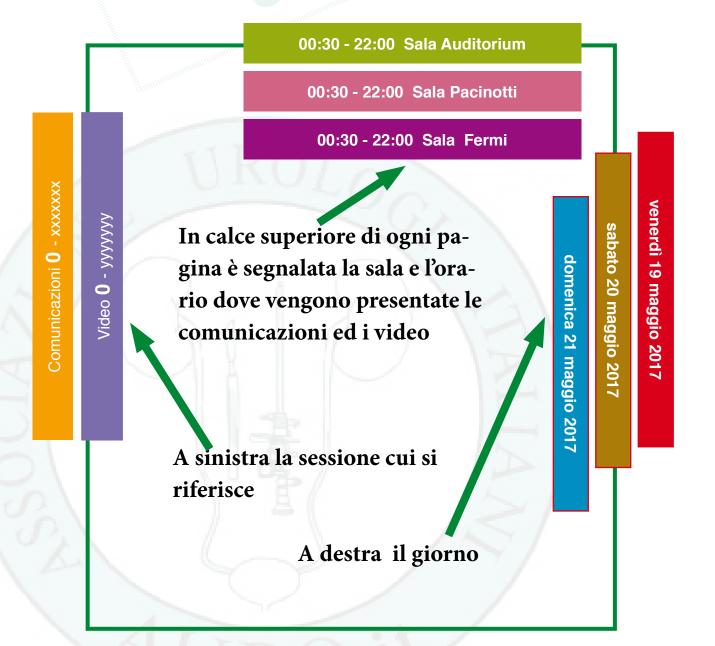


# Istruzioni per la consultazione degli abstracts

- Alle pagine 3 trovate *l'indice*: contiene l'indice delle sessioni, e quindi degli abstract, presentati nel giorno.
- 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.



2

## INDICE

## venerdì 19 maggio 2017 da pagina 6 a pagina 59:

Comunicazioni 1 - 14: 30 -16:00	pag. 4
Comunicazioni 2 - 14: 30 -16:00	pag. 16
Video 1 - 16:00 - 17:30	pag. 29
Comunicazioni 3 - 16:00 - 17:30	pag. 32
Comunicazioni 4 - 16:00 - 17:30	pag. 44

## sabato 20 maggio 2017 *da pagina 60 a pagina 99:*

Comunicazioni 5 - 16:00 - 17:30	pag. 55
Comunicazioni 6 - 17:30 - 19:00	pag. 64
Comunicazioni 7 - 17:30 - 19:00	pag. 75
Video 2 - 17:30 - 19:00	pag. 85

## domenica 21 maggio 2017 *da pagina 100 a pagina 107:*

Video 3 - 09:00 - 10:00	pag. 8	88
Video 4 - 09:00 - 10:00	pag. 9	91
Video 5 - 09:00 - 10:00	pag. 9	93

....fine a pag 95

# 19 maggio 2017 sala Pacinotti

# 14:30 - 16:00

## Comunicazioni 1 -Bersaglio Prostata

#### Moderatori: F. Curto, F. Di Tonno, E. Mereu

## **1.** #159: TRENDS IN PSA TESTING, PROSTATE BIOPSIES AND RADICAL PROSTATECTOMY PROCEDURES IN MARCHE REGION

#### E. Caraceni<sup>1</sup>, D. Mazzaferro<sup>1</sup>, L. Leone<sup>2</sup>, M. Tallè<sup>2</sup>, A.B. Galosi<sup>2</sup>

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#### Objective

Nowadays the use of PSA in clinical practice is a question of matter. In particular PSA is not always tested with accuracy and according to latest recommendations (1-2). Clinical consequences of PSA testing could be prostate biopsy and radical prostatectomy (2).

In Italy from 2010 reflex PSA is daily used in clinical practice (for PSA value between 2 ng/ml and 10 ng/ml PSA free is automatically computed).

In Marche Region PSA reflex has been used since July 2012 and, starting from late 2014, the Region has provided a reduction of PSA free cost.

Aim of the study was to determine the trend of regional employment of PSA total and free/total ratio testing; to evaluate the effect upon sanitary costs and its consequences in terms of number of prostate biopsy and radical prostatectomy. Materials and Methods

We analyzed data coming from Marche Region about the employment of free/total PSA ratio and reflex PSA from 2010 to 2014, divided per age groups. In the same period we analyzed the number of US-guided prostate biopsies and radical prostatectomy performed.

#### Results

The number of total and free PSA testing decreased of 43.5% and 35.3%, respectively, followed by a continuous increasing of reflex PSA up to 44% in the 2011-2014 period.

Even considering the more frequent use of reflex PSA, we observed a reduction of 50000 PSA testing.

On the other hand prostate biopsy showed an increasing of 300 procedures per year until 2014, while during the same period radical prostatectomy performed in Marche Region or in other Italian Region on Marche inhabitants (passive mobility) showed a decreasing of 100 procedures.

#### Discussions

The regional trend of PSA testing has been decressing, also because of regional sanitary administration choices; nevetheless the trend could be bettered.

The lack of biopsies decreasing in the 2011-14 period could be due to more accuracy PSA testing.

The decrease of radical prostatectomy procedures could be explained with a better comprehension of prostate cancer biological behavior that leaded to less aggressive and watchful approaches; according to this, PSA testing reduction is only partially involved. Conclusion

PSA testing has been largely overused especially in age groups in which it should be avoided (2-3-4-5).

Valid conclusions will be obtained by ongoing observation of the trends in years to come.

#### References

1. Opportunistic prostate-specific antigen screening in Italy: 6 years of monitoring from the italian general practice database G.G. d'Ambrosio, S. Campo, M. Cancian, S. Pecchioli and G. Mazzaglia E.Journal Cancer Prevention 2010, Vol.19 N.6; 413-416

Comunicazioni 1 - Bersaglio Prostata

#### 14:30 - 16:00 Sala Pacinotti

- 2. EAU Guidelines 2016; Prostate cancer
- 3. Vedel I, Puts MTE, Monette M, Monette J, Bergman H: The decision-making process in prostate cancer screening in primary care with a prostatespecific antigen: A systematic review. J Geriatr Oncol 2011, 2011. doi:http://dx.doi. org/10.1016/j.jgo.2011.04.001.
- 4. Djulbegovic M, Beyth RJ, Neuberger MM, Stoffs TL, Vieweg J, Djulbegovic B, Dahm P: Screening for prostate cancer: systematic review and meta-analysis of randomised controlled trials. BMJ 2010, 2010. doi:http://dx.doi.org/10.1136/ bmj.c4543
- 5. Doctors' perspectives on PSA testing illuminate established differences in prostate cancer screening rates between Australia and the UK: a qualitative study. Pickles K, et al. BMJ Open 2016;6:e011932. doi:10.1136/bmjopen-2016-011932

## **2.** #52: MRI-BASED NOMOGRAM TO PREDICT THE PROBABILITY OF PROSTATE CANCER DIAGNOSIS WITH MRI-US FUSION BIOPSY

## G. Simone<sup>1</sup>, M. Ferriero<sup>1</sup>, E. Altobelli<sup>2</sup>, A. Giacobbe<sup>3</sup>, L. Benecchi<sup>4</sup>, G. Tuderti<sup>1</sup>, L. Misuraca<sup>1</sup>, F. Minisola<sup>1</sup>, S. Guaglianone<sup>1</sup>, D. Collura<sup>3</sup>, G. Muto<sup>2</sup>, M. Gallucci<sup>1</sup>, R. Papalia<sup>5</sup>

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#### Objective

The wide diffusion of multiparametric magnetic resonance imaging (MRI) has dramatically modified the scenario of prostate cancer (PCa) diagnosis. The detection rate of MRI-ultrasound (US) fusion biopsy increased as well as the need for an extended prostate biopsy sampling with saturation biopsy decreased. The aim of this study was to develop, internally validate and calibrate a nomogram to predict the probability of detecting a prostate cancer.

#### Materials and Methods

Prospectively collected data from 3 tertiary referral center series of 475 consecutive patients who underwent MRI-US fusion biopsy using the Koelis system were used to build the nomogram. A logistic regression model is created to identify predictors of PCa diagnosis with MRI-US fusion biopsy. Predictive accuracy was quantified using the concordance index (CI). Internal validation with 200 bootstrap resampling and calibration plot were performed.

#### Results

Mean age was 66.3 yrs (± 7.98) and mean PSA levels were 9.8 ng/mL(±7.98). The overall PCa detection rate was 57.4%.

Age, PSA serum levels, PI-RADS score at MRI report, number of targeted and number of systematic cores taken were included in the model (Figure 1).Predictive accuracy was 0.82. On internal validation the CI was 0.81 and predicted probability was well calibrated (Figure 2).

Limitations include the lack of external validation and the absence of patients with races different by Caucasian in the development cohort.

#### Conclusion

This nomogram provides a high accuracy in predicting the probability of PCa diagnosis with MRI-US fusion biopsy. This is an easy to use clinical tool that physicians may use for patients counselling purposes.

References

- 1. Prostate cancer detection with magnetic resonance-ultrasound fusion biopsy: The role of systematic and targeted biopsies.
- 2. Filson CP, Natarajan S, Margolis DJ, Huang J, Lieu P, Dorey FJ, Reiter RE, Marks LS.
- 3. Cancer. 2016 Mar 15;122(6):884-92. doi: 10.1002/cncr.29874.
- 4. Magnetic resonance/transrectal ultrasound fusion biopsy of the prostate compared to systematic 12-core biopsy for the diagnosis and characterization of prostate cancer: multi-institutional retrospective analysis of 389 patients.
- 5. Mariotti GC, Costa DN, Pedrosa I, Falsarella PM, Martins T, Roehrborn CG, Rofsky NM, Xi Y, M Andrade TC, Queiroz MR, Lotan Y, Garcia RG, Lemos GC, Baroni RH.
- 6. Urol Oncol. 2016 Sep;34(9):416.e9-416.e14. doi: 10.1016/j.urolonc.2016.04.00

## **3.** #54: MRI-BASED NOMOGRAM PREDICTING THE PROBABILITY OF DIAGNOSING A CLINICALLY SIGNIFICANT PROSTATE CANCER WITH MRI-US FUSION BIOPSY

## G. Simone<sup>1</sup>, R. Papalia<sup>2</sup>, E. Altobelli<sup>2</sup>, A. Giacobbe<sup>3</sup>, L. Benecchi<sup>4</sup>, G. Tuderti<sup>1</sup>, L. Misuraca<sup>1</sup>, F. Minisola<sup>1</sup>, S. Guaglianone<sup>1</sup>, D. Collura<sup>3</sup>, G. Muto<sup>2</sup>, M. Gallucci<sup>1</sup>, M. Ferriero<sup>1</sup>

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#### Objective

Identifying clinically significant prostate cancers is the main objective of prostate cancer diagnosis. The aim of this study was to

abstracts XXIV Congresso Nazionale AURO.it - PISA 19 - 21 maggio 2017

Comunicazioni 1 - Bersaglio Prostata

develop, to internally validate and to calibrate a nomogram to predict the probability of detecting a clinically significant prostate cancer.

#### Materials and Methods

Prospectively collected data from 3 tertiary referral center series of 478 consecutive patients who underwent MRI-US fusion biopsy using the UroStation<sup>™</sup> (Koelis, France) were used to build the nomogram. A logistic regression model is created to identify predictors of PCa diagnosis with MRI-US fusion biopsy. Predictive accuracy was quantified using the concordance index (CI). Internal validation with 200 bootstrap resampling and calibration plot were performed.

#### Results

Mean age was 66.3 yrs ( $\pm$  7.98) and mean PSA levels were 9.8 ng/mL ( $\pm$  7.98). The overall PCa detection rate was 57.4%. Age, PSA serum levels, PI-RADS score at MRI report, number of targeted and number of systematic cores taken were included in the model (Figure 1).Predictive accuracy was 0.81. On internal validation the CI was 0.81 and predicted probability was well calibrated (Figure 2).

Limitations include the lack of external validation and the absence of patients with races different by Caucasian in the development cohort.

#### Conclusion

Predicting the risk of a clinically significant PCa is the goal of physicians. This nomogram provides a high accuracy in predicting the probability of diagnosing a clinically significant PCa with MRI-US fusion biopsy. The ease to use makes this nomogram a clinical tool for both patients and physicians.

#### Reference

1. – Prostate cancer detection with magnetic resonance-ultrasound fusion biopsy: The role of systematic and targeted biopsies. Filson CP, Natarajan S, Margolis DJ, Huang J, Lieu P, Dorey FJ, Reiter RE, Marks LS. Cancer. 2016 Mar 15;122(6):884-92. doi: 10.1002/cncr.29874.

2. – Magnetic resonance/transrectal ultrasound fusion biopsy of the prostate compared to systematic 12-core biopsy for the diagnosis and characterization of prostate cancer: multi-institutional retrospective analysis of 389 patients. Mariotti GC, Costa DN, Pedrosa I, Falsarella PM, Martins T, Roehrborn CG, Rofsky NM, Xi Y, M Andrade TC, Queiroz MR, Lotan Y, Garcia RG, Lemos GC, Baroni RH. Urol Oncol. 2016 Sep;34(9):416.e9-416.e14. doi: 10.1016/j.urolonc.2016.04.00

#### **4.** #128: EVAUATION OF PIRADS 3 LESION WITH SOTWARE FIOSN BIOPSIES

## M. Potenzoni<sup>1</sup>, A. Prati<sup>1</sup>, A. Savino<sup>1</sup>, R. Arnaudi<sup>1</sup>, S.C. Destro Pastizzaro<sup>1</sup>, N. Uliano<sup>1</sup>, A. PIeri<sup>1</sup>, D. Marten<sup>1</sup>, F. Cantoni<sup>1</sup>, C. Grassani<sup>1</sup>

<sup>1</sup> Ospedale di Vaio (Fidenza)

#### Objective

Multiparametric Magnetic Resonance (mpMR) of the prostate offers the potential to improve CaP diagnosis regardless clinically significant disease. PIRADS 3 ROI has been associated with clinical significant cancer in few case and has been reported as equivocal. We evaluated retrospectively the data of patients with PIRADS 3 lesion at mpMR who underwent MR guided fusion biopsy of the prostate between August 2016 and Gennary 2017. All the immaging studies have been performed by a single radiologist expert in uro-radiology and all the biopsies have been performed by a single urologist. Data were collected in a database.

18 patients with PIRADS 3 ROI at mpMR underwent MR software guided fusion transrectal biopsy. In 17 cases the procedure have been performed under local anesthesia and in one case with general anesthesia. No complications have been reported.

Median total PSA was 6,8 mg/dl, median prostate size was 65.4 cc, median age was 68 yr. All patients received 12 core, 18 gauge needle biopsy with 2 cores for target area.

Prostate cancer has been founded in 3 (16%) patients, Gleason 6 in 1 (5,5%) patient and Gleason 7 (4+3) in 2 (11%) patients. In our experience PIRADS 3 ROI is associated with clinical significant cancer in few cases.

Reference

1. Sonn GA, Natarajan S, Margolis DJA, et al: Targeted biopsy in the detection of prostate cancer using an office based magnetic resonance ultrasound fusion device. J Urol 2013; 189: 86–92.

2. Hara T, Inoue Y, Satoh T, et al: Diffusion-weighted imaging of local recurrent prostate cancer after radiation therapy: comparison with 22-core three-dimensional prostate mapping biopsy. Magn Reson Imaging 2012; 30: 1091–1098.

#### **5.** #252: DIAGNOSTIC PERFORMANCE OF MULTIPARAMETRIC MRI IN PROSTATE CANCER: PER CORE ANALYSIS OF THREE PRSPECTIVE ULTRASOUND/MRI FUSION BIOPSY DATASETS

M. Ferriero<sup>1</sup>, A. Giacobbe<sup>2</sup>, R. Papalia<sup>3</sup>, D. Collura<sup>2</sup>, E. Altobelli<sup>2</sup>, R. Mastroianni<sup>3</sup>, G. Tuderti<sup>1</sup>, F. Minisola<sup>1</sup>, L. Misuraca<sup>1</sup>, S. Guaglianone<sup>1</sup>, G. Muto<sup>3</sup>, M. Gallucci<sup>1</sup>, G. Simone<sup>1</sup>

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#### Objective

The fusion of multiparametric (Mp) magnetic resonance imaging (MRI) with real time 3D ultrasound during prostate biopsy

Comunicazioni 1 - Bersaglio Prostata

is gaining popularity. The aim of this study was to evaluate the diagnostic performance of Mp-MRI using a per-core analysis of patients who underwent prostate "fusion" biopsy.

#### Materials and Methods

Baseline, clinical and pathological data of 498 consecutive patients who underwent Mp-MRI/ultrasound "fusion" biopsy of prostate were prospectively collected in three centres between October 2013 and October 2016. The UroStation<sup>™</sup> (Koelis, France) and ultrasound system with an end-fire 3D TRUS transducer were used for the imaging fusion process.

Diagnostic accuracy of Mp-MRI was evaluated in the whole cohort and in those patients with Gleason score >6, separately. Sensitivity (Se), specificity (Sp), positive predictive value (PPV), negative predictive value (NPV) and accuracy (Ac) of Mp-MRI were assessed on the base of a per core analysis of histologic findings.

#### Results

Demographic data are reported into Table 1.

Out of 498 patients, 286 had a PCa diagnosis (57.4%); 162 of them (32.5%) were Gleason score  $\geq$ 7. Overall, 9360 cores were taken: Se, Sp, PPV, NPV and Ac of Mp-MRI in the whole cohort were 46.5%, 81.7%, 36.6%, 87% and 75.2%, respectively. When restricting the analysis to Gleason scores >6, Se, Sp, PPV, NPV and Ac were 45.9%, 79.8%, 25.1%, 90.9% and 75.4%, respectively. In a per patient analysis, the detection rate of PI-RADS scores 3,4 and 5 were 24%, 68% and 93.6%, respectively, while for Gleason score PCa>6 the detection rate of PIRADS 3, 4 and 5 were 6%, 35.2% and 73.4%, respectively. In a per core analysis, the PPV of PI-RADS scores 3,4 and 5 were 8.5%, 37.8% and 73.2%, respectively, while the PPV of PI-RADS scores for Gleason score PCa>6 were 5.1%, 21.2% and 62.2%, respectively (Table 2).

#### Conclusion

This study confirmed high PCa detection rates with Mp-MRI-ultrasound fusion biopsy. A meticulous analysis of 9360 biopsy cores taken showed a poor sensitivity and PPV of Mp-MRI, especially for Gleason score >6 PCa. Despite the poor discrimination of PI-RADS scores of 3 and 4, PIRADS scores 5 correctly identified PCa lesions with Gleason scores >6.

#### Reference

- 1. Multiparametric Magnetic Resonance Imaging (MRI) and MRI-Transrectal Ultrasound Fusion Biopsy for Index Tumor Detection: Correlation with Radical Prostatectomy Specimen. Radtke JP, Schwab C, Wolf MB, Freitag MT, Alt CD, Kesch C, Popeneciu IV, Huettenbrink C, Gasch C, Klein T, Bonekamp D, Duensing S, Roth W, Schueler S, Stock C, Schlemmer HP, Roethke M, Hohenfellner M, Hadaschik BA.
- 2. Eur Urol. 2016 Nov;70(5):846-853. doi: 10.1016/j.eururo.2015.12.052.

#### **6.** #114: SELF-LEARNING IN ROBOT-ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY. INTRAOPERATIVE OUTCOMES AND INITIAL EXPERIENCE WITHOUT ANY ASSISTANCE FROM A TUTOR

#### F. Chiancone<sup>1</sup>, M. Fedelini<sup>1</sup>, R. Giannella<sup>1</sup>, G. Battaglia<sup>1</sup>, C. Meccariello<sup>1</sup>, P. Fedelini<sup>1</sup>

<sup>1</sup> AORN A. Cardarelli, U.O.C. Urologia (Napoli)

#### Objective

The transperitoneal approach remains the most accepted and popular approach in performing robot-assisted laparoscopic radical prostatectomy (RALP) associated with minimal perioperative morbidity and good functional and oncological outcomes (1). Choice of approach should be related on patient characteristics as well as surgeon preference (2). The aim of this paper was to report our initial experience in performing RALP without any assistance from a tutor.

#### Materials and Methods

From January to December 2016, 36 patients underwent a RALP to our Department of Urology. Of these, 17 patient underwent a RALP using an extraperitoneal approach (Group A) and 19 using a transperitoneal approach (Group B), with a progressive shift from the extraperitoneal to the transperitoneal access. In the first six months of the year only 3 out of 15 patients underwent a transperitoneal RALP. 12 out of 36 patients (33.3%) underwent a simultaneous pelvic lymphadenectomy. Of these, only 2 patients underwent a lymphadenedctomy with an extraperitoneal approach. The da Vinci Xi surgical robotic system was used in all the cases.

All procedures were performed by a single surgical team with a good experience in laparoscopic procedures. Results

The mean operative time was 191,25±57,26 for Group A and 156,88±28,7 for Group B (p=0,0302).

The mean operative time for docking and for trocar positioning was 38,13±7,72 for Group A and 25,63±5,74 for Group B.

The mean blood losses were similar in the two groups ( $268,75\pm161,16$  for Group A and  $293,75\pm378,98$  for Group B, p=0,8032). In one patient a shift from the extraperitoneal to the transperitoneal approach was needed. In 13 out of 17 patients a small hole in the peritoneum was made during the extraperitoneal approach. The rate of complications was similar in both groups. In the group A, one patient experience a gastric hemorrhage, one patient a leakage from the anastomosis, and one patients experience the dislocation of the urethral catheter because of a bladder anterior wall lesion that was repaired during the procedure.

In the group B, two patients experience a leakage from the anastomosis and one patient a rectal injury that was repaired during the procedure without postoperative sequelae.

The normalization of the intestinal canalization was slightly inferior for the group A but we have not reached the statistical significance (Group A= 2,63±0,72, Group B=3,25±1,19, p=0.0756). The time of dismissal from the hospital was similar in the two groups (Group A=4,94±1,95, Group B=4,69±1,20, p=0,6629)

#### Discussions

At the beginning of our learning curve in robotic procedures, without any assistance from a tutor, we were loath to the use of the fourth robotic arm. Despite this only four procedures were performed without the use of the fourth arm. The fourth arm was always placed on the left side of the abdomen (the same side of the bipolar forceps for the right-hander). Moreover, in the first three procedures we used to coagulate the prostatic pedicle with the Caiman instrument. After this first procedures we understood the utility of the fourth arms and we started the coagulation of the prostatic pedicles using the bipolar energy.

In our experience we assisted to a shift from the extraperitoneal to the transperitoneal approach. It is mainly related to the difficulty to introduce the trocar for the Air Seal system and for the bigger work spaces associated with the transperitoneal approach. Moreover in the last six months of the year, we started to perform a lot of "high risk group" radical prostatectomy with the robotic technology. As a consequence the need to perform an extensive lymphadenectomy lead to us to choose a transperitoneal approach.

In our experience we had a shorter operative time in the Group B despite the bigger number of lymphadenectomy performed in this group. It can be related to the use of an easier approach. Moreover in the last six months of the year, the surgical team was at a more advanced point in the learning curve for all steps of the robotic procedures. In conclusion, in the last five procedure in Group B, we used a V-Loc absorbable wound closure devices that helps the surgeon to perform a quicker anastomosis.

Conclusion

In our department less than 1% of laparoscopic radical prostatectomy were performed with the transperitoneal approach. The extraperitoneal approach to RALP was described as a good alternative to the transperitoneal approach with similar intraoperative, postoperative and functional outcomes (3). In our experience the transperitoneal approach is only related to a shorter operative time. In our opinion, surgeons should be familiar with both approaches in order to provide patients with the best care.

#### Reference

- 1. Patel VR, Thaly R, Shah K.Robotic radical prostatectomy: outcomes of 500 cases. BJU Int. 2007 May;99(5):1109-12.
- 2. Capello SA, Boczko J, Patel HR, Joseph JV. Randomized comparison of extraperitoneal and transperitoneal access for robot-assisted radicalprostatectomy. J Endourol. 2007 Oct;21(10):1199-202.
- 3. Akand M, Erdogru T, Avci E, Ates M.Transperitoneal versus extraperitoneal robot-assisted laparoscopic radical prostatectomy: A prospective single surgeon randomized comparative study. Int J Urol. 2015 Oct;22(10):916-21.

## 7. #164: FOCAL TREATMENT OF PROSTATE CANCER USING FOCAL ONE DEVICE. ROLE OF FOCAL THERAPY, ONCOLOGICAL AND FUNCTIONAL RESULTS

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#### Objective

The over-diagnosis and over-treatment of prostate cancer is a reality unequivocally demonstrated by studies with PSA screening [1]. In fact in the United States and Canada it is a recommendation was issued against [2,3] systematic screening. In Europe, however, in agreement with the European Society of Urology, the execution of the PSA in patients without urinary symptoms it should be reserved for patients with a 15 year life expectancy and should focus particularly "cases at risk" or with a family history, hereditary or members of certain ethnic groups [4]. Together with the re-evaluation of the role of PSA and early diagnosis of prostate cancer were introduced into clinical practice of alternative treatment modality to classical radical therapy, surgery or radiation, for low risk of progressing tumors [4]. The need for alternatives to radical therapy derived from the heavy consequences which in fact has on the patient's quality of life when the benefits, in terms of lifespan gain, are not certain [2,3]. Active surveillance is in fact a deferred treatment of radical therapy [5,6]. The tumor is monitored by repeated checks with PSA, clinical examination of the prostate and prostate biopsies [5,6]. In about 1/3 of cases in active surveillance for a suspected progression, the patient is recommended a radical active treatment [5,6]. Until any radical treatment patients that maintain their quality of life, though psychologically accept "live" with the tumor. The evolution of multiparametric MRI, the ability to perform targeted biopsies (fusion biopsy on mpMRI) [7] and to identify a primary outbreak [8], the so-called "index lesion", within the prostate, has allowed to introduce into clinical practice the focal therapy that is substantially complementary to the active surveillance and, analogously thereto, ideal for limiting the over treatment of prostate cancer. The focal therapy is associated with a very low probability of affecting the patient's quality of life, ensuring generally the preservation of continence and sexual activity [9,10]. Nevertheless, treating the primary lesion can cure the patient and avoid potentially radical treatment for all the rest of life [11].

#### Materials and Methods

Focal One is a device designed for the focal therapy of Prostate Cancer integrating the ability to visualize, target, treat and validate the focal treatment. Magnetic Resonnance Imaging (MRI) volumes are imported through the hospital's network into the device so that an elastic fusion can be done between the real time ultrasonography and the MRI where the regions to treat have been previousy drawn, thus allowing to apply limited and targeted HIFU lesions. During the HIFU energy delivery process, the operator sees a live ultrasound image of what is being treated and, if necessary, can readjust the treatment planning. At the end of the treatment process, a Contrast-enhanced Ultrasound volume is acquired showing the de-vascularized areas.

53 patients with mono focal prostate cancer were treated from June 2015 and January 2017.HIFU treatment process was realized with the Focal One device using a 6to 12 mm safety margin around the tumor. Contrast enhanced MRI is performed within 30 day after HIFU and Control biopsies with fusion technique were performed only on suspected mri lesion. All patients respected inclusion criteria:

Comunicazioni 1 - Bersaglio Prostata

- Life expectancy  $\geq 10$  years
- PSA at diagnosis ≤15,
- clinical stage cT2NoMo
- cancerous lesions identified at mpMRI
- Biopsy performed with technical cast of mpMRI image with histopathological positive concordant with suspects mpMRI
  Standard cancer biopsy but with acknowledgment to mpMRI (also later executed) and contralateral lobe to mpMRI negative and / or positive in one frustule to 3 mm max
- Gleason score 3 + 3 (grade group 1)
- presence of tumor for more than 3 mm in the frustule bioptic
- presence of cancer in at least two biopsy cores,
- cancer mpMRI>  $\geq 10$ mm
- Gleason score 3 + 4 (grade group 2)
- Gleason score 4 + 3 (grade 3 group) as a single index lesion or lesion associated depending on the same side or contralateral lesion grade group 1 and 2 present in a frustule only for a maximum of 3 mm Results

#### Results

- The mean age of patients was 65.8±5.5 years. Mean cancer volume was 9 cc (6 to 15 cc)
- Mean Prostate Volume was 40±23 cc and no patient required TURP before procedure
- Average time of procedure 50 min
- Mean Time of Hospitalization 2 Days
- Average time of catheterization 5 Days.
- none found major postoperative complication
- >95% of preservation of continence
- >75% of the power preservation
- <15% failure rate

#### Discussions

The over treatments era is finished, the technologies (MRI multi parametric, fusion biopsy) let us to chose patients witch can switch to Active surveillance ore active focal treatments without having to undergo to surgery as first therapy line. Since the early 2000s, two systems have been marketed for this application, and other devices are currently in clinical trials. HIFU treatment can be used either alone or in combination with (before- or after-) external beam radiotherapy (EBRT) (before or after HIFU) and can be repeated multiple times. HIFU treatment is performed under real-time monitoring with ultrasound or guided by MRI. We must look to the past: HISTORICAL INFORMATION FROM PUBLIC WITH HIFU [12-28]

With radical curative intent in prostate cancer confined to the gland or locally advanced

Age greater than or equal to 70 years

Age also less than 70 years in the presence of significant comorbidities

Refusal by the patient of the other standard treatments provided by international guidelines (RT, radical prostatectomy, active surveillance)

Local recovery of established disease with biopsy after RT, brachytherapy or radical prostatectomy.

With palliative intent, HIFU may be indicated even in prostate tumors become hormonotherapy resistant and how local therapy minimally invasive cytoreductive within prostate tumors in metastatic systemic therapy.

Only turning his eyes back we will look to the future (29-32)

#### Focal therapy

- only treat the micro tumor foci saving the prostate gland and thus improving% of urinary incontinence and erectile dysfunction. The focal treatment therefore involves the ablation of prostatic tumor lesion that has the highest biopsy Gleason Score or the biggest volume (Index Tumor IT). Consensus not to preclude the therapy for multifocal tumors.

In the recent past the focal therapy had limitations due to the variability and validity of biopsy mapping; currently with the introduction of Magnetic Resonance Multiparametric and "fusion imaging" that is, the integration of the images obtained by multiparametric MRI and 3D ultrasound was made a major scientific advancement for both diagnosis and for the indications to treat cancer prostate.

-Zonal (more tissue treatment than the focal)

-Emiablazione (1/2 prostate; right or right lobe)

-Multi-zone (both right quadrants that sin, not total)

Conclusion

HIFU is an evolving technology perfectly adapted for focal treatment. Thus, HIFU focal therapy is another pathway that must be explored when considering the accuracy and reliability for PCa mapping techniques. HIFU would be particularly suited for such a therapy since it is clear that HIFU outcomes and toxicity are relative to the volume of prostate treated. Focal One device is able to achieve a complete destruction of small prostate cancer using an elastic magnetic resonance-ultrasound (MR-US) registration system for tumor location and HIFU treatment planning.

#### Reference

- 1. Screening and prostate cancer mortality: results of the European Randomised Study of Screening for Prostate Cancer (ERSPC) at 13 years of follow-up. Schröder FH et all ERSPC Investigators.Lancet. 2014 Dec 6;384(9959):2027-35
- 2. Moyer VA; U.S. Preventive Services Task Force.Screening for prostate cancer: U.S. Preventive Services Task Force recommendation statement. Ann Intern Med2012;157:120-34.Canadian Task Force on Preventive Health Care, Bell N,
- 3. Connor Gorber S, et al. Recommendations on screening or prostate cancer with the prostate-specific antigen test. CMAJ 2014;186:1225-34.

#### 14:30 - 16:00 Sala Pacinotti

- 4. EAU guidelines on prostate cancer. part 1: screening, diagnosis, and local treatment with curative intent-update 2013. Heidenreich A, Bastian PJ, Bellmunt J, Bolla M, Joniau S, van der 4)Kwast T, Mason M, Matveev V, Wiegel T, Zattoni F, Mottet N; European Association of Urology Eur Urol. 2014 Jan;65(1):124-37.
- Klotz L, Zhang L, Lam A, et al. Clinical results of longterm follow-up of a large, active surveillance cohort with localized prostate cancer. J Clin Oncol 2010;28:126-31
- 6. Bul M, Zhu X, Valdagni R, et al. Active surveillance for low-risk prostate cancer worldwide: the PRIAS study. Our Urol 2013;63:597-603
- Assessment of Prospectively Assigned Likert Scores for Targeted Magnetic Resonance Imaging-Transrectal Ultrasound Fusion Biopsies in Patients with Suspected Prostate Cancer. Costa DN, Lotan Y, Rofsky NM, Roehrborn C, Liu A, Hornberger B, Xi Y, Francis F, Pedrosa I. J Urol. 2016 Jan;195(1):80-7.
- 8. Multiparametric Magnetic Resonance Imaging (MRI) and MRI-Transrectal Ultrasound Fusion Biopsy for Index Tumor Detection: Correlation with Radical Prostatectomy Specimen. Radtke JP, Schwab C, Wolf MB, Freitag MT, Alt CD, Kesch C, Popeneciu IV, Huettenbrink C, Gasch C, Klein T, Bonekamp D, Duensing S, Roth W, Schueler S, Stock C, Schlemmer HP, Roethke M, Hohenfellner M, Hadaschik BA. Eur Urol. 2016 Jan 19
- 9. Marien A, Gill I, Ukimura O, Betrouni N, Villers A. Target ablation image-guided therapy in prostate cancer. Urol Oncol 2014;32: 912–23.
- 10. Valerio M, Ahmed HU, Emberton M, et al. The role of ocal therapy in the management of localised prostate cancer: a systematic review. Eur Urol 2014;66:732-51.
- 11. The Effects of Focal Therapy for Prostate Cancer on Sexual Function: A Combined Analysis of Three Prospective Trials. Yap T, Ahmed HU, Hindley RG, Guillaumier S, McCartan N, Dickinson L, Emberton M, Minhas S Eur Urol. 2015 Oct 30
- 12. Whole-gland Ablation of Localized Prostate Cancer with High-intensity Focused Ultrasound: Oncologic Outcomes and Morbidity in 1002 Patients. S. Crouzet et al 2013 European Urology
- 13. Evolution and Outcomes of 3 MHz High Intensity Focused Ul- trasound Therapy for Localized Prostate Cancer During 15 Years. S. Thüroff et al 2013 The Journal of Urology
- 14. Fourteen-year oncological and functional outcomes of high-intensity focused ultrasound in localized prostate cancer. R. Ganzer et al 2013 BJU International
- 15. Locally recurrent prostate cancer after initial radiation therapy: Early sal- vage high-intensity focused ultrasound improves oncologic outcomes. S. Crouzet et al Radiother Oncol. 2012
- 16. Single application of high-intensity focused ultrasound as a rst-line therapy for clinically localized prostate cancer: 5-year outcomes. D. Pfeiffer et al 2012 BJU International
- 17. Morbidity of Focal Therapy in the Treatment of Localized Prostate Cancer. E. Barret et al 2012 BJU International
- 18. High-intensity focused ultrasound (HIFU) for de nitive treatment of pros- tate cancer. E. R. Cordeiro et al 2012 BJU International
- 19. Complete high-intensity focused ultrasound in prostate cancer: outcome from the @-Registry. A. Blana et al 2012 Prostate Cancer and Prostatic Diseases
- 20. Single-session primary high-intensity focused ultrasonography treatment for localized prostate cancer: biochemical outcomes using third genera- tion-based technology. J. H. Pinthus et al 2012 BJU International
- 21. Robotic High-intensity Focused Ultrasound for Prostate Cancer: What Have We Learned in 15 Years of Clinical Use? C. Chaussy et al Current Urology Report 2011
- Focal Therapy with High-Intensity Focused Ultrasound for Pros- tate Cancer in the Elderly. A Feasibility Study with 10 Years Follow-Up. A. B. El Fegoun et al – Brazilian Journal of Urology 2011
- 23. HIFU as salvage rst-line treatment for palpable, TRUS-evidenced, biop- sy-proven locally recurrent prostate cancer after radical prostatectomy: A pilot study. A. Asimakopoulos et al Urologic Oncology 2011
- 24. Correlation of prostate-speci c antigen nadir and biochemical failure after High-Intensity Focused Ultrasound of localized prostate cancer based on the Stuttgart failure criteria analysis from the @-Registry. R. Ganzer et al BJU International 2011
- 25. Multicentric Oncologic Outcomes of High-Intensity Focused Ultrasound for Localized Prostate Cancer in 803 Patients. S. Crouzet et al 2010 European Urology
- 26. Salvage Radiotherapy After High-Intensity Focussed Ultrasound for Recur- rent Localised Prostate Cancer. J. Riviere et al 2010 European Urology A prospective study of salvage high-intensity focused ultrasound for lo- cally radiorecurrent prostate cancer: Early results. V. Berge et al 2010 Scandi- navian Journal of Urology
- 27. High-intensity focused ultrasound in prostate cancer; a systematic literature review of the French Association of Urology. X. Rebillard et al BJU International 2008
- 28. Eight years' experience with High-Intensity Focused Ultrasonography for treatment of localized prostate cancer. A. Blana et al Journal of Urology 2008.06.062
- 29. Comparing High-Intensity Focal Ultrasound Hemiablation to Robotic Radical Prostatectomy in the Management of Unilateral Prostate Cancer: A Matched-Pair Analysis. Albisinni S, Aoun F, Bellucci S, Biaou I, Limani K, Hawaux E, Peltier A, van Velthoven R. J Endourol. 2017 Jan;31(1):14-19. Focal High Intensity Focused Ultrasound of Unilateral Localized Prostate Cancer: A Prospective Multicentric Hemiablation Study of 111 Patients.
- 30. Rischmann P, Gelet A, Riche B, Villers A, Pasticier G, Bondil P, Jung JL, Bugel H, Petit J, Toledano H, Mallick S, Rouvière O, Rabilloud M, Tonoli-Catez H, Crouzet S. Eur Urol. 2017 Feb;71(2):267-273.
- 31. Focal High-intensity Focused Ultrasound Targeted Hemiablation for Unilateral Prostate Cancer: A Prospective Evaluation of Oncologic and Functional Outcomes. Feijoo ER, Sivaraman A, Barret E, Sanchez-Salas R, Galiano M, Rozet F, Prapotnich D, Cathala N, Mombet A, Cathelineau X Eur Urol. 2016 Feb;69(2):214-20

# 8. #249: THE DIAGNOSTIC AND STAGING PERFORMANCE OF MPMRI/US GUIDED FUSION PROSTATE BIOPSY: PROSPECTIVE ANALYSIS ON 41 CONSECUTIVE WHOLE MOUNT RADICAL PROSTATECTOMY SPECIMENS

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#### Objective

The ultimate assessment of MRI/US diagnostic and staging performance requires a meticulous comparison of biopsy and whole mount radical prostatectomy specimens. In this study we assessed the diagnostic and staging performance of mpMRI/US fusion

Comunicazioni 1 - Bersaglio Prostata

#### 14:30 - 16:00 Sala Pacinotti

<u>Comunicazioni 1 - Bersaglio Prostata</u>

prostate biopsy comparing core biopsy findings with whole mount radical prostatectomy specimens in 41 consecutive patients treated in a single centre series.

#### Materials and Methods

Baseline, clinical and pathologic data of 41 consecutive patients with prostate cancer diagnosis at mp-MRI/US guided "fusion" biopsy who underwent minimally invasive radical prostatectomy and whole mount sections of pathologic specimens were prospectively collected.

All fusion biopsies were performed using the UroStation<sup>™</sup> (Koelis, France) with an end-fire 3D TRUS transducer.

Diagnostic performance of MRI-US fusion biopsy was evaluated at different levels: 1. core biopsy correspondence with pathologic findings of whole mount sections; 2. Correct identification of the index lesion; 3. Gleason score upgrading at final pathology; 4. presence of extraprostatic extension and of nodal involvement.

Results

Out of 107 cases with positive fusion US/MRI guided prostate biopsy performed, fifty-nine patients underwent minimally invasive radical prostatectomy. Forty-one specimens were analyzed using whole mount sections. Clinical and pathologic data of this cohort are reported into Table 1.

Out of 41 patients, 25 (60.1%) had a clinically significant PCa not identified by MRI/US guided fusion biopsy. At a per core analysis 150/701 (21.4%) cores were positive for GS>6 out of the suspicious ROI at MRI.

The mean ratio of tumor foci/suspicious ROI was  $0.56 \pm 0.27$ .

The index lesion was correctly identified by mpMRI-US fusion biopsy in 63.4% (26/41) of the patients.

Gleason score of fusion US-MRI guided prostate biopsy was upgraded at final pathologic report in 9 (21.9%) cases.

The staging accuracy in predicting tumor side, extraprostatic extension and nodal involvement was 75.6% (31/41), 70.3% (29/41) and 90.2% (37/41), respectively.

#### Conclusion

mpMRI and Fusion US/MRI guided prostate biopsy provided a reliable diagnostic and staging performance for patients receiving a surgical treament. Systematic core biopsy seems still to have a clinical role in detecting clinically significant PCa otherwise missed by MRI.

Reference

 Multiparametric Magnetic Resonance Imaging (MRI) and MRI-Transrectal Ultrasound Fusion Biopsy for Index Tumor Detection: Correlation with Radical Prostatectomy Specimen. Radtke JP, Schwab C, Wolf MB, Freitag MT, Alt CD, Kesch C, Popeneciu IV, Huettenbrink C, Gasch C, Klein T, Bonekamp D, Duensing S, Roth W, Schueler S, Stock C, Schlemmer HP, Roethke M, Hohenfellner M, Hadaschik BA. Eur Urol. 2016 Nov;70(5):846-853. doi: 10.1016/j.eururo.2015.12.052.

#### **9.** #83: ECONOMICAL IMPLICATIONS OF THE INTRODUCTION OF AN ALTERNATIVE TREATMENT MODALITY FOR PROSTATE CANCER (HIGH INTENSITY FOCUS ULTRASOUND) IN A MULTIDISCIPLINARY TEAM

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<sup>2</sup> SDA Bocconi School of Management (Milano)

#### Objective

The critical evaluation of a new modality of treatment which employs a new technology has to be considered in the context of "Health Technology Assessment" (HTA). This analysis lead to documents whose utility is essential both for National Health System and the stakeholders, i.e. subjects who are interested in the technology and who can judge it according different point of view, varying from costs to clinical references. We analyzed the economic impact of the introduction of an alternative treatment modality, i.e. High Intensity Focused Ultrasound (HIFU) in the context of the Prostate Cancer Unit (PCU) in Our centre.

The PCU is a multidisciplinary team (MDT), constituted by an Urologist, a Medical Oncologist and a Radiation Oncologist, who manage almost 100 case of prostate cancer (PCa) per year, according to the position paper of European School of Oncology. The capacity of offering to the patients both the common and the alternative treatment modalities, related to clinical experience of the Centre, plays a fundamental role for the correct management of patients with PCa.

Materials and Methods

We retrospectively analyzed all the patients affected by Pca and evaluated by PCU during 2015. We selected low risk patients, according to Epstein's criteria.

Thus, we calculated and compared the costs of the four treatment modalities available in Our Centre for these pts: active surveillance according to PRIAS (AS), radical prostatectomy (open –RRP- or robotic –RARP-), radiation therapy [3D-conformational (3D-CRT), Imaging Modulated Radiation Therapy (IMRT), Volumetric Modulated Arc Therapy (VMAT), with or without markers] and HIFU.

We also reviewed the literature searching for the following key words: "prostate cancer", "active surveillance", "prostatectomy", "radiation therapy", "HIFU" and "costs".

Results

In our Centre 360 patients with PCa were evaluated by PCU in 2015.

During the same year we executed 500 prostate biopsy, among these, 146 pts were affected by low risk PCa.

The partition of patients, according to chosen treatment modality, is described in table 1.

Table 2 evidences the costs of every treatment modality.

#### Discussions

See results

#### Conclusion

RT represents the most frequent treatment modality for low risk PCa in Our Centre. The costs are intermediate between AS (considering the whole time of 7 years) and the robotic surgery ( $8000 \in 8300 \in 12000 \in$ , respectively). According to both literature and clinical experience of other centers, the RARP showed the highest costs. The literature review about HIFU did not evidence any study about the efficacy; consequently we focuses on costs only, which are inferior to other treatments, including RRP.

Reference

- 1. Pillay B, Wootten AC, Crowe H, Corcoran N, Tran B, Bowden P, Crowe J, Costello AJ. The impact of multidisciplinary team meetings on patient assessment, management and outcomes in oncology settings: A systematic review of the literature. Cancer Treat Rev 2016; 42:56-72.
- 2. Valdagni R.. Multidisciplinary Team Meetings in Cancer Care: We Could and Should do Better Than This. Clin Oncol (R Coll Radiol) 2016;28(12):799-800
- 3. Ramsay CR, Adewuyi TE, Gray J, Hislop J, Shirley MD, Jayakody S, MacLennan G, Fraser C, MacLennan S, Brazzelli M, N'Dow J, Pickard R, Robertson C, Rothnie K, Rushton SP, Vale L, Lam TB. Ablative therapy for people with localised prostate cancer: a systematic review and economic evaluation. Health Technol Assess 2015 19(49):1-490.

#### **10.** #86: SALVAGE HIGH INTENSITY FOCUS ULTRASOUND (HIFU) FOLLOWING PRIMARY HIFU FOR PROSTATE CANCER HAS TO BE CONSIDERED AS AN ALTERNATIVE TREATMENT FOR RECURRENCE

#### C. Maccagnano<sup>1</sup>, A. Paulesu<sup>1</sup>, M. Corinti<sup>1</sup>, A. D'Onofrio<sup>1</sup>, G.N. Conti<sup>1</sup>

<sup>1</sup> ASST Lariana Ospedale Sant'Anna (San Fermo della Battaglia)

#### Objective

Recurrent disease following primary high intensity focus ultrasound (HIFU) for localized prostate cancer (PCa) is possible but nothing about this field is described in literature. Theoretical therapeutic options may include salvage prostatectomy, salvage radio-therapy, hormonal therapy, observation and salvage HIFU. Materials and Methods

We report our experience with three patients with PCa treated with HIFU and retreated with HIFU because of local recurrence. We also reviewed the literature, searching for the key words: "Prostate Cancer Recurrence", "Focal Therapy", "High Intensity Focus Ultrasound" and "Salvage Therapy".

