practitioners and takes into account the cost-quality ratio required by the system, in order to organize the patient's path from the moment of inclusion in the list for an intervention until hospital discharge; he also plans subsequent checks. In our reality, starting from the experience with cancer patients, we have applied these concepts to all the ordinary hospitalizations as well as day surgery and outpatient procedures performed at our facility. Starting from January 2018, two doctors have been identified to perform this role. The activity of the patient manager is supported by the nurse "case manager" who is the one who manages the case. Their role is to improve the effectiveness and efficiency of health care, based on the logic of coordination of resources requested for specific pathology. The goal we set ourselves is not only to guarantee the patient a linear and as fast as possible path to solve his health problems but also to create an institutionalized figure that the patient can always refer to without being forced to change interlocutor every time approaching our structure.

Materials and Methods

At the Urology department, the patient in waiting list for an operation in order to treat a first diagnosis neoplasm is taken into charge by the patient manager responsible for scheduling the operative sessions (patient manager programmer) who organizes all the path checking the adequacy of the indications and the completeness of the diagnostic path and planning further indispensable examination or investigations required during anesthesiological visit (he also stops the path if necessary, according to the guidelines). When the patient is ready to be included in the operative note, the case manager of the ward attends, managing all the problems of assistance that can be highlighted for each individual patient (suspension of anticoagulant therapies, need for antibiotic preoperative home therapy etc). At the time of admission, the patient manager responsible for programming is replaced by the patient manager of the ward that manages the correct administration of therapies and postoperative hospitalization (mobilization, canalization, drainage and catheter removal), until time of discharge with resumption of the outpatient path.

Results

In the period from January 1 to December 15, 2018 were admitted 615 Patients in ordinary hospitalization, 223 patients in day surgery hospitalization and 101 patients in outpatient procedure: all were followed in the manner described. The 78 patients admitted directly from the emergency department were followed only by the patient manager of the ward and by the case manager. All patients on discharge were asked to complete an anonymous questionnaire requesting an opinion about the organization described. 89% answered the questionnaire, with favorable feedback in 77% of cases. In 5% of cases patients were not able to judge because they had no previous admissions experience, while in the remaining 7% of cases they would prefer to interface only with the urologist that booked the surgery.

Discussions

The evaluation of the patient manager programmer and of the case manager can not and must not be only clinical but must concern multiple aspects of the person involved in the diagnostic and therapeutic process. It must not be a subjective judgment, but must provide objective information based on careful observation, accurate medical history and physical examination, interviews with the family (if the patient accepts them), involving the social worker in case of fragile subjects to plan a protected discharge even before the entry into the ward. It is at this moment that a "therapeutic alliance" is created with the patient and the family, bringing into play the human factor that allows to create a path of care rationalizing sequences and resources. During the interview for the anamnesis is very important "an action aimed at an agreement" that is to find a point of conjunction between two parts. Sometimes, after an acute event, there is a radical change in life of a patient and in life of people around him, and they have to come to terms with this situation. The two patient managers and the care manager must help to redesign the patient's

future in a concrete way. The planning of the interventions represents the central aspect of the function of these figures: through the rationalization of the interventions and the forecast of future needs in relation to continuation and evolution of the care process, avoiding waste. They can be considered wasteful: increased days of hospitalization, repetition of examinations, double or triple visits. Lastly they are of fundamental importance: the moment of discharge with therapeutic education in management of therapies and materials when they are needed; the monitoring aimed at controlling that the planned interventions have been effective for achieving the goal, the assessment that allows the conclusion of the diagnostic-therapeutic-care procedure, to verify the correspondence between the expected purposes and the achieved results.

Conclusion

Based on the results obtained, we believe that the organizational modality described can be maintained and, if possible, improved and implemented in order to correct some critical issues. In fact no particular problems emerged about the nursing part, but we found some resistance from the medical staff, that felt deprived of the figure of the reference urologist, (in the beginning of the project). This attitude has been overcome when we realized that patient managers was able not only to better manage the various moments of the pathway of the patient but also to relieve the reference urologist from the management of the critical issues that can arise before and during hospitalization. Also important is the opinion of the nursing staff of the ward, and the judgement of the support services and of the other hospital facilities (Anesthesia and reanimation service, Cardiology, etc.): they appreciated the possibility of always having a specific reference doctor.

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Ropberto

17 maggio 2019

17:00 - 18:30

sala C

Video 3 - Prostata e Dintorni

venerdì 17 maggio 2019

Moderatori: Roberto Nucciotti, Behrouz Azizi

1. #277: PROSTATECTOMIA RADICALE VIDEO-LAPAROSCOPICA CON SINGOLA INCISIONE: TECNICA E RISULTATI DOPO 10 ANNI DI ESPERIENZA

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¹ Ospedale "Carlo Urbani", U.O.C. Urologia (Jesi)

Il seguente video mostra la tecnica di prostatectomia radicale VLP con singola incisione utilizzata presso il nostro Centro. La tecnica prevede l'utilizzo di:

- un single port sovrapubico che accoglie contemporaneamente 2 canali operativi (Ottica 10 mm 3D e aspiratore);
- una porta accessoria da 10 mm in fossa iliaca destra utilizzata principalmente per lo strumento di dissezione (Ultracision)

La tecnica, a fronte di risultati estetici migliori, recupero postoperatorio più rapido, riduzione del dolore peri e postoperatorio e minori complicanze legate al ridotto numero di accessi,

non è stata gravata da una maggiore incidenza di complicanze intra e/o postoperatorie rispetto all'approccio laparoscopico/robotico convenzionale (4/5 accessi). Inoltre non si sono registrate controindicazioni assolute o relative all'esecuzione della procedura (es. pregressa chirurgia addominale, obesità, etc) ed è stato sempre possibile gestire le complicanze insorte intraoperatoriamente senza la necessità di ulteriori accessi (es. lesione del retto, lesione vescicale, lesione del nervo otturatorio, etc).

2. #294: PROSTATECTOMIA RADICALE NERVE SPARING LAPAROSCOPICA CON TECNICA RETROGRADA

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Introduzione:

Presentiamo il trattamento laparoscopico di neoplasia prostatica Gleason7(3+4) in paziente di 62 anni con IIEF5 score pari a 20, stadiata con RM multiparametrica documentante lesione PIRADS 4 al lobo destro. PSA 6,7 ng/ml.

Materiali e Metodi:

E' stata posta indicazione a procedura di prostatectomia radicale pelvoscopica con strategia retrograda.

Il video mostra i seguenti step chirurgici:

- Incisione Neck sparing della linea vescico prostatica con mantenimento del collo vescicale
- Accesso laterale al piano vescicolare
- Incisione intrafasciale della fascia endopelvica
- Preparazione dell'apice prostatico e sezione dell'uretra
- Prostatectomia retrograda con trattamento a freddo dei peduncoli vascolari principali
- Sezione a freddo del collo vescicale
- Trattamento dei peduncoli seminali con clips
- Anastomosi in Running suture singola

Risultati:

Tempo operatorio 30 minuti, il sanguinamento 200 ml. Il drenaggio rimosso in II giornata post-operatoria. Time removal

catheter continence: 0 pads.

L' esame istologico: adenocarcinoma prostatico pT2c Gleason score 7 (3+4) , margini chirurgici negativi

Discussione:

Nonostante nell'approccio laparoscopico si predilige una procedura demolitiva discendente, nei pazienti che presentano un'anatomia favorevole è possibile adattare una strategia retrograda, che ripropone l'approccio open, con il razionale delle preservazione delle fibre del collo vescicale e della lunghezza funzionale dell'uretra per il raggiungimento dell'early continence rate ed una precoce ripresa dell'attività sessuale.

3. #190: URETHRA AND EJACULATION PRESERVING ROBOT-ASSISTED SIMPLE PROSTATECTOMY: NEAR INFRARED IMAGING-GUIDED MADIGAN TECHNIQUE

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In this video we described a novel technique for marking intraprostatic urethra through a retrograde injection of indocyanine green (ICG) to enhance a selective dissection of prostatic lobes during urethra-sparing robot-assisted simple prostatectomy (US-RASP) with the use of Near Infrared Fluorescence Imaging (NIFI).

The first step was a retrograde injection of 10 mL of ICG through the urethral catheter placed at navicular fossa. Once prepared the Retzius space, the bladder neck was meticulously isolated in order to expose the proximal prostatic urethra. BPH dissection started from the right lobe, developing the dissection plane starting from the base and progressively moving to 12 o'clock site. NIFI imaging was used when dissection moved towards the median aspect of the lobe in order to improve visualization of the bladder neck and of the urethra. Energy free dissection was used in proximity to urinary tract. Once completed the resection, a Foley catheter was introduced and the cuff inflated in the prostatic urethra with 10 mL of saline solution. Finally, the bladder was approximated to the prostatic fossa with two running monocryl sutures.

We first described a novel NIFI-guided technique to perform US-RASP. This technique showed promising early functional results suggesting a significant role of intraprostatic urethral integrity for the preservation of ejaculatory function.

4. #28: EN BLOC THULIUM LASER ENUCLEATION OF THE PROSTATE: A STEP-BY-STEP GUIDE TO IMPROVE ENUCLEATION TIME AND EFFICIENCY FOR ENDOSCOPIC ENUCLEATION OF PROSTATIC ADENOMA

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In this video, we present a reproducible step-by-step approach to En-Bloc Thulium Laser Enucleation of the Prostate (ThuLEP) for benign prostatic hyperplasia surgical treatment.

The capsular plane is identified only once, at the level of the prostatic apex, at 5 o'clock; this plane is followed ascending towards the bladder neck, separating the left lobe from the prostatic capsule from 5 to 11 o'clock. The right and median lobes are then enucleated following the same plane clockwise, and the two planes are joined anteriorly at 11 o'clock. Finally, enucleation is completed by incising the remaining mucosal flap from 10 to 2 o'clock.

Our single-center experience with this technique includes 140 procedures performed up to June 2018. Mean prostatic adenoma volume was 66.7 mL (range 20-220 ± 32.85 standard deviation). Mean total surgical time was 60.93 min (25-133 ± 23.6 SD); mean enucleation time normalized per adenoma gram was 0.32 min/g (0.12-0.8 ± 0.15 SD) and mean energy needed for the enucleation normalized per adenoma gram was 1852.13 J/g (689-6129 ± 862.4 SD). Only one case of reintervention for clot evacuation (Clavien grade IIIb) was necessary.

En Bloc ThuLEP provides an anatomical approach for endoscopic enucleation of prostatic adenoma. We believe that this sequence optimizes efficiency and efficacy in a reproducible way.

5. #58: ROBOT-ASSISTED LAPAROSCOPIC SEMINAL PARTIAL VESICULECTOMY WITH PELVIC BILATERAL LYMPHADENECTOMY

P. Fedelini¹, F. Chiancone¹, M. Fabiano¹, M. Fedelini¹, C. Meccariello¹

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This video describes the main steps of robot-assisted laparoscopic seminal partial vesiculectomy and bilateral pelvic lymphadenectomy. A 48-year-old man was referred to our attention for hematospermia and dysuria. Ultrasound showed the enlargement of the left seminal vesicle. Computed tomographic scan and magnetic resonance revealed a mass at the left dorsolateral aspect of the prostate. The biopsy of the mass was inconclusive. Robot-assisted laparoscopic exploration was performed. With the

patient in supine position, five ports are placed transperitoneally. The patient was placed in the 30° Trendelenburg position. After the incision of the peritoneum on the anterior Douglas' pouch wall, the left seminal vesicle was isolated. The mass was excised with the use of bipolar energy and Hem-o-lok clips. Bilateral pelvic lymphadenectomy was performed. The operative time was 130 minutes. No intraoperative and postoperative complications occurred. The patient was discharged three days after surgery. The pathology report described an angiofibroma of the seminal vesicle. A low number of CD34+ cells were found and Ki-67 proliferative index was 2%. Reactive lymph node hyperplasia was described in all lymph nodes. No ejaculatory disorders and no evidence of recurrence were found at 6-month follow-up. The Robot-assisted laparoscopic excision of the seminal vesicle mass is a feasible approach to treat benign seminal vesicle pathology. It could reduce surgical morbidity, postoperative pain, and recovery time, while maintaining the right principle of safe local excision.

6. #89: LAPAROSCOPIC SALVAGE LYMPH NODE DISSECTION AFTER RADICAL PROSTATECTOMY: A FEASIBLE TECHNIQUE

C. Gerolimetto¹, M. Sampalmieri¹, F. Proietti¹, E. Molinaro¹, M. Guidotti¹, G. Franco¹, C. Leonardo¹

¹ Policlinico "Umberto I" (Roma)

The video shows a laparoscopic salvage lymph node dissection in a patient with oligometastatic recurrent prostate cancer. In our series, this approach is as safe and effective as the open and robotic ones. In patients with biochemical response after surgery, androgen-deprivation therapy can be avoided. Long-term studies and larger populations are needed to confirm our results.

7. #119: IS LAPAROSCOPIC SURGERY DEAD?

C. Leonardo¹, M. Sampalmieri¹, C. Gerolimetto¹, V. Canale¹, S. Flammia¹, R. Martinelli¹, R. Mastroianni¹, G. Franco¹

¹ Policlinico "Umberto I" (Roma)

The video shows four laparoscopic procedures: renal enucleation, nerve-sparing radical prostatectomy, salvage pelvic lymph node dissection, salvage radical cystectomy with ureterocutaneostomy. Compared to robotic surgery, these procedures are equal in term of operative time, complications and outcome. They also are more cost-effective.

8. #106: HOLEP WITH MOSES TECHNOLOGY: MOLEP

Y. Hussein¹, S. Corti¹, F. Ceresoli¹, R. Milesi¹, I. Vavassori¹

¹ Ospedale Treviglio-Caravaggio - ASST Bergamo Ovest, U.O.C. Urologia (Treviglio)

The endoscopic technique of enucleation of the prostatic adenoma with Holmium laser (HoLEP) was introduced in 1998 by Peter Gilling.

After years of research, Lumenis has developed a system capable of modify the production of Holmium laser pulse with the Moses technology in order to optimize the laser to lithotripsy and prostatic enucleation.

In the video we show how Moses technology can improve HoLEP execution.

The Moses technology allows to modify the shape of laser's pulse and therefore of plasma bubble produced by the interaction between Holmium laser and water.

As shown the application of Moses technology during HoLEP allows a better interaction between laser and prostatic tissue; during incisions the MoSES is able to produce a vaporization of greater depth, therefore more effective, during anterograde incision.

The photoacoustic effect produced with Moses technology allows obtaining a longer detachment of the tissues with respect to conventionally produced impulse, resulting in a greater efficiency in enucleation due to separation of longer tissue segments and better exposure of the plan.

The Moses technology makes the HoLEP more effective when performed by an expert operator due to reduction of incision and enucleation times and is able to simplify the learning curve for beginners.