Results

Case 1. 69 year-old man, treated with trans-urethral resection of prostate (TURP) and HIFU because of prostate adenocarcinoma (ADK) Gleason 3 + 3, PSA 3.07 ng/mL. There were no short- or long term complications. PSA progressively increased during years after the procedure, until it reaches 5.94 ng/mL. He executed a Coline PET-CT with evidence of captation in the right lobe. A multi- parametric Magnetic Resonance Imaging documented a lesion with diameters pf 15 X 9 X 13 mm, in right median paramedian zone, with PI-RADS 5. Thus, the patient executed HIFU only in the right lobe. There were no short- or long term complications. The man described only mild urgency. The last PSA was 0.47 ng/mL, 20 months after the salvage HIFU.

Case 2. 64 year-old man, treated with trans-urethral resection of prostate (TURP) and HIFU because prostate ADK Gleason 3 + 3, PSA 2.98 ng/mL. Additionally, the pathological report after TURP evidenced a prostate ADK Gleason 3 + 3 in the transitional zone, in < 5% of the specimens. There were no short- or long term complications. Six years after the first HIFU the patient executed a prostate biopsy, with a PSA of 0,57 ng/mL. The pathological report documented a single core with prostate ADK Gleason 3 + 3, located in a different zone of the prostate comparing with the first biopsy. There were no short- or long term complications. The last PSA was 0.93 ng/mL, 26 months after the salvage HIFU.

Case 3. 60 year-old man, treated with HIFU because prostate ADK Gleason 3 + 3, PSA of 6,4 ng/mL. The man reported significant pain during micturion and recurrent prostatitis; thus he used the sovrapubic catheter during 2 moths after the procedure. 48 months after HIFU,PSA was 1,28 ng/mL. Thus, the patient executed a second biopsy, with diagnosis of prostate ADK Gleason 4 + 4 in the left lobe. He executed salvage HIFU, describing urgency during the following months. 12 months after the second HIFU PSA was 4,05 ng/mL. Thus he underwent Imaging Modulated RadioTherapy with a total dose of 70 Gy. The last PSA was 2,38, with a colice CT-PET without recurrence. He is still in follow-up, still reporting urgency.

No androgenic blockade was administered in all the cases.

Discussions

see results

#### Conclusion

Salvage HIFU is a feasible and therapeutic option for PCa recurrence after primary HIFU, with no or mild complications. It should be considered for patients who refuse surgery or radiotherapy, or for who with contraindications for androgenic blockade. More trials are necessary to confirm these preliminary data.

I - Bersaglio Prostata

Comunicazioni

## **11.** #95: COMPARISON OF TWO TEMPLATES OF LYMPHADENECTOMY IN PATIENTS AFFECTED BY HIGH RISK PROSTATE CANCER

#### R. Sanseverino<sup>1</sup>, G. Napodano<sup>1</sup>, O. Intilla<sup>1</sup>, U. Di Mauro<sup>1</sup>, G.. Molisso<sup>1</sup>, A. Pistone<sup>1</sup>, T. Realfonso<sup>1</sup>

<sup>1</sup> Ospedale Umberto I - ASL Salerno, U.O.C. Urologia (Nocera Inferiore)

#### 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 (116 pts), the procedure was realized by a preperitoneal access with an extended lymphadenectomy including external iliac and obturator nodes; in group 2 (35 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 151 patients were analyzed. Baseline characteristics are reported in table 1. Preoperative data were balanced between two groups of patients except for biopsy Gleason score. Postoperative outcomes are listed in table 2: Group 2 patients presented worse pathological stage, longer operative time, more nodes removed (mean 33.3 vs 16.6, p<0.001) and more positive pathological nodes (22.9 vs 1.7%, 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 lymph¬adenectomy 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 worse pathological stage, longer operative time, but also more nodes removed (mean 33.3 vs 16.6 p<0.001) and more positive pathological nodes (28.0 vs 1.7%, 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, atransperitoneal 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

- 1. Annals of Oncol 2013; 24: 1459-66
- 2. Eur Urol 2014; 65: 20-25
- 3. Eur Urol 2009; 55: 1251-65
- 4. Eur Urol 2008; 53: 118-125

## 12. #98: PROGNOSITC FACTORS OF NODAL METASTASIS IN PATIENTS WITH ORGAN CONFINED PROSTATE CANCER

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#### Objective

To evaluate prognostic factors of nodal metastasis in patients affected by organ confined prostate cancer (PCa) who underwent laparoscopic radical prostatectomy (LPR).

#### Materials and Methods

From database of our institution, we identified patients undergone a laparoscopic pelvic lymphadenectomy (LAD) and 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 pathological node metastasis by logistic regression analysis (SPSS 24).

#### Results

Data on 183 patients were analyzed. Baseline characteristics are reported in table 1. On univariate analysis, PSA, PSAD, prostate volume, biopsy Gleason score were associated with pN1. Surgical and pathological outcomes are reported in table 2. At univariate analysis, pathological stage, positive surgical margins and LAD template (obturator and external vs obturator, external hypogastric and common) correlated with pN1. At multivariate analysis, PSAD and superextended lymphadenectomy were associated with nodal metastasis.

#### Discussions

In our experience, nodal metastasis were present in 6.5% of patients despite a considerable average number of nodes removed.

This results is probably due to a not high risk of nodal metastasis of our population. At multivariate analysis PSA density and lymphadenectomy template correlates with nodal metastasis. This evidence affirms need of an extended template during radical prostatectomy.

Conclusion

In our retrospective analysis, PSA density and superextended lymphadenectomy are prognostic factors of nodal metastasis. Reference

- 1. Tumori Journal 2016, DOI:10.5301/tj.5000546
- 2. Urologia 2015 DOI:10.5301/uro.5000139

## **13.** #176: SALVAGE LYMPH NODE DISSECTION FOR NODAL RECURRENCE AFTER RADICAL PROSTATECTOMY S.

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<sup>1</sup> Ospedale Civile di Bolzano (Bolzano)

<sup>2</sup> Clinica Universitaria di Ulm (Ulm)

<sup>3</sup> Clinica Universitaria Laval (Quebec city)

#### Objective

the incidence of recurrence after radical treatment of local prostate cancer (PCa) is frequent, occurring in 30-50% after radical prostatectomy and in up to 80% after extracorporal radiotherapy [1]. An increase of PSA indicates a relapse but it cannot help to differenciate between local recurrence and systemic spread of the disease. These patients are normally managed with palliative androgen deprivation therapy (ADT), which is associated with significant toxicity and development of hormone refractory disease. Positron emission tomography with cholin tracer is a promising technique for restaging of these patients before they receive an ADT. The aim of this study is to examine the outcome of salvage lymph node dissection (LND) with evaluation of PSA in patients with only nodal recurrence documented with C-Choline-PET / CT.

#### Materials and Methods

Fifteen consecutive patients between 2007 and 2015 with biochemical failure and positive lymph node in C-Choline-PET/ CT were retrospectively included in the study. Because of a prostate cancer (PCa), 12 patients had initially undergone a retropubic radical prostatectomy with LND and 3 a perineal prostatectomy without LND. The patients underwent a secondary open extended LAD, performed from 2 of our experienced surgeon. The extended LAD consisted in dissection of lymph nodes from the obturator fossa, the internal and external iliac artery, the paravesical lymph nodes and the common iliac artery. Biochemical response was defined as a prostate specific antigen less than 0.2 ng/ml 6 weeks after salvage surgery.

#### Results

Mean PSA at the time of C-Choline-PET / CT before salvage LND was 2.1 ng/ml. Definitive histological metastases could be found in 12 of 15 patients but in 3 cases not where these were indicated by C-Choline-PET / CT; in further 3 cases no positive lymph nodes were found at all. All postoperative courses were uneventful without any major complications except in one case, with necessity of surgical reintervention. Median follow up after salvage lymph node dissection was 52 months. A total of 7 patients (46%) achieved a biochemical response. During follow up 3 patients (20%) remained free from recurrence (one of these patients died for another tumor 12 months after LND) while 2 another patients became adjuvant RT and ADT 6 and 72 months after LND and show actually no progression of disease. Only one patient died of disease 6 year after LND. The other 8 patients, who didn't achieved a biochemical response, are actually managed with ADT.

#### Discussions

C-Choline-PET / CT has been proved to be useful for restaging patients with increase of PSA after radical surgery even though its results could be influenced from PSA value [2-3]. Based on the findings of C-Choline-PET / CT, a selected group of patients could benefit of an extended secondary LAD. The current data suggest that about half of patients have an immediate postoperative response and one third of these patients can remain free of relapse for 5 years [4]. Our results are similar to these findings and we believe that these procedure should be offered in highly selected cases.

#### Conclusion

Salvage LND may represent a therapeutic option for selected patients with biochemical recurrence and nodal pathologic uptake at C-Choline-PET / CT with improving cancer control and reducing the exposure time to ADT.

#### Reference

1) Han M, Partin AW, Zahurak M. Biochemical (PSA) recurrence probability following radical prostatectomy for clinical localized prostate cancer. Journal of Urology 2003; 169: 517-523

2) Scattoni V, Picchio M, Suardi N et al. Detection of lymph node metastases with integrated C-Choline-PET / CT in patients with PSA failure after radical retropubic prostatectomy: results confirmed by open-pelvic retroperitoneal lymphadenectomy. European Urology 2007; 52: 423-429

3) Martini T, Mayr R, Trenti E. The role of C-Choline-PET / CT guided secondary lymphadenectomy in patients with PSA failure after radical prostatectomy: lessons learned from eight cases. Advances in Urology 2012; 1-3

4) Abdollah F, Briganti F, Montorsi F. Contemporary role of salvage lymphadenectomy in patients with recurrence following radical prostatectomy. European Urology 2015; 67: 839-849

- Bersaglio Prostata

Comunicazioni

Comunicazioni 1 - Bersaglio Prostata

#### **14.** #257: ABIRATERONE ACETATE FOR TREATMENT OF METASTATIC CASTRATION-**RESISTANT PROSTATE CANCER IN CHEMOTHERAPY-NAIVE PATIENTS: AN ITALIAN MULTICENTRE "REAL LIFE" 1 YEAR STUDY**

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#### Objective

To better understand the "real life" experience with abiraterone acetate (AA) in men with chemotherapy-naïve metastatic castration-resistant prostate cancer (mCRPC), we present an Italian multicentre real life analysis with a mid-term follow-up. Materials and Methods

A consecutive series of patients with mCRPC in 8 Italian tertiary centres treated with AA was collected. Demographics, clinical parameters, treatment outcomes and toxicity were recorded. The Brief Pain Inventory scale Q2 was recorded and patient treatment satisfaction was evaluated. Univariate and multivariate analyses were performed to identify factors for treatment satisfaction. Kaplan-Meier curves were estimated.

#### Results

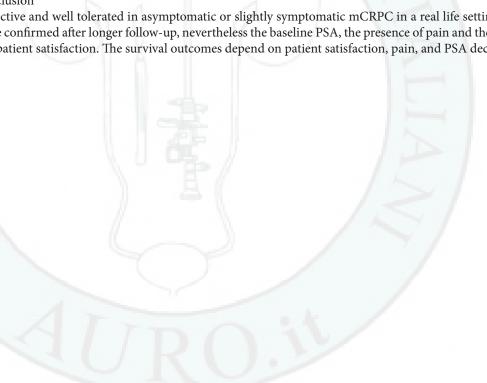
We included 145 patients (mean age 76.5y). All patients were on androgen deprivation therapy. Patients had prior radiotherapy, radical prostatectomy, both treatments or exclusive androgen deprivation therapy in 17%, 33%, 9% and 40%, respectively. The Gleason score >7 at diagnosis was 57%. Asymptomatic patients were 62%. The median serum total PSA at AA start was 17ng/mL (range 0,4-2100). Overall the median exposure to AA was 10m (range 1-35). Among the patients that had  $\geq$  3 months of AA the proportion of patients achieving a ≥50% PSA decline was 49%. Patient satisfaction was 31% "greatly improved", 37% "improved", 24% "not changed", 7% "worsened"; and significantly correlated at multivariable analysis with baseline PSA (OR 1.43 95%CI 1.03-1.98 p0.033), pain (OR 9.3 95%CI 3.33-26.09 p<0.0001), duration of ADT>12months (OR 5.5 95%CI 1.43-21.57 p0.014). With a median follow-up of 13months, median progression free and overall survival were 17 and 26.5months, respectively, and correlated with patient satisfaction, pain, PSA decline (all p <0.001).

#### Discussions

we study an Italian real life esperience to evaluate which parameters can influence patients' satisfation.

#### Conclusion

The AA is effective and well tolerated in asymptomatic or slightly symptomatic mCRPC in a real life setting. These preliminary data should be confirmed after longer follow-up, nevertheless the baseline PSA, the presence of pain and the duration of ADT are predictors of patient satisfaction. The survival outcomes depend on patient satisfaction, pain, and PSA decline.



14:30 - 16:00

# 19 maggio 2017

## sala **Fermi**

# Comunicazioni 2 -Andrologia che "Passione"

Moderatori: E. Caraceni; M. Ruoppolo; F. Viggiani

# **1.** #93: ROLE OF SILODOSIN IN PATIENTS WITH LOWER URINARY TRACT SYMPTOMS<br/>ASSOCIATED WITH BENIGN PROSTATIC ENLARGEMENT NON-RESPONDERS<br/>TOTOMEDICAL TREATMENT WITH TAMSULOSIN

S.. Masciovecchio<sup>1</sup>, A.B. Di Pasquale<sup>1</sup>, G. Ranieri<sup>1</sup>, G. Romano<sup>1</sup>, L. Di Clemente<sup>1</sup>

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#### Objective

The aim of our study was to evaluate the effect of silodosin in patients with lower urinary tract symptoms associated with benign prostatic enlargement (BPE/LUTS) non-responders to medical terapy with tamsulosin.

Materials and Methods

Patients who were taking tamsulosin 0,4 mg once daily for BPE/LUTS at last 12 months who visited the our centers from May 2015 to July 2016 were enrolled. The inclusion criteria were as follows: International Prostate Symptoms Score (IPSS)  $\ge$  8 points; Bother score (BS)  $\ge$  3 points; prostate volume measured by ultrasonographic method  $\le$  40 mL; maximal urinary flow rate (Qmax) < 15 mL/s and post-voiding residual (PVR)  $\le$  150 ml. Patients enrolled stopped tamsulosin and began terapy with silodosin 8 mg once daily. The symptom scores and uroflowmetry with PVR evaluation were measured 8 weeks after silodosin administration. Furthermore we investigated adverse drug reactions throughout the study period. The primary end-point of evaluation for efficacy was the change in IPSS and BS from the beginning of silodosin terapy; secondary end-points were changes in objective parameters (Qmax, PVR). Changes from baseline after the initiation of administration were evaluated by t-test. Values are the mean  $\pm$  standard deviation, and findings of P < 0.05 were considered significant. Statistical analyses were performed with SAS 9.1.3 for Microsoft Windows (SAS Institute Inc, NC, USA).

#### Results

One hundred-nine patients were enrolled in the study. Change in IPSS total score after administration of silodosin was -2.8  $\pm$  3.7 (18.6  $\pm$  5.1 versus 15,3  $\pm$  1.9) (p < 0,05). Similar changes were observed in subscores of IPSS, that is, voiding symptoms, storage symptoms and post-micturition symptoms. The results about BS were similar to those for IPSS (4.2  $\pm$  1.2 versus 3.7  $\pm$  1.3) (p < 0,05). Qmax (10.9  $\pm$  2.0 versus 11.9  $\pm$  1.8) and PVR (103.4  $\pm$  34.3 versus 99.6  $\pm$  23.6) were not significantly improved (p > 0,05). Adverse drug reactions were observed in 19 of 109 patients (17.4%) after administration of silodosin. The most frequently observed adverse drug reaction to silodosin was ejaculatory disorder in 7 patients (7.2%).

#### Discussions

a1-Blockers (ABs) are frequently prescribed as first-line therapy for the treatment of moderate to severe LUTS/BPE. To date, six ABs have been approved for the treatment of LUTS/BPE: terazosin, doxazosin, tamsulosin, naftopidil (not available in western), alfuzosin (not available in japan) and silodosin. All of them have been reported to significantly improve voiding and storage LUTS(1). Efficacy of ABs was similar. However, their efficacy differs among individuals. Therefore, in daily clinical practice, we switch agents when one is not effective(2). Compared with non-selective ABs, drugs with a high selectivity for  $\alpha$ 1A-adrenoreceptors ( $\alpha$ 1A-ARs) may be more prostate-specific and maintain a therapeutic response in the treatment of symptomatic BPE with less systemic adverse effects. Silodosin was demonstrated to have a higher selectivity for the  $\alpha$ 1A-AR subtype than other ABs(3). A recent meta-analysis demonstrated, for the first time, that ABs can generate significant urodynamic outcomes in patients treated for LUTS/BPE. Interestingly, the meta-analysis showed a statistically significant benefit in favor of AB drugs in terms of bladder outfflow obstruction index (BOOI) and detrusor pressure at maximum flow (PdetQmax). Although no direct comparisons have ever been performed among different ABs, the highest levels of BOOI improvement were reported in the studies on silodosin, which differs from other ABs in its high pharmacologic selectivity for the  $\alpha$ 1A receptor subtype. However, if and how urodynamic efficacy depends on pharmacologic selectivity is still to be verified(1). Miyakita et al compared

#### 14:30 - 16:00 Sala Fermi

the efficacy and safety of silodosin and tamsulosin in LUTS patients with BPE by a randomized crossover method. In this study, silodosin significantly improved storage and post-micturition symptoms in addition to voiding symptoms in both the first and crossover treatment periods. Furthermore, it significantly improved nocturia, which among LUTS markedly affects quality of life, regardless of the period of administration(4). Similar effects we observed in our study in patients with BPE/LUTS non-responders to medical treatment (tamsulosin). IPSS and BS improved while we did not observe changes of Qmax and PVR. Statistical power of our study was weakened. Therefore, further prospective studies should be conducted with greater number of patients. However we think that these preliminary data which is contributed to the literature will be helpful as guiding tools for future investigations.

#### Conclusion

In our study we showed, for the first time, that silodosin improve symtomps score and quality of life test (IPSS and BS) in patients with LUTS/BPE non-responders to terapy with tamsulosin.

#### Reference

- (1) Fusco F, Palmieri A, Ficarra V, Giannarini G, Novara G, Longo N, Verze P, Creta M, Mirone V. α1-Blockers Improve Benign Prostatic Obstruction in Men with Lower Urinary Tract Symptoms: A Systematic Review and Meta-analysis of Urodynamic Studies. Eur Urol 2016;69(6):1091-101
- (2) Araki T, Monden K, Araki M. Comparison of 7 α1-adrenoceptor Antagonists in Patients with Lower Urinary Tract Symptoms Associated with Benign Prostatic Hyperplasia: A Short-term Crossover Study. Acta medica Okayama 2013;67(4):245-51
- (3) Ding H, Du W, Hou ZZ, Wang HZ, Wang ZP. Silodosin is effective for treatment of LUTS in men with BPH: a systematic review. Asian J Androl 2013;15(1):121-8
- (4) Miyakita H, Yokoyama E, Onodera Y, Utsunomiya T, Tokunaga M, Tojo T, Fujii N, Yanada S. Short-term effects of crossover treatment with silodosin and tamsulosin hydrochloride for Lower Urinary Tract Symptoms associated with Benign Prostatic Hyperplasia. Int J Urol 2010;17(10):869-75

#### **2.** #46: TURP SYNDROME (TS) CASE REPORTE

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#### Objective

the turp syndrome, characterized by a defcit diselettrolitico and consequently the cardiovascular and autonomic nervous system. The rational resides in 'absorption by the body of high amount of volume of the endoscopic transmission fluid used (10 and 30 mlmin) for procedures, in this case, the turp to which must be added the toxicity, specific, the fluid used, which, subsequently, sometimes, makes it independent of the damage caused to the body by the absorbed volume .

#### The factors that influence such absorption are:

1) the transmission liquid 2) low pressure venosa3) prolonged endoscopic maneuver over 1 h 4) opening of numerous venous sinuses 5) perforation of the capsule thus facilitating the passage of the liquid in the cavity peritoneal and consequently its reabsorption

#### Materials and Methods

Patient data: Male of 65 years, luts 3v nocturia, in tp finasteride from 2 years, pa average of 130 / 85mm / hg (pa values generally normal no other therapy in progress), psa <4 ng / l, no familiar k prostate, dre negative in nodules, vol gland adenoma 60cc unweighted; hb12.5g / dl, creatinine 0.98

#### Results

endoscopic resection duration 2h, 30 min after the turp: hyperthermia (up to 39.5 ° C), blood pressure down, sodium 125, means of transmission used physiological, energy used jayrus, grams resected undetected. Hb 11.0g / dl, creatinine 1.2

#### Discussions

the symptoms can occur, even at 24 h from intervention, and is characterized by disparate epiphenomena, mostly triggered, after the reabsorption of the transmission medium, from hyponatremia: hypertension, hypotension, bradycardia, hypothermia, tachycardia, hyperthermia of reflection, scotoma and fotomi, hypoxia, nausea, severe vomiting, shortness of breath associated with pulmonary edema. The hypervolemia caused by excessive absorption of transmission fluid due to hypertension and bradycardia, between the other, fatigue of the left ventricle, which ease the transition in the fluid at the level of the third space, triggering pulmonary edema. The subsequent dilution of the osmolar concentration of sodium causes edema at the level of the central nervous system and subsequently hypovolemia

with all that sequela of symptoms mentioned before. For another variation of osmolarity induces hemolysis allowing it to settle of hemoglobin in the kidneys causing renal failure. Although, the use of some sources of energy and therefore of certain liquid transmission can be made more rare the phenomenon of resorption syndrome, it is, however, present. The tur syndrome in addition to the common pathophysiology of increase in circulating volume, recognizes a related toxicity liquid irrigation. Some examples are:

- the distilled water provides the best optical vision, but causes, to a high extent, intravascular hemolysis due to the different serum osmolality. Therefore Next you have the precipitation of hemoglobin in the renal tubule causing acute renal failure.

- Glycine solution has an osmolarity of 200 mOsml / L, it is metabolized by the liver into ammonium and can lead to visual disturbances. High levels of ammonium, as known, may lead to neurological disorders.

- mannitol solution is the only irrigant isosmolar (275 mOsml / L). Not only it is metabolized and excreted by the kidneys, but for precisely the absorption of large amounts of mannitol move liquids in the vascular compartment and lead to rapid fluid overload,

#### cardiac failure and pulmonary edema.

The treatment, of course varies depending on the symptoms and severity. It may be necessary to administer from atropine to adrenaline to correct a slow heartbeat or low blood pressure; anticonvulsant drugs, if they are Significantly greater neurological symptoms; blood transfusions, designed to rebalance both the hematocrit that the electrolyte balance; furosemide 40 mg only in the case in which there is the appearance of pulmonary edema, because of for if the drug induces sodium depletion .In addition in cases of severe hyponatremia (120 mmol / l) administering a hypertonic solution at 3% in order, however, to obtain a slow electrolytic rebalancing

#### Conclusion

Conclusion: the ts was treated with close monitoring of Pa and with infusion of hypertonic solution, facilitating the removal of the liquid from the third space but not facilitating sodium depletion (as is by administering furosemide) would take place. The patient gradually took in 6-h period normal values and returned asintomatic .The recognizing of this syndrome allows the implementation of the most appropriate measures to restore the patient's health Reference

#### Bibliografia

- 1. Dietrich Gravenstein, MD Department of Anesthesiology, University of Florida College of Medicine, Gainesville, Florida, the International Anesthesia Research Society 1997, Transurethral Resection of the Prostate (TURP) Syndrome: A Review of the Pathophysiology and Management Continuing Education in Anaesthesia, Critical Care & Pain j Volume 9 Number 3 2009
- 2. Aidan M O'Donnell BSc MB ChB FRCA Irwin TH Foo MB BChir MD MRCP(UK) FRCA Anaesthesia for transurethral resection of the prostate. Bipolar Transurethral Resection Versus Monopolar Transurethral Resection for Benign Prostatic Hypertrophy: A Systematic Review and Meta-Analysis
- 3. Yin Tang, MD, Jinhong Li, MD, Chuanxiao Pu, MD, YunJin Bai, MD, HaiChao Yuan, MD, Qiang Wei, MD, and Ping Han, MD JOURNAL OF ENDOUROLOGY Volume 28, Number 9, September 2014
- 4. Balzarro M, Ficarra V, Bartoloni A et al. The pathophysiology, diagnosis and therapy of the transurethral resection of the prostate syndrome. Urol Int 2001; 66: 121–6
- 5. Kirollos MM, Campbell N. Factors influencing blood loss in transurethral resection of the prostate (TURP): auditing TURP. Br J Urol 1997; 80: 111–5
- 6. Gravenstein D. Transurethral resection of the prostate (TURP) syndrome: a review of the pathophysiology and management. Anesth Anal 1997; 84: 438-46
- 7. Blanshard H, Bennett D. TURP syndrome. In: Allman KG, McIndoe AK, Wilson IH, eds. Emergencies in Anaesthesia. Oxford: Oxford University Press, 2006; 270–1
- 8. Imiak S, Weavind L, Dabney T, Wenker O: Interactive Case Report in Anesthesia and Critical Care. The Internet Journal of Anesthesiology 1999; Vol3N1; Published January 1, 1999; Last Updated January 1, 1999.
- Omar MI1, Lam TB, Alexander CE, Graham J, Mamoulakis C, Imamura M, Maclennan S, Stewart F, N'dow J BJU Int. 2014 Jan;113(1):24-35. doi: 10.1111/bju.12281. Epub 2013 Oct 24.Systematic review and meta-analysis of the clinical effectiveness of bipolar compared with monopolar transurethral resection of the prostate (TURP).

#### **3.** #75: GREENLIGHT XPS: OUR APPROACH

#### E. Daglio<sup>1</sup>, L. Timossi<sup>1</sup>, G.M. Badano<sup>1</sup>, E. Rikani<sup>1</sup>, T. Montanaro<sup>1</sup>, A. Di Domenico<sup>2</sup>, C. Introini<sup>2</sup>

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#### Objective

The photoselective vaporization of the prostate with the surgical technology of straight beam lithium triborate laser (LBO) is considered one of the most promising alternatives for the treatment of benign prostatic hyperplasia (BPH). The aim of the present work is to share our initial experience of the 180-W straight beam LBO laser photoselective vaporesection of the prostate to evaluate the technical improvement. Our approach and technique for GreenLight XPS (180 W GreenLight Laser) drawing on personal experience with both anatomic and standard vaporization techniques were applied in 63 cases.

#### Materials and Methods

From April 2015 to December 2016 we performed 63 procedures. All patients were preoperatively assessed with the International Prostate Symptom Score (IPSS), post-avoid residual urine (PVR), prostate-specific-antigen level and prostate volume measurement. Perioperative parameters and complications were recorded.

Patients were assessed at 1 week and 1 month postoperatively. A transurethral cystoscopy was performed 3 months after the procedure

#### Results

This technique resulted in a significant improvement of IPSS and PVR. Mean operative time was 50 minutes. The mean prostate volume was 60 ml. Applied energy of 250 KJ and a laser working time of 30 minutes were applied. The percentage of urinary retention after the Green light procedure was 20%. This percentage was reduced increasing catheter indwelling and hospital stay time to 48 hours instead 24 hours.

We recorded one case of fistole prostate with right adductor muscle, two case of persistent urinary incontinence (over 6 months) and one case of blood transfusion during the recovery. Finally, one case of capsule perforation was noticed

#### Discussions

Currently TURP is still the gold standard in the surgical treatment of BPH. Our results demonstrate that the LBO laser

19

Comunicazioni **2** - Andrologia che "Passione'

photoselective vaporesection of the prostate has equally efficacy and greater safety compared with TURP especially for the elderly and high-risk patients with oral anticoagulation and bleeding tendency. By means of the GreenLight XP 180 watt laser anatomic photoselective vaporization of the prostate instead of standard vaporization, we observed an improvement of surgical outcomes and obstructive symptoms with smaller catheter indwelling time. The anatomic vaporization is a partial enucleation of prostatic adenoma from prostate capsule and tissue vaporization from capsule to lumen. Moreover, this technique decreased postoperative irritative symptoms

Conclusion

The XPS GreenLight Laser is a system that allows the urologist to perform an effective treatment option for BPH. The main positive features are the following: length of hospital stay and operative catheter time reduction, less surgical bleeding.

The XPS GreenLight Laser is a system that afford the urologist an effective treatment option for BPH however with shorter length of stay in hospital, less operative catheter time and surgical bleeding. The cost of one fiber is 1200 € that is more expansive that a TURP procedure but we have to consider that a patient can be dismissed 24 hours after the procedure without catheter. We have been able to treat larger gland (until 80 ml) with significantly quicker operative time without compromise surgical outcomes and significant complications. Moreover, the XPS GreenLight Laser can be a chance to patients which can't be undergone traditional surgery

Reference

- 1) Can J Urol. 2011 Oct;18(5):5918-26. GreenLight 180W XPS photovaporization of the prostate: how I do it. Zorn KC1, Liberman D.
- 2) Minerva Urol Nefrol. 2016 Dec 1. [Epub ahead of print] Green light vaporization of the prostate (PVP): is it an adult technique? Brassetti A1, De Nunzio C, Barry Delongchamps N, Fiori C, Porpiglia F, Tubaro A
- 3) Multicenter study on costs associated with two surgical procedures: GreenLight XPS 180 W versus the gold standard transurethral resection of the prostate. Benejam-Gual JM, Sanz-Granda A, Budía A, Extramiana J, Capitán C. Actas Urol Esp. 2014 Jul-Aug;38(6):373-7. doi: 10.1016/j.acuro.2013.10.011. English, Spanish
- 4) Direct Comparison of GreenLight Laser XPS Photoselective Prostate Vaporization and GreenLight Laser En Bloc Enucleation of the Prostate in Enlarged Glands Greater than 80 ml: a Study of 120 Patients. Misrai V, Kerever S, Phe V, Zorn KC, Peyronnet B, Rouprêt M. J Urol. 2016 Apr;195(4 Pt 1):1027-32. doi: 10.1016/j.juro.2015.10.080

## 4. #106: ROLE OF FSHR POLYMORPHISM P.N680S IN THE THERAPY WITH FSH IN PATIENTS WHO UNDERWENT VARICOCELE SURGERY

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#### Objective

Follice-stimulating hormone (FSH) receptor (FSHR) polymorphism p.N680S mediates different responses to FSH in vitro (1), and this polymorphism is associated with the ovarian response in controlled ovarian hyperstimulation. In the last years, FSHR gene polymorphisms have been studied as potential risk factors for spermatogenetic failure. The analysis of this gene represents a valid pharmacogenetic approach to the treatment of male infertility, confirming also the importance of strict criteria for the selection of patients to be treated with FSH. Selice et al. (2011) demonstrate in a group of oligozoospermic subjects with hypospermatogenesis and normal FSH levels, that only subjects with at least one serine in position 680 had a statistically significant improvement of seminal parameters (2).

The aim of our study was to evaluate the influence of the polymorphism p.N680S in the adjuvant therapy with recombinant FSH (rFSH) after surgical repair of varicocele (3).

Materials and Methods

From January 2016 and June 2016, twenty-two patients whose underwent subinguinal microsurgical varicocelectomy (Marmar technique) and with a morphologic aspect of hypospermatogenesis at testicular cytology were enrolled. At the 3th post-operative month the patients underwent a semen analyses and then they started the adjuvant recombinant therapy with follitropin alfa 150UI i.m. 3 times/week for three month . After the therapy the patients had a semen analyses, and the FSHR gene polymorphism p.N680S characterization (Ser-Ser, Ser-Asn, Asn-Asn) with PCR in high resolution melting HRM from DNA extracted by a simple blood sample. Mean values with standard deviations ( $\pm$ SD) were computed and reported for all items. Statistical significance was achieved if p-value was  $\leq 0.05$  (two-sides).

#### Results

The mean age of the patients was  $27,45\pm3,79$ . 8 out of 22 patients (36.36%) had the Ser-Ser polymorphism, 8 out of 22 patients (36.36%) had the Ser-Asn polymorphism and 6 out of 22 patients (27.27%) had the Asn-Asn polymorphism. The adjuvant therapy did not significantly improve semen volume (p=0.1890).

After 3 months of treatment, we observed significant increase in total sperm count (p = 0.0272), sperm concentration (p = 0.0044), percentage of normal morphology forms (p = 0.0001) and progressive motility (0.0013) in the Ser-Ser group.

After 3 months of treatment, we observed significant increase in percentage of normal morphology forms (p = 0.0001) but we did not observe significant increase in total sperm count (p = 0.0514), sperm concentration (p = 0.0531) and progressive motility (0.0571) in the Ser-Asn group.

After 3 months of treatment, we did not observe significant increase in total sperm count (p = 0.8326), sperm concentration (p = 0.964), in percentage of normal morphology forms (p=0.1271) and progressive motility (0.1986) in the Asn-Asn group.

Discussions

#### 14:30 - 16:00 Sala Fermi

Our findings demonstrate that only subjects with two serine in position 680 had a statistically significant improvement of seminal parameters except for the percentage of normal morphology forms that is also increased in Ser-Asn group. A positive trend was seen for the others parameters in the Ser-Asn group even if the statistical significance was not reached. The patients with at least one serine in position 680 probably have lower sensitivity to FSH. In these subjects, their FSH basal levels are not sufficient for optimal stimulation of spermatogenesis that is improved by additional FSH. This is not possible for the patients of Asn-Asn group because the same FSH basal levels are already operating at their maximal potential on stimulation of spermatogenesis (2). A limitation of this study is the small cohort of patients.

#### Conclusion

Which FSHR polymorphism can benefit from FSH treatment is clinically very important, in particular for what regards nonidiopathic patients. It is also relevant from a pharmacoeconomic point of view. We expect to increase our sample size in order to better analyze the role of FSHR gene polymorphism p.N680S in the adjuvant therapy with rFSH after surgical repair of varicocele.

#### Reference

- 1-Casarini L, Moriondo V, Marino M, Adversi F, Capodanno F, Grisolia C, La Marca A, La Sala GB, Simoni M. FSHR polymorphism p.N680S mediates different responses to FSH in vitro. Mol Cell Endocrinol. 2014 Aug 5;393(1-2):83-91.
- 2-Selice R, Garolla A, Pengo M, Caretta N, Ferlin A, Foresta C. The response to FSH treatment in oligozoospermic men depends on FSH receptor gene polymorphisms. Int J Androl. 2011 Aug;34(4):306-12.
- 3-Amirzargar MA, Yavangi M, Basiri A, Hosseini Moghaddam SM, Babbolhavaeji H, Amirzargar N, Amirzargar H, Moadabshoar L. Comparison of recombinant human follicle stiumulating hormone (rhFSH), human chorionic gonadotropin (HCG) and human menopausal gonadotropin (HMG) on semen parameters after varicocelectomy: a randomized clinical trial. Iran J Reprod Med. 2012 Sep;10(5):441-52.

## **5.** #155: USE OF A NON–CROSS-LINKED XENOGRAFT (XENFORM) IN SURGICAL TREATMENT OF PEYRONIE'S DISEASE

#### E. Caraceni<sup>1</sup>, L. Leone<sup>2</sup>, L. Utizi<sup>1</sup>, A. Marronaro<sup>1</sup>

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#### Objective

To evaluate the effectiveness in Peyronie's disease surgical treatment using Xenform, a non-cross-linked graft derived from dermal bovine tissue, to close the defect obtained after plaque incision, without penile prosthesis implant. A further objective is to evaluate the satisfaction of patients. (1)

#### Materials and Methods

We treated with plaque incision 28 patients with a stable penile curvature  $\geq 60^{\circ}$  hindering penetration and with erectile function conserved. International Index of Erectile Function-15 and a not-validated questionnaire constituted of 7 questions about their satisfaction were administered after 1 year of follow-up. Furthermore, specific questions were relative about penile straightening, penile postoperative length, glandular sensitivity, and feeling palpability. (2)

#### Results

Sixteen patients were seen after at least 1 year of follow-up. Curvature improvement was obtained in all cases, with the complete straightening in 75%; we did not observe any retraction of the graft and any recurrence on the curvature.

Significant reduced glans sensibility and erectile dysfunction were the more frequent postoperative complications, resulting in 43.8% and 25%, respectively. All patients are satisfied with the straightening. Only 2 patients are dissatisfied about the overall result. (3-4)

#### Discussions

Graft is resulted compatible with albugineal features, like thickness, consistency, and elasticity; it is waterproof, allowing the visualization of complete correction of the curvature after the suture. No severe complications were observed except 1 hematoma requiring surgical revision.

#### Conclusion

Plaque incision corporoplasty with Xenform graft is an effective and safe surgical treatment. Xenform is a secure and a reliable albugineal substitute, comparable to other heterologous graft. We have not observed any retraction. Patient's satisfaction is linked to the treatment result and to sexual life.

## **6.** #154: PENILE LENGTH PRESERVATION AFTER PROSTHESIS: IS AMS LGX MORE EFFECTIVE THAN AMS CX? A PROSPECTIC, RANDOMIZED STUDY

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#### Objective

Hydraulic penile prosthesis implantation (PPI) is almost unanimously considered the best solution for severe erectile dysfunction

(ED); while patients and their partners commonly report high quality of life scores and satisfaction rates, a potential issue is postoperative reduced penile length. To verify if the AMS LGX prosthesis, with cylinders expanding in girth and length, can prevent penile shortening following surgery, and to compare its impact on penile length with the AMS CX device, which cylinders expand in girth only (1).

Materials and Methods

Thirty-two consecutive patients with severe ED scheduled for three-component hydraulic penile prosthesis placement were randomized in two groups: AMS LGX and AMS CX devices. Preoperatively a baseline stretched penile length (SPL) was obtained. In both groups our routine strategy for length preservation, consisting of cylinder oversizing (1 cm) and device kept activated for two weeks postoperatively, was used. Post-operatively penis length at fully inflated device was recorded at 1, 6 and 12 months. Participants completed the "Quality of Life and Sexuality with Penile Prosthesis" (QoLSPP) questionnaire at one year follow-up. (2-3)

#### Results

Baseline mean SPL were: 14.7 cm (range:12.5 - 17) in the LGX group; 15.4 cm (range:12.5 - 17.5) in the CX group. At 1 month postoperatively no difference emerged between the two device groups in terms of fully inflated device penile length compared to baseline measurements. At 6 months follow-up the LGX group showed a mean significant length increase of 0.9 cm (p=0.008) compared to baseline, while the CX group did not (p= 0.556). At 1 year follow-up both LGX and CX groups exhibited a statistically significant mean increase in penile length compared to baseline (2.1 cm, p=0.001, and 0.8 cm, p=0.001, respectively). QoLSPP questionnaire showed high scores in all its domains (functional, relational, social and personal) in both groups, with no significant differences emerging between the two groups. (4)

#### Discussions

Both tested devices, with strategies of cylinder oversizing and prolonged postoperative activation, prevent penile shortening, promote penile length gain, and are associated with high satisfaction rates and QoL scores.

#### Conclusion

The LGX device provides a greater and faster penile length gain compared to the CX device. The 20% LGX cylinder in vitro length gain indicated by the Company translates in a in vivo penile length gain of 14.3% at one year follow-up.

Reference

- 1. Carson CC, Mulcahy JJ, Govier FE, AMS 700 CX Study Group. Efficacy, safety and patient satisfaction outcomes of the AMS 700 CX inflatable penile prosthesis: results of a long term multicenter study. J Urol 2000;164:376-80
- 2. Montorsi F, Rigatti P, Carmignani G, Corbu C, Campo B, Ordesi G, Breda G, Silvestre P, Giammusso B., Morgia G, Graziottin A. AMS three-piece inflatable implants for erectile dysfunction: a long-term multi-institutional study in 200 consecutive patients. Eur Urol 2000;37:50-5
- 3. Caraceni E, Utizi L. A questionnaire for the evaluation of quality of life after penile prosthesis implant: quality of life and sexuality with penile prosthesis (QoLSPP): to what extent does the implant affect the patient's life? J Sex Med. 2014 Apr;11(4):1005-12
- 4. Caraceni E, Utizi L, Angelozzi G. Pseudo-capsule "coffin effect": how to prevent penile retraction after implant of threepiece inflatable prosthesis. Arch Ital Urol Androl 2014; 86(2): 135-137

#### 7. #125: A NEW ORIGINAL SURGICAL TECHNIQUE FOR PEYRONIE DISEASE: ALBUGINEAL **GRAFT-FREE LENGTHENING Z-PLASTY. RESULTS WITH MEAN FOLLOW UP OVER 24** MONTHS

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#### Objective

We present an original lengthening albugineal Z-plasty for the treatment of penile curvature due to Peyronie Disease (PD) with the aim to reduce the post-operative Erectile Dysfunction (ED) due to Veno-Occlusive Dysfunction (VOD) as major functional complication of incision and grafting surgical procedures performed for PD(1,2).

#### Materials and Methods

Surgical technique: circumcision and deglooving of the penis; dorsal neurovascular bundle isolation and setup plaque size and direction by saline hydraulic erection; Z-shape plaque incision and translocation of albugineal flaps using 4/0 Vycril suture; saline hydraulic erection to confirm absence of residual curvature. From May 2013 to September 2016, 20 patients affected by PD have been enrolled in a surgical experimental pilot study with local Aethical Comitee certification. Inclusion criteria comprise: age up to 18 years (yr), penile curvature due to PD in stable phase(3) (=>6 months), no ED (IIEF-5>19; EHS>3(4)), specific informed file subscription. History (IIEF-5 and PDQ Scale Q2 to Q6(5)), physical examination (EHS), dynamic penile ecocolorDoppler ultrasound examination (longitudinal plaque size, curvature degree) have been reported for each patients as soon as operating time procedure, intraoperative complications, post-surgical complication. Each patients has been re-evaluated after surgery at 1, 3, 6 and 12 mo.

Results

Median values of age, curvature degree, plaque diameter, IIEF-5, PDQ Scale and operating time has been: 59 yr; 66° dorsal site; 24,4 mm; 22,8 points, 3,33 points; 140 minutes. Fourteen patients has been available for evaluation with post-surgery follow up (FU) up to 18 mo. Complete resolution of the curvature has been jointed all cases with a complete subjective satisfaction with median IIEF-5 22,8; median PDQ Scale 3,33; non residual ED. Minor gland hypoesteshia in all of the ten patients from 6 to 12

<u>Comunicazioni 2 - Andrologia che "Passione'</u>

#### mo. from surgery.

#### Discussions

Our results seem to be effective in term of restoration of the penile shape with a complete functional straight of the penis and also effective in terms of erection rigidity for sexual intercourse (all patients refers absence of ED with a post-operatory mean IIEF-5 score of 22,8) in a range follow up observation over 24 months. We assay the subjective satisfaction of the patients using the PDQ Scale (from Q2 to Q6) score, that decrease from a mean value of 16,7 at baseline to 3,33 post-operatory and, with a "clinical" intent, using three direct questions submitted to them at the time of the 12 month follow up visit. All the fourteen patients eligible for the evaluation describe as full satisfaction (Q1, answer 1) after surgery and, at the same time, they answer "yes" at the Q2 and Q3 question. The answers at these last two questions represent the most important result that encourage us to continue in this surgical strategy for PD, because patients suggest that they would re-do the surgery and they would be suggest the same surgery to relations or friends meaning the complete real subjective satisfaction in terms of sexual behavior and sexual wellbeing.

Moreover, we focus our attention on the operating time and immediate or delayed post-operative complication. Mean operating time has been 140 minutes (ranging from 120-170) is lower than the 180 minutes that could be considered the limit to perform surgery with spinal anesthesia. We have had not any immediate complication and all our patients was discharged in post-op day one achieving a short hospitalization time that, considering that this is a graft-free procedure, leads to reduction of the economic impact of this kind of surgery on the budget destined to our unit. The only delayed post-op complication referred by patients has been a persistence of glandular hypo-anesthesia that otherwise improving until a complete resolution in six months after surgery. This complication is basically due to the extensive penile dorsal neurovascular bundle (DNVB) isolation and it is a common post-op complication in all the surgical procedure for PD in which it is necessary to proceed to isolate the DNVB and producing a transitorial neuropraxy of the DNVB itself.

#### Conclusion

Results obtained suggests that the length of the PD plaque, and the traslocation of the PD scar forces, on the short site of the penis with a graft free Z-plasty seems to be effectiveness to reduce penile curvature and avoid post-operative ED due to VOD.

Reference

<u>Comunicaz</u>ioni **2** - Andrologia che "Passione'

- (1) Montorsi F, Salonia A, Maga T, et al. Evidence based assessment of long-term results of plaque incision and vein grafting for Peyronie's disease. J Urol 2000; 163: 1704-8
- (2) Ralph DJ. Long-term results of the surgical treatment of Peyronie's disease with plaque incisione and grafting. Asian Journal of Andrology 2011; 13: 797
- (3) Hatzimouratidis K, Eardley I, Giuliano F, Hatzichristou D, Moncada I, Salonia A, Vardi Y, Wespes E. European Association of Urology Guidelines on penile curvature. Europena Urology 2012; 62: 543-552
- (4) Mulhall JP, Goldstein I, Bushmakin AG, Cappelleri JC, Hvidsten K. Validation of the erection hardness score. J Sex Med 2007 Nov; 4(6): 1626-34
- (5) Rosen R, Catania J, Lue T, S Althof, J Henne, W Hellstrom, L Levine. Impact of Peyronie's disease on sexual and psychosocial functioning: qualitative finding in patientd and controls. J Sex Med 2008; 5: 1977-1984

## 8. #181: ANALYZING SATISFACTION RATE IN PATIENTS WITH PEYRONIE'S DISEASE UNDERWENT ALBUGINEAL GRAFTING AND PENILE IMPLANT

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- <sup>2</sup> Università di Napoli Federico II (Napoli)

#### Objective

Peyronie's disease (PD) is a benign, localized connective tissue disorder characterized by the abnormal deposition of collagen with the formation of fibrous, inelastic plaques in the tunica albuginea of the corpora cavernosa, which causes penile deformity during erection and Erectile Dysfunction (ED)[1]. This disorder is frequently associated with anatomical alterations of the shaft and penile shortening and has a major impact on quality of life and significant psychological effects [2]. The aim of this study is to analyze the satisfaction rate in patients underwent albugineal grafting and penile implant.

#### Materials and Methods

From March 2015 to April 2016 13 patients with PD were recruited. with stable disease at list for six months. 9 patients reported ED assessed by questionnaire IIEF – 5 (14 + -2), degree of curvature> 50 ° in 9 patients, complex deformities in 3 patients and in one patient there was a penile shortening due cavernosal fibrosis.

The surgical procedure started with a sub coronal approach. The penis was degloved. Buck's fascia was dissected from the albuginea.With an artificial erection we identified the maximum curvature point, thanks to dermographic pen in order to asses the angle of curvature. A double Y incision is performed on the tunica albuginea.

The defect was musered and covered with a patch of porcine derma and sutured to the albuginea with a continuous suture in 4-0 polydioxanone.