9. #98: SIMULTANEOUS PENILE PROSTHESIS AND MALE SLING: SURGICAL TECHNIQUE

S. Masciovecchio¹, A.B. Di Pasquale¹, G. Romano¹, G. Ranieri¹, L. Di Clemente¹

¹ Ospedale San Salvatore, U.O.C. Urologia (L'Aquila)

Both erectile dysfunction (ED) and stress urinary incontinence (SUI) are serious post-operative adverse events in men undergoing surgical intervention for both prostate and bladder cancer. Together, these conditions contribute significantly to the decrease in the post-operative quality of life scores leading to general dissatisfaction. For the management of severe sui, the artificial urinary sphincter (AUS) (ams 800; american medical systems) is the gold standard.^{3,4} However for those with mild to moderately severe sui, the advance™ male transobturator sling (american medical systems) remains a popular choice. The inflatable penile prosthesis (IPP) is the standard of care for men with medically refractory ed. In recent times, the trans-perineal technique for prosthesis/male urethral sling placement by gorbatiy et al. Has further simplified the implantation approach and offers concurrent prosthesis insertion via a single incision to address both sui and ed. The purpose of this video is to describe the technical nuances of advance™ male transobturator sling /ipp combination implant using a single perineal incision.

18 maggio 2019

08:30 - 10:00

sala A

Video 4 - Chirurgia Mini Invasiva delle Neoplasie Uroteliali

Moderatori: Franco Bergamaschi, Andrea Minervini

Focus on:

CISTECTOMIA "MINI INVASIVA" LAPAROSCOPICA: Franco Bergamaschi (RE)

CISTECTOMIA "MINI INVASIVA" ROBOTICA: Andrea Minervini (FI)

1. #61: ROBOT-ASSISTED ILEOCAPSULOPLASTY IN HIGH GRADE MUSCLE-INVASIVE BLADDER CANCER

P. Fedelini¹, C. Meccariello¹, M. Fedelini¹, M. Fabiano¹, D. Di Lorenzo¹, F. Chiancone¹

¹ AORN A. Cardarelli, U.O.C. Urologia (Napoli)

Robotic-assisted videolaparoscopic seminal-sparing cystectomy (SSP) is performed in high grade localized muscle-invasive bladder cancer. The aim of procedure is to preserve neurovascular bundle, vasa deferentia, seminal vesicles and prostatic capsule. The SSP is conventionally performed as an open access surgery. In this video we present a robot-assisted seminal-sparing cystectomy with ileocapsuloplasty (ICP). The SSP with ICP was performed in 10 patients in the last 2 years. 2 of 10 patients underwent a robotic-assisted videolaparoscopic surgery. We present the case of a 60-year-old man admitted to our emergency department with asymptomatic macroscopic haematuria. He underwent a TUR-B which show a single lesion on the left wall of the bladder. The histological specimen resulted in a high grade muscle-invasive bladder cancer. The patient has no major comorbidity and no prior abdominal surgery. He showed a symptomatic benign prostatic hyperplasia (BHP). A preliminary TUR-P was performed. Operative time was 430 minutes. Estimated blood loss was 500 ml. No intra-operative complications occurred. The patient was discharged 10 days after surgery. Catheter was removed 15 days after surgery. No complications were demonstrated at the 12-month postoperative follow-up.

In conclusion the robotic approach might represent the best solution to perform a complex reconstructive procedure in a minimally invasive conditions. Oncological and functional evaluations at long term follow-up suggest the seminal sparing cystectomy an excellent and safe procedure.

2. #200: SEX-SPARING VS STANDARD ROBOT ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL PADUA ILEAL NEOBLADDER IN FEMALE: STEP-BY-STEP SURGICAL TECHNIQUE, PERIOPERATIVE, ONCOLOGIC AND FUNCTIONAL OUTCOMES

G. Tuderti¹, R. Mastroianni², R.S. Flammia², S. Guaglianone¹, F. Minisola¹, U. Anceschi¹, L. Misuraca¹, A. Brassetti¹, M.C. Ferriero¹, M. Gallucci², G. Simone¹, M. Caponera³

¹ Istituto Nazionale Tumori "Regina Elena" (Roma)

² Università "La Sapienza" (Roma)

³ Ospedale Fabrizio Spaziani, U.O.C. Urologia (Frosinone)

In this video we demonstrate surgical steps of standard vs sex-sparing robot assisted radical cystectomy, and we compare perioperative and functional outcomes of both approaches.

The key surgical steps are: isolation of the ureters, preparation of umbilical, uterine and superior vesical arteries. In Sex-sparing approach development of vesicouterine plane is performed, and uterine feeding arteries are preserved, while in standard procedure uterine and vesical pedicle are transected close to their origins from iliac internal artery. Notably, sex-sparing RARC allows to preserve utero-vaginal component of hypogastric plexus that is almost sacrificed during standard RARC. Baseline demographic, clinical, perioperative, pathologic and functional data were collected and reported. Kaplan-Meier method was performed to compare daytime continence recovery probabilities between Sex-sparing and standard RARC cohorts.

In select cohort of patients, Sex-sparing RARC-iN seems an oncologically sound procedure, associated with favorable perioperative and functional outcomes. Due to small sample size and intrinsic selection biases, oncologic and functional outcomes of sex-sparing RARC-iN should be assessed in larger cohorts, while outcomes comparison with conventional RARC-iN technique requires prospective randomized trials.

3. #264: TOTAL LAPAROSCOPIC INTRACORPOREAL ILEAL NEOBLADDER, A SIMPLE STAPLER TECHNIQUE

S. Zaramella¹, L. Zegna¹, D. Tagliatela¹, E. Cianini¹, F. Liberale¹, S. Quaranta¹

¹ Ospedale di Biella, S.C. Urologia (Biella)

In this video we show the technique of total intracorporeal laparoscopic neobladder after radical cystectomy in 59-year old patient with Transitional Cell Carcinoma of Bladder G3 pT1 and CIS associated after BCG treatment. The patient underwent a left nephroureterectomy for Upper Tract transitional cell carcinoma 1 year before.

After laparoscopic radical cystectomy and extended lymph node dissection, a tract of 40 cm of ileum was isolated, neobladder was configured with Y technique with mechanical stapler keeping only right horn, urethral-neobladder anastomosis was performed with continuous suture as the ureteral-intestinal anastomosis.

Operation time and blood loss was respectively 330 min and 250 cc, hospital stay was 10 day, no Clavien 3 were observed, the daytime continence was reached after 2 months from the intervention.

4. #270: COMPARISON OF THULIUM AND HOLMIUM LASER THERAPY FOR UPPER URINARY TRACT UROTHELIAL CANCER

L. Tosco¹, A. Giacobbe¹, D. Collura¹, E. Berdondini¹, N. Faraone¹, G.L. Muto², F. Germinale¹, M. Kurti¹, R. Papalia³, G. Muto¹

¹ Humanitas Gradenigo (Torino)

² A.O.U. Careggi (Firenze)

³ Campus Bio-Medico (Roma)

In this video we show two different laser therapy approaches for multiple and diffused low-grade urothelial tumours. This patient was affected by low grade urothelial cancer of the upper urinary system in a right single dysfunctional kidney. We counselled this patient for different therapeutic options but an initial conservative approach was planned. Considering the renal failure and the diffusion of the disease, multiple laser sessions were planned. The tumour was visualized with a semi-rigid ureterorenoscopy and lesions were treated with Holmium and Thulium lasers. Holmium laser showed good tumour tissue destruction with final smooth surface of the treated area. Thulium laser demonstrated also good tissue destruction but with necrotic left over tissue that made the procedure more difficult potentially prolonging operative time. After about 60 minutes of ureterorenoscopy we stopped the procedure and we placed a double J stent. We show that not all the laser typologies can have the same effect on urothelial tumours and the choice should be tailored. Holmium laser can reach good cancer control maximizing visibility and decreasing operative time.

5. #117: LAPAROSCOPIC SALVAGE RADICAL CYSTECTOMY IN OCTOGENARIAN

A. Tufano¹, E. Molinaro¹, F.P. Antonaccio¹, V. Palombi¹, C. Gerolimetto¹, G. Franco¹, C. Leonardo¹

¹ Policlinico "Umberto I" (Roma)

The video shows a salvage cystectomy with ureterocutenostomy in a 85 years old patient with persistent hematuria. Salvage cystectomy is an effective and safe therapeutic approach in elderly patients. The age of the patient should not be considered as a contraindication for this procedure. Moreover, laparoscopic technique is a viable alternative to open and robotic surgery.

6. #259: ENDOSCOPIC THULIUM LASER TREATMENT WITH EN BLOC TECHNIQUE FOR UTUC

P. Mondino¹, M. Grillo¹, M.T. Filocamo¹, D. Rosso¹, P. Coppola¹

¹ ASLCN1, SC Urologia (Savigliano)

At our center have been processed 2 patients over eighty. Both had gross haematuria and flank pain otherwise and some age-related comorbidities. The average tumor size was 15mm diameter.

Due to age and clinical comorbidity, and patients opposition to perform classic open surgery like nephroureterectomy, we

choose an endoscopic, minimally invasive, approach.

First time we have done semirigid ureteroscopy with exploration of ureter and cytological examination, than, UPA confirmed a “minus” of upper calyx. Flexible ureteroscopy (STORTZ XC digital; fiber 270 nm at 8 W energy) was performed without ureteral access sheath (because uncompliant ureter); and an extemporary histological examination had shown low grade tumor. After we proceeded a “en bloc” laser enucleation and a complete extraction of the tumor using basket. No other suspicious area was founded.

Overall, the surgical procedure lasted 42 min including extemporary histological examination (20 min). The patient was discharged after 24 hours. No surgical complication occurred. At 3 months from surgery, was performed an ureteroscopy that didn't show recurrence.

Definitive histological examination confirmed low grade tumor.

7. #260: ENDOSCOPIC ENUCLEATION “EN BLOC” WITH THULLIUM LASER OF SELECTED BLADDER NEOPLASM

P. Mondino¹, M. Grillo¹, A. Moiso¹, D. Rosso¹, P. Coppola¹

¹ ASLCN1, SC Urologia (Savigliano)

We describe the thullium-laser “en bloc” enucleation technique en bloc of single bladder lesion in selected patients and short-medium term outcomes.

From January 2018 to June 2018, we have selected 3 patients, aged between 70 and 78 years, with first diagnosis of perimeatal bladder neoplasm.

The case described in our video is a male subject of 76 aa, with first diagnosis of 1.5 Cm diameter neoplasia in the retromeatal left position. The diagnosis has been carried out as a comparison of ematuria. Pre operative ultrasound do not show hydronephrosis.

Retrograde urethroscopy, endoscopic bladder explorations and localization of the single lesion. Protection of the left ureter introducing an hydrophic 0.003 Guide wire before starting the “en bloc” enucleation of the lesion using of thullium laser 300 nm with energy included between 10 and 12 w. No bleeding during procedure and total excission of the neoplasia including the basis. A 6 fr double j stent was inserted guide wire coassially and leave in place for 20 days post operation. Histological examination tumor results of low grade tcc pta with presence of muscular tissue.

The patient has been discharged in the first day after procedure.

At the first cystoscopy of follow up no sign of recurrence.

18 maggio 2019

08:30 - 10:00

sala B

Comunicazioni 6 - Carcinoma Renale

Moderatori: Luca De Zorzi, Gianfranco Savoca

1. #60: OUR EXPERIENCE IN CONSERVATIVE TREATMENT OF KIDNEY CANCER IN EMERGENCY SETTING

P. Fedelini¹, C. Meccariello¹, M. Fabiano¹, L. Pucci¹, F. Chiancone¹, M. Fedelini¹

¹ AORN A. Cardarelli, U.O.C. Urologia (Napoli)

Objective

Presentation of RCC (renal cell carcinoma) as spontaneous renal haemorrhage is uncommon. Given the patient's general conditions, immediate surgery or embolization are the options of the treatment. The emergency exploration and the radical nephrectomy are considered the standard of care (1). We report our experience in conservative treatment of kidney cancer in emergency setting.

Materials and Methods

We retrospectively evaluated all the patients that reached our emergency department from January 2015 to April 2018. 22 patients were admitted to our emergency department with spontaneous bleeding of kidney cancer. Flank pain was most common symptoms (90.9%) followed by hematuria (9.1%). All patients were evaluated for renal hemorrhage observed on ultrasonography and computed tomography (CT) in the emergency department. After medical stabilization of general conditions, 14 out of 22 patients were treated with embolization (2) and 8 out of 22 patients with surgical exploration. Postoperative complications have been classified according to the Clavien-Dindo system.

Results

In 7 cases (87,5%) a partial nephrectomy was performed. Median patient age was 52.29 years (range 29.0-71.0). The mean dimension of the tumor was 7.85 centimetres (range 5.0-10.0). 5 out of 7 procedures were performed laparoscopically and the remaining 2 a procedures with an open approach. The median operative time was 88.57 minutes (range 60-110) and the mean blood loss was 485.71 millilitres (range 200-1000). The mean length of hospital stay was 5.71 days (range 5-7). 3 out of 7 patients (42,86%) experienced postoperative complications: Hematuria (1 case; Clavien-Dindo I); postoperative anemia that required blood transfusions (2 cases; Clavien-Dindo II). No patients had positive surgical margins (PSMs) and all patients are disease free at a mean radiologic follow-up of 12.86 months.

Discussions

Surgical treatment is preferred in patients diagnosed with renal malignancy and in cases of hemodynamic instability. The management of these patients is critical because the condition may go unrecognised in the early stages and can result in death. The role of partial nephrectomy is still unclear. In 1982 A.Mitchell et al. described three cases of renal haemangioma presenting with haematuria treated successfully by partial nephrectomy (3). Emergency laparoscopy is widely used to identify the causative pathology of acute abdominal pain, often followed by laparoscopic treatment of the detected abdominal disorder. The most frequent indications are appendicitis, acute colecistitis, gastroduodenal perforation, occlusion of the small intestine, and some abdominal traumas. With a correct selection of patients and the appropriate experience of the surgeon, the results are excellent and better than open surgery (less infection of the wound, complications, hospital stay and postoperative pain). We found no evidence in the scientific literature supporting the conservative treatment of kidney cancer in emergency setting. Moreover we found no evidence about the emergency laparoscopy in the treatment of kidney cancer. In our experience, partial nephrectomy when technically feasible is a feasible procedure to treat bleeding kidney tumors, when performed in high surgical experience

centres.

Conclusion

When RCC is diagnosed as a spontaneous haemorrhage, partial nephrectomy is a safe and reasonable approach if performed in highly experienced centres. The laparoscopic approach is also feasible in centres with a large experience of minimally-invasive treatment of renal masses and their complications management.

Reference

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- 3- Mitchell G, J Fellows, J C Smith. Partial nephrectomy for renal haemangioma *J R Soc Med.* 1982 Oct; 75(10): 766-767.

2. #178: IMPERATIVE VERSUS ELECTIVE PURELY OFF-CLAMP MINIMALLY-INVASIVE PARTIAL NEPHRECTOMY: RESULTS OF A SINGLE-CENTRE EXPERIENCE

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Objective

In the imperative setting, partial nephrectomy is usually associated to worse functional outcomes and a Greater risk of complications. The aim of this study is to compare perioperative and functional outcomes between patients who underwent minimally-invasive purely-off clamp partial nephrectomy (ocMIPN) for an imperative (I) or elective (E) indication at a single high-volume centre.

Materials and Methods

From July 2004 to October 2018, we analyzed perioperative, oncologic and functional outcomes of 701 patients who underwent ocMIPN, 242 with I and 459 with E indications, respectively. Data were retrieved from our prospectively-maintained partial nephrectomy dataset. Elective and imperative cohorts were matched for baseline, perioperative, oncologic and functional data. for categorical and continuous variables were reported as IQRs or frequencies, and compared with "χ² test" and Student t tests, respectively. Kaplan-Meier analysis was performed to compare recurrence-free survival (RFS) and overall survival (OS) between groups. For all statistical analyses, a two-sided p<0.05 was considered significant.

Results

Out of 242 I-ocMIPN patients, 76 were solitary kidneys, 132 had impaired preoperative renal function, 5 had horseshoes kidneys and 29 had bilateral renal tumors. I-ocMIPN patients had significantly lower baseline eGFR (p<0.001), and a trend towards a significantly higher ASA score (p=0.06) and lower tumor size (p=0.08). All other baseline data were comparable (all p>0.19, Table 1). Positive surgical margins rate (p=0.59), conversion to open surgery or radical nephrectomy (p=1), complication rates according to Clavien-Dindo (p= 0.472) were comparable between groups, while I-ocMIPN patients had significantly higher length of hospital stay (4.7 vs 4, p<0.001) and eGFR at discharge decrease (-13% vs -2.64%, p< 0.001). At a median follow-up of 21 months (IQR 7-49), last eGFR (79.6 vs 56.1, p <0.0001), and newly onset CKD-3b (1.9% vs 15.6%, p< 0.001) and CKD-4,5 stages (1.1 vs 6.7%, p< 0.001) were significantly higher in I-ocMIPN cohorts. (Tab.1) OS and RFS were comparable between groups (p=0.79 and 0.71, respectively).

Conclusion

Although associated to a longer hospital stay, and to an increased rate of significant renal function deterioration, the oncologic outcomes of I-ocMIPN are comparable to those expected in the elective setting. These aspects should be considered during patient counselling when offering nephron sparing surgery in imperative setting.

3. #183: ROBOT ASSISTED RADICAL NEPHRECTOMY AND INFERIOR VENA CAVA THROMBECTOMY: SURGICAL TECHNIQUE, PERIOPERATIVE AND MID-TERM ONCOLOGIC OUTCOMES

U. Anceschi¹, G. Tuderti¹, A. Brassetti¹, M.C. Ferriero¹, F. Minisola¹, M. Costantini¹, S. Guaglianone¹, R.S. Flammia², R. Mastroianni², M. Gallucci², G. Simone¹, M. Caponera³

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Objective

Radical nephrectomy with Inferior vena cava (IVC) thrombectomy for renal cancer represents one of the most challenging urologic surgical procedures. The aims of this series are to detail the surgical technique and to report perioperative and oncologic

outcomes of 30 consecutive cases of completely intracorporeal robot-assisted radical nephrectomy with IVC level I (20%) II (30%) III (46.7%) and IV (3.3%) tumor thrombectomy.

Materials and Methods

Thirty consecutive patients with renal tumor and IVC thrombus were treated between July 2011 and October 2018. Baseline, perioperative and follow-up data were collected into a prospectively maintained IRB approved databases. Surgical technique has been previously described. We report perioperative and oncologic outcomes of 30 consecutive patients treated in a tertiary referral center.

Results

All procedures were successfully completed. No conversion to open or laparoscopic surgery occurred. Median operative time was 360 minutes. Eleven patients (47.8%) did not experience any complication. Eleven patients (43.4%) required blood transfusion (Clavien grade 2); one patient (3.3%) had a Clavien grade 3a complication (gastroscopy); two patients (3.3%) had Clavien grade 3b complication (reintervention due to bleeding from adrenal gland; cardiac cardioversion); Two patients (6.6%) required ICU admission (Clavien 4a), for PRESS syndrome and atrial fibrillation, respectively. Out of 12 patients who underwent cytoreductive nephrectomy and IVC thrombectomy, at a median follow-up of 20 months (IQR 12-35), 2-yr cancer specific and overall survival rates were 50%. Eighteen patients received surgery with curative intent and 8 of these experienced disease recurrence. three patients died of disease progression; 2-yr disease-free and cancer specific survival rates were 55.6% and 60%, respectively.

Conclusion

Robotic IVC tumor thrombectomy has demonstrated to be a feasible and safe surgical procedure in tertiary referral centers. Favorable perioperative outcomes represent a rational base to expand indications also in the cytoreductive setting.

4. #186: ROBOTIC PARTIAL NEPHRECTOMY IN SOLITARY KIDNEYS: IMPACT OF ISCHEMIA ON TRIFECTA OUTCOMES

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Objective

Nephron-sparing surgery is imperative in patients with renal tumor in solitary kidneys. In this clinical setting, any effort should be attempt to achieve optimal cancer control, uneventful perioperative course and maximal preservation of renal function. These three variables are conventionally combined into a composite outcome, namely trifecta. The aim of this study is to compare trifecta outcomes after purely off-clamp vs on-clamp robotic partial nephrectomy (RPN) for solitary kidneys performed at two different high-volume institutions.

Materials and Methods

From December 2013 to October 2018, we analyzed baseline and perioperative outcomes of 54 pooled patients who underwent RPN for solitary kidneys. Trifecta was defined as negative margins; no major complications (Clavien 3-5); $\Delta eGFR \text{ mL/min/1.73 m}^2 \{[(\text{baseline } eGFR - eGFR \text{ at discharge})/\text{baseline } eGFR]\} < 30\%$. Univariable and multivariable logistic regression analyses were performed to identify predictors of trifecta achievement. For all statistical analyses, a two-sided $p < 0.05$ was considered significant.

Results

No patient had conversion to open surgery or radical nephrectomy. The positive surgical margins rate was 1.9%; 5.7% of patients experienced major complications; 26% had $\Delta eGFR > 30\%$. Trifecta outcomes were achieved in 34 patients (66.7%). On univariable analysis off-clamp approach was associated with a 4.64-fold increased probability of achieving trifecta (95% CI 1.25-17.2; $p=0.02$) and each minute increase of warm ischemia time was associated with a 9% increased probability of failing the trifecta achievement (95% CI 0.86-0.96; $p=0.001$). On multivariable analysis, warm ischemia time remained the only independent predictor of trifecta (HR 0.8; 95% CI 0.70-0.95; $p=0.01$). At a median follow-up of 13 (IQR 6.3 – 34) months, no patients developed recurrence.

Conclusion

In experienced centers, trifecta outcomes of RPN in solitary kidneys are achievable in two third of patients. In this setting, warm ischemia time duration remains the most important and the only surgical modifiable factor independently predicting the probability of achieving trifecta outcomes.

5. #205: ON-CLAMP VERSUS PURELY OFF-CLAMP ROBOTIC PARTIAL NEPHRECTOMY IN SOLITARY KIDNEYS: COMPARISON OF CHRONIC KIDNEY DISEASE PROGRESSION AT TWO HIGHVOLUME CENTERS

U. Anceschi¹, G. Tuderti¹, A. Brassetti¹, M.C. Ferriero¹, S. Guaglianone¹, R. Mastroianni², R.S. Flammia², M. Gallucci², R. Bertolo³, F. Minisola¹, M. Costantini¹, J. Kaouk³, G. Simone¹, M. Caponera⁴

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Objective

Solitary kidney is the optimal clinical model to assess the real impact of surgical technique on renal functional outcomes. The risk of developing chronic kidney disease (CKD) after robotic partial nephrectomy (RPN) in patients with solitary kidney has been poorly addressed. In this study, we aimed at assessing the impact of ischemia time on the risk of developing stage 3a (CKD3a) and stage 3b (CKD3b) after RPN in solitary kidneys.

Materials and Methods

From December 2013 to October 2018, we analyzed 54 consecutive patients who underwent RPN for solitary kidneys with different surgical approaches (purely off-clamp vs conventional on-clamp). Kaplan-Meier method estimated probability of developing new-onset CKD3a and CKD3b after off-clamp vs on clamp RPN was compared. Univariable and multivariable Cox regression analyses were performed to identify predictive factors for the development of newonset CKD3a and CKD3b among the surgical variables. For all statistical analyses, a two-sided $p < 0.05$ was considered significant.

Results

At a median follow-up of 13 months (IQR 6.3 – 34), new-onset CKD-3a and CKD-3b stages were observed in 33.6% and 19.6% of patients, respectively. At Kaplan-Meier analysis, on-clamp approach was associated with a significantly higher risk of developing both CKD-3a and CKD-3b stages (Figure 1A,1B; $p=0.047$, 0.034 , respectively). At multivariable Cox regression analysis, eGFR at discharge (HR 0.94 – 95% CI 0.91-0.98; $p=0.005$) and continuously coded warm ischemia time (HR 1.05-95% CI 1.01-1.09; $p=0.008$) were independent predictors of developing both CKD-3a and CKD-3b (HR 0.89-95% CI 0.82-0.96; $p=0.004$ and HR 1.09-95% CI 1.02-1.17; $p=0.009$, respectively).

Conclusion

Ischemia time and eGFR at discharge are independent predictors of renal functional outcomes after RPN in solitary kidney. With the limitation of the small sample size, ischemia time remains the only surgical modifiable variable significantly associated with renal function deterioration during follow-up.

6. #199: A NOVEL TRIFECTA TO SIMPLIFY THE ASSESSMENT OF PERIOPERATIVE OUTCOMES AFTER ROBOT ASSISTED PARTIAL NEPHRECTOMY FOR CT1 RENAL MASSES: RESULTS OF A MULTICENTER SERIES

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Objective

Two different definitions of trifecta outcomes after partial nephrectomy are available in Literature, one requiring a volumetric assessment of percentage of parenchyma spared [1], the other requiring a conventional on-clamp approach to be used [2]. Recently, the US FDA and the National Kidney Foundation recommended to consider a 30% decrease of eGFR as a clinically relevant acute kidney injury with potential implication on long term development of chronic kidney disease [3]. The aim of this study is to integrate this data into trifecta system for an easy and wide clinical use in patients treated with RAPN for cT1 renal tumor and to assess factors predicting its achievement.

Materials and Methods

From September 2006 to October 2018, we analyzed baseline and perioperative outcomes of 1336 pooled patients who

underwent RAPN for cT1 renal masses in 5 different tertiary referral centers. Trifecta were defined as negative margins; no major complications (Clavien 3-5); $\Delta eGFR$ mL/min/1.73 m² $\{[(\text{baseline } eGFR - eGFR \text{ at discharge})/\text{baseline } eGFR] \times 100\} < 30\%$. Univariable and multivariable logistic regression analyses were performed to identify predictors of trifecta outcomes. For all statistical analyses, a two-sided $p < 0.05$ was considered significant.

Results

No patient had conversion to open surgery or radical nephrectomy. The positive surgical margins rate was 3.7%; 1.1% of patients experienced a Clavien III-V complications, 27.6% had a $\Delta eGFR > 30\%$. Overall, trifecta outcomes were achieved in 906 patients (67.8%). On univariable analysis continuously coded warm ischemia time ($p=0.005$), female gender ($p=0.03$), tumor size ($p=0.001$), hypertension ($p=0.02$) and RENAL score ($p=0.001$) were associated with an increased risk of not achieving trifecta (Table 1). On multivariable analysis, warm ischemia time was the only independent predictor of achieving trifecta ($p=0.001$); any increasing minute of warm ischemia time was associated with 6% reduced probability of achieving trifecta.

Conclusion

We developed a novel trifecta, combining negative margins, no severe perioperative complications and perioperative 30% decrease of eGFR into a single comprehensive outcome assessment.

7. #191: HEAD TO HEAD IMPACT OF MIC VS A NOVEL TRIFECTA SCORE ON ONCOLOGIC AND FUNCTIONAL OUTCOMES AFTER ROBOTIC ASSISTED PARTIAL NEPHRECTOMY: RESULTS OF A MULTICENTRIC SERIES

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Objective

The optimal achievement of perioperative outcomes for robot-assisted partial nephrectomy (RAPN) is usually assessed through standard trifecta or MIC. However, there is paucity of data describing the ability of these tools in predicting oncologic and functional outcomes of RAPN. In this study we performed a head-to-head comparison of our novel trifecta definition with the standard MIC (margin, ischemia, complications) for predicting oncologic and functional outcomes on a large multicenter series of RAPN.

Materials and Methods

METHODS: A multicentric database was queried for patients with non-metastatic renal masses who underwent RAPN at 8 participating institutions between September 2006 and September 2017. Baseline demographic, clinical, pathologic and perioperative data were collected. MIC achievement was defined as the fulfillment of the following criteria: negative margins; ischemia time < 20 minutes; absence of major complications (Clavien-Dindo ≥ 3). Our novel trifecta proposal was defined as negative margins, no severe complications (Clavien Dindo ≥ 3) and estimated glomerular filtration rate (eGFR) reduction at discharge $\leq 30\%$, according to the National Kidney Foundation and the US Food and Drug Administration. Kaplan-Meier method was used to assess the predictive role of MIC and TRIFECTA on newly onset chronic kidney disease stages 3a (CKD-3a), 3b (CKD-3b), 4-5, (CKD-4,5), on recurrence-free survival (RFS) and on overall survival (OS) probabilities. The same analyses were subsequently performed in a subgroup cohort of patients receiving off-clamp (OC) RAPN. For all statistical analyses, a two-sided $p < 0.05$ was considered significant.

Results

Mean follow-up was 26.7 months. (IQR 10.3-47). Overall, 1807 patients were included in the analysis. 1285 patients achieved MIC (71.1%) while 1492 (82.6%) achieved trifecta. On Kaplan-Meier analysis patients achieving MIC displayed significantly higher OS ($p=0.004$), and lower newly onset CKD 3a, 3b, 4-5 (all $p < 0.001$) probabilities; achieving MIC did not predict RFS probability ($p=0.355$) (Fig.1,2). Patients achieving trifecta had higher OS ($p=0.014$), RFS ($p=0.009$) and lower newly onset CKD 3a, 3b, 4-5 (all $p < 0.001$) probabilities. In a subgroup analysis on patients receiving OC-RAPN, MIC score did not predict newly onset of CKD-3a, 3b, and 4,5 stages, while Trifecta was a significant predictor of all newly onset of CKD stages (all p values ≤ 0.002). (Fig.2)

Conclusion

Compared to MIC, the newly defined trifecta was a significant predictor of all major oncologic and functional outcomes,

including recurrence free survival probabilities. Moreover, the newly defined trifecta is easily and widely applicable in all patients after RAPN, regardless clamping technique.

8. #170: ASSESSMENT OF RISK AND PREDICTORS OF DEVELOPING NEWLY ONSET CHRONIC KIDNEY DISEASE AFTER ROBOTIC PARTIAL NEPHRECTOMY FOR CT1 RENAL MASSES

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Objective

There is paucity of data in literature describing the progression to chronic kidney disease (CKD) after robotic partial nephrectomy (RAPN) in the elective setting. The aim of this study is to evaluate the progression to chronic kidney disease stage 3a (CKD-3a) stage 3b (CKD-3b) stage 4-5 (CKD-4,5) and to identify predictors of CKD progression after RAPN for cT1 renal masses.

Materials and Methods

From September 2013 to October 2018, we analyzed 1336 pooled patients who underwent robotic elective RAPN for cT1 renal masses at five different high-volume institutions. Probabilities of developing newly onset 3a, 3b and 4-5 CKD stages were computed at 3,6,12,24,36,48 months after surgery; univariable and multivariable Cox regression analyses were performed to identify predictors of newly onset 3a, 3b, 4-5 CKD development. For all tests, statistical threshold was set at < 0.05.