Penile prosthesis (AMS 700 CX) was inserted using using a peno-scrotal incision and inflated at 80% of the maximum capacity for the next two weeks. The patients were discharged 2-3 days after surgery.

All patients were proposed therapy Vacuum[3] device for the next 6 months.

The assessment of patient satisfaction was measured with modified EDITS[4] questionnaire at 6 months after surgery.

This consists of 5 macro areas (overall satisfaction, self-confidence, loss of post-operative sensitivity, length of postoperative penile length loss of the post -operatoria penis); the patient could validate only one choice among the three proposals (satisfied, not very satisfied and not satisfied).

# venerdì 19 maggio 2017

#### Results

The results at 6 months after surgery were:

84% (11 patients) of the patients was satisfied with the result of surgery.

2 patient (7.7%) was half satisfied with the result.

10 patients (76.9%) of patients had received greater security in the relationship with their partners after the surgery.

The third macro areas regard the loss of post-operative sensitivity of the 13 analyzed patients, 9 (69.2%) reported no loss of post – operative sensitivity, and only 4 (38.4%) reported minimal loss of sensitivity.

92.3% of patients, when asked about the length of the penis were satisfied, and only 1 patient (7.7%) not at all satisfied.

Finally, in no patient it was found loss of penile length.

#### Discussions

Surgery is the only effective tool in the management of severe PD. Unfortunately albugineal grafting results in a high rate of postoperative ED. Albugineal grafting and penile prosthesis implantation is the only technique able to restore penile size and guarantee pts' satisfaction.

#### Conclusion

The psychological implications of Peyronie's disease is a factor to be considered when setting the therapy with surgery. In this study, we have shown that the 'surgery and penile prosthesis implantation, associated with post-operative rehabilitation with vacuum device, leads to a high satisfaction rate and greater self-confidence.

#### Reference

- 1. Pryor J., Akkus E., Alter G., Lebret T., Levine L., et. All. Peyronie's disease. J Sex Med. 2004;Jul;1(1):110-5.
- 2. Egydio PH. Surgical treatment of Peyronie's disease: Choos- ing the best approach to improve patient satisfaction. Asian J Androl 2008;10:158–66.
- 3. Raheem AA, et al. The role of vacuum pump therapy to mechanically straighten the penis in Peyronie's disease. BJU Int 2010 p.1178-80
- 4. 1. Stanley E. Althof, Eric W: Edits: Development of Questionnaires for evaluating satisfaction with treatments for erectile dysfunction. Adult Urology 1999.

## **9.** #79: SURGICAL CORRECTION OF PEYRONIE'S DISEASE VIA TUNICA ALBUGINEA PLICATION- LONG TERM FOLLOW UP

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#### Objective

Peyronie's disease (PD) is an acquired connective tissue disorder of the tunica albuginea with fibrosis and inflammation that lead to palpable plaques, penile curvature and pain during erection, compromising quality of life. Patients report negative effects in four major domains: physically appearance and self-image, sexual function and performance, pain and social stigmatization. Aim of present study is to evaluate outcome in term of patient satisfaction, anatomical and functional correction at long term follow up after surgical plication of albuginea.

#### Materials and Methods

Between 1998 and 2006 a total of 204 patients with PD underwent surgical correction using albuginea plication technique. We obtained complete long term (at 5 and 10 years) follow up data in 187 cases.

#### Results

After an average of 141 months the most common postoperative complications are loss of length (150 patients had a minimal penile shortening  $\leq$  1,5 cm, 37 between 1,5 and 3 cm, none >3 cm), recurrent or residual penile curvature (in 15 without impairing sexual intercourse) erectile dysfunction (15 patients had IIEF-5 < 10 at 5 years follow up vs 28 patients at 10 years), change in penile sensation (37 lamented paresthesia of the glans 1 year after surgery, 28 at 5 years and 15 at 10 years); painful or palpable suture knots (in 20 cases) spontaneously revolved in 3 months. Overall 77% of the patients and partners were completely satisfied with the outcome of surgery, 14% partially satisfied and 9% unsatisfied.

#### Discussions

Regardless of surgical approach, all patients should be informed about the risk of penis shortening, hypoesthesia and residual curvature prior to surgery, being imperative open and honest discussion to avoid false expectations. The most common postoperative complications of this approach are loss of length, recurrent or residual penile curvature, ED, change in penile sensation, and painful or palpable suture knots. Many of these outcomes can be quite distressing for the patient and they may impact the operative technique selection and overall satisfaction postoperatively. In our hands this approach obtained good success for the correction of curvature, maintenance of erectile function and patient-reported treatment satisfaction.

The optimal surgical treatment for PD patients with erectile capacity is still controversial [1, 2]: lengthening procedures – mainly performed on the patients with severe penile curvatures and /or narrowing or hourglass deformities – and tunical shortening procedures including incisional/excisional corporoplasty and non-incisional plication techniques. Penile prosthesis implantation is typically reserved for patients with PD and concurrent ED, especially non responders to medical management.

The advantage of our technique is that it avoids incision or excision the tunica and yet achieved the desired result of straightening the deformity by shortening the longer side. It is simple to perform and there is no risk of excising too much of tunica. If after tying a suture the deformity appears over or under corrected, the suture can be cut or applied again as the case may be.

Comunicazioni **2** - Andrologia che "Passione'

The use of non-absorbable stitches reduced the risk of recurrence of the curvature by comparing the results to the data of those who useful absorbable stitches (Ebbehoj, Schroder-Essed[3,4]). The absorbable stitches probably cannot withstand the traction during replaced erections in the early postoperatively period. On the other hand, when nonabsorbable material is used, commonly problems are the formation of granuloma around the sutures and the unpleasant feeling of bumps under the skin. Very rarely the discomfort of the suture interfered with sexual intercourse with rates reported by Baskin and Hsieh as 0-10% [5, 6].

#### Conclusion

Plication procedure is safe and simpler to preform than the classical Nesbit's procedure with shorter surgical time, lower costs and could be successfully performed also by less experienced surgeons. It has a minimal risk of de novo erectile dysfunction, a minimal risk of injury to the dorsal neurovascular bundle and may be used for a variety of angulation deformities, including multi-planar curvature and severe degrees of curvature obtaining good results in term of patient satisfaction for anatomical and functional correction.

#### Reference

- 1. Iacono F, Prezioso D, Ruffo A, Illiano E, Romeo G, Amato G "Tunical plication in the management of penile curvature due La Peyronie's disease. Our experience on 47 cases". BMC Surgery 2012, 12 (Suppl 1):S25
- 2. Langston J.P. Carson C.C." Peyronie's disease:plication or grafting" Urol Clin North Am (2011) 38:207-2016
- 3. Fried rich MG., Evans D., Noldus J." The correction of penile curvature with the Essed-Schroder technique: a long term follow up assessing functional aspects and quality of life". BJU Int. (2000) 86: 1034-1038
- 4. Baskin LS., Erol A., Li YW. "Anatomy of the neurovascular bundle: is safe mobilization possible?" J Urol 2000: 164:977-980
- 5. Hsieh Jt, Liu SP., Chen Y." Correction of congenital penile curvature using modified tunic all plication with absorbable sutures the long-term outcome and patient satisfaction" Eur Urol,2007;52: 261-6
- Makovey I, Higuchi TT, Montague DK, Angermeier KW, Wood HM. "Congenital penile curvature". Curr Urol Rep (2012) 13: 290-297

## **10.** #174: DIFFERENT APPROACHES IN PENILE TRI-COMPONENT PROSTHESIS SURGERY. A SINGLE ITALIAN CENTRE EXPERIENCE

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#### Objective

Among different approaches proposed through time, peno-scrotal and infrapubic ones are the most common performed for penile prosthesis implantation. Those are generally shorter in dimension than that of the past and allows to implant the prosthesis with a single incision of few centimeter. In scientific literature works comparing both approaches are lacking. Aim of this study is to compare advantages and disadvantages of each peno-scrotal and infrapubic approach in order to assess whether there is one to prefer on the other.

#### Materials and Methods

This was a retrospective analysis on 69 consecutive patients who all have been implanted between 2010 and 2013. Among these 10 received and implantation via infrapubic incision and other 59 via peno-scrotal one. Quality of Life(QoL) was determined using the validated questionnaire QoLSPP. Data were analyzed using SPSS software for statistical analysis.

#### Results

Samples were homogeneous according to age ((60.3 A vs 67.1 B; p=0.12).In Group A (peno-scrotal) 9 patients of 59 had concomitant IPP vs none in Group B (infrapubic). Mean of total implant length showed no difference, with differences in length of the extensor which is higher in group A. Operation time is 8 minutes shorter in group B (77.5 minutes A vs 85.2 minutes B; p<0,05). Penis length after surgery showed not significant difference (13.48 cm A vs 13.6 cm B; p=0,9). Few complications was observed all belonging to Dindo 1 with no significant difference between the groups. As well, QoLSPP scores showed no difference in the 4 domains: functional (3.9 A vs 4.0 B; p=0,32), relational (4.2 A vs 4.1 B; p=0.8), social (3.7 A vs 4.1 B; p=0.47) and personal (4.0 A vs 4.3 B; p=0.18).

#### Discussions

The peno-scrotal approach was largely more frequently performed (6:1).Operation time was barely shorter with the infrapubic approach, although its effectiveness in reducing infections has been questioned (1). The peno-scrotal approach allows a better exposition of the corpora cavernosa and it should be preferred in complex cases (like concomitant IPP). Using one approach or another did not affect patients QoL after the implantation(2).

#### Conclusion

Both approaches are safe, effective and should be considered minimally invasive if any ancillary procedure has been performed; the decision on which is to choice actually depends on surgeon or patient preference, evaluating every single case. In our centre, peno-scrotal approach is more frequently used as it is, in general, in Italy. (3)

#### Reference

- (1) Garber, Markus. Urology 1998 Aug 52(2):291-3.
- (2) Caraceni, Utizi et al. J Sex Med 2014; 11:1005-1012
- (3) INSIST-ED. Archivio italiano Urologia Andrologia 2016; 88-2

#### **11.** #269: CASE REPORT: URTHRITIS BY SYPHILIS

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#### Objective

The continued and numerous migration flows in Europe to which we are subjected oblige us to confront now obsolete and no longer endemic diseases for some time. Recognizing them can help in early diagnosis and appropriate therapy

#### Materials and Methods

It came under our observation for Urethrorrhagia: Man 20 years from gambia, normal white blood cells, hb reduced to 7.9 g / dl rbc3,01 Hct 25%. alerted by the patient's origin and asked to investigate the lack of cooperation, for idiomatic reasons, we contacted our colleagues in infectious diseases. they already knew the patient to a tertiary syphilis, positive to the relative test (TPPA). The patient was unhelpful to the previously recommended therapy.

#### Results

the patient is subjected to HCV, hbv e hiv tests, who test negative, Chest X-ray, CT abdomen-pelvis (to rule out any location of intraparenchymal disease). Chest X-ray is negative. diagnostics for system images nervous is in progress. CT abdomen pelvis. shows inguinal lymph nodes of 3 cm, palpable on physical examination, And no other goal mark, and Minutes retroperitoneal lymph nodes. The patient has Brought to seven days urethral catheter (c up to interruption of Urethrorrhagia, then removal of the cu, shooting copious Urethrorrhagia hesitated in CV repositioning for Other 3 days, until complete interruption of 'bleeding and then removed. The patient Meanwhile Treaty with the ceftriaxone 2 gr to day, it is transferred to the operative Unit of infectious diseases.

#### Discussions

Syphilis in clinical stage I, II, or III is called "early syphilis" for the first year after the date of infection

and "late syphilis" at later times. Painless lymphadenopathy develops regionally. Stage III syphilis causes a wide

variety of general medical, neurological, and psychiatric morbidity and may be life-threatening if untreated. Between this variety of symptoms acute urethritis with possible bleeding. This case represents an unusual complication of tertiary syphilis. It has been observed that urethral bleeding is more common in patients with co-infection of syphilis and gonorrhoea, suggesting that pathological changes to the urethral mucosa ,but it's possible so in III stage of syphilis (1,2,3) All persons who have primary and secondary or tertiary syphilis should be tested for HIV, hbv, hcv infection or for intraperenhimali injury ( with ct). Patients with late latent syphilis should receive doses of benzathine penicillin Ceftriaxone (1–2 g daily) may be effective for treating early syphilis. However, data are limited, and the optimal dose and duration of therapy are not defined ( 4.5)

#### Conclusion

The clinician should attempt to obtain objective evidence of urethral inflammation for an adequate therapy

#### Reference

1. The Presentation, Diagnosis, and Treatment of Sexually Transmitted Infections Florian M.E. Wagenlehner, Norbert H. Brockmeyer, Thomas Discher, Klaus Friese, Thomas A. Wichelhaus

2.International Journal of STD & AIDS Volume 22 September 2011 J Penton MBBS BSc and P French FRCP

3.MMWR / June 5, 2015 / Vol. 64 / No. 3 Prepared by Kimberly A. Workowski, MD1, 2 Gail A. Bolan, MD1 1Division of STD Prevention National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention 2Emory University, Atlanta, Georgia

#### 4.CLEVELAND CLINIC JOURNAL OF MEDICINE VOLUME 81 • NUMBER 2 FEBRUARY 2014 NEBLETT FANFAIR AND WORKOWSKI

5.JAOA • Vol 104 • No 12 • December 2004 Nusbaum et al

#### **12.** #183: TREATING ERECTILE DYSFUNCTION WITH A COMBINATION OF LOW-INTENSITY SHOCK WAVES AND VACUUM ERECTILE DEVICE

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- <sup>3</sup> Ospedale Santa Maria delle Grazie (Napoli)

#### Objective

Erectile dysfunction (ED) is the main complaint in male sexual medicine and it can affect patients (pts) physically and psychologically [1]. The primary goal in the management of ED would be to cure it when possible, and not just to treat the symptom alone [2]. One of the new promising treatments is Low intensity shock waves (LISW). In this study, we combine LISW [3] and a vacuum Device [4] for the treatment of ED.

Materials and Methods

This is a single-blind, two-arm randomized study. Sixty-five pts with mild to severe ED were enrolled. Group A (30 pts) underwent four weekly treatment sessions of LISW. During each session, 3600 shocks at 0.09 mJ/mm2 were given, 900 shocks at each anatomical area in right and left corpus cavernous, and right and left crus. Group B (30pts) underwent LISW plus vacuum device rehabilitation for 6 months. The principle of Vaccum erection device therapy is so mechanically create negative pressure surrounding the penis to engorge it with blood and then restrain blood egress from the organ to maintain the erection like effect. It is placed directly over the flaccid penis and operated, and after the penis is erected an elastic constriction ring or band is

2 - Andrologia che "Passione'

Comunicazioni

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positioned at the base of the penis; then the vacuum is released and the device is removed. They were investigated using the International Index of Erectile Function (IIEF-5) and the Sexual Encounter Profile (SEP) diaries (SEP- Questions 2 and 3). Results

At 6 months' follow-up, in Group A was reported a mean improvement of IIEF-5 scores from  $11.05 \pm 5.35$  at baseline to 20.06  $\pm$  5.28, SEP-Q2 from 48% to 72%, SEP-Q3 from 28% to 55%. In Group B was reported a mean improvement of IIEF-5 scores improved from  $10.54 \pm 6.87$  at baseline to 22.06  $\pm$  5.28, SEP-Q2 from 52% to 85%, SEP-Q3 from 30% to 62%.

Discussions

The finding of this study demonstrate that LISW plus Vacuum device therapy gives better results than LISW alone in the treatment of ED. LISW induces neovascularization and it can improve cavernously arterial flow which can result in an improvement of erectile function by releasing tissue factors (NO, VEGF). The vacuum device using the negative pressure generated by the apparatus, enables a greater influx of arterial blood within the cavernous bodies with an increase in oxygen saturation at microvascular level[5].

#### Conclusion

This combination therapy is proved to be effective and without side effects.

It can be a safe and valid tool in the management of erectile dysfunction or in men that can not undergo treatment with PDE5-i. Reference

- 1. Hatzimouratidis K, Amar E, Eardley I, Giuliano F, Wespes E; European Association of Urology. Guidelines on male sexual dysfunction: erectile dysfunction and premature ejaculation. Eur Urol. 2010
- 2. Lewis RW, Fugl-Meyer KS, Corona G, et. Al. Defnitions/Epidemiology/risk factor for sexual dysfuntion. J Sex Med 2010; 7:1598-607.
- 3. Ruffo A, Capece M, Prezioso D, Romeo G, Illiano E, Romis L, Di Lauro G, Iacono F. Safety and efficacy of low intensity shockwave (LISW) treatment in patients with erectile dysfunction. Int Braz. Urology 2015

## **13.** #107: CAN THE TESTICULAR PARENCHYMA FIBROSIS BE A PREDICTOR OF FAILURE IN THE PATIENTS WITH VARICOCELE?

#### M.. Carrino<sup>1</sup>, G. Battaglia<sup>1</sup>, L. Pucci<sup>1</sup>, D. Di Lorenzo<sup>1</sup>, F. Chiancone<sup>1</sup>, P. Fedelini<sup>1</sup>

<sup>1</sup> AORN A. Cardarelli, U.O.C. Andrologia (Napoli)

#### Objective

<u>Comu</u>nicazioni <u>2</u> - Andrologia che "Passione'

Diagnostic imaging plays a fundamental role in the diagnosis and staging of varicocele. In particular the European Association of Urology (EAU) recommends confirmation by color Doppler sonography after the diagnosis of varicocele is made by clinical examination. Color Doppler sonography was also be described like an useful tool for predicting the outcome of varicocelectomy (1). In the last years diffusion-weighted MRI of the testes was evaluated in order to detect fibrosis of the testicular parenchyma in the patients whose underwent varicocelectomy (2). The aim of this paper was to describe our preliminary experience in the use of the MRI for the patients with varicocele.

Materials and Methods

From January 2016 to July 2016 we recruited 10 consecutive patients with varicocele and 10 healthy control volunteers. The diagnosis of varicocele was confirmed by a physical examination and by color Doppler sonography. All patients exhibited unilateral varicocele and oligoastenozoospermia . All previous testicular pathologies (infections, trauma, torsion, tumor) were excluded in all patients. Infertile man using medications were also excluded. All patients and control volunteers underwent an MRI examination using a 1.5 T unit. The mean±DS ADC (Apparent Diffusion Coefficient) values were classified for testicles with varicocele (Group 1), testicles contralateral to varicocele (Group 2) and testicles of the control volunteers (Group 3). 5 out of 10 patient in the group 1 had a grade 2 of varicocele (Group 1a) and 5 out of 10 patient had a grade 3 or higher of varicocele (Group 1b). 4 out of 10 patient in the group 1 significantly improved their seminal parameters at six months follow-up without any medical therapy (group 1c) and 6 out of 10 patient in the group 1 did not significantly improved their seminal parameters (group 1d).

#### Results

There were no differences in the demographics and baseline characteristics between the two groups. The mean $\pm$ DS ADC was 940.25 $\pm$ 27.26 in the Group 1, 955.46 $\pm$ 29.2 in the Group 2 and 1109.52 $\pm$ 31.50 in the Group 3. A statistically significant difference was observed between the Group 1 and the Group 3. Moreover, a statistically significant difference was also observed between the Group 2 and the Group 3. No differences were seen between the Group 1 and the Group 2 (p=0,2442)

The mean  $\pm$  DS ADC was 918,6 $\pm$ 8,65 in the Group 1a and 953,2 $\pm$ 29,14 in the Group 1b (p=0,0344).

The mean±DS ADC was 914,2±4,91in the Group 1c and 957,6±21,69 in the Group 1d (p=0,0024).

#### Discussions

In this paper we confirmed that the mean ADC values significantly differed between patients with varicocele and healthy volunteer. Moreover also in the controlateral testis is possible to find signs of testiculare failure. The mean ADC also correlates with the grade of the varicocele and with the seminal parameters recovery at six months post-surgery. The decrease ADC values can be related to hypoxic and fibrotic change and the decrease ADC values in the contralateral testicles can be related to the heat stress or can be explained by hormonal and autoimmune factors. A limitation of this study is the small cohort of patients.

#### Conclusion

In conclusion, ADC values at MRI examination using a 1.5 T unit are a promising parameter in the detection of testicular fibrosis in patients with varicocele. It can be also used as a predictive parameter for determination of the degree of testicular damage and

the ability to improve the seminal parameter after surgery.

2- Karakas E, Karakas O, Cullu N, Badem OF, Boyacı FN, Gulum M, Cece H.Diffusion-weighted MRI of the testes in patients with varicocele: a preliminary study. AJR Am J Roentgenol. 2014 Feb;202(2):324-8.

14:30 - 16:00 Sala Fermi

## 14. #267: SPERMIOCULTURE ENRICHED WITH BHI-OXOID IN THE DIAGNOSIS OF CHRONIC BACTERIAL PROSTATITIS: A PROSPECTIVE COMPARATIVE STUDY

### V. Picone<sup>1</sup>, D. Arcaniolo<sup>1</sup>, C. Quattrone<sup>1</sup>, E. Mallardo<sup>1</sup>, M. Terribile<sup>1</sup>, M. Stizzo<sup>1</sup>, M. De Sio<sup>1</sup>, C. Manfredi<sup>1</sup>, R. Balsamo<sup>1</sup>, M.R. Iovene<sup>1</sup>

<sup>1</sup> Università degli Studi della Campania Luigi Vanvitelli (Napoli)

#### Objective

Objectives: The objective of the study was to compare the Meares Stamey test, the gold standard for diagnosis of prostate infections, with a microbiological Protocol conducted by the University of the studies of Campania "Luigi Vanvitelli", in patients diagnosed with chronic prostatitis (NIH type II).

#### Materials and Methods

Materials and methods: We enrolled patients with chronic prostatitis, defined by a NIH-CPSI score  $\geq 10$  and a symptom duration  $\geq 6$  months. The patients performed a Meares-Stamey test collection of the first voided samples (10 ml) of the first morning urine (VB1), a midstream (10 ml) (VB2), of prostatic secretions after prostatic massage (EPS) and further 10 ml of post-massage urine (VB3). The review concluded with the collection of semen during the following days (1-3). Each patient has practiced exams with 3 days of abstinence from sexual intercourse and at least 10 days prior to antibiotic treatments. The samples obtained, a part of them were insemenzati in common culture media, for the detection of pathogenic. The seminal fluid, was experimented in standard culture media, while a rate of pellet was enriched with "brain heart infusion" (BHI-OXOID).

#### Results

<u>Comunicazioni 2</u> - Andrologia che "Passione'

Results: 30 patients were enrolled in the study. 4 were negative (14%) and 26 are positive in the survey results (86%). Of these, the Meares-Stamey test was positive in 4 patients (15%), which showed as much positivity to spermioculture BHI-OXOID, 22 patients were positive only to spermioculture BHI-OXOID (85%). 6 of the 26 positive patients (23%) reported positivity to both the classical spermioculture both to that performed by prior enrichment. The remaining 20 patients (77%) reported positive only enriched semen with BHI-OXOID according to the applied protocol.

The pathogen most frequently isolated was E. faecalis (13 pc), followed by E. Coli (7), P. aeruginosa (3), K. pneumoniae (3), S. Aureus " S. Mitis, C.Koserii , H. parainfluenzae, M. morganii, S. marcescens (1).

#### Discussions

Discussion: the protocol used may represent a real breakthrough in the diagnosis of prostatitis. It is also important to emphasize that many of these infections are from pathogenic biofilm manufacturers and thus unlikely to be isolated. With this method it is thus possible to isolate the entire sessile bacteria of the same biofilm.

#### Conclusion

Conclusions: The present study showed that the semen culture is enriched with BHI-OXOID land can be considered a useful tool for the diagnosis of chronic bacterial prostatitis; Moreover, such a microbiological technique may allow you to relocate patients with chronic prostatitis belonging to Group III in Group II, by changing treatment strategies. Being able to have a more specific framework is an absolutely important, because in these patients very often the treatments do not lead you to a real advantage, especially on quality of life (as extremely relevant, also assessed the outcome of the two places questionnaires). It should also be borne in mind that very often these drugs with systemic effects, sometimes side. In this way, therefore, one of the characteristics is the ability to promote a significant reduction about the assumption of non-targeted drugs.

Keywords: Chronic Prostatitis - Semen - Meares Stamey - BHI-OXOID

#### Reference

Vittorio Picone1, Enza Mallardo2, Davide Arcaniolo1, Carmelo Quattrone1, Raffaele Balsamo1, Marco Terribile1, Marco Stizzo1, Celeste Manfredi1, Maria Rosaria Iovene2 and Marco De Sio1

1 Unità di Urologia - Università degli Studi della Campania "L.Vanvitelli"

2 U.O. di Batteriologia clinica – Università degli Studi della Campania "L.Vanvitelli"

#### **15.** #108: IS THE VACUUM ERECTION DEVICE (VED) BETTER THAN THE ICI (INTRA-CAVERNOUS INJECTION) IN PREVENTING PENILE SHORTENING AFTER NON NERVE- SPARING RADICAL PROSTATECTOMY?

#### M. Carrino<sup>1</sup>, L. Pucci<sup>1</sup>, F. Chiancone<sup>1</sup>, D. Di Lorenzo<sup>1</sup>, F. Monaco<sup>1</sup>, P. Fedelini<sup>1</sup>

<sup>1</sup> AORN A. Cardarelli, U.O.C. Andrologia (Napoli)

#### Objective

Penile length after radical prostatectomy has significant impact on patients and their partners. In addition, corporal fibrosis is associated with difficult penile prosthesis implantation (1). Vacuum erection device is a common device used for the treatment of the erection dysfunction (2). The aim of this study was to compare the penile shortening after non nerve-sparing radical

<u>Comunicazioni 2</u> - Andrologia che "Passione'

prostatectomy, in the patients that underwent sexual rehabilitation with ICI and VED. In addiction, the study analyse the rate of significant penile fibrosis in the patients that underwent penile prosthesis implantation.

Materials and Methods

We enrolled 40 consecutive patients that underwent a non nerve-sparing laparoscopic radical prostatectomy (RP) at our department from June 2015 to June 2016. The patients were randomized into two groups (Group A=sexual rehabilitation with ICI and Group B= sexual rehabilitation with VED). Androbath Med VED was used in all patients of the Group B for 15-20 minutes daily. All patients underwent an early penile rehabilitation (initiated within 2-4 weeks after RP). The stretched flaccid penile length (SFPL) was evaluated before and after 6 months of rehabilitation. 18 out of 40 patients underwent a penile prosthesis implantation 12.83 months after the surgery. We considered "significant fibrosis" if during the surgery we needed the help of additional straightening procedures like incision or excision of the scar, multiple corporotomies with or without grafting, the use of the Rossello dilator, implant downsizing, and transcorporeal resection (1). Arduos dilatation has not been considered as a parameter of "significant fibrosis" because it can be related to the surgeon experience. Mean values with standard deviations (±SD) were computed and reported for all items.

#### Results

The mean±SD pre-operative SFPL was similar in the two groups (Group A=  $8.42\pm1.82$ ; Group B= $8.21\pm1.74$ ; p= 0.7112). After 6 months of treatment, we did not observed significant increase in SFPL in the Group A (post-operative SFPL= $8.61\pm1.95$ ; p=0.7518). After 6 months of treatment, we observed significant increase in SFPL in the Group B (post-operative SFPL= $9.36\pm1.79$ ; p=0.0463).

Significant fibrosis during the penile prosthesis implantation was found in 10 out 18 patients (8 patients of the Group A and 2 patients of the Group B.

#### Discussions

Nowadays there is no standard protocol or guideline for penile rehabilitation after RP. In our experience the use of VED Androbath Med achieved a median increase in SFPL of 1.15 centimeter after six month of therapy, while the use of ICI achieved a median increase in SFPL of 0.40 centimeter. The VED mechanism depends on its ability to increase arterial inflow and the oxygenation of the corpora. Moreover, VED increases NO release (3), reduces the hypoxia inducible factor-1 and transforming growth factor beta-1 and increases smooth muscle/collagen ratio (4). The ICI therapy also increases arterial inflow but the chronic intracavernous injection of vasoactive drugs can be associated to an increase of corporal fibrosis (5).

#### Conclusion

In conclusion, the penile rehabilitation after non nerve-sparing radical prostatectomy using a new vacuum erection device (Androbath Med) is related to a good increase in SFPL after six months of therapy. In addiction the patients whose underwent VED therapy before surgery had corpora that were more suitable for dilation during the penile prosthesis implantation.

- Reference
- 1. Yafi FA, Sangkum P, McCaslin IR, Hellstrom WJ.Strategies for penile prosthesis placement in Peyronie's disease and corporal fibrosis. Curr Urol Rep. 2015 Apr;16(4):21.
- 2. Brison D, Seftel A, Sadeghi-Nejad H.The resurgence of the vacuum erection device (VED) for treatment of erectile dysfunction. J Sex Med. 2013 Apr;10(4):1124-35.
- 3. Li E, Hou J, Li D, Wang Y, He J, Zhang J.The mechanism of vacuum constriction devices in penile erection: the NO/ cGMP signaling pathway? Med Hypotheses. 2010 Nov;75(5):422-4.
- 4. Yuan J, Lin H, Li P, Zhang R, Luo A, Berardinelli F, Dai Y, Wang R.Molecular mechanisms of vacuum therapy in penile rehabilitation: a novel animal study. Eur Urol. 2010 Nov;58(5):773-80.
- 5. Egydio PH, Kuehhas FE Treatments for fibrosis of the corpora cavernosa. Arab J Urol. 2013 Sep;11(3):294-8.

16:00 - 17:30

# 19 maggio 2017 sala Auditorium

## Video 1 -Renal Video Show

Moderatori: P. Parma; M. Falsaperla; A. Polara

29

#### **1.** #142: LAPAROSCOPIC RIGHT NEPHRECTOMY AND INFERIOR VENA CAVA THROMBECTOMY WITH BOTH RETRO AND TRANS-PERITONEAL APPROCH

V. Ferrara<sup>1</sup>, W. Giannubilo<sup>1</sup>, M. Diambrini<sup>1</sup>, B. Azizi<sup>1</sup>, C. Vecchioli Scaldazza<sup>1</sup>

<sup>1</sup> Ospedale Civile, U.O. Urologia (Jesi)

#### Abstract

Renal cell carcinoma with inferior vena cava (IVC) thrombus indicates biologically aggressive cancer, so the complete surgical resection remains standard of care with best long term outcomes. In this video we describe laparoscopic right nephrectomy and with thrombectomy by both retro and trans-peritoneal approach.

Patient is a 56 year old man with incidental diagnosis of a right renal mass (30 cm) with 2nd type of vena cava thrombus (6 cm). The video shows our procedure: laparoscopic radical nephrectomy and inferior vena cava thrombectomy by both retro and trans-peritoneal approach.

Operative time was 320 minutes; blood loss 470 ml; IVC occlusion time 13 minutes; hospital stay 5 days.

Operative outcomes show that laparoscopic radical nephrectomy with inferior vena cava thrombectomy is safe and feasible also for level 2 tumor thrombus.

We chosed to perform retro and trans-peritoneal approach considering clinical case and necessity of better, complete and safe vascular control.

#### 2. #67: ROBOT ASSISTED RADICAL NEPHRECTOMY AND INFERIOR VENA CAVA THROMBECTOMY: SURGICAL TECHNIQUE, PERIOPERATIVE AND ONCOLOGIC OUTCOMES

G. Simone<sup>1</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, D. Hatcher<sup>2</sup>, M. Ferriero<sup>1</sup>, A.L. De Castro Abreu<sup>2</sup>, F. Minisola<sup>1</sup>, M. Aron<sup>2</sup>, S. Guaglianone<sup>1</sup>, M. Desai<sup>2</sup>, I.S. Gill<sup>2</sup>, M. Gallucci<sup>1</sup>

- <sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)
- <sup>2</sup> Keck School of Medicine, University of Southern California, Institute of Urology (Los Angeles)

#### Abstract

In this video we highlight surgical steps of a right radical nephrectomy and level IIIb inferior vena cava (IVC) thrombectomy using an occluding balloon Fogarty catheter to control the upper boundary of IVC thrombus. Perioperative and oncologic outcomes of our first 35 patients treated between July 2011 and September 2016 in two tertiary referral centers were reported. Preoperative arterial embolization was performed. A right template retroperitoneal lymph node dissection was performed; the left renal vein and the distal IVC segment were encircled with Roummel Tourniquet. Short hepatic veins were secured with Ligasure. Proximal IVC was encircled and right renal vein was stapled.

The distal IVC and left renal vein Tourniquets were cinched down. Cavotomy was performed and the thrombus progressively mobilized and secured into an endocatch bag.

Median operative time was 300 minutes. One patient (2.8%) had a Clavien grade 3a complication; two patients (5.7%) had

abstracts XXIV Congresso Nazionale AURO.it - PISA 19 - 21 maggio 2017

Clavien grade 3b complications; one patient had a Clavien 4a complication.

Twenty-two patients received surgery with curative intent and 5 of these experienced disease recurrence: 2-yr metastasis free, cancer specific and overall survival rates were 56%, 100% and 94.4%, respectively.

The increasing experience with robotic surgery has made nephrectomy and IVC thrombectomy a feasible and safe treatment option in tertiary referral centers.

#### **3.** #157: ENUCLEORESEZIONE LAPAROSCOPICA DI NEOPLASIE RENALI CISTICHE (CISTI DI BOSNIAK TIPO III- IV)

#### E. Caraceni<sup>1</sup>, D. Mazzaferro<sup>1</sup>, A. Marronaro<sup>1</sup>

<sup>1</sup> Ospedale di Civitanova Marche, U.O. Urologia (Civitanova Marche)

#### Abstract

Le lesioni renali di tipo cistico sono di osservazione relativamente frequente e possono essere trattate con chirurgia nephron sparing quando le caratteristiche della massa lo consentono.

L'approccio laparoscopico viene talvolta limitato per il timore di disseminazione neoplastica. Nel video sono mostrati due casi di enucleoresezione laparoscopica di lesioni cistiche.

Il video mostra i casi clinici completi di iconografia preoperatoria e controllo a sei mesi, la tecnica di enucleoresezione viene condotta mantenendo un margine di tessuto renale sano di sicurezza e clampando l'ilo in caso di necessità.

La tecnica di sutura laparoscopica viene effettuata in singolo o doppio strato (midollare e corticale) a seconda delle necessità impiegando clips Haemolock per l'ancoraggio del filo impiegato (Vicryl 1 con ago ampio) o barbed sutures.

Impieghiamo sempre uno stent preoperatorio nella via escretrice.

Uno dei casi illustrati è stato complicato da una lesione ureterale riparata in continua contestualmente.

Il controllo TAC a sei mesi evidenzia remissione completa della malattia in assenza di recidive o disseminazione.

Nella nostra esperienza con un follow-up medio di tre anni su 8 lesioni di questo tipo trattate non si sono verificate recidive o ripresa di malattia a distanza.

## **4.** #260: ENUCLEAZIONE LOMBOSCOPICA DI NEOPLASIA RENALE DESTRA DAL DIAMETRO 4.2 CM

A. Polara<sup>1</sup>, Z. Zukerman<sup>1</sup>, G.. Grosso<sup>1</sup>

<sup>1</sup> Casa di Cura Pederzoli (Peschiera del Garda)

#### Abstract

Il video descrive il trattamento laparoscopico di una neoplasia renale destra in paziente donna di 48 anni.

La patologia è stata stadiata mediante RM addome completo, con riscontro di neoformazione solida dal diametro di 4 cm, prevalentemente endofitica, sita al margine convesso-anteriore del rene destro.

Alla lesione è stato attribuito un valore PADUA score 9.

E' stata posta indicazione al trattamento conservativo, con accesso lomboscopico.

Nel video sono esposte le sedi degli accessi, la preparazione dello spazio di lavoro retroperitoneale, l'identificazione e l'isolamento dell'arteria renale destra.

E' descritta l'identificazione della massa, la marcatura della linea di sezione e l'enucleazione clampless della neoformazione con forbici e pinza bipolare.

L'emostasi è stata eseguita mediante sliding suture su tampone di tachosyl prerolled.

Il tempo operatorio è stato di 45, sono state registrate perdite ematiche pari a 150 ml.

Il catetere vescicale ed il drenaggio sono stati rimossi rispettivamente in prima ed in seconda giornata.

I valori di emoglobina pre e post operatoria sono stati rispettivamente 141 e 123 g/L, mentre la creatininemia 0.7 mg/dl e 0.8 mg/dl

la paziente è stata dimessa in II giornata.

L'esame istologico della lesione è esitato in carcinoma renale a cellule papillari, grado nucleolare ISUP 2, necrosi assente, pseudocapsula presente e spessa, margini di exeresi esenti da infiltrazione.

#### **5.** #169: ZERO ISCHEMIA LAPAROSCOPIC NEPHRON SPARING SURGERY FOR HILAR RENAL TUMOR LARGER THAN 4 CM: TECHNIQUE AND FEASIBILITY

B. Azizi<sup>1</sup>, W. Giannubilo<sup>1</sup>, C.A. Bravi<sup>1</sup>, M. Diambrini<sup>1</sup>, V. Ferrara<sup>1</sup>

<sup>1</sup> Ospedale Carlo Urbani, U.O.C. Urologia (Jesi)

Abstract

The video shows the laparoscopic procedure used to remove a solid renal mass, (58×46 mm. on the left kidney) occasionally detected at CT scan, during the follow up for melanoma.

The patient underwent laparoscopic nephron sparing surgery(L-NSS) with zero ischemia technique, as usual in our Institution. The access was trans-peritoneal. The mass was on the anterior kidney margin, strictly close to the kidney vessels. The outcome was favourable, without intra or post-operative complications and the patient was discarged in 3 days.

- Renal video show

Histopathological diagnosis was angiosarcoma.

Zero ischemia laparoscopic nephron sparing surgery for renal tumor larger than 4 cm. positioned near the ilar vessels is technically feasible and safe. Very experienced laparoscopic surgeons are requested.

#### **6.** #65: PURELY OFF-CLAMP ROBOTIC PARTIAL NEPHRECTOMY

G. Simone<sup>1</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, F. Minisola<sup>1</sup>, M. Ferriero<sup>1</sup>, M. Costantini<sup>1</sup>, S. Guaglianone<sup>1</sup>, M. Gallucci<sup>1</sup>

<sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)

Abstract

In this video we describe our surgical technique, reporting perioperative, 3-yr oncologic and functional outcomes of a single centre series of 308 patients treated with robotic off-clamp PN (OFF-RPN).

Data of all patients underwent OFF-RPN between 2010 and 2015 in a high-volume centre were collected.

Patients were placed in an extended flank position and a 5-port access with a side docking was performed. Hilar vessels were not clamped in any case; pure tumour enucleation or enucleoresection were the resection techniques used; renorraphy was omitted for small and exophytic masses and minimized with a "point specific haemostasis" for hilar tumours.

Perioperative complications, 3-yr oncologic and functional outcomes were reported. Univariable and multivariable analyses were performed to identify independent predictors of RF deterioration.

Out of 308 patients treated, 41 (13.3%) experienced perioperative complications, 2.9% of which were Clavien grade  $\geq$ 3. Three-yr local recurrence free survival and cancer specific survival rates were 99.5% and 97.9%, respectively.

No patient with preoperative CKD-stage  $\leq$  3B developed severe RF deterioration (CKD-stage 4) at 1-yr follow-up.

Preoperative eGFR (p=0.005) was the only independent predictor of a new onset CKD-stage  $\geq$ 3 in patients with preoperative CKD-stages 1 or 2.

OFF-RPN is a safe surgical approach in tertiary referral centres, with adequate oncological outcomes and negligible impact on RF.

#### 7. #117: RICOSTRUZIONE 3D DEL PEDUNCOLO RENALE: TUMORECTOMIA LAPAROSCOPICA CON CLAMPAGGIO SELETTIVO DI ARTERIA DI TERZO ORDINE

#### V. Varca<sup>1</sup>, A. Benelli<sup>1</sup>, G. Sampogna<sup>2</sup>, A. Gregori<sup>1</sup>

<sup>1</sup> Ospedale G. Salvini (Garbagnate Milanese)

<sup>2</sup> Ospedale Policlinico (Milano)

#### Abstract

Il nostro lavoro si propone di valutare l'utilità di una ricostruzione 3D dell'albero vascolare nell'eseguire un clampaggio arterioso superselettivo in corso di tumorectomia renale laparoscopica.

Mostriamo il caso di un paziente di 46 anni con riscontro incidentale TC di neoformazione renale destra di 4 cm.. Partendo dalle immagini TC abbiamo ricostruito un modello 3D utilizzando un software open-source completando con precisione la ricostruzione dei rami arteriosi segmentari e individuando alcune divisioni all'interno del parenchima renale.

Il paziente è stato sottoposto a tumorectomia renale laparoscopica. Isolando l'ilo renale, è stato possibile riconoscere la seconda e la terza divisione dell'arteria renale ed eseguire un clampaggio selettivo dell'arteria di terzo ordine. Successiva enucleoresezione; sutura del letto di resezione e approssimazione dei margini. Il tempo di ischemia parziale è stato 13 minuti. Non abbiamo registrato nessuna complicanza perioperatoria. Il follow-up oncologico a tre mesi è risultato negativo.

Molto spesso le sole immagini TC non sono sufficienti ad evidenziare particolari anatomici chirurgicamente significativi. Nella nostra casistica la costruzione di un modello 3D è risultata determinante per un approccio superselettivo. Visti questi risultati abbiamo deciso di procedere a ricostruzione 3D prima di ogni procedura laparoscopica renale con intento conservativo, per poter meglio pianificare l'intervento.

## 8. #163: THE USE OF THE FOURTH ARM AND INTRAOPERATIVE ULTRASOUND IN ROBOTIC PARTIAL NEPHRECTOMY

#### **R. Nucciotti<sup>1</sup>, F.M. Costantini<sup>1</sup>, F. Mengoni<sup>1</sup>, F. Viggiani<sup>1</sup>, A. Bragaglia<sup>1</sup>, G. Passavanti<sup>1</sup>, I. Farnetani<sup>1</sup>, V. Pizzuti<sup>1</sup> <sup>1</sup> Ospedale Misericordia, U.O. Urologia (Grosseto)**

#### Abstract

The partial nephrectomy is the procedure in which the robotic approach is the best indication. The use of the fourth arm is particularly suitable in order to expose the anatomical structures and to leave the assistant the only task of having to suck. Many surgeons prefer not to use it to the risk of conflict but with a few simple precautions you can enjoy all the advantages of the fourth arm.

The video also shows the usefulness of intraoperative ultrasound in order to directly evaluate the surgical resection margins.

# 19 maggio 2017 sala Pacinotti

# 16:00 - 17:30

## Comunicazioni 3 -Vescica dalla A alla Z

Moderatori: F. Bergamaschi; Carluccio

## **1.** #72: ROLE OF RE-STAGING TRANSURETHRAL RESECTION FOR T1 NON-MUSCLE INVASIVE BLADDER CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

A. Naselli<sup>1</sup>, R. Hurle<sup>2</sup>, S. Paparella<sup>1</sup>, N.M. Buffi<sup>2</sup>, G.. Lughezzani<sup>2</sup>, G. Lista<sup>2</sup>, P. Casale<sup>2</sup>, A. Saita<sup>2</sup>, M. Lazzeri<sup>2</sup>, G. Guazzoni<sup>3</sup>

- <sup>1</sup> Ospedale San Giuseppe, Gruppo Multimedica (Milano)
- <sup>2</sup> Istituto Clinico Humanitas IRCCS (Rozzano)
- <sup>3</sup> Istituto Clinico Humanitas IRCCS, Humanitas University (Rozzano)

#### Objective

Repeated transurethral resection of bladder tumor (reTUR), the fourth most common cancer [1], has been advocated as an essential step to obtain a complete tumor clearance in T1 stage and an appropriate staging. Several standardized national and international guidelines recommend the procedure, especially in patients with high grade and/or T1 bladder cancer [2]. The main reason is the high prevalence of residual tumor found after reTUR and its clinical implications [2]. However, experts' opinion on the topic is not concordant. Some suggest that reTUR may be not useful when an adequate first TUR has been performed [3]. Moreover, to our knowledge, the last meta-analysis were published respectively in 2011 and 2014 [4,5]. Since then many series, including a great number of cases, properly stratified upon the status of detrusor muscle of the first TUR, have been reported. Therefore, we believe it is necessary to re assess the impact of the procedure by means of a systematic review of literature and meta-analysis of available datasets, distributed in a period of 30 years, to find out potential discrepancies and support guidelines commitment.

Materials and Methods

The whole process of evidence acquisition and synthesis has been carried in order to accomplish to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Checklist [6]. After definition of the population and of the outcome a systematic search of available literature in English from 1980 to 2016 was performed. Articles included in the study [7-35] were assessed for risk of bias using two domains of the Quality in Prognosis Studies tool (QUIPS) relevant to observational studies (study participation and outcome measurement). Pooled prevalence of residual tumor and of upstage at reTUR was assessed and computed by means of random effects model to take into account heterogeneity showed by I squared and Cochran's Q values. A sensitivity analysis was conducted to exclude excessive influence by a single study. Results

Among papers identified, 29 items were selected. A total of 3566 and 2556 cases formed the study population to assess the prevalence of residual tumor and upstaging respectively. The respective figures for the subgroup with detrusor muscle in the specimen of TUR were respectively 1565 and 1187. Pooled residual tumor prevalence at reTUR and upstaging to T2 were 0.56 (95% CI 0.48 – 0.63) and 0.1 (95% CI 0.06 – 0.14). Respective figures for the subgroup were 0.47 (95% CI 0.33 – 0.62) and 0.1 (95% CI 0.06 – 0.14). Analysis of series at low risk of bias disclosed a limited impact of heterogeneity, especially in regards to up staging. Pooled prevalence of residual disease was 0.42 (95% CI 0.27 – 0.58) and of upstaging to invasive disease 0.11 (95% CI 0.06 – 0.18). Sensitivity analysis excluded excessive influence from each of the study examined.

#### 16:00 - 17:30 Sala Pacinotti

#### Discussions

Findings from our systematic review and meta-analysis showed that the rate of persistence of disease in T1 cases is really high and stable among studies belonging to different decades. Pooled prevalence of persistent disease is about 50% whereas pooled prevalence of upstaging to invasive disease is about 10% overall or about one third of the cases with residual cancer. Intriguingly, results are similar including only cases with a sample of muscle in the specimen of the initial TUR or including only series at low risk of bias. A meta-analysis, published in 2011, came to similar findings analyzing a group of 2248 patients, including 1432 T1 cases [4]. Interestingly, Authors observed similar pooled prevalence rate among cases with single and multiple primary lesion [4]. Another meta-analysis, including 3 randomized trials and 4 prospective clinical studies on reTUR for Ta and T1 tumors, showed a rate of residual disease of about one third, raging from 3.7 to 17.6% for cases with a complete first TUR [6].