Results

At a median follow-up of 24 months (IQR 8-41), probabilities of developing newly onset 3a, 3b and 4-5 CKD stages were 16.5%, 7.5% and 2.8%, respectively. Univariable and multivariable models were summarized in Table 1,2,3. On Cox multivariable analyses, age (p=.004), baseline eGFR (p=.001), ASA score (p=.003) and ischemia time (p=.001) were independent predictors of developing 3a-CKD stage; age (p=.007), baseline eGFR (p=.001), ischemia time (p=.001) and tumor size (0.002) of developing 3b-CKD stage, while baseline eGFR (p=.001), and ischemia time (p=0.016) were the only independent predictors of developing 4-5 CKD stages (Table 1).

Conclusion

Age, baseline eGFR and ASA score are significant drivers of the risks of renal function worsening after RAPN for cT1 renal tumors. Ischemia time remain a crucial, and surgically modifiable variable with independent role in determining postoperative development of clinically significant renal function deterioration.

9. #201: COMBINED REPORTING OF SURGICAL QUALITY, CANCER CONTROL AND FUNCTIONAL OUTCOMES OF ROBOT-ASSISTED PARTIAL NEPHRECTOMY: THE TRIFECTA ACHIEVEMENT

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Objective

Different trifecta have been already proposed to optimize outcomes reporting after RPN but these do not consider a possible off-clamp approach and are not based on standardized parameters. We proposed our new Trifecta and assessed its ability to predict absence of significant renal function deterioration, recurrence-free (RFS) and overall survival (OS) probabilities.

Materials and Methods

Our multicenter database was queried for patients with non-metastatic renal masses who underwent RPN at the 8 participating institutions within the study period (September 2006-September 2017). Baseline demographic, clinical, pathologic and perioperative data were collected. Trifecta outcomes were defined endorsing standardized and reproducible variables: negative margins, no severe complications (Clavien Dindo ≥ 3), and $< 30\%$ postoperative eGFR reduction (according to the National Kidney Foundation and the US Food and Drug Administration). Chi square and Student t test were used to compare categorical and continuous variables. Kaplan-Meier analysis was performed to investigate the predictive role of trifecta on newly onset CKD stage IIIa, IIIb and IV-V, RFS and OS.

Results

Overall, 1807 patients were included in the analysis (Table 1); 1492 (82%) achieved the trifecta. Patients who achieved trifecta were significantly younger ($p < 0.001$), had smaller ($p = 0.003$) and less complex tumors ($p = 0.001$), shorter ischemia ($p = 0.005$) and overall operative time ($p < 0.001$). On Kaplan-Meier analysis (Figure 1), trifecta cohort displayed significantly lower incidence of newly onset IIIa, IIIb and IV-V CKD stages (all $p < 0.001$), higher RFS ($p = 0.009$) and OS ($p = 0.014$) probabilities.

Conclusion

The newly defined RPN trifecta provides a comprehensive summary of perioperative outcomes, is widely applicable regardless the clamping technique used, and is a significant predictor of renal function deterioration, recurrence and all-cause mortality.

10. #192: DEVELOPMENT OF A NOMOGRAM TO PREDICT ACHIEVEMENT OF TRIFECTA OUTCOMES AFTER ROBOTIC PARTIAL NEPHRECTOMY FOR CT1-2 RENAL TUMORS

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Objective

Robot-assisted partial nephrectomy (RPN) is an established and widely performed surgical procedure. The two trifecta outcomes available in Literature are limited by reproducibility of subjective assessment of parenchymal volume loss and by inapplicability in off-clamp procedures, respectively. In this study, we proposed a combination of three standardized and reproducible postoperative criteria (Trifecta) to optimize outcomes reporting after RPN and we developed a nomogram to predict probability of achieving trifecta.

Materials and Methods

We defined “trifecta” as the combination of negative margins, absence of severe (Clavien >2) perioperative complications and perioperative eGFR reduction $< 30\%$. A total of 2105 consecutive patients who underwent RPN for cT1-2 renal tumors were used to generate a nomogram predicting probability of achieving trifecta outcomes. The discrimination accuracy was measured by concordance index (CI). Calibration plot was generated with 200 bootstrap resampling. A decision curve analysis was performed to assess the net benefit of the model.

Results

Overall, 2105 patients were included in the analysis. The trifecta was achieved in 1605 (78.6%) patients. On multivariable logistic regression analysis, age, ASA score, tumor size, RENAL nephrometry score and duration of warm ischemia time were significant predictors of trifecta achievement. The developed nomogram had a 0.69 CI (Figure 1A) and was perfectly calibrated (Figure 1B). On decision curve analysis, the net benefit of using the nomogram to predict trifecta was evident for probabilities higher than 70% (Figure 1C).

Conclusion

This newly defined trifecta is an easy and reproducible system specifically designed to provide a comprehensive summary of global results of perioperative and long term oncologic and functional outcomes. Estimating the probability of achieving trifecta is significantly increased by the use of the nomogram for probabilities higher than 70%.

11. #189: DESCRIBING LONG-TERM FUNCTIONAL AND ONCOLOGIC OUTCOMES OF ROBOT-ASSISTED PARTIAL NEPHRECTOMY: THE ROME SCORE

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Objective

Nephron sparing surgery (NSS) aims at achieving a durable cancer control while preserving good renal function and ensuring a long-life expectancy. We assessed the predictive role of a newly defined trifecta after robot-assisted partial nephrectomy (RAPN) on a comprehensive outcomes assessment (ROME's), including the following outcomes: no Recurrence, no Overall Mortality, absence of estimated glomerular filtration rate (GFR) significant reduction.

Materials and Methods

Our multicenter database was queried for patients with non-metastatic renal tumors who underwent RPN at the 8 participating institutions within the study period (Sep 2006 – Sep 2017). Baseline demographic, clinical, pathologic, perioperative, oncologic and functional outcomes data were collected. The newly defined trifecta included: negative margins, no severe complications (Clavien Dindo ≥ 3), and $\leq 30\%$ postoperative eGFR reduction [according to the National Kidney Foundation]. Thus, ROME's included no Recurrences, no Overall Mortality and baseline estimated GFR not significantly reduced (defined as absence of newly onset Chronic Kidney Disease stage IIIa or IV-V when baseline eGFR was \geq or < 60 mL/min/1.73m²). Chi square and Student t test were used to compare categorical and continuous variables, respectively. When one of the three ROME's outcomes was observed, the follow-up was censored. Kaplan-Meier analysis (KMa) was performed to investigate the predictive role of Trifecta on ROME's achievement.

Results

Overall, 1434 patients were included in the analysis (Table 1). Trifecta was achieved in 1185 (83%) patients. ROME's was achieved by 1192 (83%) patients: they were younger ($p < 0.001$), thinner ($p = 0.002$), with lower ASA scores ($p < 0.001$), higher baseline eGFR ($p < 0.001$), and less complex tumors ($p = 0.001$). On KMa (Figure 1), Trifecta was significantly associated with a higher probability of achieving the ROME's ($p < 0.001$); in a stratified analysis, trifecta was significantly associated with ROME's both when RAPN was performed in elective ($p < 0.001$) and in imperative settings ($p < 0.046$).

Conclusion

ROME's provides a comprehensive summary of long-term outcomes after NSS. Achieving the newly defined Trifecta in the perioperative setting is a significant predictor of maintaining successful outcomes during follow-up.

12. #181: IMPACT OF LEARNING CURVE ON PERIOPERATIVE OUTCOMES OF OFF-CLAMP MINIMALLY INVASIVE PARTIAL NEPHRECTOMY: PROPENSITY SCORE MATCHED COMPARISON OF OUTCOMES BETWEEN TRAINING VERSUS EXPERT SERIES

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Objective

Off-Clamp Robotic partial nephrectomy (OC-RPN) is a challenging surgical procedure. Training programs in this specific surgical field are difficult to realize. In this study, we compared perioperative outcomes of propensity score matched (PSM) pair cohorts of patients treated with OC-RPN by either a training or an expert surgeon in the same Institution.

Materials and Methods

The prospectively maintained “renal cancer” database was queried for “off-clamp”, “robotic”, “partial nephrectomy”. Overall, data of 230 patients treated between January 2017 and June 2018 were collected. A 1:1 PSM analysis was used to generate two cohorts homogeneous for the following variables: patient demographics (age, gender, BMI); ASA score; tumor size; PADUA nephrometry score; preoperative hemoglobin, preoperative eGFR. Exclusion criteria for PSM analysis included multiple tumors (17), preoperative estimated glomerular filtration rate (eGFR) <30 ml/min (14), lacking PADUA score (26), single setting multiple surgeries (9), leaving 162 cases available for selection, 111 performed by the expert surgeon (who had previously performed more than 1000 OCPN) and 51 performed by the training surgeon (who had previously performed more than 200 minimally invasive prostatectomies and more than 50 laparoscopic radical nephrectomies), respectively. Chi square and t test were used to compare categorical and continuous variables between selected cohorts.

Results

Patients treated by the expert surgeon had significantly larger tumors ($p=0.001$), higher PADUA nephrometry ($p=0.04$) and ASA scores ($p<0.001$). After applying the PSM, two cohorts of 29 patients were selected. Hilar clamping was never necessary in both selected cohorts. The groups were homogeneous for all baseline demographic and clinical variables (all $p\geq 0.34$, Table 1). Perioperative outcomes were largely comparable between groups: hospital stay ($p=0.61$), hemoglobin at discharge ($p=0.3$), eGFR at discharge ($p=0.15$), complications according to Clavien classification system ($p=0.36$), positive surgical margins ($p=0.31$). All data were reported in Table 2.

Conclusion

We demonstrate safety, feasibility and reproducibility of OC-RPN outcomes in two cohorts of patients homogeneous for baseline and clinical features, treated by two different surgeons with significantly different surgical expertise. The impact of learning curve on outcomes of OC-RPN is negligible, after completion of a proper training in minimally invasive surgery.

13. #77: RIGHT OPEN NEPHRECTOMY IN PATIENT UNDERGOING IN COMBINATED SPINAL AND PERIDURAL OPERATIVE ANESTHESIA AND ANALGESIA (CSE): A NEW ANESTHETIC APPROACH IN ABDOMINAL SURGERY (CASE REPORT)

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Objective

We describe a case of right open nephrectomy with xifopubic incision in a patient undergoing initial thoracic spinal anesthesia later converted into operative peridural anesthesia and analgesia (CSE).

Materials and Methods

57-year-old male patient. Negative medical history for major internal and surgical diseases. The patient accessed our U.O for a massive hematuria. Performed abdomen ultrasound that showed right renal mass suspected by heteroplasia. Subsequently he performed CT abdomen with evidence of inhomogeneous and hypervascularized renal neoformation of 10x9 cm with central necrotic area and without safe cleavage plan from the liver; presence in the pelvis of clots; numerous mesenteric and retroperitoneal adenopathies; occasional finding of a thoracic aortic aneurysm of 4.8 cm. It was decided to perform the intervention of right nephrectomy with xifopubic incision given the size of the neoformation and the unsafe plans of cleavage from neighboring structures. Colleague anesthetists performed CSE: subarachnoid puncture at T10-T11 level with Whiteacre 25G needle administered with isobaric bupivacaine 0.5% 10 mg + dexamethasone 4 mg + ketamine 20 mg + midazolam 2 mg reaching a complete sensitivomotor block up to T3. Immediately after the spinal puncture, T9-T10 was placed in the peridural catheter and the right radial artery was cannulated.

The beginning of the operation after about 15 minutes from the puncture without any surgical or anesthetic problem. Roasting after about 70 minutes with ropivacaine 0.5% in peridural 15 ml administered in fractions of 5 ml each in a total time of 30 minutes.

In the meantime, infusion of ketamine 50 mg + midazolam 5 mg in peridural was started at a rate of 2-3 ml / h. The patient was sedated in a light way, awakened to the call and reactive to the light stimulus. The patient maintained spontaneous breathing with nasal cannulas and low oxygen flows and excellent saturation values.

The intervention lasted a total of 2.40h with blood losses of about 200ml.

Starting from the closure of the surgical break initiated ropivacaine infusion 0.2% + midazolam 5 mg vel 5 ml / h + PCA beats 1.5 ml with lockout every 20 minutes.

Results

The EGA control at the end of the procedure showed excellent respiratory exchanges, normocapnia, lactates in the limits.

The post-operative course was regular. Vital parameters always in the normal range, canalization to gas the day after the operation, stable blood count. Removal of the bladder catheter on the third day. Removal of subhepatic drainage and epidural catheter on the fourth day. Discharge on the seventh day in an apiretic and asymptomatic patient. Waiting for histological examination.

Discussions

Castellani et all was the first author in Italy to describe 5 cases of radical cystectomy performed under continuous spinal

anesthesia, a technique that represents the natural evolution of that used by us (1). Numerous authors have shown excellent perioperative outcomes in cardio-vascular, orthopedic, pelvic and abdominal surgery. (2, 3, 4). It is also interesting to note that the entire procedure was conducted in opioid free mode without this having influenced the patient's algic symptoms in the intri and post-operative.. This is the first example described in Italy of open nephrectomy performed with this type of anesthesia and the excellent results obtained leads us to think we can apply it in future surgical interventions.

Conclusion

Our opinion is that this new anesthetic technique gives significant advantages to the patient, the main ones of which are to avoid endotracheal intubation with mechanical ventilation, curarization, reduction of the use of opioids. The eventual evolution (with special device) in Continuous Spinal Anesthesia (CSA) could lead to a further improvement of the procedure. Randomized and controlled clinical trials will be needed to demonstrate what we have said.

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18 maggio 2019

08:30 - 10:00

salaC

Comunicazioni 7 - Neoplasie della Vescica

sabato 18 maggio 2019

Moderatori: Giorgio Pomara, Carlo Introini

1. #127: XPRT BLADDER CANCER MONITOR IN THE FOLLOW UP OF PATIENTS AFFECTED BY NON MUSCLE INVASIVE BLADDER CANCER (NMIBC): AN UPDATE

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Objective

The Xpert Bladder Cancer Monitor kit is a new urinary marker test based on the evaluation of 5 targets mRNAs (ABL1, CRH, IGF2, UPK1B and ANXA10), overexpressed in patient with BC.

The aim of our study was to further evaluate the diagnostic accuracy of the Xpert BC Monitor test in the follow up of patients with history of NMIBC and to compare it with urinary cytology, cystoscopy and/or histology.

Materials and Methods

307 patients under follow up for NMIBC were included in this prospective study. Samples were analyzed with the Xpert BC Monitor kit and urinary cytology. Subsequently to urine collection, the patients underwent cystoscopy and if positive a TUR-B.

Cytologies were evaluated according to the Paris System of reporting cytology. The Xpert BC Monitor test was reported by the software as negative or positive (cut-off total LDA=0.5). Sensitivity, specificity, PPV and NPV of Xpert BC Monitor and cytology were calculated using cystoscopy or histology results, if available, as gold standard.

Results

Median age of the patients was 80 years (range 28-95). Patients were followed up for low grade (LG) NMIBC in 195 cases and for high grade (HG) in 112 cases. Two patients had to be excluded due to not diagnostic cytology and Xpert BC Monitor. Of the remaining 305 patients, 82 had tumour recurrence (62 LG, 20 HG). Overall sensitivity was 21.9 % (18/82) for cytology, 50% (41/82) for Xpert[®] BC Monitor and 51.2% (45/82) for the two tests combined. The sensitivity of cytology increased from 4.8% (3/62) in LG to 65% (13/20) in HG tumours whereas, for the Xpert[®] BC Monitor, the sensitivity was 41.6% (25/62) in LG and 80% (16/20) in HG tumours. Combined, cytology and Xpert[®] BC Monitor yielded an overall sensitivity of 41.9% (26/62) for LG and 90% (18/20) for HG tumours.

Overall specificity was 99.1% for cytology and 75.7% for Xpert[®] BC. PPV for cytology was 90% and for Xpert[®] BC Monitor 43.1% while NPV was similar for the 2 tests: 77.5% for cytology versus 80.5% for Xpert[®] BC Monitor.

Discussions

Our data confirm that the sensitivity of the Xpert BC Monitor Test is significantly higher than for cytology as previously reported.

Conclusion

The test performs very well in terms of specificity but cannot reach the extremely high value of cytology, PPV is significantly lower than for cytology, while NPV performs approximately the same for both tests.

2. #128: COMPARISON OF 2 NEWLY DEVELOPED BLADDER CANCER TESTS IN THE FOLLOW UP OF PATIENTS WITH NON MUSCLE INVASIVE BLADDER CANCER (NMIBC): PRELIMINARY RESULTS

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Objective

The limitations of cytology and cystoscopy in the diagnosis of bladder cancer (BC) have led to the development of new urine tests for the early detection of BC. The aim of this study was to compare the diagnostic value of 2 newly developed urine tests, the mRNA based Xpert BC Monitor and the DNA methylation based Bladder Epicheck in patients under follow-up.

Materials and Methods

76 patients (mean age 77 yrs) under follow up for NMIBC were studied prospectively. Samples were analyzed with the Bladder Epicheck Test, the Xpert BC Monitor and voided urinary cytology. Subsequently, the patients underwent cystoscopy and if cystoscopically positive, a transurethral resection of the bladder.

For the Bladder Epicheck Test a software calculates the EpiScore, a number between 0 and 100 representing the overall methylation level of the sample. If the EpiScore is equal or above 60 it is considered positive. The results of the Xpert BC Monitor are interpreted by the GeneXpert® Instrument System and given as LDA totals and Analyte Results on the Test Report. A cut-off is set at a LDA of >0.5.

Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of Bladder Epicheck, Xpert BC Monitor and cytology were calculated using cystoscopy/histology as gold standard.

Results

Of the 78 patients 12 (15.4%) had to be excluded due to insufficient DNA in the Bladder Epicheck Test. 18 out of 66 remaining patients had histologically verified BC of the bladder. 48/66 patients were negative cystoscopically and/or histologically. Of the 18 patients with BC 12 (66.6%) were found positive for Bladder Epicheck, 10 (55.5) for Xpert BC Monitor and 6 (33.3%) for cytology. The sensitivity of Bladder Epicheck increased from 60% for low grade (LG) to 87.5% in high grade (HG) tumours, for Xpert BC Monitor from 50% to 87.5%, respectively. Specificity was 77.1% (37/48) for Bladder Epicheck, 72.9% (35/48) for Xpert BC Monitor and 97.9% (47/48) for voided urinary cytology.

Discussions

Xpert BC Monitor is easy and fast to perform while the Bladder Epicheck requires dedicated technicians and is more time consuming. Both tests could be, however, of interest as an additional tool in the follow up of patients with NMIBC.

Conclusion

The Bladder Epicheck is superior to the Xpert BC Monitor in sensitivity and specificity. The sensitivity of both tests was significantly higher than for cytology but none of the both tests was able to reach the high specificity of cytology. Both tests could be, however, of interest as an additional tool in the follow up of patients with NMIBC, taking advantage of the high specificity of cytology and allowing to reduce the number of cystoscopies.

3. #31: THE TURIN POUCH: A CONTINENT CUTANEOUS URINARY DIVERSION WITH VERY LOW STOMA STENOSIS RATE AT LONG TERM FOLLOW UP

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Objective

Different continent cutaneous urinary diversions have been described. Some of these are based on the flap-valve principle using, for example, the appendix as efferent conduit (EC). However, one of the major problems during follow-up was related to the EC. These were described in average as catheterization problems in 20,3% of patients and as stomal stenosis in 19,5 % of the patients with flap valve based diversions. The Turin Pouch (TP) was developed to decrease the rate of the efferent channel (EC) stenosis. We present our long term follow-up for this cutaneous continent urinary diversion variant.

Materials and Methods

This is a retrospective series of patients who underwent TP between 2006 and 2018. The TP is a U-shaped pouch created by folding the distal ileum and right colon. The EC was conceived by the tubularization of 5 cm colonic wall with the use of a stapler. An EC-cutaneostomy was placed. All procedures were performed by the surgeon who developed this technique (GM). We evaluated different parameters such as functional outcomes, early and late complications.

Results

Since 2006, 38 consecutive patients underwent a TP procedure. The median age was 55 years (range: 25-75). Median operative time was 201 min (range:155-240), median reconstructive time was 61 min (range: 45-80), and median blood loss was 200 ml (range: 90-600). Hospitalization time was 15.3 days (range: 10-20). Median follow-up was 42 months (range: 6-127). Complete

24 hours continence was achieved in 34 (90%) patients. A sample of 47% of patients underwent urodynamic studies after 12 months showing a mean maximal pouch capacity of 494 ml (range: 360–720), mean end-filling pressure of 22,8 cmH₂O (range: 18–30), and mean EC closing pressure of 64,9 cmH₂O (range: 52–75).

The early complication rate was 13%: 3 (7,89%) patients had urosepsis, and 2 (5,26%) patients had urinary leakage from TP. Seven patients (18,42%) had pouch stones, three patients (7,89%) had ureteral stricture. Six (15,8%) patients reported difficulties in EC catheterization and 4 (10,5%) patients had stomal stenosis.

Discussions

An ideal continent cutaneous urinary diversion should store urine at low pressure, preserve upper urinary tract function, guarantee good continence, and, at the same time, be easily catheterized. Different bowel segments have been used to create continent pouches during the last 30 years. An important issue when realizing a continent urinary pouch is the EC, which is the major source of complications such as incontinence, stomal stenosis, and difficulty in catheterization.

Conclusion

The Turin pouch assured an acceptable complication rate. The TP seems to offer good functional results comparable to other pouch variants. It was developed to be able to personalize the position of the EC in order to facilitate the catheterization. From this perspective, EC and ureteral anastomosis-related complications were much lower than other pouch variants in literature.

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4. #173: FUNCTIONAL OUTCOMES OF ROBOT ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL PADUA ILEAL NEOBLADDER

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Objective

Despite the increasing popularity gained by Robot assisted radical cystectomy (RARC), extracorporeal urinary diversion is still the most performed approach. There is paucity of data about functional outcomes of RARC with intracorporeal ileal neobladder (iN). The aim of this study was to report mid-term functional outcomes of RARC-iN.

Materials and Methods

Our single center IRB approved bladder cancer database was queried for "RARC" and "iN". All patients included had a minimum follow-up length of 1 year ("treated up to October 2017"). Padua iN was performed. Baseline demographic, clinical, perioperative and pathologic data were collected and reported. Functional outcomes assessed were the following: renal function modification over time, neobladder stone formation rate, development of uretero-ileal anastomosis strictures, night- and day-time continence rates, and need for self-catheterization. Kaplan-Meier method was performed to compare day-time continence recovery probabilities between male and female cohorts; Continence rates were computed at 3,6,12 and 18 months after surgery and the log rank test was applied to assess statistical significance between two groups.

Results

Overall, 145 patients were included, 110 were male (75.8%). Median baseline estimated glomerular filtration rate (eGFR) was 83 ml/min (IQR 65.2-96.5). At a median follow-up of 26 months (IQR 13-45), actual eGFR was 64.2 ml/min (IQR 46-80).

The incidence of significant renal function deterioration (newly onset CKD stage $\geq 3b$) was 13.1%, while the overall incidence of renal function deterioration (newly onset CKD stage $\geq 3a$) was 34.4%. Neobladder stone formation occurred in 8 patients (5.5%), all of which successfully treated as outpatient endoscopic procedure. One-year incidence of ureteroileal strictures was 15.1%; 50% of these patients were treated with percutaneous nephrostomy and antegrade ureteral stenting, 50% underwent uretero-ileal reimplantation. Overall, 1-year day-time and night-time continence rates were 77.2% and 49.2%, respectively. Male and female patients had comparable day-time continence recovery probabilities ($p=0.51$). Overall, self-catheterization was adopted by 7 patients (4.8%, 3 male, 4 female).

Conclusion

We reported 1-yr complication outcomes and mid-term functional outcomes of RARC-iN after a standardized training program in a tertiary referral center. At mid-term evaluation, diversion related complications and functional outcomes of RARC-iN are encouraging and largely comparable to those of open series and RARC with extracorporeal diversion.

5. #179: IMPACT OF LEARNING CURVE ON PERIOPERATIVE, ONCOLOGIC AND FUNCTIONAL OUTCOMES OF ROBOT-ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL ILEAL NEOBLADDER

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Objective

Robot-assisted radical cystectomy (RARC) with intracorporeal orthotopic neobladder (iN) represents a challenging surgical procedure, requiring a skilled robotic team. Functional outcomes of RARC-iN were poorly reported in Literature and the impact of Learning curve on those outcomes remains to be addressed. The aim of this study was to assess the impact of learning curve on perioperative, oncologic and functional outcomes of a single center series of RARC with iN.

Materials and Methods

Internal IRB approved bladder cancer database was queried for RARC and iN.

The study population included all patients treated between January 2012 and October 2017, with at least 1-yr of follow-up. The entire cohort was divided in tertiles to assess the impact of learning curve on the outcomes evaluated, including Trifecta achieving, defined as the combination of daily urinary continence, no reoperations (neither post-operative complications Clavien ≥ 3 nor other RARC-iN related interventions) and recurrence-free status, all assessed at 1-yr. Categorical and continuous variables among the three subgroups were compared with Chi square and Kruskal-Wallis tests, respectively. Kaplan-Meier method was performed to compare Disease-free survival (DFS) and Day-time continence recovery probabilities between the tertiles. The log-rank test was applied to assess statistical significance between the groups.

Results

Overall, 137 patients were included. Baseline, preoperative and perioperative data distribution across tertiles were assessed.

Patients treated at the beginning of learning curve were significantly older ($p=0.004$). BMI, comorbidities and preoperative renal function were comparable across the tertiles (all $p \geq 0.24$). Mean operative time ($p<0.001$), incidence of low grade ($p=0.002$) and high grade ($p=0.001$) Clavien complications and mean hospital stay ($p=0.04$) decreased significantly over time. At Kaplan-Meier analysis the tertiles displayed comparable DFS (log-rank $p = 0.13$). Day-time continence recovery probability was significantly lower in the initial case series, and then remained stable over time (1-yr rate 68.4%, 89.8% and 87.5 for I, II and III tertile, respectively; log-rank $p=0.04$). Accordingly, Trifecta achievement was significantly higher in II and III tertiles compared to the first 45 patients ($p=0.01$).

Conclusion

We assessed the impact of learning curve on perioperative, oncologic and functional outcomes of a large series of patients who underwent RARC-iN a tertiary referral center. Despite the high yearly caseload and the significant experience of the entire robotic team, patients treated at the beginning of the learning curve are exposed to worse perioperative and functional results. Once standardized the procedure, complication rates and day-time continence recovery experienced a substantial improvement which remained stable in the following cases.

6. #187: LONG-TERM ONCOLOGIC OUTCOMES FOLLOWING ROBOT-ASSISTED RADICAL CYSTECTOMY (RARC) WITH TOTALLY INTRACORPOREAL URINARY DIVERSION (ICUD): A MULTICENTER STUDY

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Objective

We assessed 5-yr survival outcomes of patients who underwent RARC with ICUD at two Institutions.

Materials and Methods

we queried our prospectively maintained institutional databases for patients who underwent RARC with ICUD before October 2013. Baseline demographic clinical, perioperative, pathologic and survival data were collected. Kaplan-Meier method was performed to assess stage specific oncologic outcomes. DFS probabilities in the 2 centers were compared.

Results

Overall, 113 consecutive patients were included (Table 1). Overall, 5-yr disease-free survival (DFS), cancer-specific survival (CSS) and overall-survival (OS) probabilities were $58\pm 5\%$, $61\pm 5\%$ and $54\pm 5\%$, respectively. At Kaplan Meier analysis, AJCC stage was a significant predictor of DFS, CSS and OS probabilities (Figure 1; all $p < 0.001$). Stage specific DFS probabilities were comparable between centers (Figure 2; all $p > 0.3$).

Conclusion

We reported 5-yr oncologic outcomes of the largest cohort of patients treated with RARC & ICUD at two tertiary referral centers. Survival probabilities seem comparable across different Institutions.

7. #196: DEVELOPMENT OF A NOMOGRAM TO PREDICT ACHIEVEMENT OF TRIFECTA OUTCOMES IN PATIENTS RECEIVING ROBOT-ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL ORTHOTOPIC NEOBLADDER

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Objective

Robot-assisted radical cystectomy (RARC) with orthotopic neobladder (ON) is associated with heterogeneous surgical, functional and oncological outcomes. We propose a combination of three standardized and reproducible postoperative criteria (Trifecta) to optimize outcomes reporting after RARC with ON and we developed a nomogram to predict probability of achieving trifecta.

Materials and Methods

We defined the "trifecta" as the combination of daily urinary continence, no reoperations (meaning neither post-operative complications Clavien-Dindo ≥ 3 nor other surgical interventions related to RARC/ON, after discharge) and recurrence-free status, all assessed at one year. A total of 137 consecutive patients who underwent RARC with intracorporeal ON for bladder cancer were used to generate a nomogram predicting probability of achieving trifecta outcomes. The discrimination accuracy was measured by concordance index (CI). Calibration plot was generated with 200 bootstrap resampling.

A decision curve analysis was performed to assess the net benefit of the model.

Results

Overall, 137 patients were included in the analysis (Table 1). The trifecta was achieved by 72 (53%) patients. On multivariable logistic regression analysis, age, ASA score, body mass index and neoadjuvant chemotherapy were significant predictors of trifecta achievement. The developed nomogram had a 0.71 CI (Figure 1A) and was well calibrated (Figure 1B); on decision curve analysis, the net benefit of using the model was evident for probabilities ranging between 25% and 70% (Figure 1C). The small sample size and the lack of external validation are the main limitations of this study.

Conclusion

This newly defined trifecta is the first standardized and reproducible system specifically designed to provide a Comprehensive summary of global results after RARC-iN. The developed nomogram is an easy clinical tool to predict probability of trifecta achievement at 12-mo follow-up evaluation.

8. #197: SEX SPARING VS STANDARD ROBOT ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL PADUA ILEAL NEOBLADDER IN FEMALE: PERIOPERATIVE, ONCOLOGIC AND FUNCTIONAL OUTCOMES

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Objective

Despite the widespread use of Robot assisted radical cystectomy (RARC), there is paucity of data concerning outcomes of Sex-sparing RARC with intracorporeal ileal neobladder (iN) performed in female patients. The aim of this study was to compare perioperative, oncologic and functional outcomes of two cohorts of female patients who underwent either Sex-sparing or Standard RARC-iN.