#### Conclusion

The rate of residual disease and of upstaging also in prospective nowadays series including cases with a "clinically and pathologically" complete previous TUR suggest that reTUR should remain a cornerstone in the treatment of non muscle invasive bladder cancer as recommended in guidelines

Reference

- [1] Siegel RL, Miller KD, Jemal A. Cancer statistics, 2016. CA Cancer J Clin. 2016; 66:7-30
- [2] Burger M, Oosterlinck W, Konety B, et al. ICUD-EAU International Consultation on Bladder Cancer 2012: Non-muscle-invasive urothelial carcinoma of the bladder. Eur Urol 2013; 63:36-44
- [3] Brausi MA. Challenging the EAU Guidelines Regarding Early Repeat Transurethral Resection. Eur Urol Suppl 2011;3:e5 e7
- [4] Vianello A, Costantini E, Del Zingaro M, et al. Repeated white light transurethral resection of the bladder in nonmuscle-invasive urothelial bladder cancers: systematic review and meta-analysis. J Endourol 2011; 25:1703-12
- [5] Dobruch J, Borówka A, Herr HW. Clinical value of transurethral second resection of bladder tumor: systematic review. Urology 2014; 84:881-5
- [6] Moher D, Liberati A, Tetzlaff J, Altman DG; PRISMA Group. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. BMJ 2009; 21:339:b2535
- [7] Klan R, Loy V, Huland H. Residual tumor discovered in routine second transurethral resection in patients with stage T1 transitional cell carcinoma of the bladder. J Urol 1991;146:316–18
- [8] Herr HW. The value of a second transurethral resection in evaluating patients with bladder tumors. J Urol 1999; 162:74–76
- [9] Brauers A, Buttner R, Jakse G. 2nd Resection and prognosis in primary high risk superficial bladder cancer. J Urol 2001; 165:808–10
- [10] Ozen H, Ekici S, Uygur MC, Akbal C, Sahin A. Repeated transurethral resection and intravesical BCG for extensive superficial bladder tumors. J Endourol 2001; 15:863-7
- [11] Schips L, Augustin H, Zigeuner RE, et al. Is repeated transurethral resection justified in patients with newly diagnosed superficial bladder cancer? Urology 2002; 59:220–23
- [12] Dalbagni G, Herr HW, Reuter VE. Impact of a second transurethral resection on the staging of T1 bladder cancer. Urology 2002; 60:822-824
- [13] Grimm M, Steinhoff C, Simon X, Spiegelhalder P, Ackermann R, Vogeli TA. Effect of routine repeat transurethral resection for superficial bladder cancer: a long-term observational study. J Urol 2003; 170:433-37
- [14] Zurkirchen MA, Sulser T, Gaspert A, Hauri D. Second transurethral resection of superficial transitional cell carcinoma of the bladder: a must even for experienced urologists. Urol Int 2004; 72:99–102
- [15] Schwaibold HE, Sivalingam S, May F, Hartung R. The value of a second transurethral resection for T1 bladder cancer. BJU Int 2006; 97:1199-1201
- [16] Divrik T, Yildirim U, Eroğlu AS, Zorlu F, Ozen H. Is a second transurethral resection necessary for newly diagnosed pT1 bladder cancer? J Urol 2006; 175:1258–61
- [17] Han KS, Joung JY, Cho KS, et al. Results of repeated transurethral resection for a second opinion in patients referred for non muscle invasive bladder cancer: the referral cancer center experience and review of the literature. J Endourol 2008; 22:2699-2704
- [18] Herr HW, Donat MS. Quality control in transurethral resection of bladder tumors. BJU Int 2008; 102:1242-46
- [19] Divrik RT, Sahin AF, Yildirim U, Altok M, Zorlu F. Impact of routine second transurethral resection on the long-term outcome of patients with newly diagnosed pT1 urothelial carcinoma with respect to recurrence, progression rate and disease-specific survival: a prospective randomised clinical trial. Eur Urol 2010; 58:185–90
- [20] Parkin J, O'Keefe K, Bhatt RI, et al. G3T1 bladder cancer: Is early re-resection necessary? Br J Med Surg Urol 2011; 4:13-17
- [21] Ali MH, Ismail IY, Eltobgy A, Gobeish A. Evaluation of second-look transurethral resection in restaging of patients with non-muscleinvasive bladder cancer. J Endourol 2010; 24:2047-2050
- [22] Yucel M, Hatipoglu NK, Atakanli C, et al. Is repeat transurethral resection effective and necessary in patients with T1 bladder carcinoma? Urol Int 2010; 85:276-80
- [23] Katumalla FS, Devasia A, Kumar R, Kumar S, Chacko N, Kekre N. Second transurethral resection in T1G3 bladder tumors Selective avoidable? Indian J Urol 2011; 27:176-79
- [24] Aning JJ, Hotston M, Pisipatti S, et al. Early re-resction for T1 transitioanl cell carcinoma of the bladder-A study of current practice in the South West of England. Br J Med Surg Urol 2011; 4:18-23
- [25] Fujikawa A, Yumura Y, Yao M, Tsuchiya F, Iwasaki A, Moriyama M. An evaluation to define the role of repeat transurethral resection in a treatment algorithm for non-muscle-invasive bladder cancer. Indian J Urol. 2012 Jul; 28:267-70
- [26] Vasdev N, Dominguez-Escrig J, Paez E, Johnson MI, Durkan GC, Thorpe AC. The impact of early re-resection in patients with pT1 highgrade non-muscle invasive bladder cancer. Ecancermedicalscience 2012; 6:269
- [27] Takaoka E, Matsui Y, Inoue T, et al. Risk factors for intravesical recurrence in patients with high-grade T1 bladder cancer in the second TUR era. Jpn J Clin Oncol 2013; 43:404-9
- [28] Gontero P, Sylvester R, Pisano F, et al. The impact of re-transurethral resection on clinical outcomes in a large multicentre cohort of patients with T1 high-grade/Grade 3 bladder cancer treated with bacille Calmette-Guérin. BJU Int 2016; 118:44-52
- [29] Shim JS, Choi H, Noh TI, et al. The clinical significance of a second transurethral resection for T1 high-grade bladder cancer: Results of a prospective study. Korean J Urol 2015; 56:429-34
- [30] Cao M, Yang G, Pan J, et al. Repeated transurethral resection for non-muscle invasive bladder cancer. Int J Clin Exp Med 2015; 8:1416-9

- [31] Angulo JC, Palou J, García-Tello A, de Fata FR, Rodríguez O, Villavicencio H. Second transurethral resection and prognosis of high-grade non-muscle invasive bladder cancer in patients not receiving bacillus Calmette-Guérin. Actas Urol Esp 2014; 38:164-71
- [32] Doğantekin E, Girgin C, Görgel SN, Soylemez H, Dinçel Ç. Can immediate second resection be an alternative to standardized second transurethral resection of bladder tumors? Kaohsiung J Med Sci 2016; 32:147-5
- [33] Sanseverino R, Napodano G, Campitelli A, Addesso M. Prognostic impact of ReTURB in high grade T1 primary bladder cancer. Arch Ital Urol Androl 2016; 88:81-5
- [34] Hashine K, Ide T, Nakashima T, Hosokawa T, Ninomiya I, Teramoto N. Results of second transurethral resection for high-grade T1 bladder cancer. Urol Ann; 8:10-5
- [35] Gendy R, Delprado W, Brenner P, et al. Repeat transurethral resection for non-muscle-invasive bladder cancer: a contemporary series. BJU Int 2016; 117 Suppl 4:54-9

#### **2.** #73: EN BLOC TUR OF BLADDER TUMOURS: A NEW STANDARD?

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Objective

Trans urethral resection (TUR) of bladder tumor is one of the most frequent procedures performed in urology. Indeed, it is one of the most controversial [1]. It clearly violates oncological basic principles inasmuch tumor must be fragmented to be resected and retrieved from the bladder. Fragmentation is at the base of two major flaws. First, the pathological examination of the specimen is frankly impaired. Margins cannot be properly assessed and infiltration of the sub-urothelial connective or of the muscular tissue may be underestimated or even missed. Second, seeding of urothelial cancerous cells, which may lead to recurrence, may easily occur after tumor resection and fragmentation. En bloc transurethral resection (EBTUR) is supposed to overcome the major flaws of conventional TUR. It is not a new procedure, since it has been described the first time in 1980 in Japan [2], but only in the last decade, the interest in technical improvements of TUR has been renewed [1]. We performed a literature review to assess up to date results of EBTUR and to answer the question if EBTUR may be considered as the new golden standard for endoscopic treatment of bladder tumors

#### Materials and Methods

We performed a systematic review of the available literature about EBTUR. A search across PUBMED was performed with the following keys "bladder cancer" [MESH term] & "en bloc" and "en bloc resection bladder tumor" in July, 20th, 2016. Respectively, 132 and 160 papers were found. After reading the abstract, 118 and 141 were excluded by Authors because they were off topic, reviews and opinions. After matching the list of the remaining 14 and 20 items, 14 were excluded because duplicates, 2 because case reports, and 2 because not written in English. Thus, a list of 16 original papers was included in the review [3-18]. Finally, after reading thoroughly the references of the selected papers, one more significant item was added [19]. Main outcomes were safety (complications rate), pathological assessment (incidence of detrusor muscle in the specimen and rate of appropriate staging), and oncological control (recurrence rate, surgical margins, rate of residual disease)

#### Results

Overall, 895 patients have been submitted to EBTUR, accounting for 1191 lesions. Forty complications (4%) were computed. Only 10 (1%) were grade III, mostly bladder perforation or bleeding. Fifty-nine conversions (6.5%) to conventional TUR have been reported because of "difficult" locations of tumors or failure to extract the specimen. Several series, accounting for 763 patients, report about incidence of detrusor muscle in the specimen. Overall, 731 (96%) cases with detrusor muscle were computed. Tumor stage remained uncertain only in 12 (1.5%) cases. Follow up data were available for 544 patients. Mean follow up ranged from 9.3 to 40 months. Recurrence rate varied from 6% to 55%. Most of the recurrence occurred outside primary tumor site. Mean weighted follow up across all series was 20 months, whereas overall recurrence rate was 23%.

Discussions

Conventional TUR of bladder tumor is generally performed with a 24/26 Ch continues flow resectoscope and standard loop. Tumor is fragmented in chips by the "incise and scatter" technique and extracted with a syringe or an Ellik evacuator through the working channel. Cell seeding may occur during resection as well as during extraction of tumor. Moreover, tumor fragmentation impairs pathological examination. There is no clear orientation of the specimen, muscular or sub connective tissue infiltration may be underestimated or even missed as well as a proper assessment of surgical margins is impossible, even if additional biopsies of the resection bed and of perilesional margins are performed. Conversely, EBTUR respects the oncological principle of specimen integrity with a safety margin of healthy tissue. Even if the first paper about EBTUR has been printed in the Eighties [2], it is yet in its infancy inasmuch only about a thousand of cases have been published up to date. Despite a similar surgical technique, a great variety of equipments for resection and for specimen extraction has been used, adding heterogeneity to the results interpretation [3-19]. Beyond technicalities, two main aspects must be underlined. First, EBTUR is safe; the risk of serious complications is negligible whereas the overall risk of complications is comparable to historical TUR series [20]. Second, pathological assessment is by any means far more precise. The incidence of detrusor muscle in the specimen, about 95%, and the rate of appropriate staging, about 99%, are really high if compared to standard TUR [20,21].

#### Conclusion

EBTUR is safe and feasible. Pathological assessment of en bloc specimen makes the difference with respect to conventional TUR, even if a clear statement on the matter has still to be reported by pathologists, who should change their way of describing the specimen, including margins as in whatever oncological histology report. Indeed, no advantages in terms of recurrence rate have been yet disclosed. What we do really need now is a standardization of the technique, especially when it comes to specimen extraction, and larger randomized study, adequately designed to observe an oncological advantage. In the meanwhile, when it is

#### 16:00 - 17:30 Sala Pacinotti

Comunicazioni **3** - Vescica dalla A alla Z

possible, every urologist should adopt EBTUR to ensure the best histological assessment possible. Reference

- 1) Wilby D, Thomas K, Ray E, et al. Bladder cancer: new TUR techniques. World J Urol 2009; 27:309-12
- 2) Kitamura K, Kataoka K, Fujioka H, et al. Transurethral resection of a bladder tumor by the use of a polypectomy snare. J Urol 1980; 124:808-9 3) Hurle R, Lazzeri M, Colombo P, et al. "En Bloc" Resection of Nonmuscle Invasive Bladder Cancer: A Prospective Single-center Study.
- Urology 2016; 90:126-30
- 4) Migliari R, Buffardi A, Ghabin H. Thulium Laser Endoscopic En Bloc Enucleation
- of Nonmuscle-Invasive Bladder Cancer. J Endourol. 2015; 29:1258-62
- 5) Chen X, Liao J, Chen L, et al. En bloc transurethral resection with 2-micron continuous-wave laser for primary non-muscle-invasive bladder cancer: a randomized controlled trial. World J Urol
- 2015; 33:989-95
- 6) Kramer MW, Rassweiler JJ, Klein J, et al. En bloc resection of urothelium carcinoma of the bladder (EBRUC): a European multicenter study to compare safety, efficacy, and outcome of laser and electrical en bloc transurethral resection of bladder tumor. World J Urol 2015; 33:1937-43
- 7) He D, Fan J, Wu K, et al. Novel green-light KTP laser en bloc enucleation for nonmuscle-invasive bladder cancer: technique and initial clinical experience. J Endourol 2014; 28:975-9
- 8) Muto G, Collura D, Giacobbe A, et al. Thulium:yttrium-aluminum-garnet laser for en bloc resection of bladder cancer: clinical and histopathologic advantages. Urology 2014; 83:851-5
- 9) Sureka SK, Agarwal V, Agnihotri S, et al. Is en-bloc transurethral resection of bladder tumor for non-muscle invasive bladder carcinoma better than conventional technique in terms of recurrence and progression?: A prospective study. Indian J Urol 2014; 30:144-9
- 10) Upadhyay R, Kapoor R, Srivastava A, et al. Does En-bloc transurethral resection of bladder tumor give a better yield in terms of presence of detrusor muscle in the biopsy specimen? Indian J Urol 2012; 28:275-9
- 11) Maurice MJ, Vricella GJ, MacLennan G, et al. Endoscopic snare resection of bladder tumors: evaluation of an alternative technique for bladder tumor resection. J Endourol 2012; 26:614-7
- 12) Naselli A, Introini C, Germinale F, et al. En bloc transurethral resection of bladder lesions: a trick to retrieve specimens up to 4.5 cm. BJU Int 2012; 109:960-3
- 13) Fritsche HM, Otto W, Eder F, Hofstädter F, et al. Water-jet-aided transurethral dissection of urothelial carcinoma: a prospective clinical study. J Endourol 2011; 25:1599-603
- 14) Wolters M, Kramer MW, Becker JU, et al. Tm:YAG laser en bloc mucosectomy for accurate staging of primary bladder cancer: early experience. World J Urol 2011; 29:429-32
- 15) Nagele U, Kugler M, Nicklas A, et al. Waterjet hydrodissection: first experiences and short-term outcomes of a novel approach to bladder tumor resection. World J Urol; 29:423-7
- 16) Ukai R, Hashimoto K, Iwasa T, et al. Transurethral resection in one piece (TURBO) is an accurate tool for pathological staging of bladder tumor. Int J Urol 2010; 17:708-14
- 17) Lodde M, Lusuardi L, Palermo S, et al. En bloc transurethral resection of bladder tumors: use and limits. Urology 2003; 62:1089-91
- 18) Saito S. Transurethral en bloc resection of bladder tumors. J Urol 2001; 166:2148-50
- 19) Ukai R, Kawashita E, Ikeda H. A new technique for transurethral resection of superficial bladder tumor in 1 piece. J Urol 2000; 163:878-9
- 20) Herr HW, Donat SM. Quality control in transurethral resection of bladder tumours. BJU Int 2008; 102:1242-6
- 21) Babjuk M, Böhle A, Burger M, et al. EAU Guidelines on Non-Muscle-invasive Urothelial Carcinoma of the Bladder: Update 2016. Eur Urol 2016 Jun 17 [Epub ahead of print]

#### **3.** #85: EN BLOC RESECTION OF NON MUSCLE INVASIVE BLADDER CANCER: EXPERIENCE IN SANT'ANNA HOSPITAL – COMO

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<sup>1</sup> ASST Lariana Ospedale Sant'Anna (San Fermo della Battaglia)

#### Objective

The goal of traditional trans-urethral resection of bladder tumors (TURBT) is to remove all visible cancers and obtain tissue for pathological diagnosis, with minimal morbidity to the patient, even if the tumor is removed in piecemeal. Additionally, detrusor muscle (DM) is absent in up to 50% of cases. Moreover, residual disease is diagnosed in the final pathology in up to 76% of cases of the restaging TURBT. Recently, the urologists' approach to the management of superficial bladder cancer has been evolving and the basic principle of oncologic surgery of removing the entire tumor "en bloc" by dissecting through normal tissue to prevent the scatter of malignant cells and positive surgical margins is becoming more and more important.

The aim of the present study is the description of both "en-bloc" technique in Our Centre and the medium-term results of our single-center experience with "en-bloc resection of bladder tumors" (ERBT) in a selected group of patients.

#### Materials and Methods

We retrospectively analyzed the story of 24 patients consecutively underwent to ERBT. A single expert urologist executed the procedure using a mono-polar or bipolar Storz 24 Ch resector.

The surgeon executed a "U-shaped" incision anteriorly to the lesion, with a mucosal margin of 3 mm, including macroscopically sane tissue. Thus, the incision was conducted in retrograde way going under the lesion, until obtaining a complete detachment from the bladder wall. Laterally, the incision included the margin of sane mucosa. The depth of the incision included the muscle laver.

A trans-urethral catheter was positioned after the operation; the same was removed after 48 hours.

We also compared our experience with data literature, searching for the key words: "En bloc resection," "Trans-urethral resection" and "Non Muscle Invasive Bladder Cancer".

#### 16:00 - 17:30 Sala Pacinotti

#### Results

We enrolled 24 patients (21 males and 3 females); all showed a Non Muscle Invasive Bladder Cancer (NMIBC) urothelial carcinoma; among these, 3 had High grade NMIBC, 1 Carcinoma in Situ, 1 PULMP, and 20 showed low grade NMIBC at the definitive pathology. All the ERBT samples showed the presence of DM. The mean age at diagnosis was 69 years (range 53-87), presenting with a mean tumor diameter of 8±3 mm and a median number of resected tumors per patients of 1 (range 1-3). In 7 case the procedure (first in all patients) was associated with early instillation of epirubicin within 30 minutes after TUR. In 6 cases the ERBT was not the first TUR in the history of the patients. The mean follow-up was 25 months (range 7-60 months) and there was a recurrence rate in 7/24 patients, with low grade final pathology. The main limitation of the study consists in the absence of a control group.

#### Discussions

SEE RESULTS

<u>Comunicaz</u>ioni **3** - Vescica dalla A alla Z

Conclusion

- Our findings confirmed the feasibility and safety of en bloc resection of bladder tumor, with a recurrence-free survival of 71%. Reference
- 1. Herrmann TR, Wolters M, Kramer MW. Transurethral en bloc resection of nonmuscle invasive bladder cancer: trend or hype. Curr Opin Urol. 2016 Dec 28. doi: 10.1097/MOU.0000000000377.
- 2. Hurle R, Lazzeri M, Colombo P, Buffi N, Morenghi E, Peschechera R, Castaldo L, Pasini L, Casale P, Seveso M, Zandegiacomo S, Taverna G, Benetti A, Lughezzani G, Fiorini G, Guazzoni G. "En Bloc" Resection of Nonmuscle Invasive Bladder Cancer: A Prospective Single-center Study. Urology 2016; 90: 126-30.
- 3. kramer MW, Rassweiler JJ, Klein J, Martov A, Baykov N, Lusuardi L, Janetschek G, Hurle R, Wolters M, Abbas M, von Klot CA, Leitenberger A, Riedl M, Nagele U, Merseburger AS, Kuczyk MA, Babjuk M, Herrmann TR.En bloc resection of urothelium carcinoma of the bladder (EBRUC): a European multicenter study to compare safety, efficacy, and outcome of laser and electrical en bloc transurethral resection of bladder tumor. World J Urol 2015; 33 (12):1937-43.

# 4. #56: OPEN VERSUS ROBOT ASSISTED RADICAL CYSTECTOMY AND ORTHOTOPIC NEOBLADDER: MID-TERM SINGLE CENTER PROPENSITY SCORE MATCHED ANALYSIS OF PERIOPERATIVE AND ONCOLOGIC OUTCOMES

#### G. Simone<sup>1</sup>, M. Ferriero<sup>1</sup>, S. Guaglianone<sup>1</sup>, U. Anceschi<sup>2</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, F. Minisola<sup>1</sup>, M. Gallucci<sup>1</sup>

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<sup>2</sup> Azienda Provinciale Per i Servizi Sanitari, Urologia (Trento)

#### Objective

Oncologic equivalence open radical cystectomy (ORC) and robot-assisted radical cystectomy (RARC) remains a debatable issue and prospective randomized trials comparing these two approaches are hard to perform. In this study we compared oncologic outcomes of propensity score matched cohorts of patients treated with either ORC and orthotopic neobladder (ON) or RARC and intracorporeal ON.

#### Materials and Methods

The institutional review board approved prospective bladder cancer database was queried for "cystectomy with curative intent" and "neobladder". A 1:1 PSM analysis was used to minimize the potential biases of a retrospective analysis of data. Kaplan-Meier method was used to compare the oncologic outcomes of the PSM cohorts. Survival rates were computed at 2, 3 and 4 years after surgery and the log rank test was applied to assess statistical significance between the two PSM groups.

#### Results

Overall 363 patients with a minimum follow-up length of 2 years were included, 299 of which treated with ORC and 64 with RARC.

Patients treated with open surgery were less frequently male (p=0.08), with higher pT stage (p=0.003), higher incidence of non-urothelial histologies (0.05) and lesser adoption of neoadjuvant chemotherapy (<0.001). After applying the PSM, 64 RARC patients were matched with 46 ORC cases. The two groups did not differ for all clinical and pathologic variables included in the analysis (all  $p \ge 0.22$ ). All data are summarized in table 1.

At Kaplan-Meier analysis RARC and ORC cohorts displayed comparable disease free survival (log rank p=0.894; Figure 1a), cancer specific survival (log rank p=0.8; Figure 1b) and overall survival rates (log rank p=0.97; Figure 1c).

#### Conclusion

RARC with intracorporeal neobladder provides an optimal control of soft tissue surgical margins and of LN yield. Preliminary oncologic outcomes suggest that patients treated with RARC and intracorporeal neobladder display comparable disease free survival of patients treated with open surgery.

#### Reference

- Robotic Intracorporeal Padua Ileal Bladder: Surgical Technique, Perioperative, Oncologic and Functional Outcomes. Simone G, Papalia R, Misuraca L, Tuderti G, Minisola F, Ferriero M, Vallati G, Guaglianone S, Gallucci M. Eur Urol. 2016 Oct 22. pii: S0302-2838(16)30721-7. doi: 10.1016/j.eururo.2016.10.018. [Epub ahead of print]
- Perioperative and oncologic outcomes of robot-assisted vs. open radical cystectomy in bladder cancer patients: A comparison of two high-volume referral centers. Gandaglia G, Karl A, Novara G, de Groote R, Buchner A, D'Hondt F, Montorsi F, Stief C, Mottrie A, Gratzke C. Eur J Surg Oncol. 2016 Nov;42(11):1736-1743. doi: 10.1016/j.ejso.2016.02.254.

#### 16:00 - 17:30 Sala Pacinotti

#### **5.** #58: INTRACORPOREAL PARTLY STAPLED PADUA ILEAL BLADDER USING ROBOTIC STAPLERS: PERIOPERATIVE AND EARLY FUNCTIONAL OUTCOMES OF A SINGLE CENTER PROSPECTIVE SERIES

#### G. Simone<sup>1</sup>, F. Minisola<sup>1</sup>, L. Misuraca<sup>1</sup>, S. Guaglianone<sup>1</sup>, G. Tuderti<sup>1</sup>, M. Gallucci<sup>1</sup>

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#### Objective

Robot assisted radical cystectomy (RARC) with totally intracorporeal orthotopic neobladders is a challenging surgical procedure. The potentially increased risk of neobladders stone formation consequent to the use of staplers to create the neobladders is still a matter of debate. Robotic staplers have been recently made commercially available. In this prospective study (www.clinicaltrials. gov NCT02665156) we assessed feasibility, safety and time efficiency of RARC with intracorporeal partly stapled "Padua Ileal Bladder" using robotic staplers.

#### Materials and Methods

Twenty-two consecutive patients with muscle-invasive or high grade recurrent urothelial carcinoma of the bladder were treated between March 2016 and October 2016. Perioperative outcomes were recorded and classified according to Clavien-Dindo classification system. The median follow-up was 3 months.

#### Results

Six patients received neoadjuvant chemotherapy. All procedures were successfully completed; open conversion was never necessary. Median operative time was 270 minutes (IQR:255-295), median hospital stay was 9 days (IQR:8-11) and median EBL was 200 mL (IQR:150-300).

One patient (4,5%) had wound infection (CLavien grade 1), three patients (13.6%) had Clavien grade 2 complications (blood pack trasfusion, urinary tract infection requiring antibiotics, hypoxaemia requiring oxygen treatment), one patient (4.5%) needed urethral catheter replacement in the OR (Clavien grade 3b) and one patient (4.5%) had acute kidney failure requiring temporary dialysis (Clavien grade 4a). Post-operative readmission rate was 13.5% (one patient for candidaemia and two patients for ureteroileal strictures requiring nephrostomy tube insertion). Overall complication rate was 40.1% and overall severe complication incidence was 18.2%; 59.5% of patients did not experience any complication.

All patients had pure urothelial carcinoma. At final pathology 8 patients (36.4%) had undetectable disease (3 of which after neoadjuvant chemotherapy [ypT0]), and 6 patients (27.3%) had extravesical disease (pT3a-b). The median number of nodes removed was 25 (IQR:21-33). Three patients (13.6%) had pathologically involved nodes. CT scan performed 3 months postoperatively did not find any recurrence. At 3-mo evaluation day-time continence rate was 60%.

Conclusion

We first report safety and time efficiency in the use of robotic staplers to create totally intracorporeal orthotopic neobladder. Preliminary data highlight feasibility of this technique and favorable perioperative and functional outcomes. A longer follow-up and a larger cohort are necessary to assess oncologic efficacy of this procedure.

Reference

- Robotic Intracorporeal Padua Ileal Bladder: Surgical Technique, Perioperative, Oncologic and Functional Outcomes. Simone G, Papalia R, Misuraca L, Tuderti G, Minisola F, Ferriero M, Vallati G, Guaglianone S, Gallucci M. Eur Urol. 2016 Oct 22. pii: S0302-2838(16)30721-7. doi: 10.1016/j.eururo.2016.10.018. [Epub ahead of print]
- Evolution of robot-assisted orthotopic ileal neobladder formation: a step-by-step update to the University of Southern California (USC) technique. Chopra S, de Castro Abreu AL, Berger AK, Sehgal S, Gill I, Aron M, Desai MM. BJU Int. 2016 Jul 30. doi: 10.1111/bju.13611. [Epub ahead of print]

#### 6. #139: A MODIFIED ILEO CONDUIT TECNIQUE TO AVOID URETEROENTERIC STRICTURE

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#### Objective

Despite the popularity of continent urinary diversion and neobladder recostruction, radical cistectomy with ileal conduit urinary diversion remains the most commonly performed curative surgical treatment option for invasive bladder cancer. Commonly, the ileal conduit is created using a 15-20 cm ileum length. The distal left ureter passage under mesosigmoid previous its extensive dissection, in order to allow a tension-free ureteroileal anastomosis, often leads to a compromised blood supply to the left ureter, resulting in a higher incidence of delayed ischemic damage of the distal ureter, wich is the most common cause of ureteroenteric stricture. In literature, ileoureteral stricture rate reported is 1,7-14%, being more common on the left side. Of some interest is the fact that no significant diferrence is been reported in strictures occurrance rate between Bricker anastomosis type and Wallace type. The strictures resulting from urinary diversion are difficult to treat, have a high risk of recurrence and may lead to renal function deterioration. We presented our results with a modified ileal conduit tecnique (MICT) and left ileoureteral anastomosis aimed to prevent uretero-ileal anastomosis stricture.

Materials and Methods

We prepared an ileal tract of 20 cm medium lenght. The proximal end of the ileal conduit tract was brought on the left side through the mesosigmoid and was fixed to the parietal peritoneum, to avoid an extensive dissection and mobilization of the left ureter and to perform a tension free anastomosis. On the right side, we performed a classical Bricker ureteroileal anastomosis, while on the left side the ureter was sutured directly to the end of ileal conduit, according to our modified ureteroileal anastomosis in Y shape ileal neobladder. Between 2001 and 2010, 98 consecutive patients underwent to radical cistectomy with ileal conduit diversion Comunicazioni **3** - Vescica dalla A alla Z

with Bricker anastomotic tecnique; from 2011 to 2015, 46 consecutine patients underwent to new tecnique. Results

The MICT was easily performed in all cases, leading to neither intraoperative nor postoperative complications, without increasing intraoperative time. The ileoureteral stricture rate was 9.1% (8/98 patients, 1/8 patients with bilateral stricture) in the traditional tecnique; no patient had ureteral stricture with the modified tecnique.

#### Discussions

There are several potential etiologies for ureteroileal stricture formation. Ischemia of the distal ureter due to prior radiation therapy, during surgical dissection. Tension caused by tunneling the left ureter below the sigmoid mesocolon has also been implicated as left sided strictures have been observed more comonly. The latter etiology may be of additional relevance in an increasingly obese population. No significant diferrence is been reported in strictures occurrance rate between Bricker anastomosis type and Wallace type.

#### Conclusion

Our preliminary experience with the MICT are very encouraging; further randomized studies with a larger series are needed to confirm our results.

Reference

- A.Evangelidis, E. K. Lee, M. E. Karellas, J. B. Thrasher and J. M. Holzbeierlein. Evaluation of Ureterointestinal Anastomosis: Wallace vs Bricker. J Urol Vol. 175, 1755-1758, May 2006
- N. F. Davis, MD; J P. Burke, MD; T McDermott, MD; R. Flynn, MD; R. P. Manecksha, MD; J. A. Thornhill, MD. Bricker versus Wallace anastomosis: A meta-analysis of ureteroenteric stricture rates after ileal conduit urinary diversion. CUAJ, Volume 9, Issues 5-6, May-June 2015
- M. Cheng MD, S. W. Looney MD, J. A. Brown MD. Ureteroileal anastomotic strictures after a Bricker ileal conduit 50 case assestment of the impact of conversion from a slit incision to a "shield shaped" ileotomy. The Canadian Journal of Urology; 18 (2); April 2011

# 7. #161: TOTALLY ROBOTIC RADICAL CYSTECTOMY WITH INTRACORPOREAL ILEAL CONDUIT: INITIAL EXPERIENCE

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#### Objective

Total intra-corporeal robot-assisted radical cystectomy (RARC) with total intracorporeal ileal conduit is relatively new in the treatment of bladder cancer.

#### Materials and Methods

This is a consecutive case series of 6 patients, who underwent total RARC, pelvic lymphadenectomy and creation of an intracorporeal ileal conduit. Surgical technique is described and perioperative variables, pathologic data, and complication rates are reported.

#### Results

The mean patient age was 71.6 and the mean body mass index was 28.01 kg/m(2). The mean operative time, estimated blood loss, time to full diet and length of stay were 360.8 minutes , 250 min , 4 days (range: 3-6) and 8 days (range: 6-9), respectively. Pathological nodal status were positive in two patient. No peri-operative complication were reported. Only one patient with pT4aN2 pathological stage reported rectal pain 1 month after surgery.

#### Discussions

The limitation of our study is its small sample size. The follow-up is short; however, the outcomes are encouraging expecially in the learning curve phase.

Conclusion

In our initial experience, RARC with total intracorporeal ileal conduit is safe. We expect that with experience the expense of robotic surgery can be compensated with early ambulation and shorter stay.

# 8. #99: ETHICAL CONSULTATION FOR RADICAL UROLOGICAL SURGERY IN FRAGILE ELDERLY PEOPLE

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#### Objective

The care of fragile patient is an aspect still largely debated. In the past was encouraged economic assistance with low clinical content; in this context find place an evaluation also based on ethical clinic. We don't want to discuss surgical methods or medical results, but we would like to demonstrate the way we answered an explicit (or sometimes tacit) question when we decided to perform surgery on a patient with these characteristics: "It really needs to perform surgery on him at his age?"

#### Materials and Methods

The word "fragile" identifies a condition of risk and vulnerability, with unstable equilibrium towards negative events. Elderly people, due to aging process and intercurrent diseases, become more vulnerable and many conditions can change homeostatic balance of their organism (1). It is defined essentially by two paradigms:

Biomedical: this condition is considered a physiological syndrome defined by reduction of functional reserves and weak

abstracts XXIV Congresso Nazionale AURO.it - PISA 19 - 21 maggio 2017

resistance to "stressors", resulting from cumulative decline of multiple physiological systems causing vulnerability and adverse consequences (2)

BioPsychosocial: this condition is considered like "dynamic state affecting people who experience losses in one or more functional domains (Physical, Psychic, Social) caused by multiple variables that increase risk of adverse events for health" (3,4). To evaluate fragile patients we applied the Multidimensional Oncological Geriatric Evaluation (MOGE) and the scale: Vulnerable Elders Survey (VES – 13), and screening tool (G8) (5,6). We defined three categories of patients:

FIT: absence of disability or comorbidity, standard treatment can be applied.

UNFIT/VULNERABLE: presence of many comorbidity and/or disability and /or Geriatric Syndrome; treatments conformed to general clinical conditions can be applied to improve quality of life.

UNFIT/FRAIL: cannot be included in previous two categories, personalized treatment to improve quality of life and survival can be applied

We scanned the caregiver. Cancer changes family architecture. Caregiver takes care of sick people in first person, is an integrated figure in the care of oncological patient with important caretaking and ethical tasks and is involved in many aspects of the care through several phases of oncological disease: drugs administration, symptoms management, nutritional assistance, treatments supervision, emotional support.

#### Results

In the second half of 2016 we perform surgery on 12 patients that can be defined fragile elderly people. In 5 patients we perform radical cystectomy with ureteroileocutaneostomy (Bricker). In 3 patients we must perform radical nephrectomy (in addition to cystectomy), with monolateral ureterocutaneostomy, in 2 patients we perform radical nephrectomy and in the last 2 patients conservative renal surgery. Actually 10 patients are in follow-up. 2 patients died (one for pulmonary thromboembolism during surgery and one after 4 months for pulmonary infection).

#### Discussions

Combining data from MOGE (VMG) and data from interview with caregiver (that we consider fundamental because relationship between caregiver and health professionals have important ethical and social implications) (7), we got to analyze the whole question according to ethical clinic using bioethical foundations, contractualism, utilitarianism, ontology based personalism (8), but in particular inspired by Bioethics of everyday life (9,10,11) that want to face daily life themes of professionals of care process so that ethics become an operative tool stimulating a change for improvement of health intervention.

#### Conclusion

Ethical consultation allows to help any health worker, patient, caregiver who need advice in facing hard or suffered decisions. In particular helps doctors to answer the initial question: "It really needs to perform surgery on him at his age?", not only with the guidelines indications, but also in the perspective of total care so that the narrative medicine based (12) approach became always more important in health resorts

#### Reference

1) La fragilità nell'anziano: una prospettiva clinica. A. Giordano et all. J Gerontol 2007;55:2-6

- 2) Untangling the concepts of disability, frailty, and comorbidity: Implications for improved targeting and care. Journals of Gerontology. Series A: Biological and Medical Sciences; 59(3): 255-263; 2004 Fried LP et al.
- Gobbens R.J. et al. In search of an integral conceptual definition of frailty: opinions of experts. J Am Med Dir Assoc; 11(5): 338-43; Jun 2010
- 4) La fragilità dell'anziano. Linea guida Regione Toscana 2013
- 5) Tumori dell'anziano .Linee Guida AIOM 2016
- 6) Gestione del paziente unfil/trail : il punto di vista dell'Urologo. A. Giacobbe Convegno renal care Verona 7-8 Marzo 2014
- 7) Family caregivers, patients and physicians: ethical guidance to optimize relationships. Mitnick S., Leffler C., Hood V.L. J Gen Intern Med 2010; 25: 255-260.
- 8) Dalla parte della vita . Itinerari di Bioetica Vol. 1 E. Larghero . Effatà Editore 2010
- 9) Bioetica del Quotidiano. S. Spinsanti Medico e Bambino 1/1997 pag.59-64
- 10) Bioetica Quotidiana. G. Berlinguer. Giunti Editore 2000
- 11) La Bioetica del Quotidiano. E. Sgreccia Vita e Pensiero Editore 2006
- 12) Bioetica e medicina narrativa: nuove prospettive di cura . E. Larghero Edizioni Camilliane 2013

# **9.** #147: INCIDENTAL DIAGNOSIS OF PHEOCHROMOCYTOMA OF THE URINARY BLADDER: WHAT ARE THE CLINICAL PROBLEMS THAT CAN ARISE ?

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#### Objective

Pheochromocytoma of the urinary bladder is a rare tumor. We report a case of bladder pheochromocytoma in a female patient with no clinical symptoms of paraganglioma, radiological and cystoscopy examinations were suggestive of urothelial carcinoma but the histopathological diagnosis was pheochromocytoma.

#### Materials and Methods

Pheochromocytoma of the urinary bladder is a rare tumor that originates from chromaffin tissue of the sympathetic nervous system associated with urinary bladder wall [1,2]. They account for less than 0.06% of all bladder cancer [3] and less than

1% of all pheocromocytoma. In the genitourinary tract, the urinary bladder is the most common site of pheochromocytoma (79.2%), followed by urethra (12.7%), pelvis (4.9%) and ureter (3.2%) [4]. The pheochromocytoma of the bladder was first described by Zimmermann in 1953 [5]. Pheochromocytoma usually occured in young caucasians adult (mean age, 43.3 years). The most common symptoms and signs of pheochromocytoma of the urinary bladder are hypertension, headache, hematuria and other generalized symptoms due to raised of the catecholamines (blurred vision, hearth palpitation, flushing) [2]. Patients with pheochromocytoma may develop miocardial infarction, cerebral vascular accidents, acute renal failure and in rare cases acute respiratory distress syndrome [6].

Anesthetic management of any surgical patient with pheochromocytoma is challenging, particularly when the tumor has not been diagnosed [7]. In the event of an anesthetic-induced hypertensive crisis, even potent antihypertensives, such as nitroprusside, may be ineffective. Phentolamine, however, proved effective. Phentolamine should be the treatment of choice for pheochromocytoma-related hypertensive crises. Calcium channel antagonists, like nicardipine, have also been shown to control hemodynamic response during resection of pheochromocytoma [7]. Patients with pheochromocytoma are chronically vasoconstricted as a result of the high levels of circulating catecholamines and have a secondary decrease in their blood volume [8].

If pheochromocytoma is diagnosed pre-operatively it's necessary to start a preparation for surgery. Preparation for surgery should begin at least 2 weeks prior to allow full alpha-blockade along with gradual restoration of blood volume [7]. A standard protocol for adrenergic blockade is to administer phenoxybenzamine, starting at a dose of 40 mg per day and gradually increasing to 80 to 120 mg per day.

The most common side effect of phenoxybenzamine is postural hypotension. Beta-blockade can be given after starting alphablockade, if tachycardia or other cardiac arrhythmias develop. Beta-blockade must never be started prior to adequate alphablockade, since in the absence of beta-2-mediated vasodilatation, profound unopposed alpha-mediated vasoconstriction may lead to hypertensive crisis or pulmonary edema [7].

If it is possible to diagnose pheochromocytoma pre-operatively it is necessary to treat patients with alpha-adrenergic blockade, this is helpful for reducing intraoperative hypertension episodes, thus decreasing morbidity and mortality.

#### Results

A 35 years old female patient was referred to urology service of our hospital for the management of a single episode of monosymptomatic macrohematuria.

The patient hadn't hypertension or other conditions and didn't take drugs, she was an ex-smoker and she had stopped 5 years before. The urine citology has not documented neoplastic cells, urine culture was negative, the routine abdominal ultrasonography was negative for bladder tumors. We performed a pre operative cystoscopy which documented suspicious papillary tumors in the posterior bladder wall and in the left side. Computed tomography revealed an expansive formation of 29 mm in the left bladder wall, this lesion showed enhancement. Cistoscopy and endoscopic resection was performed and two bladder lesion in the posterior bladder wall and one in the left side were removed, intraoperatively the patient's blood pressure got elevated to 223/109 mmHg, however the anestesiologist was able to control it easily. The histopatological examination of the lesion in the left side revealed tumor cells with eosinophilic cytoplasm and hypercromatic nuclei of variable size, neoplastic cells show the following immunophenotypical profile: panCK-, CK 20-, p 63-, p 53-, CD 44-/+, GATA 3+/-, S100 +, chromogranin +, synaptofysin +, CD 56+, antigen of proliferation Ki 67 +1%. The framework was compatible with paraganglioma (pheochromocytoma).

#### Discussions

Neuroendocrine tumors of the urinary bladder are rare and comprise <1% of all urinary malignances [4]. These tumors of the urinary bladder range from well-differentiated neuroendocrine neoplasms (carcinoids) to the more aggressive subtypes such as small cell carcinoma. The neuroendocrine tumors of the urinary bladder are subdivided into four subtypes: small cell neuroendocrine carcinoma, large cell neuroendocrine carcinoma, well-differentiated neuroendocrine tumors carcinoids and paraganglioma [4,9]. The origin of pheochromocytoma of the urinary bladder is uncertained but believed to be related to migration of small nests of paraganglionic tissue along the aortic axis and in the pelvic regions into the bladder wall during embryogenesis; paraganglioma may be of two types, functional (sympathetic chromaffin paragangliomas/pheochromocytomas) that appeared with typical symptoms such as paroxysmal hypertension, hearth palpitations, headache attacks, sweating or non functional pheochromocytoma without chromaffin cells [10]. Beilan et al. extensively reviewed the english litterature on this subject and analyzed a total of 106 patients; symptoms reported in their series ranged from the typical micturations attacks of headache and palpitations to more abstract signs such as paraesthesias and dyspnea [1]. Our case is unusual in that, the patient presented with no obvious symptoms suggestive of pheochromocytoma, the first sign was noticed only intraoperatively in the form of episodic increase in blood pressure. Pheochromocytomas can be treated in different ways: catecholamine blockade, surgery, chemotherapy and radiation therapy [1]. The standard treatment for localized or locally advanced pheochromocytomas is surgery while metastatic or recurrent tumors are treated with palliative therapy. The National Cancer Institute (NCI) identifies four pathologic features associated with malignancy: large tumor size, increased number of mitosis, DNA aneuploidy and extensive tumor necrosis [11]. The Auerbuch chemotherapic protocol (cyclophosphamide, vincrastine and dacarbazine) has been shown to be effective against advanced malignant pheocromocytoma [12]. Radiation therapy with I 131-MIBG has been used for the treatment of metastases [13]. Approximately 70% of patients underwent partial cystectomy as primary treatment, it is important to note that 5.3% of patients had recurrence or mestastases.

The lack of uniformity on how oncologic cases were presented makes difficult to characterize the true disease course of bladder pheochromocytoma. Patients with localized tumor have an extremely favorable prognosis and may be managed by less aggressive modalities whereas patients with metastatic disease have a significant reduction in survival rates despite aggressive treatment. There is a lack of high quality data on post operative follow-up; in patients with benign, localized disease were not recommended follow-up studies. In patients with functional tumors regardless of stage, VMA, metanephrine and catecholamines levels should

<u>Comunicaz</u>ioni **3** - Vescica dalla A alla Z

#### 16:00 - 17:30 Sala Pacinotti

Comunicazioni 3 - Vescica dalla A alla Z

be monitored within one month post-surgery, then every six months for two years; if metastases are documented CT of the abdomen/pelvis should be performed every three months for one year, then every six months for one year and yearly for three years [1].

#### Conclusion

The current case report stresses the importance of knowledge of this rare disease which occures mostly in young Caucasian. Initial presentation is extremely varied in these tumors. Moving forward it would be helpful to collect as many cases as possible in order to understand the natural process and outcomes of this disease to standardize the reporting guidelines of pheochromocytoma. Reference

- [1] Beilan JA, Lawton A, Hajdenberg J, Rosser CJ. Pheochromocytoma of the urinary bladder a systemic review of the contemporary literature. BMC Urology 2013; 13:22.
- [2] Rajendra BN, Prasad VM, Amey YP, Shishir D, Hiremath MB. Pheochromocytoma of yhe urinary bladder- A case Report of an Unusual Presentation. Indian J Surg Oncol Sept. 2015; 6(3):303-206.
- [3] Spessoto LCF, Vasilceac FA, Phadilha TL et al. Incidental Diagnosis of Nonfunctional Bladder paraganglioma. Urology Case Report 2016; 4:53-54.
- [4] Kouba E, Cheng L. Neuroendocrine Tumors of the Urinary Bladder According to the 2016 World Health Organization Classification: Molecular and clinical Characteristics. Endocr Pathol. 2016; 27:188-199.
- [5] Zimmerman IJ, Biron RE, MacMahan HE. Pheochromocytoma of the urinary bladder. N Engl J Med 1953; 249:25-26.
- [6] Kwon SY, Lee KS, Lee JN et al. Risk factors for hypertensive attack during pheochromocytoma resection. IC Urology 2016;57:184-190.
- [7] Myklejord D. Undiagnosed pheochromocytoma: the anesthesiologist nightmare. Clin Med Res 2003;2(1):59-62.
- [8] Plouin PF, Duclos JM, Soppelsa F, Boublil G et al. Factors associated with perioperative morbidity and mortality in patients with pheochromocytoma: analysis of 165 operations at a single center. J Clin Endocrinol Metab 2001;86:1480-6.
- [9] Burkhard H. Morphology and Therapeutic Strategies for Neuroendocrine Tumors of the Genitourinary Tract. Cancer Oct. 2002; 95(7):1415-1420.
- [10] Alberti C. Urology pertinent neuroendocrine tumors: focusing on renal pelvis, bladder, prostate located sympathetic functional paragangliomas. G Chir. March-April 2016; 37(2):55-60.
- [11] Deng JH, Li HZ, Zhang YS, Liu GH. Functional paragangliomas of the urinary bladder: a report of 9 cases. Chin J cancer 2010, 29(8):729-734.
- [12] Auerbuch SD, Steakley CS, Young RC et al. Malignant pheochromocytoma: effective treatment with a combination of cyclophospamide, vincrastine and dacarbazine. Ann Intern Med 1998; 109(4):267-273.
- [13] Gonias S, Goldsby R, Matthay KK et al. Phase II study of high-dose [1311] metaiodobenzylguanidine therapy for patients with metastatic pheochromocytoma and paraganglioma. J Clin Oncol 2009; 27(25):4162-4168.