Materials and Methods

Out of 47 patients included, 11 underwent sex-sparing RARC (23.4%). The two cohorts were homogeneous for all baseline, clinical and pathologic features (all $p \geq 0.14$), except for age, being sex-sparing patients significantly younger (47.1 vs 61.7 yrs, $p < 0.001$). Perioperative complications and hospital stay were comparable between groups ($p = 0.25$ and $p = 0.67$, respectively). With regard to functional outcomes, no significant differences were observed for last estimated glomerular filtration rate ($p = 0.64$), neobladder stone formation rate ($p = 0.93$) and 1-yr incidence of ureteroileal strictures ($p = 0.56$). Day-time continence recovery probability was significantly higher in Sex-sparing cohort (1-yr rate 90.9% vs 74%, log-rank $p = 0.02$). A trend towards a significantly higher adoption of intermittent self-catheterization was observed in Sex-sparing cohort ($p = 0.07$). At a median follow-up of 19.9 months, no patients of Sex-sparing cohort developed recurrences.

Results

Out of 47 patients included, 11 underwent sex-sparing RARC (23.4%). The two cohorts were homogeneous for all baseline, clinical and pathologic features (all $p \geq 0.14$), except for age, being sex-sparing patients significantly younger (47.1 vs 61.7 yrs, $p < 0.001$). Perioperative complications and hospital stay were comparable between groups ($p = 0.25$ and $p = 0.67$, respectively). With regard to functional outcomes, no significant differences were observed for last estimated glomerular filtration rate ($p = 0.64$), neobladder stone formation rate ($p = 0.93$) and 1-yr incidence of ureteroileal strictures ($p = 0.56$). Day-time continence recovery probability was significantly higher in Sex-sparing cohort (1-yr rate 90.9% vs 74%, log-rank $p = 0.02$). A trend towards a significantly higher adoption of intermittent self-catheterization was observed in Sex-sparing cohort ($p = 0.07$). At a median follow-up of 19.9 months, no patients of Sex-sparing cohort developed recurrences.

Conclusion

In select cohort of patients, Sex-sparing RARC-iN seems an oncologically sound procedure, associated with favorable perioperative and functional outcomes. Due to small sample size and intrinsic selection biases, oncologic and functional outcomes of sex-sparing RARC-iN should be assessed in larger cohorts, while outcomes comparison with conventional RARC-iN technique requires prospective randomized trials.

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9. #214: COMBINED REPORTING OF SURGICAL QUALITY, CANCER CONTROL AND FUNCTIONAL OUTCOMES OF ROBOT-ASSISTED RADICAL CYSTECTOMY WITH ORTHOTOPIC NEOBLADDER: THE TRIFECTA ACHIEVEMENT

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Objective

Robot-assisted radical cystectomy (RARC) with orthotopic neobladder (ON) is associated with heterogeneous surgical, functional and oncological outcomes. These are currently presented separately, while the success of this surgery depends on a combination of good cancer control, no surgery-related complications and urinary continence. We propose a combination of three standardized and reproducible postoperative criteria (Trifecta) to optimize outcomes reporting after RARC with ON.

Materials and Methods

Our prospectively maintained database of patients undergoing RARC with intracorporeal ON for bladder cancer (BC) was queried for baseline demographics, clinical, pathologic and peri-/post-operative data. We defined the "trifecta" as the combination of daily urinary continence, no reoperations (meaning neither post-operative complications Clavien-Dindo ≥ 3 nor other surgical interventions related to RARC/ON, after discharge) and recurrence-free status, all assessed at one year. Kaplan-Meier analysis was performed to assess the predictive role of trifecta outcomes on overall survival. Univariable and multivariable logistic regression analyses were performed to identify predictors of trifecta achievement.

Results

Overall, 137 patients were included in the analysis (Table 1); 72 (53%) achieved the trifecta (Figure 1). On Kaplan-Meier analysis, it was significantly associated with a better overall survival (OS) (Log Rank = 0.032). On univariable analysis, age, body mass index, neoadjuvant chemotherapy and pathological stage predicted trifecta; on multivariable regression, this association was only confirmed for age and stage (Table 2).

Conclusion

Our trifecta is the first standardized and reproducible system specifically designed to provide a comprehensive summary of global results after RARC with ON. Although external validation studies are required, this novel tool may optimize outcomes reporting and facilitate comparisons between various surgical technique.

10. #215: GLOBAL ASSESSMENT OF OUTCOMES OF ROBOT-ASSISTED RADICAL CYSTECTOMY WITH INTRACORPOREAL NEOBLADDER: TRIFECTA VS PENTAFACTA

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Objective

Robot-assisted radical cystectomy (RARC) with orthotopic neobladder (ON) is associated with heterogeneous surgical, oncologic and functional outcomes. Two different "pentafecta" have been already proposed to optimize outcomes reporting after cystectomy but their external validation is still missing and both did not include functional outcomes. In this study, we developed a new Trifecta in patients who underwent RARC with intracorporeal ON and we validated the available Pentafecta.

Materials and Methods

Our prospectively maintained bladder cancer (BC) database was queried for "RARC" and "intracorporeal ON". Only patients with a minimum 1-yr follow-up were included. The following data were collected and analyzed: baseline demographic, clinical, perioperative and pathologic data, functional and oncologic outcomes. The "trifecta" was defined as the combination of: daily urinary continence, recurrence-free status and Clavien-Dindo \geq 3-free status at 12 months. The Pentafecta designed by the PROMETRIC group (PentaPRO)¹ and the other proposed by the University of Southern California (PentaUSC)² were also calculated. A receiver operating characteristic (ROC) analysis was performed to assess the predictive accuracy of any model on 2-yr overall survival (OS) probability.

Results

Overall, 137 patients were included in the analysis (Table 1). The trifecta was achieved by 72 (53%) of them, while 64 (47%) and 99 (72%) obtained the PentaPRO and the PentaUSC, respectively (Figure 1). On ROC analysis, trifecta was the only significant predictor of 2-yr OS (AUC=0.685, 95%CI:0.55-0.82; p=0.018), while both PentaPRO (AUC=0.599; 95%CI: 0.453-0.764; p=0.205) and PentaUSC models (AUC=0.645; 95%CI: 0.492-0.798, p=0.064) were not significantly associated with 2-yr OS probability (Figure 2).

Conclusion

Our trifecta is the first standardized and reproducible system specifically designed to provide a comprehensive outcome assessment after RARC with ON. Although external validation studies are required, this novel tool may optimize outcomes reporting and, at 1-yr follow-up evaluation, can be used to design a patient tailored follow-up.

11. #115: ORTHOTOPIC ILEAL NEOBLADDER "SEMINAL SPARING"

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Objective

Radical cystectomy is the gold standard in infiltrating bladder tumors or in high risk superficial bladder tumors. In these cases, when possible, we prefer to perform an orthotopic bladder reconstruction. Looking for a less demolitive surgery, most conservative when possible, we evaluated the possibility of preservation of erectile and ejaculatory function in young male patients and older sexually active at the time of diagnosis. To achieve this goal it is necessary to save not only the neurovascular bundles but all deferento-vesicular structure. (1)

Materials and Methods

From 2000 to 2011 we perform 12 radical cystectomy with reconstruction of orthotopic ileal neobladder seminal sparing type. (2) The older patient was 55 years old and sexually active. The preoperative staging was performed by endoscopic resection of bladder, abdomino-pelvic TAC and total body bone scintigraphy. Histology of the resected lesions was in 8 cases an urothelial carcinoma of the bladder G3T1 relapsed, in three cases G3T2, in one case a leiomyosarcoma.

Results

The average age was 47 years (39-55). The average operating time was 230 minutes. 7 patients needed blood trasfusion to treat post surgical anemia. Pelvic lymphadenectomy did not show the presence of pathological lymph nodes, except in the case of leiomyosarcoma, where were positive bilateral external iliac lymphnodes. Histological examination of the prostate has confirmed.

The presence of benign hyperplasia in all cases. The mean follow up was 17.5 months (6-48). All patients were completely continent during the day at 6 months follow-up with night-time dribbling, hourly urination and evening water restriction. The resumption of sexual activity was possible in all and defined satisfactory in 4 (75%). 1 patient (25%) required oral therapy with sildenafil 100 mg on demand. 2 patients (25%) retained partial anterograde ejaculation.

Discussions

Radical pelvic surgery with orthotopic reconstruction of urinary tracts always involve the functional problems of continence and sexual function. Our seminal sparing cystectomy technique contemplates contemporary adenomectomy and it seems to be the gold standard in a single surgical time with good saving and excellent disobstruction. (6)

Some considerations can be performed to sexual function: the sparing of the nerves and all the seminal system ensures these

patients a sensational recovery of the erectile function that occurs very quickly. (2,3,4,5,7)

In our experience in one case it was necessary to use sildenafil, but it was the oldest patient in the series. The spare of deferents, seminal vesicles and prostate capsule ensure the permanence of ejaculation, however, which is retrograde due to the demolition of the proximal urethral sphincter.

Conclusion

In selected cases, the orthotopic reconstruction of ileal neobladder with "seminal sparing" can be an excellent technique for reconstruction and saving of sexual functions. The savings of deferents and the whole prostate block allows complete preservation of erectile function and partly of ejaculatory function.

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12. #116: UNDIVERSION: RECONVERSION OF URINARY DIVERSION

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Objective

Radical cystectomy is the gold standard in the treatment of bladder infiltrating tumors. This surgery always puts the surgeon on the question of the ideal urinary tract reconstruction : the best reconstruction is represented by the orthotopic neobladder, but is not always possible. (1)

Urinary diversion must also have three basic requirements: – complete oncological radicality, – to ensure a normal renal function, – to ensure a good quality of life. When some of these fail during follow-up, require re-conversion. (2)

Materials and Methods

Between 2000 and 2016 we performed 230 radical cystectomies. 38 patients underwent to a orthotopic reconstruction: 36 Vescica Ileale Padovana (VIP), 1 "S shaped" ileal neobladder seminal-sparing, 1 sigmoid neobladder. In 39 patients we performed an ileal conduit; In 6 bilateral ureterocutaneoneostomy, in 4 an ureterosigmoidostomy and in 3 a continent etherotopic ileo-cecal pouch. During the follow-up of these 230 patients we needed to reconvert 8 patients (8.9%), described in the Table.

Results

A patient undergoing conversion of VIP into the ileal conduit for anastomosis neoplastic recurrence had a postoperative dehiscence of ileo-ileal anastomosis. It has been subjected to reconfiguring the intestinal anastomosis. In 4 of the 8 reoperated patients, preoperative bilateral hydronephrosis was present with a different degree of renal failure: two of them required the use of preoperative percutaneous nephrostomy to normalize renal function parameters. Reconfiguration of the diversions has allowed normalization of renal function parameters in all these patients. Follow-up goes between 12 and 42 months (mean 29 months): Two patients with ureteral recurrence of disease died at 6 and 8 months after surgery; the other patients are still free of illness and report good compliance with the new diversion.

Discussions

The choice of urinary diversion after radical cystectomy should always be carried out with great care: parameters concerning the type and extension of the disease, the general conditions of the patient, and the appropriate local possibilities of reconstruction should be considered. (3,4,5,6,7,8)

Conclusion

The orthotopic neobladder is the gold standard in patients undergoing cystectomy who wants a satisfactory quality of life. The management of complications of urinary tract requires careful evaluation of the clinical and general problem related to urinary function and the patient itself, however, in performing such operations, technical knowledge and background versatility must be required which does not preclude the surgeon from choosing original and unexpected, in order to achieve the best solutions for the patient.

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13. #120: THE USE OF BUCCAL MUCOSA GRAFT IN FEMALE URETHRAL RECONSTRUCTIONS

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Objective

Urethral stricture in women is a rare entity, constituting only 4%-13% of female bladder outlet obstruction. The initial management of female urethral strictures has remained controversial. Female urethroplasty is a topic of increasing attention with multiple surgical approaches described. We present our outcomes of buccal mucosa graft substitution urethroplasty (BMG) in the treatment of non-obstructive female urethral stricture (FUS).

Materials and Methods

From November 2017 to June 2018, a total of 14 patients with US were reviewed. Four patients were treated with an urethroplasty using a BMG placed ventrally for proximal urethral stricture, and ten cases with BMG placed dorsally for distal urethral stricture. All patients were investigated with the same procedure: clinical history, physical examination, uroflowmetry, post-void residual urine, voiding urethrocytography. Cysto-urethroscopy was performed before surgery to insert a guidewire in the tight urethra. All patients referred poor quality of life, symptoms referred was dysuria, frequency, recurrent urinary tract infection, urinary retention, urge, dyspareunia. Three patients has suprapubic cystostomy because of the urinary retention.

Results

Median patients age was 51 yrs (range 33 to 68 yrs). Median stricture length was 1,5 cm (range 1 to 2,5 cm). Strictures were hiatrogenic in 10 patients (71,4%) and idiopathic in 4 (28,6%). Previous gynecologic surgery, urethral instrumentation and catheterization was the major causes. All patients underwent previous urethral dilatations. Four patients underwent previous urethroplasty.

Mean operative times resulted 70 minutes (range 45 to 90 minutes).

Mean graft length was 2 cm (range 1,5 to 3 cm).

Catheter was left in place for 3-4 weeks after surgery. Voiding urethrogram was performed only for the patients who underwent ventral BMG : no patients develop fistulae. No perioperative and postoperative complications occurred. No patients develop incontinence. The improvement urinary flow was observed in all patients.

Mean followup 10 months (range 6 to 13)

Discussions

More techniques has been described for urethroplasty.

The latest literature reported a three-dimensional reconstructions of the female urethral sphincter and described it as a superior, horseshoe or omega-shaped part that covers the urethra and an inferior part that covers the anterolateral aspect of the urethra and the lateral aspect of the vagina. To avoid sphincter damage we perform the dorsal BMG for the distal FUS and the ventral BMG for the proximal FUS. These two techniques was well defined for the male urethroplasty as the dorsal Asopa procedure and the ventral McAninch procedure resulted well adaptable for the FUS. The dorsal approach avoid the develop of urethral fistulae and there was no necessity of voiding cystourethrogram for catheter removal, while in the ventral approach the risk of fistulae is more high. The lateral colpotomy, the covering of the ventral BMG with a first layer of endopelvic fascia and a second layer of vaginal mucosa avoid the develop of fistulae.

Conclusion

Also, this study demonstrates, despite the low number of patients studied, that these two techniques for urethroplasty was a reliable, effective, to treat FUS, with no apparent secondary effects. Longer follow-up and comparisons of series of BMG urethroplasty for FUS are necessary to clarify the success rate in the long time.

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| | 85 | 8#197: | Comunicazioni 7 - Neoplasie Della Vescica | |
| | 86 | 9#214: | Comunicazioni 7 - Neoplasie Della Vescica | |
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| | 52 | 2#188 | Comunicazioni 5 - Ipb E Incontinenza | |
| | 41 | 3#217: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica | |
| | 54 | 5#212 | Comunicazioni 5 - Ipb E Incontinenza | |
| | 73 | 4#186: | Comunicazioni 6 - Carcinoma Renale | |
| | 74 | 5#205: | Comunicazioni 6 - Carcinoma Renale | |
| | 84 | 6#187: | Comunicazioni 7 - Neoplasie Della Vescica | |
| | 40 | 1#167: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica | |
| | 85 | 7#196: | Comunicazioni 7 - Neoplasie Della Vescica | |
| | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata | |
| | Carcano G. | 66 | 4#28: | Video 3 - Prostata E Dintorni |
| | Caroli P. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
| | Carrino M. | 6 | 5 #100: | Video 1 - Chirurgia Ricostruttiva |
| 10 | | 3#63 | Comunicazioni 1 - Andrologia E Calcolosi | |
| 11 | | 4#64: | Comunicazioni 1 - Andrologia E Calcolosi | |
| 12 | | 5 #67: | Comunicazioni 1 - Andrologia E Calcolosi | |
| 13 | | 6#78 | Comunicazioni 1 - Andrologia E Calcolosi | |
| 13 | | 7#68 | Comunicazioni 1 - Andrologia E Calcolosi | |
| 24 | | 6#76 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità | |
| 29 | | 11#66 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità | |
| 51 | | 1#57 | Comunicazioni 5 - Ipb E Incontinenza | |
| Casadei C. | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica | |
| Casale A. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica | |
| Casilio M. | 22 | 4#114 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità | |
| | 60 | 13#126 | Comunicazioni 5 - Ipb E Incontinenza | |
| | 61 | 14#118 | Comunicazioni 5 - Ipb E Incontinenza | |
| | 87 | 11#115: | Comunicazioni 7 - Neoplasie Della Vescica | |
| | 88 | 12#116: | Comunicazioni 7 - Neoplasie Della Vescica | |
| | Castoria G. | 45 | 8#251: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Catanzaro M.A. | 19 | 1#32 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità | |
| Catanzaro M.A. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica | |
| Celia A. | 41 | 3#217: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica | |
| Ceresoli F. | 57 | 10#104 | Comunicazioni 5 - Ipb E Incontinenza | |
| | 67 | 8#106: | Video 3 - Prostata E Dintorni | |
| Chiancone F. | 68 | 1#61: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali | |
| | 6 | 5 #100: | Video 1 - Chirurgia Ricostruttiva | |
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| | 11 | 4#64: | Comunicazioni 1 - Andrologia E Calcolosi | |
| | 12 | 5 #67: | Comunicazioni 1 - Andrologia E Calcolosi | |
| | 13 | 6#78 | Comunicazioni 1 - Andrologia E Calcolosi | |
| | 13 | 7#68 | Comunicazioni 1 - Andrologia E Calcolosi | |
| | 24 | 6#76 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità | |
| | 29 | 11#66 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità | |
| | 31 | 1#59 | Comunicazioni 3 - Carcinoma Della Prostata | |
| | 33 | 4#62 | Comunicazioni 3 - Carcinoma Della Prostata | |
| | 37 | 5#79 | Video 2 - Chirurgia Del Retroperitoneo | |
| | 51 | 1#57 | Comunicazioni 5 - Ipb E Incontinenza | |
| | 66 | 5#58: | Video 3 - Prostata E Dintorni | |
| | 71 | 1#60: | Comunicazioni 6 - Carcinoma Renale | |
| | Chiappo L. | 37 | 4#261 | Video 2 - Chirurgia Del Retroperitoneo |
| | Cianini E. | 37 | 4#261 | Video 2 - Chirurgia Del Retroperitoneo |
| 69 | | 3#264: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali | |

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| Ciccariello M. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Cindolo L. | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
| Colecchia M. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Collura D. | 37 | 3#253 | Video 2 - Chirurgia Del Retroperitoneo |
| | 38 | 6#268 | Video 2 - Chirurgia Del Retroperitoneo |
| | 54 | 6#72 | Comunicazioni 5 - Ipb E Incontinenza |
| | 55 | 7#73 | Comunicazioni 5 - Ipb E Incontinenza |
| | 69 | 4#270: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| | 82 | 3#31: | Comunicazioni 7 - Neoplasie Della Vescica |
| | 5 | 1 #123: | Video 1 - Chirurgia Ricostruttiva |
| | 89 | 13#120: | Comunicazioni 7 - Neoplasie Della Vescica |
| Colombo M. | 27 | 9#262 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Colozzi S. | 53 | 4#105 | Comunicazioni 5 - Ipb E Incontinenza |
| | 62 | 15#107 | Comunicazioni 5 - Ipb E Incontinenza |
| Comploj E. | 23 | 5#110 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Conteduca V. | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Coppola P. | 8 | 1#266 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 20 | 2#267 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 21 | 3#272 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 27 | 9#262 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 28 | 10#263 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 58 | 11#233 | Comunicazioni 5 - Ipb E Incontinenza |
| | 63 | 17#258 | Comunicazioni 5 - Ipb E Incontinenza |
| | 69 | 6#259: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| | 70 | 7#260: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| | 9 | 2#265 | Comunicazioni 1 - Andrologia E Calcolosi |
| Cordara G. | 8 | 1#266 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 63 | 17#258 | Comunicazioni 5 - Ipb E Incontinenza |
| Cordelli E. | 44 | 6#280: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Corti S. | 57 | 10#104 | Comunicazioni 5 - Ipb E Incontinenza |
| | 67 | 8#106: | Video 3 - Prostata E Dintorni |
| Costantini M. | 36 | 2#203 | Video 2 - Chirurgia Del Retroperitoneo |
| | 38 | 8#204 | Video 2 - Chirurgia Del Retroperitoneo |
| | 54 | 5#212 | Comunicazioni 5 - Ipb E Incontinenza |
| | 72 | 2#178: | Comunicazioni 6 - Carcinoma Renale |
| | 72 | 3#183: | Comunicazioni 6 - Carcinoma Renale |
| | 73 | 4#186: | Comunicazioni 6 - Carcinoma Renale |
| | 74 | 5#205: | Comunicazioni 6 - Carcinoma Renale |
| | 78 | 12#181: | Comunicazioni 6 - Carcinoma Renale |
| | 45 | 8#251: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Cotugno M. | 55 | 8#88 | Comunicazioni 5 - Ipb E Incontinenza |
| | 59 | 12#33: | Comunicazioni 5 - Ipb E Incontinenza |
| | 79 | 13#77: | Comunicazioni 6 - Carcinoma Renale |
| Cozzolino S. | 33 | 4#62 | Comunicazioni 3 - Carcinoma Della Prostata |
| Cursano M.C. | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| D'Elia C. | 23 | 5#110 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 81 | 1#127: | - Comunicazioni 7 - Neoplasie Della Vescica |
| | 82 | 2#128: | - Comunicazioni 7 - Neoplasie Della Vescica |
| De Concilio B. | 41 | 3#217: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| De Giorgi U. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
| | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| De Nunzio C. | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |

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| | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale |
| | 85 | 7#196: | Comunicazioni 7 - Neoplasie Della Vescica |
| De Paula U. | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata |
| De Sena G. | 33 | 4#62 | Comunicazioni 3 - Carcinoma Della Prostata |
| Dell'Acqua V. | 25 | 7#227 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 26 | 8#226 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Dell'Aglio M. | 79 | 13#77: | Comunicazioni 6 - Carcinoma Renale |
| Dell'Oglio P. | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
| | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale |
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| | 76 | 9#201: | Comunicazioni 6 - Carcinoma Renale |
| | 78 | 11#189: | Comunicazioni 6 - Carcinoma Renale |
| Derweesh I.. | 76 | 8#170: | Comunicazioni 6 - Carcinoma Renale |
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| | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale |
| | 84 | 6#187: | Comunicazioni 7 - Neoplasie Della Vescica |
| Descotes J.L. | 42 | 4#220: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Di Biase M. | 7 | 8 #274: | Video 1 - Chirurgia Ricostruttiva |
| | 16 | 9#229 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 65 | 1#277: | Video 3 - Prostata E Dintorni |
| Di Clemente L. | 7 | 9 #97: | Video 1 - Chirurgia Ricostruttiva |
| | 17 | 10#95 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 53 | 3#109 | Comunicazioni 5 - Ipb E Incontinenza |
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| | 62 | 15#107 | Comunicazioni 5 - Ipb E Incontinenza |
| Di Donato M. | 45 | 8#251: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Di Iorio V. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
| Di Lorenzo D. | 68 | 1#61: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| Di Mauro U. | 37 | 5#79 | Video 2 - Chirurgia Del Retroperitoneo |
| Di Pasquale A.B. | 67 | 9#98: | Video 3 - Prostata E Dintorni |
| | 7 | 9 #97: | Video 1 - Chirurgia Ricostruttiva |
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| | 56 | 9#96 | Comunicazioni 5 - Ipb E Incontinenza |
| | 53 | 4#105 | Comunicazioni 5 - Ipb E Incontinenza |
| | 62 | 15#107 | Comunicazioni 5 - Ipb E Incontinenza |
| Diambri M. | 7 | 8 #274: | Video 1 - Chirurgia Ricostruttiva |
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| Domenico T. | 37 | 4#261 | - Video 2 - Chirurgia Del Retroperitoneo |
| Eun D. | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
| | 76 | 8#170: | Comunicazioni 6 - Carcinoma Renale |
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| | 13 | 6#78 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 29 | 11#66 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 33 | 4#62 | Comunicazioni 3 - Carcinoma Della Prostata |
| | 37 | 5#79 | Video 2 - Chirurgia Del Retroperitoneo |
| | 66 | 5#58: | Video 3 - Prostata E Dintorni |
| | 68 | 1#61: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |

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| Fabiano M. | 71 | 1#60: | Comunicazioni 6 - Carcinoma Renale |
| | 31 | 1#59 | Comunicazioni 3 - Carcinoma Della Prostata |
| Fandella A. | 43 | 5#269: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| | 49 | 13#271: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Faraone N. | 37 | 3#253 | Video 2 - Chirurgia Del Retroperitoneo |
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| Farneti A. | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata |
| Fasbender Iacobitti M. | 10 | 3#63 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 11 | 4#64: | Comunicazioni 1 - Andrologia E Calcolosi |
| | 12 | 5 #67: | Comunicazioni 1 - Andrologia E Calcolosi |
| | 13 | 6#78 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 13 | 7#68 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 24 | 6#76 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Fedelini M. | 37 | 5#79 | Video 2 - Chirurgia Del Retroperitoneo |
| | 71 | 1#60: | Comunicazioni 6 - Carcinoma Renale |
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| | 31 | 1#59 | Comunicazioni 3 - Carcinoma Della Prostata |
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| Fedelini P. | 10 | 3#63 | Comunicazioni 1 - Andrologia E Calcolosi |
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| Ferraiuolo M. | 37 | 5#79 | Video 2 - Chirurgia Del Retroperitoneo |
| Ferrara V. | 16 | 9#229 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 7 | 8 #274: | Video 1 - Chirurgia Ricostruttiva |
| | 65 | 1#277: | Video 3 - Prostata E Dintorni |
| Ferretti S. | 30 | 12#129 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Ferriero M.C. | 78 | 12#181: | Comunicazioni 6 - Carcinoma Renale |
| | 38 | 9#194: | Video 2 - Chirurgia Del Retroperitoneo |
| | 36 | 1#175 | Video 2 - Chirurgia Del Retroperitoneo |
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| | 73 | 4#186: | Comunicazioni 6 - Carcinoma Renale |
| | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata |
| | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
| | 36 | 2#203 | Video 2 - Chirurgia Del Retroperitoneo |
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| | 52 | 2#188 | Comunicazioni 5 - Ipb E Incontinenza |
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| Filauri P. | 62 | 15#107 | Comunicazioni 5 - Ipb E Incontinenza |
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| | 28 | 10#263 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 58 | 11#233 | Comunicazioni 5 - Ipb E Incontinenza |
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| Flammia R.S. | 83 | 4#173: | Comunicazioni 7 - Neoplasie Della Vescica |
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| | 72 | 2#178: | Comunicazioni 6 - Carcinoma Renale |
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| | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
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| 73 | 4#186: | Comunicazioni 6 - Carcinoma Renale | |
| 76 | 9#201: | Comunicazioni 6 - Carcinoma Renale | |
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| 85 | 7#196: | - Comunicazioni 7 - Neoplasie Della Vescica | |
| Fntonini F. | 53 | 4#105 | Comunicazioni 5 - Ipb E Incontinenza |
| Forte V. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Franco G. | 67 | 7#119: | Video 3 - Prostata E Dintorni |
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| Franco M. | 6 | 4 #284: | Video 1 - Chirurgia Ricostruttiva |
| Gallucci M. | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale |
| | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale |
| | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
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| | 38 | 8#204 | Video 2 - Chirurgia Del Retroperitoneo |
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| 73 | 4#186: | Comunicazioni 6 - Carcinoma Renale | |
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| Garisto J. | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
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| | 78 | 11#189: | Comunicazioni 6 - Carcinoma Renale |
| | Germinal F. | 37 | 3#253 |
| 38 | | 6#268 | Video 2 - Chirurgia Del Retroperitoneo |
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| Gerolimetto C. | | 7 | 7 #273: |
| | 67 | 6#89: | Video 3 - Prostata E Dintorni |
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| | Ghidini N. | 15 | 8#103: |
| 34 | | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
| Giacinti S. | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
| Giacobbe A. | 37 | 3#253 | Video 2 - Chirurgia Del Retroperitoneo |
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| Giannella R. | 31 | 1#59 | Comunicazioni 3 - Carcinoma Della Prostata |
| Giannubilo W. | 7 | 8 #274: | Video 1 - Chirurgia Ricostruttiva |
| | 16 | 9#229 | Comunicazioni 1 - Andrologia E Calcolosi |
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| Gill I. | 84 | 6#187: | Comunicazioni 7 - Neoplasie Della Vescica |
| Gomellini S. | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata |
| Gontero P. | 5 | 2 #230: | Video 1 - Chirurgia Ricostruttiva |
| | 6 | 3 #232: | Video 1 - Chirurgia Ricostruttiva |
| | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
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| Grillo M. | 20 | 2#267 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 58 | 11#233 | Comunicazioni 5 - Ipb E Incontinenza |
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| Grosso G. | 65 | 2#294: | Video 3 - Prostata E Dintorni |
| Guaglianone S. | 36 | 2#203 | - Video 2 - Chirurgia Del Retroperitoneo |
| | 38 | 8#204 | - Video 2 - Chirurgia Del Retroperitoneo |
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| | 73 | 4#186: | Comunicazioni 6 - Carcinoma Renale |
| | 74 | 5#205: | Comunicazioni 6 - Carcinoma Renale |
| | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
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| | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale |
| | 78 | 11#189: | Comunicazioni 6 - Carcinoma Renale |
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| 85 | 7#196: | Comunicazioni 7 - Neoplasie Della Vescica | |
| 85 | 8#197: | Comunicazioni 7 - Neoplasie Della Vescica | |
| 86 | 9#214: | Comunicazioni 7 - Neoplasie Della Vescica | |
| 87 | 10#215: | Comunicazioni 7 - Neoplasie Della Vescica | |
| 36 | 1#175 | Video 2 - Chirurgia Del Retroperitoneo | |
| Guazzieri S. | 49 | 13#271: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Guidoni E. | 49 | 13#271: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Guidotti M. | 67 | 6#89: | Video 3 - Prostata E Dintorni |
| Gunelli R. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
| | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |

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| Gurioli G. | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Hampton L.. | 76 | 8#170: | Comunicazioni 6 - Carcinoma Renale |
| Hanspeter E. | 23 | 5#110 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 81 | 1#127: | Comunicazioni 7 - Neoplasie Della Vescica |
| | 82 | 2#128: | Comunicazioni 7 - Neoplasie Della Vescica |
| Huqi D. | 23 | 5#110 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Hussein Y. | 57 | 10#104 | Comunicazioni 5 - Ipb E Incontinenza |
| | 67 | 8#106: | Video 3 - Prostata E Dintorni |
| Iacono F. | 6 | 4 #284: | Video 1 - Chirurgia Ricostruttiva |
| Iazzolino E. | 9 | 2#265 | Comunicazioni 1 - Andrologia E Calcolosi |
| Ietto G. | 66 | 4#28: | Video 3 - Prostata E Dintorni |
| Impedovo S. | 17 | 11#121: | Comunicazioni 1 - Andrologia E Calcolosi |
| Infranco A. | 30 | 12#129 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Intilla O. | 7 | 6 #247: | Video 1 - Chirurgia Ricostruttiva |
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| Juan G. | 76 | 8#170: | Comunicazioni 6 - Carcinoma Renale |
| Kaouk J. | 73 | 4#186: | Comunicazioni 6 - Carcinoma Renale |
| | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
| | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale |
| | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale |
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| Kumar P. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Kurti M. | 37 | 3#253 | - Video 2 - Chirurgia Del Retroperitoneo |
| | 38 | 6#268 | - Video 2 - Chirurgia Del Retroperitoneo |
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| La Ciura P. | 21 | 3#272 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Langella N.A. | 24 | 6#76 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 29 | 11#66 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Lanocita R. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Larcher A. | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale |
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| | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
| Larosa M. | 30 | 12#129 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Leonardo C. | 7 | 7 #273: | Video 1 - Chirurgia Ricostruttiva |
| | 67 | 6#89: | Video 3 - Prostata E Dintorni |
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| Leone P. | 53 | 4#105 | Comunicazioni 5 - Ipb E Incontinenza |
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| Leucci G. | 37 | 3#253 | - Video 2 - Chirurgia Del Retroperitoneo |
| | 82 | 3#31: | - Comunicazioni 7 - Neoplasie Della Vescica |
| Liberale F. | 37 | 4#261 | - Video 2 - Chirurgia Del Retroperitoneo |
| | 69 | 3#264: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| Lolli C. | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Lombardo R. | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale |
| | 85 | 7#196: | Comunicazioni 7 - Neoplasie Della Vescica |
| Londoni V. | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata |
| Luperto E. | 44 | 6#280: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Macchi A. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Maffei M. | 23 | 5#110 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Maglia A. | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata |
| Magnani T. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Maisto E. | 11 | 4#64: | Comunicazioni 1 - Andrologia E Calcolosi |
| | 12 | 5 #67: | Comunicazioni 1 - Andrologia E Calcolosi |
| | 13 | 7#68 | Comunicazioni 1 - Andrologia E Calcolosi |
| Malossini G. | 40 | 1#167: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| | 42 | 4#220: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Marano A. | 17 | 11#121: | Comunicazioni 1 - Andrologia E Calcolosi |
| Marconi A. | 16 | 9#229 | Comunicazioni 1 - Andrologia E Calcolosi |
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| Marenghi C. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Mari A. | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale |
| | 76 | 9#201: | Comunicazioni 6 - Carcinoma Renale |
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| Martens D. | 59 | 12#33: | Comunicazioni 5 - Ipb E Incontinenza |
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| Martinelli R. | 67 | 7#119: | Video 3 - Prostata E Dintorni |
| Masciovecchio S. | 7 | 9 #97: | Video 1 - Chirurgia Ricostruttiva |
| | 17 | 10#95 | Comunicazioni 1 - Andrologia E Calcolosi |
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| Massa S. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
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| | 73 | 4#186: | Comunicazioni 6 - Carcinoma Renale |
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| | Matarozzi C. | 63 | 17#258 |
| Matteucci F. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
| Meccariello C. | 66 | 5#58: | Video 3 - Prostata E Dintorni |
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| Messina A. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Mian C. | 81 | 1#127: | Comunicazioni 7 - Neoplasie Della Vescica |
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| Migliavacca G. | 79 | 13#77: | Comunicazioni 6 - Carcinoma Renale |
| Milesi R. | 57 | 10#104 | Comunicazioni 5 - Ipb E Incontinenza |
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| Minervini A. | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
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| | 76 | 8#170: | Comunicazioni 6 - Carcinoma Renale |
| | 76 | 9#201: | Comunicazioni 6 - Carcinoma Renale |
| | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale |
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| | Minisola F. | 36 | 1#175 |
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| 86 | 9#214: | Comunicazioni 7 - Neoplasie Della Vescica | |
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| Misuraca L. | 36 | 1#175 | Video 2 - Chirurgia Del Retroperitoneo |

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| | Moiso A. | 8 | 1#266 | Comunicazioni 1 - Andrologia E Calcolosi |
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| Molinaro E. | 7 | 7 #273: | Video 1 - Chirurgia Ricostruttiva | |
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| Mondino P. | 8 | 1#266 | Comunicazioni 1 - Andrologia E Calcolosi | |
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| | 28 | 10#263 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità | |
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| Montorsi F. | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale | |
| | 76 | 8#170: | Comunicazioni 6 - Carcinoma Renale | |
| | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale | |
| | 78 | 11#189: | Comunicazioni 6 - Carcinoma Renale | |
| | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale | |
| | 76 | 9#201: | Comunicazioni 6 - Carcinoma Renale | |
| Moretti E. | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata | |
| Morlino S. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica | |
| Mottrie A. | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale | |
| | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale | |
| | 76 | 8#170: | Comunicazioni 6 - Carcinoma Renale | |
| | 76 | 9#201: | Comunicazioni 6 - Carcinoma Renale | |
| | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale | |
| | 78 | 11#189: | Comunicazioni 6 - Carcinoma Renale | |
| Mozzer P. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica | |
| Muto G. | 37 | 3#253 | Video 2 - Chirurgia Del Retroperitoneo | |
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| | 55 | 7#73 | Comunicazioni 5 - Ipb E Incontinenza | |
| 82 | 3#31: | Comunicazioni 7 - Neoplasie Della Vescica | | |

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| Muto G.L. | 69 | 4#270: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
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| | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Nandanani N. | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale |
| Napodano G. | 7 | 6 #247: | Video 1 - Chirurgia Ricostruttiva |
| | 38 | 7#246 | Video 2 - Chirurgia Del Retroperitoneo |
| | 32 | 3#248 | Comunicazioni 3 - Carcinoma Della Prostata |
| | 47 | 10#240: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| | 48 | 11#249: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| | 49 | 12#244: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Nicolai N. | 19 | 1#32 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Noris Chiorda B. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Oderda M. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| | 42 | 4#220: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Olianas R. | 6 | 5 #100: | Video 1 - Chirurgia Ricostruttiva |
| Pacchetti A. | 66 | 4#28: | Video 3 - Prostata E Dintorni |
| Paganelli G. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
| Pagano M. | 28 | 10#263 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Palermo S.M. | 23 | 5#110 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Palminteri E. | 5 | 2 #230: | Video 1 - Chirurgia Ricostruttiva |
| | 6 | 3 #232: | Video 1 - Chirurgia Ricostruttiva |
| Palombi V. | 69 | 5#117: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| Palumbo F. | 17 | 11#121: | Comunicazioni 1 - Andrologia E Calcolosi |
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| Paolini B. | 19 | 1#32 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Papalia R. | 44 | 6#280: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
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| | 54 | 6#72 | Comunicazioni 5 - Ipb E Incontinenza |
| | 37 | 3#253 | Video 2 - Chirurgia Del Retroperitoneo |
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| | 69 | 4#270: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| | 82 | 3#31: | Comunicazioni 7 - Neoplasie Della Vescica |
| | Parazzini F. | 15 | 8#103: |
| Pasta A. | 25 | 7#227 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 26 | 8#226 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Peltier A. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| | 42 | 4#220: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Pepe P. | 43 | 5#269: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Persico F. | 10 | 3#63 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 12 | 5 #67: | Comunicazioni 1 - Andrologia E Calcolosi |
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| | 31 | 1#59 | Comunicazioni 3 - Carcinoma Della Prostata |
| | Pescatori E. | 15 | 8#103: |

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| Petrelli F. | 57 | 10#104 | Comunicazioni 5 - Ipb E Incontinenza |
| Piazza S. | 15 | 8#103: | Comunicazioni 1 - Andrologia E Calcolosi |
| Piechoud T. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| | 42 | 4#220: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Pirola G.M. | 66 | 4#28: | Video 3 - Prostata E Dintorni |
| Pisanti F. | 22 | 4#114 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 60 | 13#126 | Comunicazioni 5 - Ipb E Incontinenza |
| | 61 | 14#118 | Comunicazioni 5 - Ipb E Incontinenza |
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| | 88 | 12#116: | Comunicazioni 7 - Neoplasie Della Vescica |
| Polara A. | 65 | 2#294: | Video 3 - Prostata E Dintorni |
| Polledro P. | 27 | 9#262 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 28 | 10#263 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Porpiglia F. | 76 | 8#170: | Comunicazioni 6 - Carcinoma Renale |
| | 5 | 2 #230: | Video 1 - Chirurgia Ricostruttiva |
| | 6 | 3 #232: | Video 1 - Chirurgia Ricostruttiva |
| | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
| | 77 | 10#192: | Comunicazioni 6 - Carcinoma Renale |
| | 78 | 11#189: | Comunicazioni 6 - Carcinoma Renale |
| | 75 | 7#191: | Comunicazioni 6 - Carcinoma Renale |
| | 76 | 9#201: | Comunicazioni 6 - Carcinoma Renale |
| Potenzoni M. | 55 | 8#88 | Comunicazioni 5 - Ipb E Incontinenza |
| | 79 | 13#77: | Comunicazioni 6 - Carcinoma Renale |
| Pradeep K. | 42 | 4#220: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Prati A. | 55 | 8#88 | Comunicazioni 5 - Ipb E Incontinenza |
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| Preto M. | 5 | 2 #230: | Video 1 - Chirurgia Ricostruttiva |
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| Proietti F. | 67 | 6#89: | Video 3 - Prostata E Dintorni |
| Pucci L. | 6 | 5 #100: | Video 1 - Chirurgia Ricostruttiva |
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| | 24 | 6#76 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 29 | 11#66 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 51 | 1#57 | Comunicazioni 5 - Ipb E Incontinenza |
| | 71 | 1#60: | Comunicazioni 6 - Carcinoma Renale |
| Puglisi M. | 40 | 1#167: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Pulvirenti M. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
| Pycha A. | 23 | 5#110 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
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| | 81 | 1#127: | Comunicazioni 7 - Neoplasie Della Vescica |
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| Quaranta S. | 69 | 3#264: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| | 37 | 4#261 | Video 2 - Chirurgia Del Retroperitoneo |
| Rancati T. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Ranieri G. | 7 | 9 #97: | Video 1 - Chirurgia Ricostruttiva |
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| | 53 | 3#109 | Comunicazioni 5 - Ipb E Incontinenza |

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| Rapisarda S. | 65 | 2#294: | Video 3 - Prostata E Dintorni |
| Realfonso T. | 7 | 6 #247: | Video 1 - Chirurgia Ricostruttiva |
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| Ricapito V.D. | 17 | 11#121: | Comunicazioni 1 - Andrologia E Calcolosi |
| Riccardo F. | 6 | 4 #284: | Video 1 - Chirurgia Ricostruttiva |
| Roche J.B. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Rolla M. | 30 | 12#129 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Romano G. | 7 | 9 #97: | Video 1 - Chirurgia Ricostruttiva |
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| | 67 | 9#98: | Video 3 - Prostata E Dintorni |
| | 62 | 15#107 | Comunicazioni 5 - Ipb E Incontinenza |
| Romeo A. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
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| Rossi R. | 8 | 1#266 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 21 | 3#272 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 27 | 9#262 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 63 | 17#258 | Comunicazioni 5 - Ipb E Incontinenza |
| | 9 | 2#265 | Comunicazioni 1 - Andrologia E Calcolosi |
| | 20 | 2#267 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 21 | 3#272 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 27 | 9#262 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 28 | 10#263 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
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| | 63 | 17#258 | Comunicazioni 5 - Ipb E Incontinenza |
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| | 70 | 7#260: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| Rouprèt M. | 41 | 2#207: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Ruffo A. | 6 | 4 #284: | Video 1 - Chirurgia Ricostruttiva |
| Salaris C. | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Salomoni U. | 34 | 6#221 | Comunicazioni 3 - Carcinoma Della Prostata |
| Salvioni R. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Sampalmieri M. | 7 | 7 #273: | Video 1 - Chirurgia Ricostruttiva |
| | 67 | 6#89: | Video 3 - Prostata E Dintorni |
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| Sanguineti G. | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata |
| Sannino S. | 24 | 6#76 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| Sanseverino R. | 48 | 11#249: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
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| Saracino G.A. | 17 | 11#121: | Comunicazioni 1 - Andrologia E Calcolosi |
| Saredi G. | 66 | 4#28: | Video 3 - Prostata E Dintorni |
| Savino A. | 79 | 13#77: | Comunicazioni 6 - Carcinoma Renale |
| Sawavely N. | 74 | 6#199: | Comunicazioni 6 - Carcinoma Renale |
| Scarpi E. | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Schepisi G. | 44 | 7#239: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Schettini M. | 22 | 4#114 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 60 | 13#126 | Comunicazioni 5 - Ipb E Incontinenza |
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| Schips L. | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
| Schwienbacher C. | 81 | 1#127: | Comunicazioni 7 - Neoplasie Della Vescica |
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| Sedigh O. | 5 | 2 #230: | Video 1 - Chirurgia Ricostruttiva |
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| Simone G. | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
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| | 74 | 5#205: | Comunicazioni 6 - Carcinoma Renale |
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| Soda P. | 44 | 6#280: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Sortino G. | 16 | 9#229 | Comunicazioni 1 - Andrologia E Calcolosi |
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| Stagni S. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |

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| Stanojevic N. | 6 | 4 #284: | Video 1 - Chirurgia Ricostruttiva |
| Stefanucci M. | 22 | 4#114 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
| | 60 | 13#126 | Comunicazioni 5 - Ipb E Incontinenza |
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| Tafa A. | 25 | 7#227 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
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| Tagliatella D. | 69 | 3#264: | Video 4 - Chirurgia Mini Invasiva Delle Neoplasie Uroteliali |
| Tema G. | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
| Terrone C. | 66 | 4#28: | Video 3 - Prostata E Dintorni |
| Tesei A. | 45 | 8#251: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Tesone A. | 46 | 9#130: | Comunicazioni 4 - Carcinoma Della Prostata - Diagnostica |
| Torelli T. | 19 | 1#32 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
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| Trenti E. | 23 | 5#110 | Comunicazioni 2 - Tumori Del Pene E Altre Rarità |
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| Trovò M.. | 32 | 2#195 | Comunicazioni 3 - Carcinoma Della Prostata |
| Tubaro A. | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
| Tuderti G. | 34 | 5#172 | Comunicazioni 3 - Carcinoma Della Prostata |
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