#### **10.** #77: ONCOLOGICAL OUTCOMES OF LAPAROSCOPIC AND OPEN TREATMENT (NEPHROURETERECTOMY) FOR UROTHELIAL TUMORS OF UPPER URINARY TRACT

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#### Objective

The open radical nephroureterectomy (ORN) with distal ureter and removal of a bladder cuff is considered the current standard of care for the treatment of carcinoma of the upper urinary tract (1). However, laparoscopy has been shown to be equally effective with lower perioperative morbidity (2). Laparoscopic nephroureterectomy (LRN), therefore it is emerging as a viable alternative minimally invasive. But the question remains on the safety and efficacy of oncological LRN and its equivalence to ORN.

Some authors have suggested that the dissection of the tumor and the high pressure of the gas that are established for the pneumoperitoneum during the LRN associated with a higher risk of bladder recurrence, local recurrence as well as metastases on Trocar sites (3).

The differential effect of LRN compared ORN on oncological outcomes after radical nephroureterectomy (RN) remains controversial. Although many recent studies report oncological results comparable between ORN and LRN in well selected patients (4-5 and 8), others reported a higher risk of intravesical recurrence of disease compared with LRN ORN (6-7).

We wanted to evaluate our clinical results between ORN and LRN, analyzing the data of 61 NUL performed between 2006 and 2016 and compared retrospectively with data from 37 NUO performed in the years 2002 to 2005 (it was pre-laparoscopy).

#### Materials and Methods

We evaluated data collected retrospectively on 37 consecutive patients treated with ORN between 2002 and 2005 (it was prelaparoscopy) and 61 patients undergoing LRN between 2006 and 2016.

ORN was performed according to the standard criteria, ie, the dissection of the kidney with the entire length of the ureter bladder and removal of a headset with a second short incision. Lymphadenectomy was not routinely performed unless the patient had no macroscopically or radiographically evident lymph nodes.

The laparoscopic technique has been performed with transperitoneal approach in 45 patients and with retroperitoneal approach 15. The excision of the bladder cuff has been carried out with open technique using the incision to remove the piece. In table 1, 2 and 3, the characteristics of patients and interventions

Patients were followed every 3 months for the first year, every 4 months for the second year, every 6 months starting from the third to fifth year and each year thereafter. The follow-up consisted of history, physical examination, routine blood tests, urine cytology, chest X-ray, CT uretrocistoscopica and Uro.

The average was 32 months follow-up in patients undergoing LRN and 52 months for those treated with ORN. We evaluated particularly cancer recurrence, the recurrence and survival site.

# venerdì 19 maggio 2017

#### Results

We had local recurrence in 7 patients (11.4%) after LRN and in 2 (6.25%) after ORN.

2 patients undergoing LRN (5.5%) died from metastatic disease at 9 and 12 months, 3 patients underwent ORN (9.3%) died from metastases to 12, 16 and 23 months.

Was found bladder recurrence in 9 patients undergoing LRN and 4 after ORN.

The most frequent tumor recurrence sites were: local recurrence (7 LRN-2 ORN), 1 recurrence of laparoscopic port, 3 recurrences in the regional lymph nodes (6 LRN, 1 ORN), bladder (LRN 9, 4 ORN). There were no significant differences in recurrence and even the survival rates at 1 and 3 years old are not very different results between the two techniques.

Some researchers have suggested that the manipulation of the tumor during the LRN can lead to a migration of tumor cells with the possible plant to secondary sites, and in the bladder, due to the high gas pressure required for the laparoscopic procedure (3). Moreover, it was also reported as a possible concern with the LRN of tumoral cells of the plant in Trocar sites (3). However, these potential risks of LRN are controversial and have not gotten feedback in the various works carried out (11).

In agreement with many previous studies, we found no significant difference in recurrence, recurrence in the bladder, and in the specific cause of death from the disease among patients treated with ORN and those with LRN (4-5- 8-9). Also as in other studies (5, 8 and 9), we found no significant association between surgical approach and death due to illness.

#### Discussions

Some researchers have suggested that the manipulation of the tumor during the LRN can lead to a migration of tumor cells with the possible plant to secondary sites, and in the bladder, due to the high gas pressure required for the laparoscopic procedure (3). Moreover, it was also reported as a possible concern with the LRN of tumoral cells of the plant in Trocar sites (3). However, these potential risks of LRN are controversial and have not gotten feedback in the various works carried out (11).

In agreement with many previous studies, we found no significant difference in recurrence, recurrence in the bladder, and in the specific cause of death from the disease among patients treated with ORN and those with LRN (4-5- 8-9). Also as in other studies (5, 8 and 9), we found no significant association between surgical approach and death due to illness.

#### Conclusion

The grade and stage of the cancer affect the incidence of metastatic disease, and is a poor prognostic factor in the primitive location of the disease (pelvis-ureter-both), rather than the surgical technique used.

There is no evidence so that the cancer control is compromised in patients treated with LRN rather than by ORN.

#### Reference

- 1. Oosterlinck W, Solsona E, van der Meijden APM et al. EAU guidelines on diagnosis and treatment of upper urinary tract transitional cell carcinoma. Eur Urol 2004;46:14
- S.Y. Eskicorapci, D. Teber, M. Schulze, M. Ates, C. Stock, J.J. Rassweiler. Laparoscopic radical nephrectomy: the new gold standard surgical treatment for localized renal cell carcinoma. ScientificWorldJournal 7 (2007) (825 – 836)
- 3. S. Micali, A. Celia, P. Bove, et al.. Tumor seeding in urological laparoscopy: an international survey. J Urol 171 (2004) (2151 2154)
- 4. F. Greco, S. Wagner, R. Hoda, A. Hamza, P. Fornara. Laparoscopic vs open radical nephroureterectomy for upper urinary tract urothelial cancer: oncological outcomes and 5-year follow-up. BJU Int 104 (2009) (1274 1278)
- U. Capitanio, S.F. Shariat, H. Isbarn, et al.. Comparison of oncologic outcomes for open and laparoscopic nephroureterectomy: a multiinstitutional analysis of 1249 cases. Eur Urol 56 (2009) (1 – 9)
- 6. O. Kamihira, R. Hattori, A. Yamaguchi, et al.. Laparoscopic radical nephroureterectomy: a multicenter analysis in Japan. Eur Urol 55 (2009) (1397 1409)
- 7. Y. Matsui, N. Utsunomiya, K. Ichioka, et al.. Risk factors for subsequent development of bladder cancer after primary transitional cell carcinoma of the upper urinary tract. Urology 65 (2005) (279 283)
- 8. M. Waldert, M. Remzi, H. Klingler, L. Mueller, M. Marberger. The oncological results of laparoscopic nephroureterectomy for upper urinary tract transitional cell cancer are equal to those of open nephroureterectomy. BJU Int 103 (2009) (66 70)
- 9. D. Manabe, T. Saika, S. Ebara, et al.. Comparative study of oncologic outcome of laparoscopic nephroureterectomy and standard nephroureterectomy for upper urinary tract transitional cell carcinoma. Urology 69 (2007) (457 461)
- 10. M. Muntener, E. Schaeffer, F. Romero, et al.. Incidence of local recurrence and port site metastasis after laparoscopic radical nephroureterectomy. Urology 70 (2007) (864 – 868)
- 11. G. Simone, R. Papalia, S. Guaglianone, et al.. Laparoscopic versus open nephroureterectomy: perioperative and oncologic outcomes from a randomised prospective study. Eur Urol 56 (2009) (520 526)

#### 11. #150: MALIGNANT MESOTHELIOMA OF TUNICA VAGINALIS TESTIS: A CASE REPORT

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#### Objective

Mesothelioma of the tunica vaginalis testis is a extremely rare tumor and the most unusual type of mesothelioma with only a limited number of reported cases (less than 300 cases published in the literature) [1]. Because of his low incidence and nonspecific clinical presentation, it's almost diagnosed accidentally during surgery for other reasons and the prognosis is usually poor. We present a case of a patient with a mesothelioma of tunica vaginalis testis, diagnosed secondarily during hydrocele surgery, with long-term survival after radical surgery.

Materials and Methods

we describe a case of a 40 years old patient, who was admitted to our department for routine left hydrocele surgery. The patient reported progressive scrotal enlargement without pain and the ultrasonography showed a simple left hydrocele with 350 ml in volume and normal testis. During the operation an anatomopathological analysis was request because of the strange nodular thickening of tunica vaginalis: the examination revealed a malignant mesothelioma with epithelioid structure and tubule-

Comunicazioni **3** - Vescica dalla A alla Z

#### papillary proliferation.

#### Results

The patient agreed with a radical operation and a left hemiscrotectomy with left inguinal lymph node dissection was performed. The definitive histology confirmed the previous report of malignant mesothelioma with angioinvasion but normal testicle findings and negative lymph node. The immunoistochemical study showed positivity for calretinin, cytocheratin 5/6 and WT1 while carcinoembryonic antigen was negative. The patient underwent further examinations: computed tomography (CT) showed absence of lymph node enlargement or distant metastases. Chemotherapy and radiotherapy were not indicated. For the first 2 years a CT was repeated every 4 months, and then every 6 months for 3 years. Five years after surgery the patient has well done and show no signs of residual disease.

#### Discussions

Mesothelioma is a rare malignant tumor, that develops from the internal surface of the pleura, pericardium, peritoneum and tunica vaginalis testis. Less then 5% of cases of malignant mesothelioma occur in the tunica vaginalis [2]. The first case was described by Barbera and Rubino in 1957 [3]. Due to his low incidence, it is unknown whether asbestos exposure plays a role in his etiology: less than half of reported mesothelioma of tunica vaginalis testis are associated with asbestos exposure. Other suspected causes are scrotal trauma, log-term hydrocele, herniorraphy and exposition to radiation during radiotherapy. The diagnosis occurs often secondarily during surgery for other reasons (hydrocele, testicular tumor or inguinal hernia). Approximately one third of tumors is locally invasive when diagnosed and more of 50% of patients develop a local recurrence with most recurrences within the first 2 years [4]. Because radiotherapy and chemotherapy have failed to provide significant results, a radical resection with hemiscrotectomy, even with local lymphadenectomy, appears to be the preferred treatment, associated with better prognosis and should be proposed when possible. Our case shows the importance of a correct diagnosis, if possible preoperative otherwise intraoperatively in case of fibrotic thickening of the tunica vaginalis or hemorrhagic hydrocele fluid. A mesothelioma of tunica vaginalis testis should be suspected always in all patients with asbestos exposure and rapid enlargement of hemiscrotum. Conclusion

malignant mesothelioma of the tunica vaginalis testis is a rare entity, often initially thought to be a hydrocele or an epididymal cyst. An aggressive approach with hemiscrotectomy with or without regional lymphadenectomy can reduce the risk of recurrence.

- Reference
- 1) Jankovichova T, Jankovich M, Ondrus D et al. Extremely rare tumor malignant mesothelioma of tunica vaginalis testis. Bratisl Med J 2015; 116 (9): 574-576
- 2) Spiess PE, Tomasz T, Kassouf W et al. Malignant mesothelioma of the tunica vaginalis. Urology 2005; 66: 397-401
- 3) Barbera V. Rubino M. Papillary mesothelioma of the tunica vaginalis. Cancer 1957; 10: 183-189
- 4) Plas E, Riedl CR, Pflueger H. Malignant mesothelioma of the tunica vaginalis: review of the literature and assessment of prognostic parameters. Cancer 1998; 83: 2437-2446



# Comunicazioni 4 -Bersaglio Prostata 2

Moderatori: F.Cossu; M. Simone; M. D'Anca

# **1.** #144: EFFICACY AND SAFETY OF DIFFERENT DOSAGES OF FOSFOMYCIN AS ANTIMICROBIAL PROPHYLAXIS IN TRANSRECTAL BIOPSY OF THE PROSTATE

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#### Objective

Prostate biopsy, the gold standard diagnostic procedure for prostate cancer diagnosis, is not free from complications, with a post biopsy prostatitis rate ranging between 1 and 5% [1]. In the recent years, especially in Europe, the incidence of bacterial strains like Escherichia coli, Klebsiella pneumoniae, Enterococci spp resistant to fluoroquinolones and cephalosporine is growing critically, leading to significative death and morbidity risk [2]. Fosfomicin, a bactericidal antibiotic produced by streptomycetes, shows a good activity against gram positive and gram negative bacteria [3] and seems to be an attractive alternative to quinolones based prophylactic regimen for prostate biopsies, due to the promising results of Cai et al [4]. The aim of our randomized study was to evaluate efficacy and safety of a prostate biopsy phrophylaxis protocol using two VS three fosfomicine dosis, with the aim to assess the optimal timing and dosage of this antibiotic.

Materials and Methods

229 patients undergoing transrectal ultrasound guided prostate biopsy were prospectively evaluated between April and December 2016 in a single italian center. All the patients were evaluated with history, comorbidity evaluation with Charlson score, complete urological examination, PSA, urine exam and urinalysis, transrectal ultrasound. The patients were, moreover, randomized to group A (fosfomicine 3 gr within 4 hours from the procedure and after 24 hours) and group B (fosfomicine 3 gr 12 hours before the procedure, within 4 hours from the procedure and after 24 hours). About three weeks after the procedures the patients were evaluated in our outpatients clinic.

#### Results

229 patients were randomized to group A (n: 115) or group B (n:114); allocation was done by date of birth. Mean age of the intire cohort was 65 years, whereas more represented Charlson comorbidity index was 0 (49%). The 2 groups were comparable with respect to age, comorbidity, PSA value, prostate volume, operative time and urine culture results (p n.s.) 23 pts had a positive urine culture, and only one of those > 100.000 UFC; no one was resistant to fosfomicineand only of these (E. Coli plurisesnsible) pts was readmitted after the procedure. 3.4% (8/229) of our patients developed fever requiring a readmission after the procedure (6 in group A and 2 in group B, p n.s.). Four of these patients presented respectively positive urineculture (only one positive for Enterobacter cloacae resistant to fosfomicine) and two presented a positive hemoculture (only one a Klebsiella pneumoniae resistant to fosfomicine). None of the patients developed > grade II complications.

44

venerdì 19 maggio 2017

Table 1				
Variable	Group A (n: 69)	Group B (n: 76)	Global	р
Age (yrs; mean + SD)	64.9 + 9.1	66.0 + 8.3	65.5 + 8.7	0.35
Charlson score (mean + SD)	0.6 + 0.9	0.7 + 1.2	0.7 + 1.1	0.30
PSA (mg/dl; mean + SD)	8.9 +12.6	12.4 + 42.1	10.6 + 31.1	0.4
Prostate volume (ml; mean + SD)	44.6 + 18.7	49.8 + 26.8	47.2 +23.2	0.1
Urine culture > 100.000 UFC	0	1	1	
Operative time (min; mean + SD)	12.2 + 7.3	12.2 + 7.9	12.2 + 7.3	0.8
Complications (n) (only Clavien I and II)	11	6	17	0.31
Readmission (n)	6	2	8	0.28

#### Discussions

The low readmission rate of our cohort, treated with both doses of fosfomicine, shows that this prophylaxis is safe and effective. Moreover, the two doses (2 VS 3 doses) show an overlapping efficacy.

Our study presents, moreover, possible limitations, as the single center, multisurgeon basis and the relatively low number of patients enrolled.

#### Conclusion

The low fever and prostatitis rate shows that fosfomicine prophylaxis is safe and efficacy; moreover, the two dosage seem to be overlapping in term of post operative outcomes.

#### Reference

1 Linvert K.A., Kabalin J.N., Terris M.K. Bacteremia and bacteriuria after transrectal ultrasound guided prostate biopsy. J Urol. 2000;164:76–80.

2. Taylor S, Margolick J, Abughosh Z, et al.. Ciprofloxacin resistance in the faecal carriage of patients undergoing transrectal ultrasound guided prostate biopsy. BJU Int. 2013 May;111(6):946-53.

3. Hendlin D, Stapley EO, Jackson M, et al. Phosphonomycin, a new antibiotic produced by strains of streptomyces. Science. 1969 Oct 3;166(3901):122-3.

4. Cai T, Gallelli L, Cocci A, et al. Antimicrobial prophylaxis for transrectal ultrasound-guided prostate biopsy: fosfomycin trometamol, an attractive alternative. World J Urol. 2016 May 31. [Epub ahead of print]

# **2.** #168: CENTRAL AND PERIFERIC PROSTATE DIFFUSION OF FOSFOMYCIN TROMETAMOL IN MEN WITH OR WITHOUT METABOLIC ABNORMALITIES

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#### Objective

Current evidences show that men with abnormal metabolic parameters are at major risk of harboring a more aggressive prostate cancer [1]. Despite the increased risk of post-procedure complication, infections included, this is the cohort of patients for which prostate biopsy will be particularly useful. Precisely for this reason prophylactic antibiotics in these patients, before they underwent prostate biopsy, plays a predominant role. Fosfomycin trometamol (FT) is a bactericidal, broad-spectrum antibiotic with low profile of resistance and elevated activity against multidrug-resistant bacteria. It is well known FT' urinary distribution but about prostate diffusion in literature [2] there are only few and old works and none in patients with Metabolic syndrome (METs). This prospective study focuses on the diffusion proprieties of FT in prostatic tissue by comparing its concentration in men with different metabolic abnormalities.

Materials and Methods

FT was administered 3 to 6 hours before procedure to sixty men with suspected prostate cancer. The diffusion of FT was calculated analyzing the concentration differences in the cores obtained from peripheral and from central prostate biopsies (central zone [C] and peripheral zone [P]). The arithmetic mean of C and P was considered as total prostatic concentration (T). Metabolic features including waist circumference, arterial blood pressure, glycemia, HDL-Cholesterol and triglyceride were recorded in all men. Each obtained value was split into normal or pathologic according to NCEP-ATPIII criteria. The variations of FT concentration among different zones of the gland (C, P and T) and men with or without abnormal metabolic parameters were analyzed by Anova.

Results

Over all patients, thirty-one (51.7%) suffered from hypertension, nineteen (31.7%) presented hyperglycemia, twenty-one (35%) were classified with high levels of Triglycerides while two (3.3%) with low levels of HDL-Cholesterol. Ten (16.7%) had a pathologic waist circumference. The table below reports the mean value of FT concentration in different zone of prostate (C, P, T) according to the normal vs abnormal metabolic features.

Comunicazioni **4** - Bersaglio Prostata 2

- Bersaglio Prostata

Comunicazioni 4

#### 16:00 - 17:30 Sala Fermi

		Central	Peripheral	Total	
Blood pressure	Normal	9.02	7.35	8.15	
_	Pathologic	13.09	12.97	13.03	
	p value	0.032	0.008	0.010	
Glycaemia	Normal	10.04	9.16	9.57	
	Pathologic	14.03	12.65	13.34	
	p value	0.033	0.080	0.037	
Triglycerides	Normal	11.29	10.44	10.87	
annunnun.	Pathologic	12.19	11.17	11.58	
	p value	0.636	0.731	0.705	
HDL-Cholesterol	Normal	11.5	10.59	11.01	
	Pathologic	15.97	15.05	15.51	
	p value	0.376	0.437	0.379	
Waist Circumference	Normal	11.10	9.54	9.79	
	Pathologic	16.27	14.32	15.29	
	p value	0.010	0.089	0.026	

#### Discussions

In literature it is known as METs is correlated with various diseases: oncological, non-oncological and infectious. As also evident in the literature, patients undergoing prostate biopsy, if not treated with appropriate prophylactic antibiotics, are at risk for infectious complications sometimes with series sequele. Especially in patients affected from metabolic disorders, which exhibit increased susceptibility to infection, it is important a suitable prophylactic coverage with a low resistance to common uropathogenic bacteria and broad spectrum antibiotic. FT, a chemoterapic with the mentioned characteristics, in our study seems to be spreading adequately in prostate tissue as to be used in the prophilaxis of prostate biopsy. Moreover it seems to have higher distribution in prostate of patients with diabetes, hypertension dyslipidemia. This evidence could lead to hypothesize that if on one hand the diabetic patients have higher infection risk, on other hand they have at the same time higher concentration of FT in our target tissue. It could be explained as dysmetabolic patients have a generalized inflammatory state that, in the prostate, could increase distribution of fosfomycin in the tissue, making it a suitable drug also for patients suffering from METs.

#### Conclusion

FT shows a higher concentration rate in the prostate gland of obese, hypertensive and hyperglycemic patients compared to those with non-altered metabolic parameters. For this reason FT can be considered an effective prophylaxis before performing a prostate biopsy, particularly in dysmetabolic men.

#### Reference

- Bhindi B, Xie WY, Kulkarni GS, Hamilton RJ, Nesbitt M, Finelli A, Zlotta AR, Evans A, van der Kwast TH, Alibhai SM, Trachtenberg J, Fleshner NE. Influence of Metabolic Syndrome on Prostate Cancer Stage, Grade, and Overall Recurrence Risk in Men Undergoing Radical Prostatectomy. Urology. 2016 Jul;93:77-85. doi: 10.1016/j.urology.2016.01.041.
- Rhodes NJ, Gardiner BJ, Neely MN, Grayson ML, Ellis AG, Lawrentschuk N, Frauman AG, Maxwell KM, Zembower TR, Scheetz MH. Optimal timing of oral fosfomycin administration for pre-prostate biopsy prophylaxis. J Antimicrob Chemother. 2015 Jul;70(7):2068-73. doi: 10.1093/jac/dkv067.

# **3.** #173: ECONOMICAL ASPECTS ABOUT THE COSTS OF ROBOT-ASSISTED LAPAROSCOPIC PROSTATECTOMY (RALP)

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<sup>2</sup> A.O.P Ospedale di Cisanello (Pisa)

#### Objective

The aim of this study to report the economic costs related to the RALP procedure in a robotic reference center. Materials and Methods

A five years robotic activity is evaluated to determine the costs of RALP by engineers team. The evaluated items are: preoperative, operatory and post-operatory costs.

Results

The total amount pro patients is estimated 7852,06 euro:

-111,30 euro for preoperative assesment .

-5693.08 euro for operatory fase (800.86 for medical e paramedical equipe, 3781 euro for medical device and drugs, 1110.40 euro for operating room.

#### Discussions

While potential benefits of robotic technology include decreased morbidity and improved recovery, some have suggested a prohibitively high cost. Because of the last governement resolution for Tuscany the financial balance about the robotic procedure is improved

#### Conclusion

Robotic technology did not significantly increase hospital costs. While the absolute cost for robotic surgery was higher than

conventional techniques after taking into account the institutional cost of the robot, the major driver of cost for robotic procedures will likely continue to decrease. Furthermore we must consider due to the our last regional government resolution the robotic

DRG refunded raised from 4234.00 to 9677.00 euro. This variation leads to a positive balance varing from -3618.06 to +1824.94

16:00 - 17:30 Sala Fermi

# 4. #178: ROLE OF BENIQUE IN SINGLE INCISION LAPAROSCOPIC PROSTATECTOMY. OUR EXPERIENCE

#### M. Diambrini<sup>1</sup>, B. Azizi<sup>1</sup>, W. Giannubilo<sup>1</sup>, P. Fulvi<sup>1</sup>, V. Ferrara<sup>1</sup>

<sup>1</sup> Ospedale Carlo Urbani, U.O.C. Urologia (Jesi)

#### Objective

Laparoscopic prostatectomy is a well-established and standardized technique to treat patients with localized prostate cancer. Nevertheless, the procedure is continuously in evolution in order to yield better results in cosmesis, pain, convalescence and in order to reduce the risk of the technique manteining the benefits in terms of potency, continence and oncological management. Aim of this study is to show how the Benique aided single incision laparoscopic prostatectomy (SILP) technique with totally extraperitoneal approach can avoid the ligation of Santorini dorsal venous complex

#### Materials and Methods

retrospective study on 262 SILP in the period 2011-2015 : match analysis between surgical and transfusional data

Benique catheter is applied along the urethra after the bladder neck incision allowing : 1) better exposure and mobilization of the prostate during the seminal vesicles plan dissection and endopelvic fascia and puboprostatic ligaments incision; 2) better Santorini plexus exposure and , after Santorini cold cutting by scissors , 3) no stithces to close it; 4) Santorini compression against the publis bone to avoid bleeding 5) better urethra exposure during the vesico-urethral suture

#### Results

262 patients range of age 45 - 76, submitted to SILP from 2011 to 2015, 19 pat (7,2 %) needed

blood transfusions during hospitalization but only 8 pat (3 %) within the early 12 hours after surgery,

6 patients had a retropubic hematoma, but no treatment was necessary.

1 paz (0,3%) needed rehospitalization for concomitant hematuria occurring 10 days after discharge

Mean surgery time was 100 minutes , range 75 – 130 minutes

#### Discussions

No differences in intra-and / or post-operatively blood loss evidenced in the percentage of patients with hemotransfusion were shown with literature : in fact a systematic review of the literature shows that the weighted mean intra and postoperative transfsion rate for laparoscopic prostatectomy is 6,3 %. This shows the security of the technique

even with the single port approach: furthermore the use of Beniquet may be useful both for hemostatic compression and for the exposure of the urethra during vesico-urethral suture

#### Conclusion

The ligation of Santorini venous plexus is not necessary during laparoscopic prostatectomy : bleeding can be avoided by the use of a Benique catheter for compression .

This save time without increasing risk of important bleeding; the technique is not influenced performing the single incision procedure

#### Reference

De Carlo F., Celestino F., Verri C., Masedu F., Liberati E., Di Stasi S.M. Retropubic, Laparoscopic, and Robot-Assisted Radical Prostatectomy: Surgical, Oncological, and Functional Outcomes: A Systematic Review . Urol Int 2014;93:373-383

#### **5.** #193: RARE PRESENTATION OF A PROSTATE CANCER, CASE REPORT

#### M. Foresio<sup>1</sup>, A. Carrieri<sup>1</sup>, A. D'Elia<sup>1</sup>, F. Beleggia<sup>1</sup>

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#### Objective

The prognosis of prostate cancer mainly depends on the presence or absence of metastatic spread . Prostate cancer usually metastasises to the bony skeleton, followed by Liver 19.8%, Lung 13.1%, Peritoneum 3.6%, Adrenal 3%, brain/dura 3%. Most cases present with localized disease and have good prognosis. However, advanced metastatic prostate cancer commonly metastasizes to regional lymph nodes and vertebral bones, but metastasis lateral cervical lymph nodes is rare. Important to recognize rare presentations metastatic disease, to obtain the correct diagnosis. There are only 2 published cases

Materials and Methods

CLG 76 years-old, cardiopathy post-IMA , treaty with anticoagulants and antihypertensive drugs ,psa 178 ng/ml, palpable lateral cervical lymph nodes (LLC). T ac total negative body except for 4 lymph nodes Lc . Therefore, the patient undergoes at the department of otolaryngology Taranto to resection of adenopathy. Histology was suggestive of positive adenocarcinomatoide infiltrated with immunohistochemical markers, (cytokines) CK8 and CK18. Therefore, the patient was sent to us for appropriate assessment. The patient after rectal examination, was performative a transrectal prostate biopsy, under local anesthesia They are executed only 4 needles for no patient compliance and its upward pressure until 190/85 mm / HGG and 108 bpm

#### Results

The survey showed a clinical t2A, the biopsy Gleason 4 + 4 and 50 % of positive cores (those on the left). Scintigraphy t / B positive for secondarità 2 of radiopharmaceutical accumulation in the iliac crests

**Bersaglio Prostata** 

Comunicazioni 4

<u>Comunicazioni 4 - Bersaglio Prostata 2</u>

#### 16:00 - 17:30 Sala Fermi

Lymphnodes are commonly involved during the course of metastatic prostate cancer. Hypogastric and obturator lymph nodes as the most common sites. This case reported, wanted examineted a atypical prostate cancer metastases cases. The awareness of the manifestations of prostate cancer metastases may enable accurate diagnosis, staging and help in appropriate management of disease. direct us to the correct diagnosis markers such as cytokines , that we used in this case. Cytokines CK8, CK18, are useful screening markers for the recognition of epithelial differentiation.( 9) PanCKC (CK8/CK18/CK19) representing epithelial cells. CK18, are also positively expressed by lung adenocarcinoma, colorectal cancer (CRC), and prostate cancer (10) Finally, in the case of prostate cancer, we combined PSA, because in the clinical application, immunohistochemistry for PSA is commonly used for In the diagnosis of prostate cancer (10).

Conclusion

Prostate cancer should be always considered in the differential diagnosis

of elderly men presenting with supraclavicular lymphadenopathy, hydroureteronephrosis

or later cervical lymphadenopathy even in the presence of a normal digital rectal. PSA immunohistochemical staining should be used in doubtful cases. Obviously, prevention has its importance.

#### Reference

- 1. (Can Urol Assoc J. 2013 Mar-Apr; 7(3-4): E248–E250 Metastatic prostate cancer with malignant ascites: A case report and literature review Ifeanyi Ani, MD,\* Mark Costaldi, MD,† and Robert Abouassaly, MD\*
- 2.AJR:199, August 2012 Anant H. Vinjamoori, Jyothi P. Jagannathan, Atul B. Shinagare, Mary-Ellen Taplin, William K. Oh, Annick D. Van den Abbeele, Nikhil H. Ramaiya
- 3.Arab Journal of Urology (2013) 11, 48–53 Ahmed Elabbady, Ahmed Fouad Kotb
- 4. Int J Surg Case Rep. 2016; 23: 177–181. A 76 year old male with an unusual presentation of merkel cell carcinoma Joel C. Acab,a, Wade Kvatum,a and Chukwuma Ebob
- 5.Br J Radiol. 1999 Oct;72(862):933-41. Features of unusual metastases from prostate cancer. Long MA1, Husband JE.
- 6. World J Urol. 2015 Dec 22. [Epub ahead of print] Update on histopathological evaluation of lymphadenectomy specimens from prostate cancer patients. Conti A1, Santoni M2, Burattini L2, Scarpelli M3, Mazzucchelli R3, Galosi AB1, Cheng L4, Lopez-Beltran A5, Briganti A6, Montorsi F6, Montironi R
- 7.Can J Urol. 1994 Jul;1(3):55-9. Unusual presentations of advanced prostate cancer. Gulanikar A1, Lau P, Bell DG.
- 8.Semin Oncol. 1977 Mar;4(1):53-8. Metastatic and histologic presentations in unknown primary cancer. Nystrom JS, Weiner JM, Heffelfinger-Juttner J, Irwin LE, Bateman JR, Wolf RM
- 9. Arch Pathol Lab Med—Vol 132, March 2008 Undifferentiated Tumor, Immunohistochemistry—Bahrami et al 327
- 10. CANCER BIOLOGY & THERAPY 2016, VOL. 17, NO. 4, 430–438 Si-Hong Lua,b, Wen-Sy Tsaic, Ying-Hsu Changd, Teh-Ying Choue, See-Tong Pangd, Po-Hung Lind, Chun-Ming Tsaif, and Ying-Chih Changa

# **6.** #179: C-MYC COPY NUMBER ANALYSIS IN URINE CELL FREE DNA FROM PRIMARY PROSTATE CANCER PATIENTS: A FEASIBILITY STUDY

#### V. Casadio<sup>1</sup>, S. Salvi<sup>1</sup>, F. Martignano<sup>1</sup>, G. Gurioli<sup>1</sup>, D. Calistri<sup>1</sup>, G. Cicchetti<sup>2</sup>, M. Fiori<sup>3</sup>, R. Gunelli<sup>3</sup>

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#### Objective

The amplification of 8q, in particular of the region 8q24 containing c-MYC gene, is a frequent event in primary prostate cancer tissues and maybe associated with biochemical recurrence and worse outcome (1; 2). The possibility to have non invasive biomarkers is an important chance for the early diagnosis and monitoring of prostate cancer patients instead of invasive approaches. While the use of circulating cell free DNA from blood has been intensively studied (3) only few data have been published on the role of urinary cell free DNA (UcfDNA) as a noninvasive marker (4; 5).

In the present study we aimed at evaluating copy number variation (CNV) of c-MYC gene in urinary samples collected after radical prostatectomy in a series of patients consecutively enrolled from 2013 to 2014. Our aim was to determine the feasibility of copy number analysis in urine samples using a Real Time PCR approach and to correlate it with clinical pathological characteristics. Materials and Methods

The study was conducted on a total of 49 individuals, 37 with a first diagnosis of prostate cancer and 12 with benign prostatic disease including prostatitis, inflammation, prostatic benign hyperplasia. Participants were enrolled from the Departments of Urology of Morgagni Pierantoni Hospital (Forlì, Italy) and Bufalini Hospital (Cesena, Italy). First-morning voided urine samples were collected and centrifuged at 850 g for 10min and the supernatants were transferred into cryovials and stored at -80 °C until use. DNA isolation was performed starting from 4 ml of urine supernatant and using Quick-DNA Urine Kit (Zymo Research), following the manifacturer's instructions. Urine cell free DNA was quantified using Qubit fluorometer. c-MYC gene amplification was evaluated by duplex TaqMan quantitative Real Time PCR using two different assays: (ID:Hs01764918 located on exon 3 and ID:HS02602824 located on exon 1) and two different reference genes: AGO1 (ID: Hs02320401) and TCC3 (ID: Hs02765308) both located in chromosomal regions not affected by gain or deletions. For each sample, 1.5 ng of DNA was analyzed in triplicate using TaqMan Universal Master Mix and the primers for target and reference sequences. Three urine DNAs from healthy males over 40 years were singly tested, and then pooled and used as a calibrator, a sample with no CNVs of target and reference genes. In the same run the samples were evaluated for the two loci of the target gene and the two reference genes. When the Ct either for c-MYC or for the reference genes was  $\geq 35.5$ , samples were considered as "not evaluable". Copy number variation analysis

<u>Comunicazioni 4 - Bersaglio Prostata 2</u>

was performed using CopyCaller Software (Applied Biosystems). Final results were calculated as the average between the copy number values of the two gene loci. CNV values >2.6 were considered as amplification while values <1.4 were considered as deletion.

#### Results

UcfDNA copy number was feasible on 43 samples. Six samples were considered as "not evaluable" as their Real Time Ct either for c-MYC or for the two reference genes was  $\geq$  35.5.

Cancer patients had a pathological stage as follows: 2 pT1, 7 pT2a, 17 pT2b, 6 pT3a and 1 pT3b. Eleven patients had a Gleason score  $\leq 6$ , 25 had a Gleason score > 6. Median PSA was 5.87 for cancer patients and 2.46 for individuals with urological benign pathologies. Copy number value for c-MYC gene varied from 1.3 to 3.1 in prostate cancer patients with a median value of 2.1 and from 1.1 to 2.4 in patients with benign diseases with a median value of 1.8.

c-MYC gene was gained in 8 of 31 evaluable prostate cancer patients (25.6 %), while it was normal for all individuals with benign pathologies except for two deletions. Samples with c-MYC copy number gain had all T2 stage tumors. No gain was detected either in T1 or in T3 tumors. Regarding the pathological Gleason score, patients with amplification of c-MYC were: 4 Gleason score 6, 3 Gleason score 7, 1 Gleason score 9. Patients follow-up was available for 24 patients and only two patients experienced a biochemical recurrence until now (one with c-MYC gain). To date the number of analyzed cases are too low to statistically CNV values with clinical -pathological characteristics or follow-up information.

#### Discussions

UcfDNA takes its origin either directly from dying cells exfoliated in urine (also prostatic cells) or from the circulation, for this reason it could be a good source of biomarkers especially for urological cancers such as prostate or bladder ones.

In the present study we demonstrated that copy number analysis could be easily performed in cell free DNA isolated from urine supernatant and that no amplification was found in healthy individuals or individuals with benign pathologies.

We found a 26% frequency of copy number gain for c-MYC gene in UcfDNA from prostate cancer patients with different pathological stages and grades. This amplification frequency is in line with those reported in papers previously published regarding 8q24 gain in primary prostate cancer tissues (1; 2). We strangely found no amplification in T3 patients but the number of cases analyzed is still too low to draw any statistical conclusion. The case series will be implemented in the next future.

It will be necessary for prostate cancer patients to analyze CNV of c-MYC in primary tissue and compare the results with those obtained in urine to establish the UcfDNA CNV sensitivity and to eventually adjust the cut off values.

Conclusion

We demonstrated that copy analysis of c-MYC gene is feasible in cell free DNA isolated from urine supernatant. We found that 26% of prostate cancer samples had a gain for c-MYC while all individuals with benign pathologies had normal copy number. In the next future we will enlarge the case series and compare results with those obtained in the corresponding tissues to test assay sensitivity and correlate with clinical pathological features.

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#### 7. #103: ROBOT ASSISTED NERVE SPARING RADICAL PROSTATECTOMY USING NEAR INFRARED FLUORESCENCE TECHNOLOGY AND INDOCYANINE GREEN: INITIAL EXPERIENCE

#### M.S.. Mangano<sup>1</sup>, F. Beniamin<sup>1</sup>, A. De Gobbi<sup>1</sup>, C. Lamon<sup>1</sup>, M. Ciaccia<sup>1</sup>, L. Maccatrozzo<sup>1</sup>

<sup>1</sup> Azienda U.L.S.S. n 2 Marca Trevigiana, Ospedale di Treviso, U.O. Urologia (Treviso)

#### Objective

The use of Indocyanine green (ICG) with near infrared (IR) fluorescence is a consolidated technology to visualize edge lesions in laparoscopic robot-assisted nephron sparing surgery and is actually used in robotic assisted partial nephrectomy. Instead, we propose the use of the ICG with near IR fluorescence during laparoscopic robot assisted radical prostatectomy (RARP), to identify and improve the preservation of neurovascular bundle and the hemostasis.

#### Materials and Methods

From April, 2015 to February, 2016, 62 patients underwent to RARP in our Urology Unit. In 26 of these, in the attempt to have a better visualization of neurovascular bundles, we used to inject ICG during the procedure, as described below. After the bladder neck incision and seminal vescicles dissection, we injected 1,25ml of ICG. Then we proceeded to bilateral pedicles resection only after the visualization of arterious vessels location, through IR technology. Just after the visualization with IR technology, the dissection was performed by non electrified scissors and Hem-o-lok Ligation System, with non IR visualization. Subsequently we evaluated post operative continence, defined by the suspension of pads within six months from RARP.

#### Results

Starting from 10 seconds after the injection of ICG we visualized the arterial structure using near IR fluorescence technology, and progressively we could obtain an optimal highlighting of neurovascular bundles.

This procedure is useful to easily dissect lateral pedicles and control arterial flow and hemostasis, specially for those of us that started robotic surgery only few months ago. We easily identified prostatic arteries and neurovascular bundles using near IR fluorescence technology in all patients (100%). Then, we performed the dissection alternating IR (picture) and non IR view for each patient .

There wasn't any increase in the operative time compared to RARP without ICG injection performed by the same surgeons. Complications related to injection of ICG did not occurred. In the follow up 24 patients (92.3 %) were continent and two patients (7,7%) were still using pad after six months from surgery.

Discussions

We use IR green technology to perform meticulous nerve sparing RARP. This expedient helps to improve nerve sparing technique and hemostasis. It let us also to minimize the risk to damage neurovascular bundles, both for experienced robotic surgeon, and for urologists that are just approaching the robotic technology, obtaining a high continence rate within six months after surgery. Conclusion

In our experience the application of ICG with near IR fluorescence during RARP could be useful in preserving the neurovascular bundle without any complication.

#### **8.** #81: DOES RALP LEARNING CURVE IMPACT ON PATIENTS' OUTCOMES?

S. Melegari<sup>1</sup>, M. Seveso<sup>1</sup>, G. Bozzini<sup>1</sup>, O. De Francesco<sup>1</sup>, P. Bono<sup>1</sup>, A. Mandressi<sup>1</sup>, G. Taverna<sup>1</sup>

<sup>1</sup> Humanitas Mater Domini (Castellanza)

#### Objective

RALP learning curve is associated with long operating times, inferior operatory and post-operatory outcomes and an increased number of complications. We report the initial results of 80 RALP procedures performed in our Institute, with the introduction of a new surgeon laparoscopically trained that followed a modular structured program. The aim of this study is to evaluate if our approach to training would yield a safer outcomes for patients undergoing the procedure during the learning curve.

Materials and Methods

From 06.2015 to 06.2016 a new surgeon began a training program in RALP. He was open and laparoscopically trained . RARP procedure was splitted into steps: opening peritoneum and bladder takedown ( 5 cases) , endopelvic fascia and bladder neck (12 cases), seminal vesicle/vas deferens (15 cases), pedicle/nerve sparing and apex (12 cases), posterior dissection and posterior bladder neck transection ( 15 cases), anastomosis with reconstruction as described by Porpiglia (10 cases), lymphadenectomy ( according to guidelines) ( 11 cases) . In all procedure the training surgeon performed a single step of RALP under supervision of an experienced preceptor. Consolle time and perioperative variables were compared to 80 surgeon-only cases.

#### Results

Comunicazioni 4 - Bersaglio Prostata

The median surgical time was not significantly different between the two cohort of patients (160 min vs 150 min; p NS). The median estimated blood loss was 200 ml. There was no difference in positive margins, length of stay, catheter days, readmission. There were 2 complications Clavien II(anemia that required blood transfusion) and 6 Clavien IIIa (5 drainage for lymphocele and 1 urinary leakage), no conversions nor transfusions. The median hospital stay was 3 days. The median catheterization time was 7 days. The biochemical recurrence-free survival rate (PSA < 0.01 ng/ml) was 94 % over an average follow-up of 6 months. The continence rates were (no pad) 70 % within 3 months and 90 % within 6 months with no difference between the two group.

#### Discussions

The introduction of a new surgeon in robotic team and the impact of learning curve on oncological, functional and perioperative outcomes is actually object of debate; as confirmed by the raising of studies focused on modality of teaching RALP. Like most of studies reported in literature, we splitted RALP in steps but in our clinical practice the training surgeon performed just one step in each procedure, even if he had already completed the learning curve of other steps, with the aim of not impact on surgical time and focus attention in the step in-training. Similarly to our study, Schommer [1] et al splitted the procedure in steps and they examined perioperative outcomes of resident involvement during various steps of robot-assisted radical prostatectomy (RARP) concluding that supervised resident console involvement did not affect perioperative outcomes, although, it prolongs surgical time, with the bladder takedown step having the most effect. Wang et al [2] reported that a new surgeon joining a high-volume robotic prostatectomy program with an established robotic team and mentorship can progress through the learning curve without compromising overall outcomes of the practice. Lovegrove et al [3] developed and validated a modular training and assessment pathway via Healthcare Failure Mode and Effect Analysis (HFMEA) for trainees undertaking RARP and evaluate learning curves for procedural steps. The RARP Assessment Score based on HFMEA methodology identified critical steps for focused RARP training and assessed surgeons. They reported the experience necessary to reach a level of competence in technical skills to protect patients: 16 cases for anterior bladder neck transection , 18 cases for posterior bladder neck transection , 9 cases for posterior dissection , 15 cases for dissection of prostatic pedicle and seminal vesicles and 17 cases for anastomosis .

In our experience the learning curve of the new surgeon was shorter, this may be caused by his previous large experience in open surgery, laparoscopy and table surgeon in about 300 RALP. This hypothesis may be confirmed by Ku et al [4]; indeed they reported that previous large-volume experience of laparoscopic radical may shorten the learning curve for RARP in terms of oncological outcome as well as, previous experience with laparoscopy may improve the functional outcomes of RARP. As far as surgical team experience overall is concerned, an experienced surgical team, in general, and the surgeon assistant in particular are believed to play a critical role in the operation's safety and success; anyway as Abu- Ghanem [5] showed, the assistant's seniority has no influence on perioperative course following RALP. Consequently, given a highly experienced primary surgeon, a less experienced assistant can be safely incorporated into this procedure. Obviously, whenever disposable, a dual-console system may improve intraoperative and perioperative outcomes, representing a safe and more efficient modality for robotic surgical education as compared to a single-console system , as reported by Morgan et al [6].

#### Conclusion

The implementation of a training program in which the trained surgeon is involved in at least one portion of RARP allowed us to

Comunicazioni 4 - Bersaglio Prostata 2

- overcome the initial learning curve with no difference in perioperatory outcomes, oncological and functional results . Reference
- 1. Schommer E, Tonkovich K, Li 2, Thiel DD. " Impact of Resident Involvement on Robot-Assisted Radical Prostatectomy Outcomes". J Endourol. 2016 Oct;30(10):1126-1131.
- 2. Wang L, Diaz M, Stricker H, Peabody JO, Menon M, Rogers CG. "Adding a newly trained surgeon into a high-volume robotic prostatectomy group: are outcomes compromised?" J Robot Surg. 2016 Jun 27.
- 3. Lovegrove C, Novara G, Mottrie A, Guru KA, Brown M, Challacombe B, Popert R, Raza J, Van der Poel H, Peabody J, Dasgupta P, Ahmed K. "Structured and Modular Training Pathway for Robot-assisted Radical Prostatectomy (RARP): Validation of the RARP Assessment Score and Learning Curve Assessment". Eur Urol. 2016 Mar;69(3):526-35.
- 4. Ku JY, Ha HK."Learning curve of robot-assisted laparoscopic radical prostatectomy for a single experienced surgeon: comparison with simultaneous laparoscopic radical prostatectomy".
- World J Mens Health. 2015 Apr;33(1):30-5
- 5. Abu-Ghanem Y, Erlich T, Ramon J, Dotan Z, Zilberman DE. "Robot assisted laparoscopic radical prostatectomy: assistant's seniority has no influence on perioperative course". J Robot Surg. 2016 Nov 9.
- Morgan MS1, Shakir NA, Garcia-Gil M, Ozayar A, Gahan JC, Friedlander JI, Roehrborn CG, Cadeddu JA. "Single- versus dual-console robot-assisted radical prostatectomy: impact on intraoperative and postoperative outcomes in a teaching institution". World J Urol. 2015 Jun;33(6):781-6.

#### **9.** #88: STRATEGICAL IMPLICATIONS OF THE INTRODUCTION OF AN ALTERNATIVE TREATMENT MODALITY (HIGH INTENSITY FOCUS ULTRASOUND) IN A PROSTATE CANCER UNIT IN THE CONTEXT OF MULTIDISCIPLINARY TEAM

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<sup>2</sup> SDA Bocconi School of Management (Milano)

#### Objective

The critical evaluation of a new modality of treatment which employs a new technology has to be considered in the context of "Health Technology Assessment" (HTA). This analysis lead to documents whose utility is essential both for National Health System and the stakeholders, i.e. subjects who are interested in the technology itslef and who can judge it from different point of view, varying from costs to clinical references. We considered the introduction of an alternative treatment modality, i.e. High Intensity Focused Ultrasound (HIFU) in the context of the Prostate Cancer Unit (PCU) in Our centre.

PCU is a multi-disciplinary team (MDT) constituted by an Urologist, a Medical Oncologist and a Radiation Oncologist, who manage almost 100 case of prostate cancer (PCa) per year, according to the position paper of European School of Oncology. The capacity of offering to the patients the ordinary therapies and also alternatives, due to clinical experience of the Centre, plays a fundamental role for the correct management of PCa. The aim of the present study was to contextualize the results of the analysis among the strategies of MTD, also evaluating the social impact.

#### Materials and Methods

We analyzed the patients affected by prostate cancer, who were all evaluated by MTD in 2015. For the purpose of the study, we considered only low risk patients, according to Epstein's criteria. The available therapeutic alternatives in Our Centre were: radical prostatectomy (open or robotic) (RRP), radiation therapy (RT), active surveillance (AS) and HIFU. We compared our experience with those reported in literature, searching for the key words: "multidisciplinary team", " prostate cancer " and "High Intensity Focused Ultrasound".

#### Results

In our Centre 360 patients with PCa were evaluated by PCU in 2015. During the same year we executed 500 prostate biopsy, among these 146 pts were affected by low risk Pca The partion of patients according to chosen treatment modality is described in table 1.

#### Discussions

#### SEE RESULTS AND TABLE 1

#### Conclusion

Different treatment modalities may be offered to the patients after the diagnosis of PCa; obviously, every alternative may have both physical and psychological side-effects, all significantly impact on the quality of life. The management of the patient in the context of MDT may change, especially regarding therapy itself; this is due to the fact the decisions of the MTD are applicable and reproducible, according to the internal guide-lines followed by all the members. Our MTD follows data literature, especially regarding the orientation towards AS and RT. Additionally, patients tend to chose RT during the PCU visits.

There are no available data about the impact of MTD on survival, or about a correlation between the MTD and a improvement of the outcome of the patients. Nevertheless, a clear idea about the overall survival of the single treatment modality may lead to a more simple choose by the patients. In this context, we could not have certainties, because of the too recent follow up as well as the recent introduction of PCU in Our Center.

Reference

- Pillay B, Wootten AC, Crowe H, Corcoran N, Tran B, Bowden P, Crowe J, Costello AJ. The impact of multidisciplinary team meetings on patient assessment, management and outcomes in oncology settings: A systematic review of the literature. Cancer Treat Rev 2016; 42:56-72.
- Valdagni R., Multidisciplinary Team Meetings in Cancer Care: We Could and Should do Better Than This. Clin Oncol (R Coll Radiol) 2016;28(12):799-800

3. Ramsay CR, Adewuyi TE, Gray J, Hislop J, Shirley MD, Jayakody S, MacLennan G, Fraser C, MacLennan S, Brazzelli M, N'Dow J, Pickard R, Robertson C, Rothnie K, Rushton SP, Vale L, Lam TB. Ablative therapy for people with localised prostate cancer: a systematic review and economic evaluation. Health Technol Assess 2015 19(49):1-490.

# **10.** #96: PATHOLOGIC OUTCOMES IN PATIENTS AFFECTED BY VERY LOW RISK AND LOW RISK PROSTATE CANCER AND ELIGIBLE FOR ACTIVE SURVEILLANCE

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<sup>1</sup> Ospedale Umberto I - ASL Salerno, U.O.C. Urologia (Nocera Inferiore)

#### 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  $\leq$ 10 ng/ml and patients with very low risk (VLR) PCa as defined by Italian PRIAS (cT1c-T2a, Gleason score <7, PSA  $\leq$ 10 ng/ml, PSAD  $\leq$ 0,20 ng/ml/cc,  $\leq$ 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. Prognostic factors of unfavorable disease were analyzed by logistic regression analysis (SPSS 24).

#### Results

We identified 103 patients with LR Prostate cancer. Of these, 58 patients have 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 1.7%, upgrading in 24.7% and 22.8% in LR and VLR patients, respectively. Unfavorable disease occurred in 28.2% and 22.4% of LR and VLR patients, respectively [table 2]. At multivariate analysis, PSAD was the only prognostic 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 experience, a retrospective analysis on LR and VLR patients revelead no significant differences in terms of adverse pathology between LR and VLR patients (28.2 vs 22.4%). This results is probably due to clinical stage of LR patients ( $\leq$ cT2a) and to percentage of positive cores. However this results seems to affirm need of mpMRI for more accurate selection of patients candidates for AS.

#### Conclusion

In our experience, upstaging and upgrading at laparoscopic radical prostatectomy occurred in 9% and 25% of low risk patients and in 2% and 23% 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 prognostic factor of unfavorable disease.

Reference Eur Urol 2016; 69: 576-81 Eur urol 2015; 68: 458-63

#### **11.** #162: URINARY CONTINENCE OUTCOMES AFTER PERI-URETHRAL SUSPENSION ACCORDING TO PATEL DURING ROBOT ASSISTED LAPAROSCOPIC RADICAL PROSTATECTOMY (RALP). RESULTS FROM A CASE-CONTROL STUDY

G. Pomara<sup>1</sup>, A. Mogorovich<sup>1</sup>, R. Bartoletti<sup>1</sup>, C. Selli<sup>1</sup>, F. Francesca<sup>1</sup>

<sup>1</sup> AOUP, U.O.Urologia II (Pisa)

#### Objective

Technical variations of RALP have been proposed by different authors to improve urinary continence with conflicting results, due to the persistence of multiple adjunctive factors such as bladder neck sparing and the patient or disease characteristics. The aim of the present study was to determine the effects of peri-urethral suspension according to Patel on a cohort of consecutive patients who underwent RALP for clinically localized prostate cancer.

Materials and Methods

Two-hundred and thirty patients who previously underwent RALP were recalled by telephone and subsequently investigated by PSA testing , ultrasound post-voiding residual urine measurement and specifically designed questionnaire to investigate their quality of life and the effects of surgery on urinary continence. 174 of them responded to the telephone recall and were eligible for the study while 56 were considered as drop out (2 deceased for unrelated diseases, 51 refused to respond the questionnaire). 81 out 174 received PUS with polyglecaprone 3-0 suture prior of Van Velthoven vesico-urethral anastomosis (Group 1) while 93 out 174 received a standard vesico-urethral polyglecaprone 3-0 suture according to Van Velthoven (Group 2). Statistical analysis was performed by Fisher Exact test.

Comunicazioni 4 - Bersaglio Prostata 2

#### 16:00 - 17:30 Sala Fermi

#### Results

Patients presented comparable preoperative characteristics in both groups except for prostate volume, which had a median value greater than 40 cc in 95.3% of Group 1 in comparison to 80.8% in the Group 2 (p<0.001). Pathological analysis demonstrated comparable distribution of progression risk in both groups but a significantly higher number of T3 patients in the control group (13.3% vs. 25.6%) (p=0.02). Positive surgical margin rate was comparable between the two groups. Sixty-nine percent of patients in the Group 1 were immediately and totally continent after the urethral catheter removal as well as after a median follow up of 23±17.4 months (period 2011-2016) while only 48.3% in the Group 2 were continent with a median follow up of 30±22.1 months (period 2009-2016). Socially acceptable continence (no pads or a single safety pad a day) was found in 92.58% of the Group 1 and 79.56 of the Group 2 patients respectively (p=0.003). Severe incontinence was found in 4.9% and 15% of the Group 1 and 2 respectively.

Conclusion

Periurethral suspension according to Patel during RALP resulted in a statistically significant shorter interval to continence recovery and higher continence rate at a median 23 months follow up time.

#### **12.** #78: UPDATE ON 3 YEAR OUTCOMES OF A TRANS-OBTURATOR AND PRE-PUBIC FOUR ARM URETHRAL SLING FOR POST-PROSTATECTOMY STRESS URINARY INCONTINENCE

M. Seveso<sup>1</sup>, S. Melegari<sup>1</sup>, G. Bozzini<sup>1</sup>, O. De Francesco<sup>1</sup>, P. Bono<sup>1</sup>, A. Mandressi<sup>1</sup>, G. Taverna<sup>1</sup>

<sup>1</sup> Humanitas Mater Domini (Castellanza)

#### Objective

The risk of persistent urinary incontinence after prostatectomy (PPI) is moderately elevated

varying from 2% to 10%. When present, it can lead to a very relevant reduction in the patient's quality of life (QoL). Mild degrees of PPI in the early postoperative period may be improved by pelvic muscle exercises, physiotherapy, and pharmacological therapy . However, for most patients who have moderate to severe PPI, conservative methods are not sufficient to return to their normal lives. Surgery is usually necessary to treat the more severe cases. Various male slings and devices are available for the treatment of PPI. In parallel with the successful results obtained with sub-urethral slings in women, similar devices have been developed for male urinary incontinence. The aim of this study is to assess tolerance and mid-term clinical outcomes of treatment with a new four-arm mesh sling of post prostatectomy incontinence (PPI) in men. The trans-obturator pre-pubic four arm sub-urethral sling used in the present study ensures non compressive support of the urethra. It repositions the sphincter complex upwards and stabilized it by firmly fixing the urethral bulb under the pubic symphysis.

Materials and Methods

A total of 31 patients were included in this study between December 2012 and December 2015. All selected patients had moderate PPI (less than 500 g of urinary loss in 24-h Pad test) for a minimum of 12 months after prostatectomy and after failure of conservative re-education treatment. They all underwent on Surgimesh M-Sling implantation for the treatment of PPI. Objective outcome measures included number of pads per day, 24-h Pad-test, maximum urinary flow rate and urinary retention . We also analysed degree of erectile dysfunction, patients' satisfaction, postoperatively pain and procedure complications. Patients were considered cured if no protection was used and/or daily pad weight <2g. Improved patients reduced their daily losses by more than 50%. Those not included in any of the aforementioned groups were assessed as unchanged or deteriorated, and considered as failures.

#### Results

Average hospitalization period was 1.57±0.70 days. All patients remained catheterized for 1.17±0.48 days. On an intention to treat analysis, at 12 months, 31 % were cured, 34 % had improved and 35% were considered failures. Two patients experienced transient urinary retention. There was a not significant tendency for reduced severe erectile dysfunction (ED), and a shift towards moderate ED was observed. No severe complications occurred. No explantation was necessary. No urethral or bladder injuries related to the device or erosionsn occurred. Complications were perineal/scrotal hematoma (9%), pain lasting >6 months (3%), and sling infection (2%); all were managed conservatively.

#### Discussions

Many studies have been published in recent years on the surgical treatment of post prostatectomy incontinence and good shortening to mild term results for the implantation of urethral support slings have been reported [1]. Sling procedures are quicker and less invasive than implanting an AUS. It is generally accepted that patients with mild to moderate incontinence are appropriate candidates for a male sling, and probably those with severe incontinence should be treated with an AUS, although there is no specific recommendation in this context. In particular, we believe that it would be advisable to treat urinary incontinence with an AUS in patients undergoing adjuvant radiotherapy, and to reserve the choice of the sling for those with mild and moderate urinary incontinence with no previous radiotherapy. Our success rate was stable throughout the study and similar to that reported in previous studies [2,3]. The major limitations of our study were the small number of patients and the duration of the follow-up period. Additional follow-up and larger series of patients are necessary to confirm our results. Conclusion

PPI represents a significant health problem. The rising elderly population and the increasing number of surgical interventions for prostate cancer mean that the incidence of PPI will rise. The trans-obturator and pre-pubic four arm urethral sling represents an easy-to-deploy, safe and durable therapeutic alternative for mild to moderate post-prostatectomy incontinence. Its implantation did not have a negative influence on sexual performance outcomes.

#### 16:00 - 17:30 Sala Fermi

#### Reference

- 1. Leruth J, Waltregny D, de Leval J." The inside-out transobturator male sling for the surgical treatment of stress urinary incontinence after radical prostatectomy: midterm results of a single-center prospective study". Eur Urol. 2012 Mar; 61(3):608-15.
- Le Portz, B., Haillot, O., Brouziyne, M. and Saussine, C. (2016) "Surgimesh M-SLING" transobturator and prepubic four-arm urethral sling for post-prostatectomy stress urinary incontinence: clinical prospective assessment at 24 months". BJU International, 117: 966–975
- Siracusano S1, Visalli F1, Toffoli "Male incontinence and the transobturator approach: An analysis of current outcomes". Arab J Urol. 2013 Dec;11(4):331-5.

#### 13. #97: PROGNOSTIC FACTORS OF UPSTAGING, UPGRADING AND ADVERSE PATHOLOGICAL FEATURES IN FAVOURABLE GS 3+4

G. Napodano<sup>1</sup>, T. Realfonso<sup>1</sup>, A. Campitelli<sup>1</sup>, O. Intilla<sup>1</sup>, U. Di Mauro<sup>1</sup>, G. Molisso<sup>1</sup>, A. Pistone<sup>1</sup>, R. Sanseverino<sup>1</sup>

<sup>1</sup> Ospedale Umberto I - ASL Salerno, U.O.C. Urologia (Nocera Inferiore)

#### Objective

Active surveillance (AS) is a valid option for the treatment of low risk prostate cancer. Whether or not AS could be offered also to patients with intermediate risk prostate cancer is a debated issue. Some AS protocols included selected patients (older) with Gleason score 3+4. In our study we evaluated the risk of upgrading and upstaging and predictive factors of adverse disease in patients with favourable Gleason score 3+4 and identified prognostic factors.

#### Materials and Methods

From database of our institution, we identified patients with favourable GS 3+4 (PSA  $\leq 10$  ng/ml, cT1c-T2a) undergone a laparoscopic pelvic lymphadenectomy (LAD) and 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 ( $\geq$ GS4+3) and adverse pathological outcomes (non-organ confined disease or  $\geq$ GS4+3 or pN1) by logistic regression analysis (SPSS 24).

#### Results

Baseline characteristics of the 82 patients with favourable Gleason score 3+4 PCa are reported in table 1. Surgical and pathological outcomes are reported in table 2. Upstaging to  $\geq$ pT3 occurred in 9.7% of patients; no variables were associated to upstaging (table 3). Upgrading occurred in 24.4% of patients; PSA was the only factor associated to upgrading [OR 2.12, p 0.04] (tables 4A and 4B). Adverse pathological outcomes (non organ confined disease or primary GS4 or pN1) occurred in 31.7% of patients; PSA correlated with adverse pathological outcomes [OR 2.87, p 0.01] (tables 5A and 5B). Downgrading occurred in about 5% of patients.

#### Discussions

Active surveillance (AS) is a valid option for the treatment of low risk prostate cancer. Whether or not AS could be offered also to patients with intermediate risk prostate cancer is a debated issue. Some AS protocols included selected patients (older) with Gleason score 3+4. NCCN guidelines have considered AS as option for patients with favourable intermediate risk PCa (GS3+4, PSA ≤10 ng/ml, positive cores <50%). We have evaluated rates of upstaging, upgrading and adverse pathology in favourable intermediate risk patients undergone to laparoscopic RP. Upstaging, upgrading and adverse pathology occurred in 9.7%, 24.4% and 31.7%, respectively. Among all variables considered, PSA was the only factor associated to upgrading and adverse pathology. Conclusion

In patients with favourable Gleason score 3+4, upstaging, upgrading and adverse pathological outcomes occurred in 10%, 24% and 32% of the patients. PSA was the only factor associated to upgrading and adverse pathological features.

Reference Transl Androl Urol 2015; 4 (3): 342-54 Plos One 2014; 9 (9): Urol Oncol 2015; 33: 7121-9

# 20 maggio 2017 sala Pacinotti

# 16:00 - 17:30

# Comunicazioni 5 -Nonsolocalcoli

Moderatori: C. Meccariello; F. De Marco; P. Casale

55

# **1.** #94: THE SUCCESS OF EXTRACORPOREAL SHOCK-WAVE LITHOTRIPSY BASED ON THE ULTRASOUND COLOR-DOPPLER TWINKLING ARTIFACT EVALUATION

S. Masciovecchio<sup>1</sup>, A.B.. Di Pasquale<sup>1</sup>, G. Ranieri<sup>1</sup>, G. Romano<sup>1</sup>, L. Di Clemente<sup>1</sup>

<sup>1</sup> Ospedale Civile "San Salvatore", U.O.C. Urologia (L' Aquila)

#### Objective

Aim of our study was to determine the utility of the ultrasound color-doppler twinkling artifact study for predicting the success of ExtracorporeaL Shock-Wave Lithotripsy (ESWL) of ureteral calculi. To the best of our knowledge, for the first time, similar approach has been used in a patient group.

Materials and Methods

Between July 2015 and September 2016, a total of 178 patients who underwent to ultrasound-guided ESWL for single ureteral stones of 5 to 10 mm were included in this study. All patients underwent a baseline evaluation, including a medical history, a physical examination, a complete blood count, a serum creatinine measurement, determination of the glomerular filtration rate, a urinalysis and a color-doppler ultrasound scan of upper urinary tract. The exclusion criteria were as follows: placement of percutaneous nephrostomy tube or ureteral stent before ESWL. The ultrasound parameters included stone location and stone length. During Color-Doppler ultrasound examination single focal zone was always placed somewhat deeper than the level of the targeted stone. The presence of twinkling artifact, and if detected its signal intensity was recorded. Signal intensities of the twinkling artifacts were classified as follows: twinkling artifact not observed (grade 0); grade 1: focal and hardly observed twinkling artifact; strong signal intensity observed on only some part (grade 2) or all over the stone (grade 3)(1). To investigate the usefulness of color Doppler twinkling artifact study for predicting ESWL success-rate, patients were divided into two subgroups. Patients with no twinkling artifact (grade 0) or with focal and hardly observed twinkling artifact (grade 1) (GROUP A) and patients with twinkling artifact (grade 2 and grade 3) (GROUP B). Patients were followed up every 2 weeks after ESWL with ultrasound. If there were significant fragments others sessions of ESWL were planned. The final results were considered after the complete passage of all fragments or after 3 months from the last ESWL session. The outcome of ESWL was described as a success with stone-free condition or clinically insignificant residual fragments with no symptoms at 3 months after ESWL. Failure was defined as residual stone fragments or no evidence of fragmentation after 3 sessions of ESWL.

#### Results

The GROUP A consisted of 153 patients (85.9%), and the GROUP B consisted of 25 patients (14.0%). The average stone size (mm) in the two groups was  $7,9\pm1,4$  and  $8,1\pm0.5$  respectively, which was no significantly different between the two groups. Other ultrasound parameters such as stone location and hydronephrosis were not significantly different. No significant differences in other baseline characteristics were found between the two groups. Overall success rates in the GROUP A and GROUP B were 86.9% (133 patients) and 100% (25 patients) respectively. Mean time to stone free status and the average number of ESWL sessions required for success in the two groups were  $18.7\pm31.7$  days compared with  $12.2\pm20.0$  days and  $1.2\pm1.2$  compared with  $1.1\pm1.5$ , respectively. However, the subgroup analysis divided by stone size and stone location was not performed because the sample size was relatively small for accurate analysis.

#### Discussions

ESWL is a non-contact, non-invasive technique for the treatment of urinary calculi. It is widely used in clinical treatment, and this method of removing stones has advantages such as simple operation, less pain and lower cost(2). Several studies

sabato 20 maggio 2017

Comunicazioni **5** - Nonsolocalcoli

concluded that the outcomes of ESWL correlate with several factors, including type of lithotripter, stone size, stone location, stone composition, calyceal and ureteral anatomy, body mass index and recently the stone attenuation value(3). Many previous studies have investigated the relationship between computed tomography (CT) parameters and successful ESWL. Data revealed that the energy of the shock wave needed for fragmentation was related to stone density, and that the higher the stone density, the stronger the shock wave energy needed to achieve fragmentation(4). A twinkling artifact associated with color doppler ultrasonography of urinary calculi has been described as a rapidly changing mixture of red and blue seen on or behind the stone where the shadowing would be expected on B-mode imaging. The etiology of the artifact is not completely understood, but it has been hypothesized to be from phase or clock jitter, and stone surface roughness. More recent data suggest that twinkling may arise from tiny gas pockets on the stone surface. Several studies have demonstrated the dependence of the twinkling artifact on ultrasound machine settings and stone composition. The twinkling artifact has been observed in 83% to 96% of stones seen on B-mode ultrasonography(5). In the identification of urinary stones this artifact provides additional contribution to grayscale ultrasound, and increases diagnostic success rates. Some stones do not induce formation of artifact, while others lead to greater amount of artifact. For the first time Chelfouh et al. investigated this correlation. In this in vitro study performed with small number of stones, calcium oxalate monohydrate stones generally did not induce formation of twinkling artifact, while a correlation between calcium oxalate dihydrate stones and twin¬kling artifact was found(6). Bulakçı et al, in vivo, evaluated to the role of twinkling artifact observed in color doppler analysis for the pre-diction of the mineral composition of urinary stones. Overlapping intensities of the twin¬kling artifact have been also observed among all stone groups. On the other hand, mineral composition of the stones with a density value below 780 HU which also display grade 3 artifact can be evaluated in favour of non-calcium stones(1). In our study we demonstrated that the absence of ultrasound color-doppler twinkling artifact correlate with a higher ESWL success rate for the treatment of ureteral stones. The lower number of patients and the dependence on the sonographer of the ultrasound exam are important limitation of our study. Statistical power of our study was weakened. Therefore, further prospective studies should be conducted with greater number of patients. However we think that these preliminary data which is contributed to the literature will be helpful as guiding tools for future investigations.

Conclusion

Our study shows the utility of the ultrasound color-doppler twinkling artifact study for predicting the success of ESWL of ureteral calculi.

Reference

- (1) Bulakçı M, Tefik T, Akbulut F, Örmeci MT, Beşe C, Şanlı Ö, Oktar T, Salmaslıoğlu A. The use of non-contrast computed tomography and color Doppler ultrasound in the characterization of urinary stones preliminary results. Turk J Urol 2015;41(4):165-70.
- (2) Yang C, Li S, Cui Y. Comparison of YAG Laser Lithotripsy and Extracorporeal Shock Wave Lithotripsy in Treatment of Ureteral Calculi: A Meta-Analysis. Urol Int 2016; DOI: 10.1159/000452610
- (3) Massoud AM, Abdelbary AM, Al-Dessoukey AA, Moussa AS, Zayed AS, Mahmmoud O. The success of extracorporeal shock-wave lithotripsy based on the stone-attenuation value from non-contrast computed tomography. Arab J Urol 2014;12(2):155-61
- (4) Gücük A, Uyetürk U. Usefulness of hounsfield unit and density in the assessment and treatment of urinary stones. World J Nephrol 2014;3(4):282-6
- (5) Sorensen MD, Harper JD, Hsi RS, Shah AR, Dighe MK, Carter SJ, Moshiri M, Paun M, Lu W, Bailey MR. B-mode ultrasound versus color Doppler twinkling artifact in detecting kidney stones. J Endourol 2013;27(2):149-53
- (6) Chelfouh N, Grenier N, Higueret D, Trillaud H, Levantal O, Pariente JL, et al. Characterization of urinary calculi: In vitro study of "twinkling artifact" revealed by color-flow sonography. AJR Am J Roentgenol 1998;171:1055-60.

#### 2. #112: ONE SHOT RENAL DILATION VERSUS GRADUAL METAL TELESCOPIC DILATION TECHNIQUE IN PERCUTANEOUS NEPHROLITHOTOMY: COMPARISON OF SAFETY AND EFFECTIVENESS

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#### Objective

Renal dilation (RD) is an important step in percutaneous nephrolithotomy (PCNL). It is usually done using metallic telescopic dilators (Alken), sequential fascial dilators (Amplatz), and single-step balloon dilator (BD). Despite its high costs, BD is considered the most modern and safest system. The aim of this study was to evaluate the feasibility of one-shot (OS) RD versus metallic telescopic (MT) dilation technique for tract creation in PCNL (1).

#### Materials and Methods

We enrolled 90 consecutive patients whose underwent PCNL for a renal stone at our institution from October 2015 to September 2016. The patients were randomized into two groups, with the first (Group A) having OS RD using the 30-F Amplatz dilator, and the second (Group B) having gradual dilation using the MT dilators (Alken). Intraoperative outcomes were collected in a prospectively maintained database and analyzed. Postoperative complications have been classified according to the Clavien-Dindo (CD) system (2). The stone-free rate was assessed using a plain abdominal film on the day after surgery. 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  $\leq 0.05$  (two-sides).

#### Results

All procedures were performed by a single surgical team in the prone position. There were no differences in the demographics and baseline characteristics between the two groups. In all patients of the Group A there was renal access with correct tract dilation except for 9 out of 45 (20%) patients in which a shift from the OS to the MT dilation was needed. There was a significant

sabato 20 maggio 2017

differences in successful dilation (p=0.0095). There were no significant differences in transfusion rate (p=0.56) and in hemoglobin decrease (p=0.60) between the two groups. OS dilation had significant shorter access time (p=0.019) and X-ray exposure time (p=0.031) than MT dilation. There were no significant differences in stone-free rates (p=0.56) and in complication rates (p=0.65) between the groups. Table 1 reports post-operative complications according to CD systems.

#### Discussions

Tract dilatation is an important step in PCNL, and inadequate RD can lead to a failure of the procedure or to provoke bleeding. In our department RD is classically done using metallic telescopic dilators (Alken) or single-step balloon dilator. The single-step balloon dilator is a safe but expensive technique. Even if in 9 patients of the Group A a shift from the OS to the MT dilation was needed, no significant differences in transfusion and complication rates were seen. Moreover OS dilation had significant shorter access time. In our opinion the difficulty encountered to obtain an adequate access using the OS dilation, could be related to the difficulty to perforate the layers of abdominal wall and the Gerota's fascia.

#### Conclusion

OS RD is a cheap, effective and safe technique for tract creation in PCNL, with shorter access time and X-ray exposure time and without increased complications.

Reference

- 1- Nour HH, Kamal AM, Zayed AS, Refaat H, Badawy MH, El-Leithy TR.Single-step renal dilatation in percutaneous nephrolithotomy: A prospective randomised study. Arab J Urol. 2014 Sep;12(3):219-22.
- 2- de la Rosette JJ, Opondo D, Daels FP, Giusti G, Serrano A, Kandasami SV, Wolf JS Jr, Grabe M, Gravas S.Categorisation of complications and validation of the Clavien score for percutaneous nephrolithotomy. Eur Urol. 2012 Aug;62(2):246-55.

#### 4. #274: SUBCAPSULAR KIDNEY URINOMA AFTER PERCUTANEOUS NEPHROLITHOTOMY

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#### Objective

Percutaneous nephrolithotomy (PCNL), as primary treatment of kidney urinary stones, has regained much interest in the last decade thanks to the variations and refinements of the technique. Albeit 54% of complications are negligible, such as fever and small bleeding, for which no invasive intervention are needed (I type according to the Clavien classification), severe complications may occur and a prompt correct management should be established to avoid the worsening of patient clinical state. 1 We report on an unusual PCNL complication and its management.

Materials and Methods

A male patient, 43 years of age, underwent PCNL for a large left pyelocaliceal stone. Surgery was performed in Valdivia-Galdakao supine position. The percutaneous tract was established by combined radiological and sonographic guidance. The tract was dilated by balloon and a 24 F Amplatz sheath was located. As complete clearance was not achieved because of a residual lower pole calyceal stone, an ureteral double J and a 20 F nephrostomy were located for a second-look PCNL through the same tract after 7 days. After second-look PCNL residual stone was still not cleared because it was unreachable through the tract established and the patient was discharged without Nephrostomy and with the ureteral stent, with the plan of performing Retrograde intrarenal surgery (RIRS) in 3-4 weeks. Haemoglobin, Haematocrit and the renal function were normal. At the 7th day after PCNL no leakage was detected from the percutaneous tract, but the patient started to complain about flank discomfort and fever. Imaging showed a 6 cm lower-pole subcapsular collection. After 3 day of conservative management with antibiotics, the sub capsular collection did not resolve and a percutaneous 6 Fr mono-j drainage in the collection was placed. Drain output was at first purulent and evolved into urine throughout the following days. Drain urine culture was positive for E. Coli infection and Carbapenemic targeted antibiotic was offered to the patient.

#### Results

Collection drained about 400 cc in 7 days and the drain was removed when the output was less than 10 cc per day. No late complications were reported and RIRS was scheduled in 1 month to clear the residual stone.

#### Discussions

Improvement of surgical care demands transparent, consistent, and accurate reporting of surgical outcomes that are evaluated and documented in a standardised manner. 2A Clavien-Dindo Complication classification has recently been adopted and validated in a PCNL surgery. A Categorisation of percutaneous nephrolithotomy-specific complications according to Clavien classification score based on expert opinions collected from 74 urologists via an international survey has mentioned most of the PCNL complication and relative management. 3

To our knowledge the aforementioned complication is quite uncommon and deserves to be reported. In the Clavien-Dindo classification it may be located at 3b category, because its resolution needed a radiological intervention under local anaesthesia. The subcapsular collection did not resolve spontaneously because an internal fistula between the damaged calix and the subcapsular space supplying the collection had been established. The second-look PCNL irrigation without an Amplatz sheath probably plumped the collection through the fistulous small path, although it was carried out one week later when the tract should be mature enough and the calix rupture healed. Usually, the collection should shrink without further management when the collecting system is adequately drained by the stent after nephrostomy removal. That was not the case because the tract sealed quickly and the subcapsular collection continued being supplied by urine extravasation despite the double J placement. After 7

days the patient became symptomatic as the collection augmented and evolved into an abscess. Another interesting aspect we observed was the complete absence of blood clots in the collection as it was not a result of a traumatic hematoma, but rather a urine extravasation supplied by the second-look PCNL irrigation.

#### Conclusion

To our knowledge and experience the aforementioned complication is very uncommon and dreadful. Prompt detection and minivasive management may be resolutive.

Reference

- References Labate G, Modi P, Timoney A, Cormio L, Zhang X, Louie M, Grabe M, de la Rosette J, on behalf of the CROES PCNL Study Group J. The percutaneous nephrolithotomy global study: classification of complications. J Endourol. 2011 Aug;25(8):1275-80
- 2. Ibarluzea G, Scoffone CM, Cracco CM, Poggio M, Porpiglia F, Terrone C, Astobieta A, Camargo I, Gamarra M, Tempia A, Valdivia Uria JG, Scarpa RM. Supine Valdivia and modified lithotomy position for simultaneous anterograde and retrograde endourological access. BJU Int. 2007 Jul;100(1):233-6.

3. Krupski TL. Standardization of reporting surgical complication. Are we ready? J Urol 2010;183:1671–2.

4. de la Rosette JJ, Opondo D, Daels FP, Giusti G, Serrano A, Kandasami SV, Wolf JS Jr, Grabe M, Gravas S; CROES PCNL Study Group. Categorisation of complications and validation of the Clavien score for percutaneous nephrolithotomy. Eur Urol. 2012 Aug;62(2):246-55.

#### 5. #188: TREATMENT OF URETHRAL STRICTURES USING BUCCAL MUCOSA GRAFT. A SINGLE GROUP EXPERIENCE

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#### Objective

Urethral stricture is complex urological disease characterized by a narrowing of the urethral lumen. These conditions affects patients psychologically too having a severe impact on health and quality of life of these patients. Management of urethral strictures is difficult and requires careful evaluation. There are different treatment options for urethral stricture. Urethral dilation and internal urethrotomy represent the most commonly performed procedures but they have very low success rate.. Urethroplasty has a much higher chance of success (85-90%) and is considered the gold-standard treatment. Buccal mucosa seems to be the best graft for uretroplasty [1].

Materials and Methods

In this study 20 patients (pts) were enrolled : 2 pts with penile stricture, 3 pts with penile stricture and failed hypospadia repair, 1 pt penile stricture with lichen sclerosus and failed hypospadia repair, 14 pts with bulbar stricture. Median age was 51 years. Stricture etiology was idiopathic, failed hypospadias and flogistic. All pts underwent previous surgery. 2 pts had sovrapubic catheter. 1 patient with failed hypospadia and lichen sclerosus underwent 2 stages uretroplasty (2 stage at six months after the first surgery). Average stricture length was 3.2 cm. All patient underwent preoperatively evaluation using : uroflowmetry , retrograde urethrography, ultrasound, cystoscopy. Maximum flow rate (Qmax) and post-void residual urine were collected before surgery and at 3 and 6 months follow-up.

#### Results

All patients were very satisfied with the result of the surgery. In 2 pts (10%) a second surgery was needed in order to dilate the urethral lumen endoscopically. At 6 months follow-up the mean Qmax increased from 4.64mL/s to 21mL/s at 6 months follow-up. Mean post-void residual urine was 48 mL.

#### Discussions

The use of buccal mucosa graft urethroplasty for bulbar urethral strictures has gained widespread popularity since the first report in 1996 [2]. Buccal mucosa seems to be the ideal tissue to reconstruct the urethra. Regarding bulbar strictures, the best approach for the placement of the graft remains controversial. Medium- and long-term outcomes of all three approaches were comparable ranging between 80 and 88% [3]. For failed hypospadia patients with concomitant uretral strictures the management seems to be more complex due the number of previous surgeries starting from pediatric age.

#### Conclusion

In our opinion uretroplasty is the only procedures that provides satisfying results. Uretrotomy is suggested in naive pts with strictures < 1 cm with a success rate of 30%. End-to-end anastomosis is valid with short strictures or in posterio strictures. At the state of art, buccal mucosa is still the best graft for long strictures affecting the urethra.

#### 6. #120: AN ALTERNATIVE TECHNIQUE FOR TREATING COMPLEX URETERAL STRICTURES AND DEFECTS

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Mid-ureteral strictures and defects represent one of the most serious reconstructive challenges for urologists. We describe a new technique of ureteral reconstruction using a peritoneal graft in 8 highly selected cases.

#### Materials and Methods

Between January 2006 and December 2015, 8 patients with mid-ureteral narrowing and obstruction were treated using a peritoneal graft. Stricture/defect length ranged from 4 to 12 cm. Due to their length, all cases would have otherwise required an ileal ureter, nephrectomy or autotransplantation. Two cases were secondary to long strictures from retroperitoneal fibrosis after

vascular surgical procedures, three cases followed an extensive resection, required for large intraureteral masses (2 papillomas and 1 pTaG1) resulting in insufficient ureteral width for closure, 2 cases were secondary to repeated endoscopic procedures for urinary stones and 1 case followed repeated pyeloplastics. After ureteral incision a free peritoneal graft was harvested from nearby healthy peritoneum. An onlay patch was fixed with running suture to the remaining ureteral plate after placement of an indwelling ureteral catheter. Finally, the ureter was complete wrapped with greater omentum.

#### Results

Patient follow-up has ranged from 6 to 76 months (average 34.5 months). All postoperative courses were uneventful. The urethral catheter was removed after intravenous pyelography on the 10thpostoperative day. The ureteral stent was removed six weeks post-operatively in 3 patients and after 3 months in the other 5 patients. Five patients were free from stricture recurrence after 6, 30, 36, 54 and 60 months, showing no obstruction and good passage of the contrast without dilatation of the upper urinary tract on the uro-CT or urography. In one patient occurred a stricture recurrence below the reconstructed ureter after 60 months without symptoms and with mild hydronephrosis: the patient died 16 months later with stable disease at 92 years. One patient became symptomatic after removal of the stent; after temporary stenting, also this patient became asymptomatic with narrowing of the ureter below the reconstructed patent ureteric segment and mild hydronephrosis. In the last patient, who had an ureter fissus, the intravenous urography showed obstruction of the reconstructed segment of ureter with hydronephrosis of the upper pole system 6 months after the surgical procedure; the patient was asymptomatic and didn't required surgery.

#### Discussions

Mid-ureteral strictures and defects represent one of the most serious reconstructive challenges for urologists and might require more complex treatment like bowel replacement or autotransplantation. These procedure are of considerable magnitude and associated with high rates of complications and long term morbidity [1-2]. As alternative to these complex procedures, Naude and other Authors [3-4] have reported the successfull use of buccal mucosal patch graft for the reconstruction of a variety of ureteric lesions without major complications. Based on this findings we have treated these patients with long mid-ureteral strictures using a peritoneal patch graft, wrapped with greater omentum. The advantage of this technique is the unlimited availability of the material, which can be simply harvested from nearby healthy peritoneum without related complications. Furthermore this technique of reconstruction is simple and devoid of complications; it allows a good drainage of the upper tract and patency of the ureter, preserving as much as possible the vascular supply and reducing the risk of ischemic necrosis. The limitations of this study are the small sample series and its retrospective nature. This approach should be considered in all patients, who would need ureteric replacement for long mid-ureteral strictures, and specially in those with renal impairment, to avoid metabolic problems or increasing morbidity.

#### Conclusion

We describe a novel technique for treating long mid-ureteral strictures or defects using a peritoneal graft. The technique allows for preservation of any remaining vascular supply of the ureter and can be a feasible and usefull alternative to nephrectomy, ileal ureter and autotransplantation in highly selected cases.

#### Reference

1. Schoeneich G, Winter P, Albers P, Frohlich G, Muller S. Management of complete ureteral replacement. Experiences and review of the literature. Scand J Urol Nephrol 1997; 31 (4): 383-388

2. Bonfig R, Gerharz EW, Riedmiller H. Ileal ureteric replacement in complex reconstruction of the urinary tract. BJU Int 2004; 93: 575-580.

3. Naude JH. Buccal mucosal grafts in the treatment of ureteric lesions. BJU International 1999; 83:751-4

4. Kroepfl D, Loewen H, Klevecka V, Musch M. Treatment of long ureteric strictures with buccal mucosal grafts. BJU Int 2009; 105: 1452-1455

#### 7. #113: COST ANALYSIS OF CONVENTIONAL LAPAROSCOPIC PYELOPLASTY (CLP) VERSUS ROBOTIC ASSISTED LAPAROSCOPIC PYELOPLASTY (RALP) AT A SINGLE CENTER STUDY

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#### Objective

Laparoscopic pyeloplasty is the standard of care for the ureteropelvic junction obstruction (UPJO) correction in several hospital (1). Several cost analysis, in which common robot-assisted procedures such as radical prostatectomy, partial nephrectomy and radical cystectomy were analysed, revealed higher costs with robotic procedures (2-3). The aim of this study was to compare the costs of conventional laparoscopic pyeloplasty (CLPP) and robotic-assisted laparoscopic pyeloplasty (RALPP) (4), which are both used for correction of UPJO at our institution from January 2016.

Materials and Methods

We retrospectively identified 11 consecutive RALPP (Group A) and 19 consecutive CLPP (Group B) performed at our institution between January 2016 and December 2016. 2 out of the 19 CLPP patients underwent laparoscopic redo pyeloplasty for recurrent UPJO. All procedures were performed by a single surgical team with a transperitoneal approach. The costs of each procedure include:  $105.45 \in$  for preospedalization phase,  $307.23 \in$  for each hour of use of operatory room (nursing and surgical team),  $237.98 \in$  for medical devices (surgical sutures, surgicl gloves, etc),  $86.08 \in$  for anesthetic drugs,  $514.00 \in$  for each day of hospitalization,  $21.06 \in$  for each postoperative blood sample,  $56.80 \in$  for stenting removal. The costs of the Robotic Da Vinci Xi system with the use of 3 robotics arms is  $4.382,24 \in$  and with 4 robotics arms is  $5.159,38 \in$ . The costs related to the laparoscopic instruments for the CLPP is  $301,08 \in$ . The regional refund for this kind of surgical procedure is  $8.530 \in$ .

#### Results

The mean operating room operation time in the Group A was 126.36 minutes and in the Group B was 117.36 minutes. The mean

Comunicazioni 5 - Nonsolocalcoli

(mean 3.184,74).

Discussions

Conclusion

Reference

treatment of UPJO.

sabato 20 maggio 2017

Our preliminary single institutional analysis shows bigger costs for the robotic-assisted laparoscopic pyeloplasty and as a consequence a better profit for the conventional laparoscopic pyeloplasty. It remains the best cost-effective procedure in the

1- Fedelini P, Verze P, Meccariello C, Arcaniolo D, Taglialatela D, Mirone VG. Intraoperative and postoperative complications of laparoscopic pyeloplasty: a single surgical team experience with 236 cases. J Endourol. 2013 Oct;27(10):1224-9.

length of hospital stay was 3.36 days in the Group A and 3.42 days in the Group B. The mean postoperative blood sample was 1.63 samples in the Group A and 1.73 samples in the Group B. In Group A, seven procedures were performed with four robotics arms and four procedures with three robotics arms. No intraoperative and postoperative complications that caused adjunctive costs occurred and no patients experienced early failure of the procedure. As a consequence, the global cost of the eleven RALPPs at our department was 85486,1€ (mean 7.771,46€) and the global costs of the nineteen CLPPs in our hospital was 60.510,58€

In our experience there are greater costs for robotic instrumentation but not for medical and nurse surgical team. Moreover the

mean operating room operation time and the mean length of hospital stay were similar in the two groups. The global profit related to RALPP was 8343.9€ and the profit related to CLPP was 101.559,42€. Moreover, in this first prelimary experience we have not considered the costs related to robotic platform maintenance contracts (200.000€), because at our hospital the maintenance of the robotic platform has been free for the first year. It is possible in the future to achieve a more profit in the RALPP considering a shorter operative times due to the improvement of our robotic learning curve and considering a shorter time of dismission. In addition to the costs of the surgical procedure and perioperative care, the costs of long-term follow-up and care must be

considered when comparing these 2 procedures. Long term followup data are not yet available.

2- Lotan Y, Cadeddu JA and Gettman MT: The new economics of radical prostatectomy: cost comparison of open, laparoscopic and robot assisted techniques. J Urol 2004; 172: 1431.

3-. Mir SA, Cadeddu JA, Sleeper JP et al: Cost comparison of robotic, laparoscopic, and open partial nephrectomy. J Endourol 2011; 25: 447.

4- Yee DS, Shanberg AM, Duel BP et al: Initial comparison of robotic-assisted laparoscopic versus open pyeloplasty in children. Urology 2006; 67: 599.

#### **8.** #277: MARTIUS FLAP LIKE APPROACH FOR NEOBLADDER -VAGINAL FISULAE AFTER ORTHOTOPIC URINARY DIVERSION IN WOMAN.

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#### Objective

Vescico-vaginal fistulae (VVF) is uncommon and difficult pathology to manage especially because they occours in patients with previously surgery (trans abdominal hysterectomy 70%, trans vaginal hysterectomy 20%), radiotherapy exposition (6/10%) or in case of pelvic floor tissue ischemia (long labor time 10%) (1,2,3,4,5). Another clinic condition that can be at risk for vaginal fistula is in case of neoblabber replacement after radical cystectomy and occurring in 0-10% (6,7,8,9,10). Several risk factors have been identified in poorly vascularized tissue between the urethra neobladder anastomosis and anterior vaginal wall on the suture line proximity and in the damage to the anterior vaginal wall during dissection The technique that we are going to describe was introduced by Dr Heinrich Martius in 1928 in African women with vescico-urethral-fistula caused of a long labor time after recurrence with poor functional outcomes. This kind of flap has been used for urogyncological fistulae and less frequently for rectovaginal fistulae (11). Generally, the surgical approach, depending on the complexity of the cause and the localization of the fistulae. There are various techniques repair that can be considered like gracile muscle flaps, trans abdominal omentum flap, transperineal and transvaginal approaches or fistula plugs (12,13) and can be performed opening, lapharoscopy or Robot assisted. Healthy tissue transfer is important more that the tecnique for a good outcome of complex fistulae especially for clinical patients history. For low fistulae, when rectal, perineal or vaginal approach is planned, Martius flap become an excellent choice being in close proximity of the operation field (14).

Materials and Methods

We report a small collection of 2 patients with VVF after orthotopic urinary diversion. The first one is a patient 66 years old who received the Martius flap after previously transvaginal approach for anterior vaginal wall fistula with neo-bladder urethra anastomosis with a double wall layer repair. The recurrence occurred after 3 months and in the same side and the fistula size was 1.5cm. The second is a patient 62 years old received a Martius flap like first step for laterally vagina fistula wall with neo-bladder urethral anastomosis with size of 1cm. In both cases anterior vagina wall was sacrificed during radical open cystectomy and the posterior wall was folded anteriorly and anastomosed to the margin of vagina resection.

#### Results

The patients independently of previously transvaginal surgical approach were dry after removal catheter in 15th day. A cystoscopy and cystography performed after two months were without evidence of recurrence. At an average of 20.5 months (24, 17 months) both the patient are dry.

#### Conclusion

We think that anterior approach of the neo-bladder vagina fistula using the Martius flap represents the less invasive and feasible technique that can be employed with minimally morbidity especially compared to gracile muscle flap or abdominal approach. We suggest this technique before to plane ad abdominal approach. Particular indication can be considered in all patients with

#### 16:15 - 17:30 Sala Pacinotti

Comunicazioni 5 - Nonsolocalcoli

poor outcome or actinic tissue damage because the bulbocavernosus muscle provides with a good drainage of the local secretion and in same time supplied an appropriate blood and lymphatic support .

#### Reference

- 1. El-Gazzaz G, Hull T, Mignanelli E et al.: Analysis of function and predictors of failure in women undergoing repair of Crohn's related rectovaginal fistula. J Gastrointest Surg 2010; 14: 824-29.
- 2. Athanasiadis S, Yazigi R, Kohler A, Helmes C: Recovery rates and functional results after repair for rectovaginal fistula in Crohn's disease: a comparison of different techniques. Int J Colorectal Dis 2007; 22: 1051-60.
- 3. Pinto RA, Peterson TV, Shawki S et al.: Are there predictors of outcome following rectovaginal fistula repair? Dis Colon Rectum 2010; 53: 1240-47.
- 4. Boronow RC: Repair of radiation-induced rectovaginal fistula utilizing the Martius technique. World J Surg 1986; 10: 237-48.
- 5. White AJ, Buchsbaum HJ, Blythe JG, Lifshitz S: Use of the bulbocavernosus muscle (Martius procedure) for repair of radiation-induced rectovaginal fistulas. Obstet Gynecol 1982; 60: 114-18.
- 6. Tscholl R, Leisinger HJ, Hauri D. The ileal S-pouch for bladder replacement after cystectomy: preliminary re¬port of 7 cases. J Urol 1987; 138:344.
- 7. Ali-el-Dein B, el-Sobky E, Hohenfellner M et al. Or¬thotopic bladder substitution in women: functional eva¬luation. J Urol 1999; 161:1875.
- 8. Tunuguntla HS, Manoharan M, Gousse AE. Manage¬ment of neobladder-vaginal fistula and stress inconti¬nence following radical cystectomy in women: a re¬view. World J Urol 2005; 23:231.
- 9. Stein JP, Grossfeld GD, Freeman JA et al. Orthotopic lower urinary tract reconstruction in women using the Kock ileal neobladder: updated experience in 34 pa¬tients. J Urol 1997; 158:400.
- 10. Rapp DE, O'connor RC, Katz EE et al. Neobladder-va¬ginal fistula after cystectomy and orthotopic neobladder construction. BJU Int 2004; 94:1092.
- 11. Raugnekar NP, Judad Ali N, Kaul SA , Pathak HR: Role of the martius procedure in the management of urinary-vaginal fistulas. J Am Coll Surg 2000; 191: 259-63.
- 12. Chang SS, Cole E, Cookson MS et al. Preservation of the anterior vaginal wall during female radical cystec¬tomy with orthotopic urinary diversion: technique and results. J Urol 2002; 168:1442.
- 13. Juan E. Bestard Vallejo, Anna Orsola de los Santos, Carles X. Raventós Busquets, Jacques Planas Morin and Juan Morote Robles. Closure of neobladder-vaginal fistula in patient with Studer neobladder using vaginal approach and interposition of Martius flap. Urology Service. Hospital Vall d'Hebron. UAB. Barcelona. Spain. Arch. Esp. Urol. 2009; 62 (1): 56-59
- Maude E. Carmel, 1\* Howard B. Goldman, 2 Courtenay K. Moore, 2 Raymond R. Rackley, 2 and Sandip P. Vasavada 2. Transvaginal Neobladder Vaginal Fistula Repair After Radical Cystectomy With Orthotopic Urinary Diversion in Women Neurourology and Urodynamics 35:90– 94 (2016). 1 UT Southwestern Medical Center, Dallas, Texas. 2 Cleveland Clinic, Cleveland, Ohio.

# **9.** #276: TWO-STAGE URETHROPLASTY USING BUCCAL MUCOSA GRAFT IN PATIENT WITH PENILE STRICTURE AND LICHEN SCLEROSUS

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<sup>2</sup> Università di Napoli Federico II (Napoli)

#### Objective

Lichen sclerosus (LS) is a disease of unknown etiology that affects the penile organ.

It is more common in young adults, but can affect any age.

It is characterized by atrophy of the epidermis.

LS affects especially the genital mucosa.

The disease can give: itching of the glans and penis, trauma during intercourse, difficulty in preputial mobility, erectile dysfunction, phimosis and paraphimosis and furthermore can lead to urethral stricture [1].

Materials and Methods

From January 2015 to February 2016 10 patients (pts) with LS and urethral stricture were enrolled for this study. Patient mean was age 45 years. All of the patients underwent physical examination, uroflowmetry, retrograde and voiding urethrography in order to evaluate the stricture. The mean Qmax was 7 ml/sec. Mean stricture length was 3.7 cm. All pts underwent two-stage urethroplasty with buccal/labial mucosa graft. When the stricture affected the navicular urethra it was used a labial graft for its minor thickness. A midline longitudinal incision was made along the penile skin ventrally. The penile urethra was exposed with minimal dissection. The urethra was opened along its ventral surface under the guidance of the guide wire, previously inserted. The urethra is spatulated up to 3 cm into normal caliber and pink urethral mucosa. The entire urethral plate affected by the LS was removed. Then the buccal mucosa graft was suteured on the urethral plate with two lateral running sutures and many single stiches on the whole graft in 5.0 Vicryl suture. Second-stage procedure was carried out at 6 months from the first procedures in order to have a soft urethra and relaxed scar tissues. The neo-urethra is incised laterally and tubularized with 5.0 Vicryl suture. The glans was reconstruct on the tubularized urethra. Dartos fascia and skin were closed. A sovrapubic catheter and a 10 Fr urethral stent were inserted and left for two weeks post-operatively. Pts were discharged from the clinic 2 days after surgery. Pts were suggested to use anti-scar and moisturizing creams 3 times/day until the second-stage surgery.

Results

At 3 months follow-up after the second stage all pts underwent uroflowmetry in order to assess the voiding. Two pts needed calibration with Nelaton catheter 16 Fr. One patient underwent surgery with buccal mucosa graft. Mean Qmax was 21 ml/sec. All Pts were satisfied with the result of the surgery.

#### Discussions

In pts with penile strictures caused by LS, the penis is fully involved in the disease : glans, meatus, skin, fibrotic dartos. For these

pts one-stage repair would be risky, having a poor chance of success. For this reason it is recommended the two-stage repair [2]. At moment buccal mucosa graft is the best tissue to replace the urethra

#### Conclusion

Penile urethroplasty is a complex procedure with high risk of insuccess so it should be perfomed only by surgeon specialized in genital reconstructive surgery. This procedure is the only technique that can treat LS and penile strictures.

#### Reference

- 1) Kulkarni S, Kulkarni J, Surana S, Joshi PM. Management of Panurethral Stricture. Urol Clin North Am. 2017 Feb;44(1):67-75
- 2) Angulo JC, Arance I, Esquinas C, Nikolavsky D, Martins N, Martins F. Treatment of long anterior urethral stricture associated to lichen sclerosus. Actas Urol Esp. 2016 Nov 2. pii: S0210-4806(16)30131-0.

#### **10.** #80: MID-URETHRAL SLINGS AND SEXUAL FUNCTION

#### M. Seveso<sup>1</sup>, S. Melegari<sup>1</sup>, G. Bozzini<sup>1</sup>, O. De Francesco<sup>1</sup>, P. Bono<sup>1</sup>, A. Mandressi<sup>1</sup>, G. Taverna<sup>1</sup>

<sup>1</sup> Humanitas Mater Domini (Castellanza)

#### Objective

Stress urinary incontinence (SUI) has been reported to have a negative impact on sexual relations in up to 68% of women. Women with SUI report avoiding sexual intercourse because of wetness at night, leakage during intercourse, embarrassment and depression. Disorders of arousal, desire, and lubrication, as well as anorgasmia and dyspareunia, are typical complaints reported on sexual function questionnaires. Aging and the presence of certain comorbid conditions (i.e., cervical cancer or multiple sclerosis) clearly lead to worsened sexual functioning among women. Other factors, such as hormonal status and absence of a uterus, have also been implicated, although much less clearly so, in the development of sexual dysfunction. Sling procedures are a widely proven treatment for stress urinary incontinence. The effects of outside-in transobturator midurethral sling procedures on women's sexual function are unclear. We conducted this study to investigate sexual function alteration among women who underwent TOT for urodynamic stress incontinence.

#### Materials and Methods

Patients who underwent transobturator sling surgery were included in the present study if information was available on sexual activity before and 12 months after surgery .We included in the final analysis all the women who are sexually active at baseline. Between September 2010 and June 2015, 86 patients undergoing TOT were enrolled. An investigation was conducted using a validated, self-administered questionnaire: Female Sexual Function Index (FSFI). The evaluation was repeated at the 3(rd), 6(th) and 12(th) months post surgery and then yearly. The association between midurethral sling surgery and sexual function (coital incontinence, satisfaction, and dyspareunia) was compared.

#### Results

Comunicazioni 5 - Nonsolocalcol

The mean age of patients was  $46.7 \pm 5.7$ . The mean follow-up period was  $18.2 \pm 2.9$  months. After the 12-month follow up, 73 out of 86 patients (86%) were dry, 7 improved their symptoms and the remaining 6 were unchanged. After adjusting for multiple testing, only age, menopause, and storage symptoms remained significantly correlated with the FSFI total score post-surgery as independent variable. A significant loss of total FSFI score was observed at postoperative 3 months (P = 0.003), which was regained after postoperative 6 months. In comparison with baseline and postoperative 12 months, total FSFI score showed significant improvement (P < 0.001).

There were significant improvements in desire, arousal, orgasm, and satisfaction on FSFI domain. The frequency improved in 60 (70.5%) patients, lubricity improved in 49 (57.1%) patients, orgasm improved in 57 (67.1%) patients, pain improved in 59 (70%) patients, in leaking patients sexual satisfaction improved in 85.7% while in non-leaking patients improvement was seen in 40%. Sexual relation was not satisfactory in 65 (76.4%) of the patients before surgery; of them, 68 (80%) patients had improved sexual satisfaction after surgery. De novo urgency and dyspareunia developed in 6 and 3 patients, respectively.

#### Discussions

Despite the fact that SUI could be harmful in regard to sexual function, there has been little study of sexual function change after treatment of SUI, with most efforts focusing on incontinence, rather than the effect of cure on sexual function. The sexual satisfaction is a difficult parameter to study. Reports on sexual function after surgery for SUI vary, with some authors reporting improved function and others reporting deterioration of function [1,2]. Improvements in sexual function following vaginal surgery are believed to be due to the cessation of incontinence during intercourse, whereas worsening sexual function is believed to be caused by dyspareunia following colporhaphy [3,4]. This study was undertaken to assess the effect of the midurethral sling procedure for SUI on sexual function using a validated questionnaire.

#### Conclusion

These data show that midurethral sling surgery has an overall positive influence on sexual function in women with stress urinary incontinence. The TOT procedure has no significant negative impact on sexual function and it significantly improves female sexual function and overall sexual satisfaction in majority of the patients with SUI. The transobturator tape procedure has a positive effect on female sexual functioning by reducing urinary leakage and pain during or after sexual activity. Women with coital incontinence show a significant higher improvement in sexual function after surgery for SUI compared to women without coital incontinence. Our results suggest that improvement in coital incontinence results in improvement of sexual function. Therefore, coital incontinence is a prognostic factor for improvement of sexual function following incontinence surgery.

#### Reference

1. Ko YH, Song CH, Choi JW, Jung HC, Song PH "Effect on Sexual Function of Patients and Patients' Spouses After Midurethral Sling Procedure for Stress Urinary Incontinence: A Prospective Single Center Study" Low Urin Tract Symptoms. 2016 Sep;8(3):182-5.

 nKim DY, Choi JD" Change of sexual function after midurethral sling procedure for stress urinary incontinence" Int J Urol. 2008 Aug;15(8):716-9

- 3. Liang CC, Tseng LH, Lo TS, Lin YH, Lin YJ, Chang SD "Sexual function following outside-in transobturator midurethral sling procedures: a prospective study" Int Urogynecol J. 2012 Dec;23(12):1693-8.
- 4. Bekker M, Beck J, Putter H, Venema P, Lycklama A, Nijeholt A, Pelger R, Elzevier H "Sexual function improvement following surgery for stress incontinence: the relevance of coital incontinence". J Sex Med. 2009 Nov;6(11):3208-13.

# **11.** #182: COMMUNICATING IN SEXUAL MATTER. INFORMATIVE QUESTIONNAIRE DURING PROFESSIONAL TRAINING COURSE

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<sup>1</sup> Ospedale Carlo Urbani, U.O.C. Urologia (Jesi)

#### Objective

Communication in sexology is always a hard matter because the terapist must listen to and inform the patient and in the same time take care of him : so that the concept of "communication" have to change in "communi-care ". Uroandrological departments and ambulatory outpatients represent a challenge both in case of anamnesis collection, explanation of side effects and complications of drugs, surgery and in case of physical exam or nursing.

Materials and Methods

During a professional training course about "communi-care " held on october 2016 a simple 8 items questionnaire was submitted to all participants :

1)Do you think that sex is important in your life?

- 2) Do you feel to have "sexological problems" in this moment ?
- 3) Are there sexological questions to which do you like to have answers?
- 4) Do you consult a specialist to deepen any curiosity or sexual problem?
- 5) Have you any trouble talking about sex ?

6) Have you any trouble talking about sex with your partner?

7) Do your personal sexological problems affect your professional activities ?

8) Do your personal sexological problems affect your dialogue with patients?

AIM of the questionnaire is the evaluation of the sexual status and feeling about sex of the participants and the relevance of sexual matters and personal problems in approaching patients

76 participants of professional training course: 14 males , 52 females ,10 not decleared sex;

13 medical doctors, 41 nurses, 4 psychologists , 5 other professional workers 13 not decleared profession, aged 23 -64 years Results

item 1 :yes 72/76 (94.7 %) item 2 : no 60/76 (78,9 %) item 3: yes 53/76 (69.7 %) item 4 : no 42/76 (55,2 %) item 5 : no 63/76 (82,8 %) item 6 : no 68/76 (89,4 %) item 7 : no 73/76 (96 %) item 8 : no 75/76 (98,6 %)

Discussions

78,9 % of the participants decleared NO "sexological problems", BUT 69.7% YES : had to ask some sexological questions Females seem to have more sexological problems (25 % versus 14.3% of the male) and have more questions to be answered (77 % versus 57.1 % of the male ) Furthermore females decleared a bit more trouble talking about sex (18.8 % versus 7.2% of the male) 100 % of the male decleared NO trouble in talking about sex either with the partner or with patients Only 1 male and 1 female decleared that personal sexological problems affected professional activity and the dialogue with the patient respectively : the others showed very clear and strong positions thinking and feeling about communication in sex. Perhaps this strong unanimuos response may hide any psychological resistances or underlying problems?

#### Conclusion

Discrepancy revealed by an accurate analysis of the answers underlines the importance of treating sexual matters in uroandrological environment and in the same time a kind of personal psychological involvement by health care staff: so sexological informations is needed togheter with a basical sexological training

Reference

Biopsychosocial aspects of Prostate cancer . EJS Kunkel JR Bakker RE Myers, O Oyesanmi, LG Gomella Psychosomatics 2000; 41:85-94

Longitudinal effects of social support and adaptive coping on the emotional well-being of survivors of Localized Prostate Cancer RES Zhou, FJ Penedo et al J Support Oncol 2010; 8 (5):196-201

Perceptions and opinions of men and women on a man's sexual confidence and its relationship to ED: results of the European Sexual Confidence Survey. San Martín C1, Simonelli C, Sønksen J, Schnetzler G, Patel S. Int J Impot Res. 2012 Nov-Dec;24(6):234-41. doi: 10.1038/ijir.2012.23. Epub 2012 Jun 21.

Comunicazioni **5** - Nonsolocalcoli

17:30 - 19:00

# 20 maggio 2017 sala Pacinotti

# Comunicazioni 6 -Obiettivo Rene

Moderatori: S. Zaramella; P. Cozzupoli; L. Di Clemente

# **1.** #268: SMALL RENAL MASSES IN 100 PATIENTS: HOW MANY TUMOURS ARE DETECTED WITH IMAGING-GUIDED RENAL BIOPSY

#### S. Rapisarda<sup>1</sup>, B. De Concilio<sup>2</sup>, G. Zeccolini<sup>2</sup>, A. Caruso<sup>2</sup>, M. Bada<sup>3</sup>, C.. Cicero<sup>2</sup>, G. Morgia<sup>1</sup>, A. Celia<sup>2</sup>

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- <sup>3</sup> Ospedale San Pio da Pietrelcina (Vasto)

#### Objective

As the use of radiological investigations has increased in the last years, the detection of small renal masses (SRMs) < 4 cm has become more frequent. In most cases the radiological distinction between benign and malignant SRMs cannot be performed. According to the results of recent studies the use of US-guided percutaneous renal biopsy (RTB) or Computerised Tomography (CT)-guided RTB is diagnostic and accurate with low complication rates.

#### Materials and Methods

We performed a retrospective analysis of our experience with US/CT-guided RTBs of SRMs suspicious for renal cancer from 2010 to 2015. We collected and analysed our data about size, site, histopathology,Fuhrman grade, type of radiological imaging used to perform a biopsy, peri-operative complications (according to Clavien-Dindo classification), surgical treatment of tumours and number of RTBs required to get a correct diagnosis. Patients whose first RTB was non-diagnostic of renal cell carcinoma were followed up and they got a second biopsy if required.

#### Results

100 patients were enrolled with an average age of 71. SRMs were detected by means of US-guided biopsies and CT-guided biopsies in 19% and 81% of cases respectively. Local anaesthesia was performed in 97% of cases. The lesions were located in the right, left or in both kidneys in 46%, 52% and 2% of cases respectively. Post-operative complications occurred in 3% of cases ( Clavien Dindo 1 and 2 ) and all were treated conservately. 66% of the lesions proved to be malignant. Fuhrman grade was assigned by experienced genitourinary pathologist in all renal cell carcinomas and was used to stratify cases into low- and high risk; Fuhrman grade 1-2 or 2-3 were considered to be low-risk renal tumors (n=25) and Fuhrman grade 3 and 4 were classified as high risk (n=5). In the 54% of cases physicians had performed a US-guided RTB, in the 12% a CT-guided RTB. 6% of RTBs were non-diagnostic because they contained insufficient material for the analyses (3% necrotic tissue and/or blood 2%, 1% inflammation/fibrosis), 9% revealed benign lesions and 6% were over diagnoses. 77% (n=51) of patients whose RTBs detected the presence of cancer were treated in our clinical centre: 29% were treated with partial nephrectomy, 48% with tumorectomy. A strong link (86% rate) was high lighted between the histological findings in the biopsy and the post-operative ones. We followed up patients with a first non-diagnostic RTB: 21% were diagnostic after a second RTB, 2% were non-diagnostic and 11% were diagnostic after a third biopsy.

#### Discussions

The use of CT and US-guided biopsy is a safe and accurate method to discriminate between benign and malignant lesions. Its limits reside in the amount of removed tissue. Our study was aimed to assess its efficacy and to find out how many biopsies are required in order to make a correct diagnosis. Thus US or CT-guided renal biopsies are a valid method of investigating suspicious renal lesions (<4 cm) thanks to their high reliability and a low complication rate.

#### Conclusion

The US and TC-guided biopsy is a safe method with 3% rate of complications and has an accuracy of 86% for SRMs diagnosis at the first biopsy and 14% at the second biopsy.

64

Comunicazioni 6 - Obiettivo Rene

#### 2. #55: ON-CLAMP VERSUS OFF-CLAMP PARTIAL NEPHRECTOMY: PROPENSITY SCORE MATCHED COMPARISON OF LONG TERM FUNCTIONAL OUTCOMES

## G. Simone<sup>1</sup>, U. Capitanio<sup>2</sup>, A. Larcher<sup>2</sup>, M. Ferriero<sup>1</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, F. Minisola<sup>1</sup>, S. Guaglianone<sup>1</sup>, F. Muttin<sup>2</sup>, A. Nini<sup>2</sup>, F. Trevisani<sup>2</sup>, F. Montorsi<sup>2</sup>, R. Bertini<sup>2</sup>, M. Gallucci<sup>1</sup>

<sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)

<sup>2</sup> Ospedale San Raffaele, Università Vita Salute, Dipartimento di Urologia (Milano)

#### Objective

The elective indication for off-clamp (Off-C) partial nephrectomy (PN) in patients with good baseline renal function remains controversial. The aim of this study is to compare the risks of developing a severe (stage  $\geq$ 3b) chronic kidney disease (CKD) in patients with cT1-2/N0/M0 renal tumors and baseline estimated glomerular filtration rate (eGFR) >60 ml/min after either Off-C or on-clamp (On-C) PN.

#### Materials and Methods

A prospective "renal cancer" database of two high volume centers was queried for "cT1-2/N0/M0" tumors, "PN" and "baseline eGFR>60 mL/min". Overall 1073 patients met the inclusion criteria (483 Off-C and 588 On-C). A 1:2 propensity score-matched (PSM) analysis was employed to minimize the selection bias of non-random treatment assignment of patients.

Kaplan–Meier method was used to compare the PSM cohorts specific risks of developing a CKD stage  $\geq$  3b during follow-up in the PSM cohorts, and the log-rank test was applied to assess statistical significance between groups. Univariable and multivariable Cox regression analyses were performed to identify independent predictors of developing a CKD stage  $\geq$ 3b.

#### Results

On-C patients were significantly younger (p=.001), less frequently smokers (.01), with a lower incidence of diabetes (.001) and hypertension (.001), lower ASA scores (<.001), higher baseline eGFR values (.003), smaller tumor sizes (<.001), and higher incidence of positive surgical margins (.021). After applying the PSM analysis, the two cohorts of 221 On-C and 485 Off-C PN cases did not differ for all clinical and pathologic covariates (Table 1; all  $p \ge .06$ ). The probability of developing a CKD stage  $\ge$  3b was significantly higher (log rank p=.006, Figure 1) in the On-C cohort (2, 5 and 8yr risk 0.9, 5.1 and 12.8% vs 0.6, 1.2 and 1.2% in the Off-C cohort, respectively). On-C technique was associated with a 5.2 fold increased risk of developing CKD stages  $\ge$  3b compared with the Off-C approach (HR 5.2 [95% CIs 1.4–18.9]; p=.012). At multivariable regression analysis, eGFR at discharge and Off-C PN were independent predictors of outcomes. For each increasing mL/min of eGFR at the discharge the risk of developing a CKD stage  $\ge$  3b was reduced by 5% (HR 0.95 [95% CIs 0.93–0.97]), while On-C approach was associated with a 5.8 fold increased risk of developing a CKD stage  $\ge$  3b (HR 5.8 [95% CIs 1.6–20.8]).

#### Conclusion

This study highlights the beneficial role of an Off-C approach in patients with cT1-2/N0/MO renal tumors and good baseline renal function candidate to elective PN.

#### Reference

- -Indications, techniques, outcomes, and limitations for minimally ischemic and off-clamp partial nephrectomy: a systematic review of the literature. Simone G, Gill IS, Mottrie A, Kutikov A, Patard JJ, Alcaraz A, Rogers CG. Eur Urol. 2015 Oct;68(4):632-40. doi: 10.1016/j. eururo.2015.04.020. Review
- -To clamp or not to clamp? Long-term functional outcomes for elective off-clamp laparoscopic partial nephrectomy. Shah PH, George AK, Moreira DM, Alom M, Okhunov Z, Salami S, Waingankar N, Schwartz MJ, Vira MA, Richstone L, Kavoussi LR. BJU Int. 2016 Feb;117(2):293-9. doi: 10.1111/bju.13309

# **3.** #62: PURELY OFF-CLAMP ROBOTIC PARTIAL NEPHRECTOMY: PRELIMINARY 3-YEAR ONCOLOGIC AND FUNCTIONAL OUTCOMES

**G. Simone<sup>1</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, F. Minisola<sup>1</sup>, M. Ferriero<sup>1</sup>, M. Costantini<sup>1</sup>, S. Guaglianone<sup>1</sup>, M. Gallucci<sup>1</sup> <sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)** 

#### Objective

The negative impact of ischemia on renal function (RF) has led surgeons to develop minimally ischemic

techniques to perform partial nephrectomy (PN). We described our surgical technique and report perioperative, 3-yr oncologic and functional outcomes of a single centre series of 308 consecutive patients treated with robotic off-clamp PN (OFF-RPN). Materials and Methods

Materials and Methods

A prospective renal cancer database was queried and data of all patients treated with OFF-RPN between 2010 and 2015 in a high-volume centre were collected. Patients were placed in an extended flank position and a 5-port access with a side docking was performed. Hilar vessels were not clamped in any case; pure tumour enucleation or enucleoresection were the resection techniques used; renorraphy was omitted for small and exophytic masses and minimized with a point specific haemostasis†for hilar tumours. mPerioperative complications, 3-yr oncologic and functional outcomes were reported. Univariable and multivariable analyses were performed to identify independent predictors of RF deterioration.

#### Results

Out of 308 patients treated, 41 (13.3%) experienced perioperative complications, 2.9% of which were Clavien grade 3. Three-yr local recurrence free survival and renal cell carcinoma specific survival rates were 99.5% and 97.9%, respectively (Figure 1). No patient with preoperative CKD-stage 3B developed severe RF deterioration (CKD-stage 4) at 1-yr follow-up (Figure2). At multivariable analysis, preoperative eGFR (p=0.005) was the only independent predictor of a new onset CKD-stage 3 in patients with preoperative CKD-stages 1 or 2.

#### Conclusion

OFF-RPN is a safe surgical approach in tertiary referral centres, with adequate oncological outcomes and negligible impact on RF.

#### Reference

-Indications, techniques, outcomes, and limitations for minimally ischemic and off-clamp partial nephrectomy: a systematic review of the literature. Simone G, Gill IS, Mottrie A, Kutikov A, Patard JJ, Alcaraz A, Rogers CG. Eur Urol. 2015 Oct;68(4):632-40. doi: 10.1016/j. eururo.2015.04.020. Review

# **4.** #57: ROBOT ASSISTED RADICAL NEPHRECTOMY AND INFERIOR VENA CAVA THROMBECTOMY: SURGICAL TECHNIQUE, PERIOPERATIVE AND ONCOLOGIC OUTCOMES

## G. Simone<sup>1</sup>, D. Hatcher<sup>2</sup>, M. Ferriero<sup>1</sup>, F. Minisola<sup>1</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, S. Guaglianone<sup>1</sup>, A.L. De Castro Abreu<sup>2</sup>, M. Aron<sup>2</sup>, M. Desai<sup>2</sup>, I.S. Gill<sup>2</sup>, M. Gallucci<sup>1</sup>

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#### Objective

Radical nephrectomy with Inferior vena cava (IVC) thrombectomy for renal cancer is one of the most challenging urologic surgical procedures. We describe surgical technique and present perioperative and oncologic outcomes of 35 consecutive cases of completely intracorporeal robot-assisted radical nephrectomy with IVC level I (5.7%) II (65.7%) and III (28.6%) tumor thrombectomy treated at two tertiary referral centers.

#### Materials and Methods

Thirty-five consecutive patients with renal tumor and IVC thrombus were treated between July 2011 and September 2016. Baseline, perioperative and follow-up data were collected into prospectively maintained IRB approved databases. Key steps of surgery include: a meticulous isolation of IVC; the isolation and sealing of all lumbar and collateral vessels, a full monolateral retroperitoneal dissection for staging purpose and to have a complete control of IVC; isolation of left renal vein, Tourniquet placement and infrarenal IVC control. IVC incision and thrombectomy; cava suture with 3/0 visi-black monocryl or 5/0 goretex; restoration of IVC flow; nephrectomy. We report perioperative and oncologic outcomes of 35 consecutive patients treated in two tertiary referral centers.

#### Results

All procedures were successfully completed; open conversion was necessary in one case (2.8%). Median operative time was 300 minutes. Twenty-one patients (68.6%) did not experience any complication. Ten patients (28.6%) required blood transfusion (Clavien grade 2); one patient (2.8%) had a Clavien grade 3a complication (gastroscopy); two patients (5.7%) had Clavien grade 3b complications (reintervention due to bleeding from adrenal gland and subphrenic ascess requiring drainage, respectively); one patient (2.8%) experienced a PRESS syndrome requiring ICU admission (Clavien 4a). Out of 13 patients who underwent cytoreductive nephrectomy and IVC thrombectomy, only one patient died of disease progression 14 months postoperatively. Both 2-yr cancer specific and overall survival rates in this subpopulation were 88.9%. Twenty-two patients received surgery with curative intent and 5 of these experienced disease recurrence: 2-yr metastasis free, cancer specific and overall survival rates were 56%, 100% and 94.4%, respectively.

#### Conclusion

Robotic IVC thrombectomy is a challenging surgical procedure. In tertiary referral centers this procedure is feasible, safe and associated with favorable perioperative outcomes and encouraging short term oncologic outcomes.

#### Reference

- Advances in Robotic Vena Cava Tumor Thrombectomy: Intracaval Balloon Occlusion, Patch Grafting, and Vena Cavoscopy. Kundavaram C, Abreu AL, Chopra S, Simone G, Sotelo R, Aron M, Desai MM, Gallucci M, Gill IS. Eur Urol. 2016 Nov;70(5):884-890. doi: 10.1016/j. eururo.2016.06.024.
- Robot-assisted Level II-III Inferior Vena Cava Tumor Thrombectomy: Step-by-Step Technique and 1-Year Outcomes. Chopra S, Simone G, Metcalfe C, de Castro Abreu AL, Nabhani J, Ferriero M, Bove AM, Sotelo R, Aron M, Desai MM, Gallucci M, Gill IS. Eur Urol. 2016 Sep 20. pii: S0302-2838(16)30578-4. doi: 10.1016/j.eururo.2016.08.066.

# **5.** #145: RADICAL NEPHRECTOMY VERSUS NEPHRON SPARING SURGERY: RUN AFTER A CHIMERA?

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#### Objective

Literature data regarding oncological outcomes after radical nephrectomy and nephron sparing surgery are conflicting. Van Poppel et al showed overlapping oncological data between radical nephrectomy (RN) and nephron sparing surgery (NSS), but NSS seems to provide lower OS results in comparison with RN [1] and slightly higher complication rate [2]. Moreover, a recent SEER database analysis conducted on a young population (20-44 yrs) showed no difference in cancer-specific survival at 5 or 10 years and in 5-year overall survival (P = 0.07), but a significative advantage in 10-year overall survival (P = 0.025) in partial nephrectomy cohort [3], whereas a retrospective study conducted on patients with T1 renal cancer documented that type of **Objettivo Rene** 

Comunicazioni 6 -

nephrectomy was not associated with overall survival [4] The aim of our study was to compare the long-term oncological and functional outcome as well as the surgical complications of nephron sparing surgery (NSS) versus radical nephrectomy (RN) for any renal cell carcinoma (RCC) over all stages (T1-T4).

#### Materials and Methods

Between April 2000 and June 2016, 392 patients underwent renal surgery for RCC in two European academical centers. 129 women and 263 men with a median age of 65 years (range 23-88) underwent RN or NSS. 162/392 (41.3%) experienced a RN, whereas 239/392 (58.7%) underwent a NSS. We compared long term overall survival (OS), cancer specific survival (CSS), disease free survival (DFS) in both groups of patients. Moreover, functional parameters and surgical complications (according to Clavien Dindo classifications) were evaluated in the whole cohort. Median follow-up time for these patients was 48.08 months (range 0.26-194.43).

Results

Compared to RN, patients with NSS showed a significantly higher disease free survival (DFS) (70.2% vs 93.5%, p<0.001) and cancer specific survival (CSS) at 10 years (78.4% vs 97.8%, p<0.001), whereas the 10 years overall survival (OS) in both groups did not differ significantly (RN 65.3% vs NSS 71.3%, p= n.s.). 4% of NSS had a positive resection margin (PRM), but only 0.4% developed a recurrence within 23 months. Within the follow up period, 7% of patients in the NSS group developed metastases VS 28.1% of the RN group. At the last follow up, renal function preservation, moreover, was better in the NSS group, with a median glomerular filtration rate of 65 ml/min/1.72m2 (6-113) for NSS VS. 54 ml/min/1.72m2 (1.73-144) for RN (p<0.001). The new onset of chronic kidney diseases was significantly less in the NSS group. Total complication rate was significantly lower in the RN group (5.6% vs 8.9%), but became comparable in the last years of observation.

#### Discussions

Contrary to the literature data, our study showed an advantage in term of CSS and DFS in the NSS group, with no significative effects on OS, and with an acceptable complication rate.

#### Conclusion

NSS was performed whenever technically possible but was obtained with a higher (but acceptable) surgical complication rate. It could be shown that also for higher stages of RCC, NSS can be safely performed. Renal function preservation, CSS and DFS were better in the NSS group but surprisingly NSS did not lead to a better OS. This stands in contrast to the most published studies of the last decades.

#### Reference

1. Van Poppel H, Da Pozzo L, Albrecht W, et al. A prospective, randomised EORTC intergroup phase 3 study comparing the oncologic outcome of elective nephron-sparing surgery and radical nephrectomy for low-stage renal cell carcinoma. Eur Urol. 2011 Apr;59(4):543-52.

2. Van Poppel H, Da Pozzo L, Albrecht W, et al. A prospective randomized EORTC intergroup phase 3 study comparing the complications of elective nephron-sparing surgery and radical nephrectomy for low-stage renal cell carcinoma. Eur Urol. 2007 Jun;51(6):1606-15.

3. Daugherty M, Bratslavsky G. Compared with radical nephrectomy, nephron-sparing surgery offers a long-term survival advantage in patients between the ages of 20 and 44 years with renal cell carcinomas (≤4 cm): an analysis of the SEER database Urol Oncol. 2014 Jul;32(5):549-54.

4. Kyung YSm You D, Kwon T et al The type of nephrectomy has little effect on overall survival or cardiac events in patients of 70 years and older with localized clinical t1 stage renal masses. Korean J Urol. 2014 Jul;55(7):446-52.

# **6.** #172: ZERO ISCHEMIA FOR PARTIAL NEPHRECTOMY: A SAFE PROCEDURE FOR THE MANAGMENT OF SMALL KIDNEY TUMORS

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#### Objective

Robotic partial nefrectomy (RPN) and laparoscopic partial nefrectomy (LPN) are effective surgical treatments for small kidney tumors (T1a-T1b) (1).

The aim of this retrospective study is to evaluate the effectivness of zero ischemia techinique in RPN and LPN for small renal masses.

#### Materials and Methods

We retrospectively evaluated 296 renal tumorectomy performed in our istitution. (198 LPN and 98 RPN). We performed in all cases renal tumor enucleation. Tumor average size was 4,1 cm (7,2-1,2) and R.E.N.A.L. average score 5.1 (4-8). The main outcome parameters examined were intraoperative blood loss, intraoperative and post-operative blood trasfusions and surgical conversion rate.

#### Results

All the RPN procedures were concluded without conversion to open surgery but 1 (1.05%). We performed RPN with clamp of renal artery in 3 caes (1,1%) with R.E.N.A.L score 7 and 8.5 LPN (all with R.E.N.A.L score 7) were converted to open procedure (2.5%). 94 RPN and all the LPN were performed without vascular approach. Intraoperative transfusion never occours in these series. Itraoperative average blood loss was 110 cc (10-260 cc) in RPN and 245 cc in LPN (20-460cc). 3 (1.1%) patients underwent to RPN and 15 (5%) after LPN were postoperatively trasfsused.

#### Discussions

In our experience most of LPN and RPN procedures were performed without clamping . Only three RPN procedures were performed with vascular approach and hilar clamping

<u> Comunicazioni 6 - Obiettivo Rene</u>

#### Conclusion

Small renal masses with R.E.N.A.L score ≤ 6 enucleation can be performed without hilar clamping. Pedicle dissection can be safely avoided in these cases to reduce operative time and the consequent related risks. Reference

 Curr Opin Urol. 2013 Sep;23(5):399-402. doi: 10.1097/MOU.0b013e3283632115. Hilar clamping versus off-clamp laparoscopic partial nephrectomy for T1b tumors. Kreshover JE1, Kavoussi LR, Richstone L.

# 7. #47: GRADE-DEPENDENT LIPID STORAGE IN CCRCC CELLS: MOLECULAR AND FUNCTIONAL STUDY PERFORMED IN PRIMARY CELL CULTURES

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#### Objective

Clear cell renal cell carcinoma (ccRCC) is the most common (80-90%) and lethal subtype of renal cell carcinoma, which accounts for 80% of all kidney cancers (1). The most striking morphological feature of ccRCC cells is their clear cytoplasm mainly due to lipid accumulation (2). These intracellular storages suggest the involvement of altered fatty acid metabolism in the development of ccRCC. In fact, transcriptomic, proteomic and metabolomic profiling of ccRCC tissues revealed the presence of a metabolic reprogramming characterized also by increased fatty acid synthesis and by down-regulation of fatty acid b-oxidation (3-4). Of note, gene expression profiling and pathway analysis of ccRCC tissues also evidenced an enrichment of the PPARa pathway that, through the transcription of genes involved in fatty acid mitochondrial uptake (i.e. CPT1) and b-oxidation, is a master regulator of fatty acid metabolism (5). Interestingly, inhibition of ccRCC cell line growth has been obtained by targeting PPARa in vitro and in a xenograft mouse model (6). More recently, by using different -omics approaches, several groups revealed that specific metabolic alterations might correlate with tumor aggressiveness and poor survival in ccRCC patients. In particular, a decrease of specific fatty acid oxidation enzyme expression has been also found to correlate with the increase of tumour stage, size and grade and with the decrease of survival (7). By combining proteomics and metabolomics analysis, we collaborated to reveal a grade-dependent metabolic reprogramming in ccRCC tissues involving also fatty acid metabolism (4). Even if many approved targeted therapeutics have been recently developed (8), at present there is no grade-specific therapy addressing this metabolic reprogramming in ccRCC. For this purpose, an in vitro model of ccRCC that maintains the metabolic features of tumor tissue might be useful. Thus, we established primary cell cultures (PCC) from normal cortex and ccRCC tissue specimens that have been extensively characterized demonstrating to retain, at the early passages, the phenotypic, genomic, proteomic and transcriptomic profile of the corresponding tissues (9-12). Here we aimed to investigate by cytological, molecular and functional analyses of these PCC: 1) the presence of grade-dependent lipid storages in ccRCC cells; 2) the involvement of PPARa and/or its target CPT1 in these storages; 3) the effect of CPT1 inhibition by Etomoxir on ATP production and cell viability of ccRCC PCC. Materials and Methods

PCC established from ccRCC and normal cortex tissue samples were characterized by FACS analysis (10). Functional enrichment analysis of KEGG and Reactome pathways was performed by Cytoscape ClueGO plug-in on transcriptome profiling of ccRCC PCC previously obtained (12). Neutral lipid storage in Fuhrman low- and high-grade tissues and corresponding PCC was evaluated by Oil Red "O" staining and lipid droplet marker PLIN2 expression evaluated by western blot. PPARa expression was evaluated by western blot. Inhibition of CPT1 activity was performed by treatment with 50 uM Etomoxir. ATP production and cell viability in untreated and treated cells were evaluated by a specific commercial kit and FACS analysis after Annexin V/PI staining, respectively.

#### Results

The analysis performed on ccRCC PCC transcriptomic profiling evidenced a significant enrichment of several metabolic pathways mainly related to lipid metabolism and PPARa signaling. Notably, ccRCC cultures maintain at the first passage the lipid storages observed in corresponding tissues and, like in corresponding tissues, the lipid storages were also more abundant in low- (G1-G2) than in high-grade (G3-G4) ccRCC PCC. Moreover, PPARa protein expression was significantly increased in high-grade with respect to low-grade ccRCC PCC, as also described in corresponding tissues (13). Inhibition of CPT1 by Etomoxir induced a significant decrease of ATP production and cell viability only in high-grade ccRCC cells.

#### Discussions

Our data show that the PCC maintain the grade-dependent lipid storage of ccRCC tissues and this storage correlates with PPARa expression. Because PPARa regulates fatty acid uptake into mitochondria through CPT1 gene transcription, the increased accumulation of lipids observed in low-grade ccRCC cells might be due to a decreased PPARa-dependent CPT1 expression, which evaluation is in progress. Moreover, the decrease of ATP production induced by CPT1 inhibition with Etomoxir and observed only in high-grade ccRCC cells suggests that PPARa, likely through CPT1 expression modulation, plays a role also in grade-dependent energy metabolism differences in ccRCC. The cytotoxic effect induced only in high-grade ccRCC cells by Etomoxir-dependent CPT1 inhibition also highlights the grade-dependent role of mitochondrial fatty acid uptake and/or metabolism in ccRCC viability and suggests the feasibility of a grade-specific therapeutic approach in ccRCC.

#### Conclusion

These ccRCC PCC, retaining also the metabolic features of corresponding tissues, are a useful tool to shed light on the complex molecular mechanisms involved in grade-dependent metabolic reprogramming and lipid storage of ccRCC. Moreover, the gradedependent impact of lipid metabolism inhibition on ccRCC cell viability suggests the feasibility of a grade-specific metabolic targeted therapy in ccRCC.

- Reference
- 1. Rini et al., Lancet 2009
- 2. Gebhard et al., J Lipid Res 1987
- 3. Cancer Genome Atlas Research Network, Nature 2013
- 4. Wettersten et al., Cancer Res 2015
- 5. Tun et al., PLOS one 2013
- 6. Abu Aboud et al., Am J Physiol Cell Physiol 2015
- 7. Zhao et al., Tumor Biology 2016
- 8. van der Mijn et al., Cancer and Metabolism 2016
- 9. Perego et al., J Proteome Res 2005
- 10. Bianchi et al., Am J Pathol 2010
- 11. Cifola et al., BMC Cancer 2011
- 12. Di Stefano et al., Am J Pathol 2016.
- 13. Abu Aboud et al., PLOS one 2013

#### 8. #82: VOLUMINOUS ANGIOMYOLIPOMA TREATED WITH PERCUTANEOUS EMBOLIZATION: CASE REPORT AND LITERATURE REVIEW

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#### Objective

Percutaneous embolization represents one of the feasible treatments of voluminous angiomyolipomas, because of the haemorragic risks related to this type of renal lesion. We described the story of a woman with an angiomyolipoma with a maximum diameter of 8 cm, treated with percutaneous embolization. Additionally, we reviewed the literature about this field.

#### Materials and Methods

We described our case report. We searched in Medline and Embase using the following key words: "kidney angiomyolipoma" and "percutaneous embolization".

#### Results

61 year-old woman described nonspecific abdominal pain. The US reported a "Solid hyperechoic lesion with a maximum diameter of 8 cm, located in the cortical part of the inferior third of right kidney, with uncertain significance". The abdominal CT scan with contrast medium evidenced an esophitic lesion with in the inferior part of the left kidney, in its anterior side, with maximum axial and logitudinal diameter of 75 mm and 86 mm, respectively. The content was mainly fatty, with several vascular branches inside the lesion itself, with arterial ones directly derived from the renal artery. The lesion was surrounded by a thin capsule. There were no solid components with contrast enhancement. The appereance suggested an angiomyolipoma (fig.2). The patient executed percutaneous embolization of the lesion using endo-coils The duration of treatment was about 35 minutes (fig.3-6). The were no technical complications. She had fever until 38°C, responsive to antibiotic therapy with ceftriaxone during the first day after the procedure. Additionally, she described mild lumbar pain during the 2 days after the procedure, treated with paracetamol. The patient was discharged in 5th day after the embolization. The CT two months after the procedure demostrated a stable lesion (fig. 7); the patient was asymptomatic. We found several reports about the procedure, with different materials used for embolization. Discussions

61 year-old woman described nonspecific abdominal pain. The US reported a "Solid hyperechoic lesion with a maximum diameter of 8 cm, located in the cortical part of the inferior third of right kidney, with uncertain significance". The abdominal CT scan with contrast medium evidenced an esophitic lesion with in the inferior part of the left kidney, in its anterior side, with maximum axial and logitudinal diameter of 75 mm and 86 mm, respectively. The content was mainly fatty, with several vascular branches inside the lesion itself, with arterial ones directly derived from the renal artery. The lesion was surrounded by a thin capsule. There were no solid components with contrast enhancement. The appereance suggested an angiomyolipoma (fig.2). The patient executed percutaneous embolization of the lesion using endo-coils The duration of treatment was about 35 minutes (fig.3-6). The were no technical complications. She had fever until 38°C, responsive to antibiotic therapy with ceftriaxone during the first day after the procedure. Additionally, she described mild lumbar pain during the 2 days after the procedure, treated with paracetamol. The patient was discharged in 5th day after the embolization. The CT two months after the procedure demostrated a stable lesion (fig. 7); the patient was asymptomatic. We found several reports about the procedure, with different materials used for embolization.

#### Conclusion

Our case report is similar to those described in literature. The percutaeous embolization represents a valid method for the treatment of amgiomyolipomas with big dimensions, especially considering the risk-benefit ratio for the patient. Reference

- 1. Thulasidasan N, Sriskandakumar S, Ilyas S, Sabharwal T. Renal Angiomyolipoma: Mid- to Long-Term Results Following Embolization with Onyx. Cardiovasc Intervent Radiol. 2016; 39(12):1759-1764
- 2. Guziński M, Kurcz J, Tupikowski K, Antosz E, Słowik P, Garcarek J. The Role of Transarterial Embolization in the Treatment of Renal Tumors.. Adv Clin Exp Med 2015; 24 (5):837-43.

**Objettivo Rene** 

Comunicazioni 6 -

Comunicazioni 6 - Obiettivo Rene

3. Flum AS, Hamoui N, Said MA, Yang XJ, Casalino DD, McGuire BB, Perry KT, Nadler RB. Update on the Diagnosis and Management of Renal Angiomyolipoma. J Urol 2016;195 (4P1): 834-46.

#### **9.** #143: SPONTANEOUS PARENCHYMAL RUPTURE OF THE KIDNEY, A RARE BUT LIFE-THREATENING ENTITY: A SINGLE-CENTER EXPERIENCE

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#### Objective

Nontraumatic, spontaneous parenchymal kidney rupture is a rare clinical entity that can cause extensive haemorrhage and lead to the development of a Wunderlich's syndrome. It has been previously described in patients with systemic lupus erythematosus (SLE) (1) or in patients with Castleman's Disease (2). Sometimes an incidental renal carcinoma can be found in the kidney. We report our experience of spontaneous rupture of the kidney without a clear cause, in a single high-volume center.

#### Materials and Methods

We retrospectively evaluated all the patients that reached our emergency department for a kidney rupture from January 2012 to December 2016. 62 patients experience a parenchymal kidney rupture due to a clear cause and 10 patients experience a spontaneous parenchymal kidney rupture without a clear cause. All patients with an anamnesis of abdominal trauma were excluded from the analysis. All patients were evaluated with an abdominal ultrasonography and then an abdominal computed tomography.

#### Results

The mean age of the patients (four women and six men) was 52,1 years (range 18-69). All patients reached our emergency department with abdominal pain. 6 out of 10 patients experience a diffuse abdominal pain and 4 out of 10 patients experience a pain that simulated a renal colic, probably related to the occupation of the pelvis by blood clots. 5 out of 10 patients experience haematuria. 6 out of 10 patient experience a typical Wunderlich's syndrome with hypovolemic shock Stage 3 (marked tachycardia and tachypnea, low systolic blood pressure (mean 66,6 mmHG), confusion state, sweating with cool and pale skin. In the youngest patient the systolic blood pressure was 120 mmHG. Despite this the blood sample showed a lower hematocrit (Hemoglobin=6,7 g/dL). The mean hemoglobin level was 6,54 g/dL (range 5,8-7,1). All patients underwent blood transfusions. 6 out of 10 patients had a renal injury grade 3 (Fig.1) and 4 out of 10 patients had a renal injury grade 2. The management was conservative for seven patients. Three patients experience the embolization of a subsegmental renal artery. One patients with a renal injury grade 3 experience data and required a surgical drainage.

#### Discussions

A lot of conditions can cause a parenchymal kidney rupture (misunderstood renal cell cancer, acute purulent pyelonephritis secondary to stone, polycystic kidney disease, etc). Only few cases about spontaneous rupture of the kidney are reported in the scientific literature (3). The management of these patients is critical because the condition may go unrecognised in the early stages and can result in death. In our experience the youngest patient had a normal systolic blood pressure despite of the low levels of haemoglobin. It can be related to the high level of catecholamine that increased the blood pressure. In our experience the management was conservative but if the collecting system or the vascular pedicle are involved it is imperative to choose a surgical approach.

#### Conclusion

The spontaneous parenchymal kidney rupture is a rare but life-threatening entity. It is critical for clinicians in the Emergency Department to be aware of this entity to avoid diagnostic error. It is important to exclude all the causes of the kidney rupture. Moreover, in the young patients the condition can be misunderstood. In conclusion, we suggest to pay attention to old people that more probably can have consequences after a severe hemorrhage.

Reference

- 1- Ufuk F, Herek D. Life-threatening spontaneous kidney rupture in a rare case with systemic lupus erythematosus: Prompt diagnosis with computed tomography. Hemodial Int. 2016 Jan;20(1):E9-11.
- 2- Kremer A, Kremer V, Lee SK.Spontaneous kidney rupture with incidental renal cell cancer in patient with Castleman's disease. Urology. 2009 Oct;74(4):787-8.
- 3- Dangle P, Pandya L, Chehval M.Idiopathic non-traumatic spontaneous renal hemorrhage/laceration: a case report and review of the literature. W V Med J. 2012 Nov-Dec;108(6):24-6.

# **10.** #59: ROBOTIC PARTIAL ADRENALECTOMY: INITIAL REPORT FROM TWO TERTIARY REFERRAL CENTERS

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#### Objective

In the era of minimally invasive surgery, partial adrenalectomy has been certainly underused. We aimed to report on postoperative and early functional outcomes of a two-center robotic partial adrenalectomy (RPA) series.

#### Materials and Methods

From June 2014 to October 2016 RPA was performed on 13 consecutive patients affected by non-functioning adenomas, aldosterone-secreting adenomas and pheochromocytoma (3, 9 and 1, respectively). Preoperative, postoperative and early functional outcomes data were prospectively collected and reported.

17:30 - 19:00 Sala Pacinotti

#### Results

All cases were completed robotically. Median nodule size was 29 mm (range 20-40) for non-functioning adenomas, and 17.6 mm (range 10-30) for functioning adrenal masses. Intraoperative blood loss was negligible, postoperative course was uneventful in 12 cases; a single (7.7%) postoperative Clavien grade 2 complication occurred (fever requiring antibiotics); median hospital stay was 3 days (IQR 2-3.5). Patients with hyperaldosteronism became normotensive immediately after surgery (mean preoperative blood pressure: 154/93 mmHg; mean postoperative blood pressure: 120/71 mmHg, respectively). None of the patients required further hypotensive treatment. Aldosterone and plasmatic renin activity (PRA) levels decreased and returned within the normal range after surgery (mean post-operative aldosterone: 150 pg/ml [ normal range: 17.6-232] and mean post-operative PRA:2.4 ng/ml h [range: 0.2–2.8], respectively). Postoperative urinary metanephrines of the patient with pheochromocytoma decreased within normal range as well.

#### Conclusion

RPA is a safe, feasible and minimally invasive surgical approach. The excellent perioperative and early functional outcomes suggest an increasing adoption of this technique in the near future.

#### Reference

-Current trends in partial adrenalectomy. Colleselli D1, Janetschek G. Curr Opin Urol. 2015 Mar;25(2):89-94. doi: 10.1097/ MOU.00000000000147.

# **11.** #105: OUR SURGICAL EXPERIENCE IN BILATERAL BENIGN TESTICULAR TUMORS. IS THE CONSERVATIVE SURGERY AN EASY AND SAFE APPROACH?

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#### Objective

Bilateral testicular tumors are a very rare event and represent the 2.7% of all testicular masses. 15% of the bilateral testicular tumors occurs simultaneously, but in 85% of cases the second tumor appears in the remaining testicles after a variable period. Epidermoid cysts of the testis are rare and benign lesions. The incidence of bilateral cysts is around 0,5%. Granulosa cell tumor of the testis is an infrequent stromal cell tumor and is a rare pathologic finding, accounting for 1.2%-3.9% of prepuberal testicular tumors. Although radical surgery was previously considered the treatment of choice, we evaluated the role of partial orchiectomy in presence of bilateral benign lesions in terms of preservation of testicular function (1). The aim of this study was to describe our experience in testicular tumors, focusing on their diagnosis and conservative surgical treatment.

Materials and Methods

231 patients with testicular tumors whose underwent testicular surgery for testicular masses at our department from January 2010 to June 2016 were retrospectively analysed. Baseline ultrasonography (US) and an hormone panel test were performed to all patients. Contrast-enhanced ultrasound (CEUS) was performed in the patients with no clear diagnosis of malignant lesion. Semen analysis was performed before of the testicular surgery and at the 6 month follow-up. Mean values with standard deviations ( $\pm$ SD) were computed and reported for all items. Statistical significance was achieved if p-value was  $\leq$ 0.05 (two-sides).

#### Results

The patients with simultaneously occurring bilateral benign testicular tumors were 6 (2,6%). The average age is 23,8 years (range 16 – 34). Overall, 16 benign lesions are removed. 3 out of 16 patients had only 2 tumors (1 on the left testicle and 1 on the right), 2 out of 16 patients had 3 tumors (2 on the left testicle and 1 on the right) and only 1 patient had 4 tumors (2 on the left testicle and 2 on the right). The average diameter was 0,78cm (range 0,3 – 1,8cm). Preoperative average value of testosterone was 624,3±225,08 ng/dl (range 351 – 946 ng/dl). Preoperative average values of spermiogram were: global sperm cells count 45±17,34 millions (range 35 – 80 millions), sperm progressive motility 35,83±3,77% (range 29 – 40), normal forms 6±2,37% (range 3-9). Postoperative average value of testosterone was 587,5 ± 188,16 ng/dl (range 400 – 861 ng/dl) (p=0,7648). Postoperative average values of spermiogram were: global sperm cells count 42,5 millions ± 21,14 (range 25 – 82 millions) (p=0,8273),sperm progressive motility 31,83±7,26% (range 23 – 45) (p=0,2582), normal forms 5,1±1,47% (range 3-7) (p=0,4476). No recurrences were seen at a median follow-up of 24,3 months. PGI-I (Patient Global Impression of Improvement) test average score was 2 (1 – 4).

#### Discussions

History, physical examination and tumor markers don't always allow to distinguish between benign and malignant lesions. Ultrasonography has a sensitivity of 96% and a specificity of 44% for the diagnosis of the testicular masses (2).

CEUS allows seeing the distribution of the microcirculation, which is homogeneous in benign lesions and anarchic in malignant lesions. We used histograms that enable to identify the anticipation of vascularization that is typical of malignant lesions.

In our experience, no significant differences were seen for serum testosterone levels and no significant differences were seen in global sperm cells count, sperm progressive motility and normal forms after the conservative surgery.

In addiction, PGI-I score indicates an higher degree of satisfaction of the patients treated with conservative technique.

#### Conclusion

Bilateral simultaneously occurring testicular masses are extremely rare. Some of these are benign and, in this case, the radical orchiectomy can represent an overtreatment. In these patients partial orchiectomy could be an option (in particular for young

<u> Comunicazioni 6 - Obiettivo Rene</u>

patients), allowing to maximize the advantages related to the maintenance of testicular parenchyma (3). The exocrine and the endocrine function are both preserved. In addiction, we should consider the psychological and cosmetic benefits of receiving a conservative treatment. Despite the radical orchiectomy remains the gold standard for all testicular masses, the inclusion criteria are not clear and the discussion of informed consent with the patient is mandatory. We agree with EGCCCG (European Germ Cell Cancer Consensus Group) guidelines (4) that partial orchiectomy should be proposed for simultaneously occurring bilateral benign lesions.

Reference

1-Tavolini IM, Oliva G, Nigro F, Dal Moro F, Zuliani G, Norcen M, Mazzariol C, Pagano F. Synchronous and metachronous bilateral tumors of the testis: a single institution experience of 11 cases and review of the literature. Arch Ital Urol Androl. 1999 Jun;71(3):155-64

2-Loberant N, Bhatt S, Messing E, Dogra VS. Bilateral testicular epidermoid cysts. J Clin Imaging Sci. 2011;1:4. doi: 10.4103/2156-7514.73502. Epub 2011 Jan 1.

3-Cosentino M1, Algaba F2, Saldaña L3, Bujons A4, Caffaratti J4, Garat JM4, Villavicencio H4. Juvenile granulosa cell tumor of the testis: a bilateral and synchronous case. Should testis-sparing surgery be mandatory? Urology. 2014 Sep;84(3):694-6.

4-Zuniga A, Lawrentschuk N, Jewett MA. Organ-sparing approaches for testicular masses. Nat Rev Urol. 2010 Aug;7(8):454-64.

#### 12. #255: THE ADHERENCE TO THE EAU GUIDELINES ON PENILE CANCER TREATMENT COULD INFLUENCE THE SURVIVAL: MULTICENTER, RETROSPECTIVE, EUROPEAN STUDY

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#### Objective

Comunicazioni **6** - Obiettivo Rene

Penile Cancer (PC) is uncommon in Western countries with an incidence of  $\leq 1.0/100.000$  males, aged 50-70 years. Circumcision in childhood is protective. Due to its low incidence and low volume of surgical series it is difficult to achieve good quality guidelines with robust recommendations. Aims of this study were 1) to evaluate the adherence to the EAU guidelines on PC in terms of primary treatment and lymphadenectomy; 2) to weight the impact of the adherence on survival outcomes.

Materials and Methods

We retrospectively reviewed the clinical charts of 176 patients underwent penile surgery for neoplasms in 8 European Centres(2010-2016). Demographics, patient's comorbidity, circumcision, site of primarylesion, perioperative and histopathological data were collected and analysed. The follow-up was updated by recall of all patients. For each case the theoretical adherence to 2016 EAU Guidelines for the primary surgery and the lymphoadenectomywere evaluated. A comparison between theoretical and practical surgical approach was done in order to evaluate the adherence rate. The TNM 2009 was used to classify stage and grade. Descriptive, univariate and multivariate analyses were performed to evaluate the impact of the adherence on survival. Kaplan-Meier curves were estimated.

#### Results

176 patients were enrolled (median age 66.5 y +/- 11.3).56.5% was uncircumcised. The lesions were located at the glans, the prepuce and on both sites in 55%, 11% and 34%, respectively. The surgical approaches adopted were radical circumcision, tumor excision, glansectomy, penile partial amputation, total emasculation in 7%, 24%, 15%, 39%, 15%, respectively. All PC were squamous carcinoma. The staging was 16% <pT1 (incl. PeIN, Tis, Ta), 38% pT1, 34% pT2,12% pT3-4. The grading was G1, G2 and G3 in 37%, 47% and 16%, respectively. The surgical margin was negative in 83%. 30% had palpable lymph node.45% of patients underwent lymphadenectomy (LY). The pathological nodal status was 42% N0, 26% N1, 32% N2. The adherence to the EAU guidelines for primary treatment was respected in 66% of patients. In non-adherent cases the reasons for discrepancy was a choice of the patient in 17%, of the surgeon in 36% and other causes of 47%. The adherence to the EAU guidelines on Primary Surgery, after adjustments for age, TNM stage and LY significantly influences the overall survival(HR 0.42 (95%CI 0.23-0.79, p=0.007)).

Moreover the adherence to the EAU Guidelines for LY, after adjustments for age, TNM stage, Palpable Nodes and Grade, significantly influences the overall survival (HR 0.30 (95%CI 0.16-0.58, p<0.001)). The adherence to EAU Guidelines showed a trend of statistical significance on Progression Free Survival.

#### Discussions

Due to the rarity of penile cancer in industrialized countries, there are not robust reccomendations for the primary treatment and lymphadenectomy of penile cancer. adherence to EAU guidelines ensures successfull loco regional disease control and improved patient survival.

#### Conclusion

- Our data showed that the adherence to the EAU Guidelines on PC:
- is quite optimal across 8 European Centers;
- strongly influences the survival outcomes;

sabato 20 maggio 2017

should be reinforced, endorsed and encouraged in all the centers treating PC.
 Reference

Eau guidelines on Penile Cancer 2016

- 1. Maden C, Sherman KJ, Beckmann AM, Hislop TG, Teh CZ, Ashley RL, et al. History of circumcision, medical conditions, and sexual activity and risk of penile cancer. J Natl Cancer Inst 1993;85(1):19e24.
- 2. Hernandez BY, Barnholtz-Sloan J, German RR, Giuliano A, Goodman MT, King JB, et al. Burden of invasive squamous cell carcinoma of the penis in the United States, 1998-2003. Cancer 2008;113(10 Suppl):2883e91.
- 3. Horenblas S. Lymphadenectomy for squamous cell carcinoma of the penis. Part 1: diagnosis of lymph node metastasis. BJU Int 2001;88(5):467e72.

#### 13. #123: NEUROENDOCRINE CARCINOMA OF THE BLADDER

#### C. Curatolo<sup>1</sup>, V. Verriello<sup>1</sup>, A. Caniglia<sup>2</sup>, G. Galeone<sup>1</sup>, M. Altomare<sup>1</sup>

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#### Objective

Primary neuroendocrine cancer of the bladder is a rare histological occurrence, constituting 0.48–1% of all bladder cancers. The 5-year survival rate is around 8% and the prognosis is extremely unfavorable. Due to the morphology of the tumor, treatments based on small cell lung cancer have been performed. In this study, we treated a case in which chemotherapy was performed with cisplatin (CDDP) and etoposide (VP-16) forneuroendocrine cancer that occurred in the bladder; here, we report the results.

Materials and Methods

Our patient was a 49 year old male. His previous history included hypertension. He had no family history in particular. In June 2014, the patient visited our department because of voiding obstructive and irritative symptoms. He was evaluated by ultrasound examination, thoracic and pelvic CT scan, urinary cytology and cystoscopy without evidence of bladder pathology. He was treated with alpha lytic therapy because of his obstructive symptoms. Nine months later he returned with intensive irritative voiding symptoms and haematuria. An ultrasound examination revealed a thickening on the right bladder wall. A thoracic and pelvic CT scan revealed a flat lesion of 4 cm on the right bladder wall and metastasis to right external iliac lymph nodes with a diameter of 2.5 cm, resulting in a diagnosis of clinical stage T3bN1M0. No obvious distal metastasis was detected by bone scintigraphy and thoracic pelvic CT. In April 2015 the patient was hospitalized for the purpose of undergoing a transurethral resection of the bladder tumor (TUR-Bt). In the histopathological findings, there were a number of large and small solid alveoli of atypical cells accompanied by infiltrative growth into the interstitium. The atypical cells had a high N/C ratio and rough chromatin, and the neoplastic alveoli also suggested differentiation into the neuroendocrine system. When immunohistological staining was performed, the tumor cells were partially positive for CD56 and chromogranin A and negative for synaptophysin. Based on the morphology and the results of immunohistological staining, the patient was diagnosed with neuroendocrine cancer. Radical cystectomy was performed in June 2015 with bilateral ureterocutaneostomy.

#### Results

In September 2015 a positron emission tomography-computed tomography (PETCT) performed before chemotherapy revealed no distal metastasis. Based on the protocol for small cell lung cancer, chemotherapy with cisplatin (CDDP) and etoposide (VP-16) was performed along with PE therapy (P: 80 mg/body, E: 100 mg/body). Two other PETCT in March 2016 and November 2016 revealed no recurrence.

#### Discussions

Since first being reported by Cramer et al. in 1981, neuroendocrine bladder cancer has often been reported as primary small cell cancer of the bladder. Histologically, it is believed that this condition exhibits a similar histological appearance as small cell lung cancer, where the tumor cells are small, the nuclei are rich in chromatin and are circular or spindle-shaped, and tumor cells with scarce cytoplasm solidly proliferate. For immunostaining, CD56, synaptophysin, and chromogranin A are used. In this study, CD56 and chromogranin A were shown to be partially positive. The case in this study involved a high-grade neuroendocrine cancer according to the World Health Organization classification, and using the classifications of lung cancer, many parts had morphologies equivalent to those of small cell cancer, while some parts exhibited morphologies of large cell cancer. Blomjous et al. have reported that primary neuroendocrine cancer of the bladder constitutes approximately 0.48% of all bladder tumors in autopsy cases. At the time of diagnosis, primary neuroendocrine cancer of the bladder is detected as an advanced cancer occurring in T3 and T4 in 70% and 16.3% of cases, respectively. In addition, the 5-year survival rate has been reported to be 8.1–19%, and the prognosis is extremely unfavorable. Regarding treatment, multimodality therapy combining surgical therapy and chemotherapy/radiation therapy is often implemented; however, this is not yet an established therapy. Based on cases of small cell lung cancer, chemotherapy is mainly performed with PE therapy using a combination of cisplatin (CDDP) and etoposide (VP-16), and there are reports in which the prognosis was improved.

#### Conclusion

Primary neuroendocrine cancer of the bladder is a rare histological occurrence, constituting 0.48–1% of all bladder cancers. The 5-year survival rate is around 8% and the prognosis is extremely unfavorable. This case is to be signaled because of the age of the patient and the rapid evolution of pathology.

#### Reference

 Cramer SF, Aikawa M, Cebelin M: Neurosecretory granules in small cell invasive carcinoma of the urinary bladder. Cancer 1981;47:724–730.
 Blomjous CE, Vos W, Schipper NW, et al: Morphometric and flow cytometric analysis of small cell undifferentiated carcinoma of the bladder. J Clin Path 1989;42:1032–1039.

3 Abbas F, Civantos F, Benedetto P, et al: Small cell carcinoma of the bladder andprostate.

73

4 Mackey JR, Au HJ, Venner P, et al: Genetourinary small cell carcinoma of the bladder: a report of 25 cases. J Urol 1998;153:1820–1822.

17:30 - 19:00

## sala**Fermi**

# Comunicazioni 7 -Dulcis in Fundo

Moderatori: S. Annoscia, M. Melis, G. Zanetti

#### **1.** #247: OUR TECHNICAL ENDOSCOPIC RESECTION IS CORRECT? AFTER WLTURBT NBI TECNIQUE CAN 'TO INCREASE OUR CAPACITY' TO FIND THE PERSISTENCE OF THE DISEASE? PRELIMINARY EXPERIENCE IN A SINGLE CENTER

R. Giulianelli<sup>1</sup>, B.C. Gentile<sup>1</sup>, L.. Albanesi<sup>1</sup>, G. Mirabile<sup>1</sup>, G. Rizzo<sup>1</sup>, P. Tariciotti<sup>1</sup>

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#### Objective

Transurethral resection of bladder tumours (TURBT) is the main-stay approach in the diagnosis and treatment of bladder cancer. Inadequate tumour clearance results in early recurrence and inaccurate staging of the cancer. Guidelines recommend a delayed second TURBT after an incomplete initial TURBT if there was no muscle in the specimen after the initial resection, with the exception of TaG1 tumors and primary CIS and in all T1 tumors and G3 tumors, with the exception of primary CIS

However, most urologists recommend resection at 2 e 6 weeks after the initial TURBT, and there is no current consensus regarding strategies and timing of a delayed second TURBT. The recurrence rate at the first follow-up cystoscopy, attributed to incomplete resection of the tumour or missed tumours, among other reasons, is a strong predictor of the subsequent recurrence rate and possibly even the prognosis in the higher grade/T1 disease. Residual disease after TURBT can be as high as 64%. Aim of this study was to evaluate, using a much larger cohort of patients, if we carried out a complete eradication of all visible tumors following a classic white light transurethral resection of bladder tumor (cWLTURBT). We used as indicator to incomplete bladder tumours resection, the detected disease's persistence (residual tumour rate), in the same surgical session, following a re-NBI resection (repeat NBITURBT) on margins and bottom lesions. The findings of this study highlight the need for improvement in the diagnostic accuracy and treatment of non muscle invasive bladder tumors (NMIBT).

#### Materials and Methods

From June 2010 to April 2012, 797 consecutive patients, 423 male and 374 female, affected by primitives or recurrences or suspicious bladder lesions, underwent WL plus NBI cystoscopy and following to complete macroscopic Gyrus PK cWLTURBT. Overall we identified 1572 bladder lesions and 1068, in 512 pts, were bladder neoplasms. In the same surgery session, all patients were submitted to NBI resection of the margins and bed (repeat NBITURBT). Ciascuna lesione, a seconda che fosse localizzata sui margini, o su fondo o su entrambe le zone, fu asportata separatamente ed inviata per l'esame istologico. All histopathological evaluations were performed by a single pathologist based on the 2004 WHO classification.

The average follow-up was at 24 (16-38) months

#### Results

Data l'ampiezza del campione, la persistenza di malattia ( residual tumour rate) osservata nei pazienti sottoposti a repeat NBITURBT, dopo l'iniziale cWLTURBT, è stata sottoposta al test binomiale per valutarne la casualità applicando lo Z test ( significatività = 0,05%). La possibile presenza di correlazione fra la persistenza e uno o più dei fattori di rischio rilevati (età, fumo, ecc.) è stata verificata con un modello logistico. Le analisi sono state condotte utilizzando SPSS ver.19. Dopo repeat NBITURBT, abbiamo osservato complessivamente un residual tumour rate in 641 lesioni ( $\Delta$ = 60,01%, p<0.05), di cui, 439 lesioni oncologicamente positive individuate sui margini ( $\Delta$  =+41,1%, p<0.05), 202 lesioni sul fondo della lesione ( $\Delta$  =+18,9%, p<0.05) e 178 localizzatesia sui margini che sul fondo della lesione ( $\Delta$  =+16,6%, p<0.05). La distribuzione del residual tumour rate dopo repeat NBITURBT erano localizzata sia rispetto al pT ( $\Delta$  =+ 41,1%, p<0,05), che al grading (28,1%, p<0,05) sui margini di resezione rispetto che al letto di resezione. Le lesioni pTa ( $\Delta$  =+ 24,3 %, p<0,05) e le lesioni LG ( $\Delta$  =+ 29,8%, p<0,05), sono state

75

- Dulcis in Fundo

Comunicazioni 7

quelle in cui si è osservato un residual tumour rate più frequente . Combinando fra loro, le due variabili pT e grading, abbiamo osservato che il residual tumour rate , riscontrato con maggiore frequenza sui margini era costituito da lesioni sia pTaLG ( $\Delta = +46,3\%$ , p<0,05) che pTaHG ( $\Delta = +24,7\%$ , p<0,5), mentre sul fondo, da lesioni pT1HG ( $\Delta = +46,3\%$ , p<0,05). Abbiamo osservato che soprattutto sul bed , invece che sui margini, di resezione (32,12% vs 6,4%, respectively) era presente uno stage and grade migration ( pTaLG to pCISHG to pT1HG). Abbiamo osservato una progressione di malattia da non muscolo invasiva a muscolo invasiva , solo per le lesioni poste nel bed ( 11,9%).

Conclusion

The results of this study demonstrated that residual tumors is a real important problem after initial cWLTURBt, either in the tumor margins than in the beds . Dopo repeat NBITURBT, abbiamo osservato un complessivo estremamente elevato residual tumour rate ( 641 lesioni ,  $\Delta =+ 60,01\%$ ), più frequente sui margini (sia rispetto al pT,  $\Delta =+ 41,1\%$ , p<0,05), che rispetto al pT ed al grading erano costituiti da lesioni prevalentemente pTa ( $\Delta =+ 28,1\%$ , p<0,05), LG ( $\Delta =+ 29,8\%$ , p<0,05). Sul fondo della lesioni abbiamo riscontrato una maggiore frequenza di lesionipT1HG ( $\Delta =+ 46,3\%$ , p<0,05). Il rischio di evoluzione a malattia muscolo invasiva è stato dell'11,9%, per le sole lesioni poste sul bed. I risultati ottenuti indicano un significativo scostamento al livello di significatività ( $\alpha$ =0,05) dalla ipotesi di casualità e inducono a ritenere che repeat NBITURBT presenti effettivamente una capacità di eradicazione superiore alla sola cWLTURBT,

# **2.** #203: BIPOLAR PLASMA ENUCLEATION OF THE PROSTATE (B-TUEP) IN BENIGN PROSTATE HYPERTROPHY TREATMENT. MEDIUM-TERM RESULTS

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#### Objective

Numerous endoscopic techniques have been described since Iglesias published the results of his modified resectoscope for the treatment of bladder outlet obstruction (BOO) due to benign prostate enlargement (BPE),. Classic transurethral resection of the prostate (cTURP) has long been the accepted gold standard to treat symptomatic disease of prostates weighing 30-80g. A variety of therapeutic solutions and technical innovations have been developed to bring improvements to BOO endoscopic treatment. The plasma-button enucleation of the prostate (B-TUEP) is considered a successful treatment option mainly because the large surface creats the conditions for a fast enucleation process, continuous vaporization and concomitant haemostasis [Geavlete B, Stanescu F, Iacoboaie C, Geavlete P. Bipolar plasma enucleation of the prostate vs open prostatectomy in large benign prostatic hyperplasia cases – a medium term, prospective, randomized comparison. BJU Int. 2013 May;111(5):793-803.]. Aim of this study was to assess safety, efficacy, and medium term durability of B-TUEP for the treatment of BOO due BPE.

#### Materials and Methods

Between July 2011 and March 2012, 50 consecutive patients underwent B-TUEP at our institution, by a single surgeon (R.G.). All patients were pre-operatively assessed with maximum urinary flow rate (Qmax), the single-question quality of life (QoL), International Prostate Symptoms Score (I.P.S.S.) and the International Index of Erectile Function (IIEF-5) questionnaires, Transrectal Ultrasound gland volume evaluation (TrUS), prostate-specific antigen (PSA)and post-voided residual of urine (PVR). Postoperativeparameters were evaluated and the patients were reassessed at 1-, 3-, 6-, 12-, 18-, 24-, and 36-mo follow-up with the same examinations.

#### Results

We observed a significant improvement occurred at 12, 24 and 36 months in terms of Qmax ( $22.3 \pm 4.74$  mL/s,  $23.2 \pm 0.30$  mL/ sec and  $23.6 \pm 1.26$  mL/sec, respectively, p<0.01), and QoL ( $5.28\pm0.97$ ,  $5.69\pm0.90$  and  $5.73\pm0.87$ ).IPSS and IEEF scores improved significantly (p<0.05). Gland volume evaluation and postvoid residual decreased (p<0.001). Prostate-specific postoperative antigen level was0.76±0.61 ng/mL,  $0.7\pm0.51$  ng/mL and  $0.62\pm0.18$  ng/mL, at 12, 24 and 36 months respectively Two patients (4%) had persistent BOO and requiring reoperation. During the 36-month follow up five patients (10%), developed neoplasms and turned so lost.

#### Conclusion

After 3-yr follow-up, B-TUEP represents an effective, durable and safe surgical intervention. Voiding parameters such as Qmax, QoL score, IPSS, PVR improved significantly (p < 0.05) from baseline, starting from 3-mo after B-TUEP and continuing during the follow-up, until they reached a plateau that was stable up to the 36-mo visit.

The present report adds to the evidence that B-TUEP could be the alternative "size-independent" surgical treatment for symptomatic BPE-related BOO.

# **3.** #245: NBI CYSTOSCOPY INCREASES IN A POPULATION OF SMOKERS THE LIKELIHOOD OF DETECTING BLADDER TUMORS? PRELIMINARY EXPERIENCE

R. Giulianelli<sup>1</sup>, B.C. Gentile<sup>1</sup>, L. Albanesi<sup>1</sup>, G. Mirabile<sup>1</sup>, P. Tariciotti<sup>1</sup>, G. Rizzo<sup>1</sup>

<sup>1</sup> Nuova Villa Claudia (Roma)

#### Objective

Recent reports have suggested that NBI cystoscopy is more effective than standard WLI cystoscopy for the detection of bladder tumors. Cigarette smoking is the primary risk factor for bladder cancer. The aim of this study was to evaluate, in the same

patient, smokers ot not-smokers, the probability to increase our ability to detect bladder cancer comparing the predictive power NBI visible lesions cystoscopy versus white light visible lesions cystoscopy. The secondary objective was to evaluate how the preoperative use of NBI cystoscopy can increase the ability to detect bladder lesions in higher smokers (> 20 cigarette/die) vs fewer (< 20 cigarette/die) vs no-smokers

Materials and Methods

From June 2010 to April 2012, 797 consecutive patients, 423 male and 374 female, affected by suspected bladder cancer lesions, on the basis of the EAU Guideline 2010, were underwent to WL plus NBI cystoscopy. The mean age was 67.7 yrs. (range 46-88). In our experience, 520 pts ( 65,2%) were smokers and 153 pts no-smokers . In the smokers group, 337 pts ( 64,8%) were higher (> 20 cigarette/die) than 183 pts (35,2%) fewer (< 20 cigarette/die) smokers.

#### Statistical analysys

The statistical analysis was oriented toward the evaluation of the efficacy of NBI vs WL cystoscopy. The two-proportion z-test for matched pairs has been conducted to determine whether the difference between the two proportions of positive results achieved by WL and by NBI is significant. The related confidence intervals have been calculated. In order to quantify how strong is the difference, OR and RR have been built up.

#### Results

In our experience, in 797 patients, WL cystoscopy was used to identify 602 patients (75,5%) with suspicious lesions, while the use of NBI following WL allowed identifying a total of 785 patients (98.49%). The use of NBI cystoscopy, significantly increases by approximately 30% our predictive power to identify lesions not visible with WL cystoscopy.

In smokers, the use of NBI Cystoscopy increases by approximately 30% (p <0,000, IC-95% 0,19-0,26) the ability to detect lesions not otherwise visible with the only WL cystoscopy (OR 25.9 and RR 1.28).

In higher smokers group the use of NBI Cystoscopy increases by approximately 25% (OR 21,8 and RR 1,24) than 35% in fewer smokers group (OR 34,8 and RR 1,34) the ability to detect lesions not otherwise visible with the only WL cystoscopy. In no smokers group we observed, following NBI cystoscopy, a relative risk approximately 30% (OR 15.9 and RR 1.29) to detect lesions not otherwise visible with the only WL cystoscopy.

#### Discussions

This is the first study in the literature in a large patient's cohort, in which the ability of NBI cystoscopy to increase the ability to detect suspicious bladder lesions was compared with the use of WL cystoscopy alone in the same smokers or no-smokers patients. In smokers patients, the use of NBI cystoscopy, significantly increases by approximately 30% our predictive power to identify lesions not visible with WL cystoscopy . In the others subgroups, fewer, no smokers and higher smokers groups, we observed , following NBI cystoscopy, a significantly increased relative risk, approximately 35%, 30% and 25%, respectively, to detect lesions not otherwise visible with the only WL cystoscopy.

# **4.** #246: UROTENSIN II RECEPTOR PREDICTS THE CLINICAL OUTCOME OF PROSTATE CANCER PATIENTS AND IS INVOLVED IN THE REGULATION OF MOTILITY OF PROSTATE ADENOCARCINOMA CELLS

R. Giulianelli<sup>1</sup>, G. Mirabile<sup>1</sup>, B.C. Gentile<sup>1</sup>, L.. Albanesi<sup>1</sup>, P. Tariciotti<sup>1</sup>, G. Rizzo<sup>1</sup>

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#### Objective

Discrepancy between the Gleason score on needle biopsy and the grading of prostatectomy specimens is common and universal. Inaccuracy of Gleason score and PSA as pathological predictors exists and there is the need of new parameters to better evaluate prostate cancer aggressiveness. Urotensin II (UTII) is a potent vasoconstrictor peptide and its receptor (UTII-R) is involved in prostate. In this study, we evaluated the correlation between UTII-R expression and tumor upgrading from needle biopsy to postoperative specimen and we presented a new score based on UTII-R microscopic features of neoplastic cells.

#### Materials and Methods

We retrospectively collected prostatic needle biopsies and radical prostate samples of 141 patients affected by prostatic adenocarcinoma Gleason  $\geq$ 6, treated between 2006 to 2011 at single high volume center. For each patient, clinicopathologic data were collected. The immunohistochemical staining was performed through automated system using the kit Urotensin II Receptor Detection System. Immunostained slides were independently and blindly evaluated by two uropathologists. A new score based on UTII-R coloration intensity, intracytoplasmic location and dimension of UTII-R granules was calculated. Modelling and statistical analyses were carried out using R version 3.1.0. Multivariable logistic regression models were used to explore the independent role of UTII-R expression in predicting Gleason Score upgrading. Diagnostic validity of the model-based scores was evaluated by ROC curve analysis and measured using the Area Under the Curve (AUC).

#### Results

Gleason Sum (GS) upgrading was observed in 55 patients (38.56%). The most frequent pattern of upgrading (n=20, 36.4%) was from a bGs of 3+4 to a pGS of 4+3. Although patients with GS upgrading were characterized by higher PSA values, this difference did not reach statistical significance (p=0.215). UTII-R emerged as independent predictor of upgrading. Higher score of UTII-R expression was found in 73 patients (51.7%). Neoplastic cells presented UTII-R granules bigger and located in more apical position.

#### Conclusion

Our study suggests that UTII-R expression and its microscopic features are significant related with prostate tumor upgrading and could add important information as prognostic factor in patients affected by potentially more aggressive cancer.

Comunicazioni 7 - Dulcis in Fundo

# **5.** #202: ANTERIOR-APICAL SINGLE-INCISION MESH SURGERY (SIMS) IN THE TREATMENT OF ANTERIOR VAGINAL WALL PROLAPSE, 3 YEARS OF FOLLOW UP

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#### Objective

Il fine di questo studio è stato di valutare gli esiti chirurgici e funzionali della chirurgia vaginale a singola incisione (SIMS) per il trattamento del prolasso degli organi pelvici avanzati (POP).

#### Materials and Methods

Trentacinque pazienti HANNO subito un intervento chirurgico per il trattamento sintomatico di una POP di stadio superiore al II, secondo la Pelvic Organ Prolapse Quantificazione System (POP-Q).

Gli obiettivi primari erano la correzione anatomica anteriore di una POP superiore allo stadio III, valutata con esame vaginale e con ecografia translabiale, e la risoluzione dell'ostruzione cervico uretrale con alto residuo postminzionale valutata preoperativamente con esame urodinamico. La guarigione anatomica è stata valutata con un esame vaginale utilizzando il sistema ICS-POP-Q, con una uroflussimetria con valutazione del residuo post minzionale e con l'utilizzo di una ecografia translabiale per valutare la giusta posizione della rete. Il risultato soggettivo è stata misurato utilizzando il questionario Pelvic Organ Prolapse Distress Inventory 6 (POPDI-6). Abbiamo inoltre valutato la qualità della vita della paziente pre e post operativamente.

#### Results

trentacinque donne con cistocele (15 stadio III / 20 stadio IV), sono stati operati con la tecnica a singola incisione per via transvaginale. Il follow up medio è stato di due anni. E' stata utilizzata in tutte le pazienti la Restorelle SmartMesh con sistema di sutura Digitex con tecnica single incision. Tutti i pazienti hanno dimostrato un significativo miglioramento nei risultati anatomici dopo l'intervento chirurgico del prolasso (p <0,05), e nessuna recidiva che abbia richiesto un ulteriore intervento chirurgico. Il coefficiente di successo anatomico è stato del 97.3% con un significativo miglioramento della qualità della vita (p <0,0001) ed una riduzione significativa (58 vs 2,9%) del RPM. Non abbiamo avuto alcuna dislocazione della mesh. Nessuna dispareunia de novo riportata. Non vi è alcun stata alcuna estrusione di rete fino ad oggi. Tuttavia, alcune pazienti hanno presentato una incontinenza urinaria da sforzo, di cui tre pazienti hanno ricevuto un trattamento chirurgico.

#### Discussions

Non ci sono state complicanze maggiori in questa chirurgia. Delle tre pazienti con IUs de novo, solo una ha richiesto a sei mesi un trattamento chirurgico. Le altre sono state mandate a terapia riabilitativa. Non ci sono stati casi di urgenza de novo, anzi si è avuta una risoluzione della iperattività vescicale precedente all'intervento in molte pazienti, anche se non in modo statisticamente significativo

#### Conclusion

possiamo concludere che la tecnica a singola incisione per via transvaginale per la riparazione del prolasso vescicale è una tecnica sicura, risolutiva e con un alto tasso di guarigione e di persistenza di guarigione.

# **6.** #131: LAPAROSCOPIC SACROCOLPOPEXY FOR PELVIC ORGAN PROLAPSE: SURGICAL TECHNIQUE AND OUTCOMES

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#### Objective

The prevalence of pelvic organ prolapse (POP), defined as stage  $\geq 2$  prolapse using the Pelvic Organ Prolapse Quantification (POP-Q) examination, was reported to be 37% in the general population and increased to 64.8% in an older population of women with a mean age of 68 yr. Abdominal sacrocohysteropexy is the gold standard treatment for POP and can be performed laparoscopically. The aim of our study was to evaluate the surgical outcomes, complications and benefits of laparoscopic single promonto-fixation for patients with pelvic prolapse.

Materials and Methods

Between 2005 and 2015 a total of 243 patients affected by POP were submitted to laparoscopic single promonto-fixation in our Department of Urology, Misericordia Hospital in Grosseto. After an interrectovaginal dissection to free the whole posterior surface of the vagina we proceeded with the installation of a posterior polypropylene mesh pre-cut in a butterfly shape that we sutured with levator ani muscles than with uterosacral ligaments and finally with the posterior wall of vagina by a resorbable stitch. The anterior face of the promontory is then freed after incision of the posterior peritoneum. After intervescical vaginal dissection, the anterior prosthesis comprising a precut polypropylene mesh with a "single" end is fixed to promontory avoiding excess traction.

#### Results

Population median age was 63 (range 35–78); The median stage of POP, according to POP-Q, was 3 (range 2-4). The mean operating time was 102 minutes (range 70-122). There were 2 conversions to open surgery due to anesthetic or surgical difficulties. The average follow-up was 14.6 months. Follow up was done by a postal questionnaire and physical examination at 6 months and then every year. 233/243 (96%) were satisfied and no patients complained of sexual dysfunction. There was a 2% recurrence rate of prolapse and no vaginal erosions. Thare was an intraoperative vaginal effraction that we immediately repaired with a continue suture. The mean hospital stay was 3 days (2–5). We observed no retraction of the mesh and no dyspareunia. De novo

- Dulcis in Fundo

Comunicazioni 7

urgency was observed in 10/243 patients (4.2%) who presented previous high-grade cystocele with concomitant prolapse of other compartments. In this case, symptoms were treated with short-term anticholinergic medications and always resolved in the first few weeks after surgery.

Conclusion

Laparoscopic single promonto-fixation is a feasible and highly effective technique that offers good long-term results with complication rates similar to open surgery, with the added benefits of minimally invasive surgery.

With this technique we performed a complete resolution of severe prolapse by a minimally invasive approach with a low rate of recurrence at this point. This technique with implant of polypropylene meshes is associated with low morbidity and good long-term results in the treatment of all types of POP. With this type of "sigle-end" conformation of the anterior mesh and the fixation points of the posterior mesh we have significantly reduced the dischezia compared to double promonto-fixation.

#### 7. #146: FUNCTIONAL OUTCOMES AND HEALTH RELATED QUALITY OF LIFE AFTER ARTIFICIAL URINARY SPHINCTER IMPLANTATION: A MONOCENTRIC SERIES EVALUATION WITH VALIDATED QUESTIONNAIRES

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#### Objective

Urinary incontinence is, unfortunately, a complication of several urologic procedures. This complication ranges from 4 to 31% in robot assisted radical prostatectomy [1] and from 7 to 40% in radical retropubic prostatectomy [2]. At the moment, the gold standard treatment for post prostatectomy incontinence is the Artificial Urinary Sphincter (USA); a Cochrane review conducted in 2014 documented that patients treated with AUS, in comparison with those treated with injectable devices, are more likely to be continent (OR 8.89) [3]. Moreover, this device provides good continence rate and ameliorate quality of life of the patients undergoing the procedure, as reported by Trigo et al., with a post operative VAS score decreasing from 5.0 to 1.4 (P < 0.001) [4]. The aim of our study was to assess efficacy and safety and quality of life outcomes of a series of patients who underwent AMS 800 placemente in a single academic urologic clinic.

Materials and Methods

We prospectively collected and retrospectively reviewed the data regarding 37 patients who underwent AMS 800 placement ad our clinic after prostatic suergery.

Previous external beam radiotherapy or brachytherapy was not a exclusion criteria, unless performed in the previous 3 months. Pre and post operative SUI was evaluated using the daily pad use (PPD) and the italian validated International Consultation on Incontinence Questionnaire – short form (ICIQ-SF), whereas health related quality of life and subjective satisfaction of the patients was evaluated with the Italian validated Patient Global Impression of Improvement (PGI-I) questionnaire.

Moreover, to assess the degree of personal satisfaction, patients were asked to rate on a scale from 0 to 100 their improvement and satisfaction after surgery and if they would recommend the procedure to a friend.

#### Results

We prospectively collected and retrospectively evaluated the data regarding 37 consecutive patients undergoing AMS 800 artificial sphincter placement from 2001 to 2015. Mean age of the patient at time of procedure was  $68.8 \pm 5.3$  years; 29/37 pts underwent RRP and 8 (21.6%) were treated with adjuvant radiotherapy. Median preoperative PPD used was 4 (IQR 3-5); after a median follow up of 4 years (range: 1-15), median PPD used was 1. With regard to ICIQ-SF questionnaire, 4 patients (12.5%) responded that they never lose urine and 22 (68,76%) only during exercise and / or sneezing. Median PGI-1 score was 1, documenting a better HRLQoL after AMS positioning; with regard to the answer regarding the 0 to 100 improvement after surgery, median score was 90, while median score concerning satisfaction was 99. When we asked, "would you recommend the post to a friend? ", only 1 patient replied no. Moreover, correlation coefficient between ICIQ-SF score and number of aids used was 0.77, whereas between PGI-I and the number of diapers was of 0.60.

#### Discussions

Our monocentric study has shown that, at median follow-up of 48 months, patients who underwent AMS 800 placement, showed good results in terms of urinary continence, quality of life and degree of satisfaction. To our knowledge our study is one of the few available in the literature that used validated questionnaires as like ICIQ-SF nad PGI-I for the quality of life assessment. Literature studies, on the other hand, ared heterogeneous and not completely comparable.

#### Conclusion

In our experience, at a median follow-up of 48 months, the Artificial Urinary Sphincter type AMS 800 ensures good results in terms of urinary continence and a satisfactory quality of life. The majority of patients continue to wear a small pad to purely precautionary purposes, since the diaper is often dry to the exchange. The chances of urine leakage occur in conjunction with physical activity, coughing or sneezing. Our patients are happy and satisfied with the intervention, and would recommend to their friends.

#### Reference

- Ficarra V, Novara G, Rosen RC, Artibani W, Carroll PR, Costello A, Menon M, Montorsi F, Patel VR, Stolzenburg JU, Van der Poel H, Wilson TG, Zattoni F, Mottrie A. Systematic review and meta-analysis of studies reporting urinary continence recovery after robot-assisted radical prostatectomy. Eur Urol. 2012 Sep;62(3):405-17. D
- 2. Ficarra V, Novara G, Artibani W, Cestari A, Galfano A, Graefen M, Guazzoni G, Guillonneau B, Menon M, Montorsi F, Patel V, Rassweiler J, Van Poppel H. Retropubic, laparoscopic, and robot-assisted radical prostatectomy: a systematic review and cumulative analysis of

- Dulcis in Fundo

Comunicazioni 7

#### 17:30 - 19:00 Sala Fermi

- Dulcis in Fundo

Comunicazioni 7

comparative studies. Eur Urol. 2009 May;55(5):1037-63.

- 4. Silva LA, Andriolo RB, Atallah ÁN, da Silva EM...Surgery for stress urinary incontinence due to presumed sphincter deficiency after prostate surgery. Cochrane Database Syst Rev. 2014 Sep 27;(9):CD008306.
- 5. Trigo Rocha F, Gomes CM, Mitre AI, Arap S, Srougi M.A prospective study evaluating the efficacy of the artificial sphincter AMS 800 for the treatment of postradical prostatectomy urinary incontinence and the correlation between preoperative urodynamic and surgical outcomes. Urology. 2008 Jan;71(1):85-9.

#### **8.** #126: FOURNIER GANGRENE: EXPERIENCE OF A SECONDARY HOSPITAL

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Objective

Fournier gangrene (FG) is an acute and life-threatening bacterial infection disease of soft tissue of the external genital area characterized by a necroticizing fiscitis of perigenital region and tendency of spreading to perineum and perianal region.

#### Materials and Methods

We reviewed retrospectively the data of 13 patients treated primarily or followed in our center between 2013 and 2016 with FG. First line treatment consisted in surgically emergency debridement of the necrotic tissue, wide spectrum intravenous antibiotics and later tissue or blood bacteria targeted antibiotics therapy and hyperbaric oxygen therapy.

#### Results

The median age was 64.8 years old (range 46-91 years old). The mean hospital stay of patients was 16 days (range 18-25 days). Diabete mellitus was present in 10 patients, 8 patients were HCV + and 2 patients were indwelling catheter.

The defects were treated primarily in 11 cases with second wound closure and skin flap in 2 cases. The septic state was properly treated in all the cases and the mortality rate of FG was 2/13(15%) due in both cases to miocardial ischemia.

#### Conclusion

Early intervention and multidisciplinary approach can reduce mortality in FG patients demanding however important medical supplies.

#### Reference

A contemporary update on Fournier's gangrene. Hagedorn JC1, Wessells H1.Nat Rev Urol. 2016 Dec 13. Urologic Emergencies Adam E. Ludvigson, Lisa T. Beaule Surgical Clinics of North America, Volume 96, Issue 3, Pages 407-424

#### **9.** #127: EVALUATION OF THE FOURNIER'S GANGRENE SEVERITY INDEX (FGSI) IN OUR **EXPERINCENE**

M. Potenzoni<sup>1</sup>, A. Prati<sup>1</sup>, A. Savino<sup>1</sup>, R. Arnaudi<sup>1</sup>, N. Uliano<sup>1</sup>, A. Pieri<sup>1</sup>, S.C. DEstro Pastizzaro<sup>1</sup>, F. Cantoni<sup>1</sup>, D. Martens<sup>1</sup>, C. **Grassani**<sup>1</sup>

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Objective

Fournier gangrene (FG) is a life-threatening bacterial infection disease of soft tissue of the external genital area characterized by a necroticizing fiscitis of perigenital region and tendency of spreading to perineum and perianal region. Fournier's Gangrene Severity Index (FGSI) has been reported to predict the outcome in FG patients where a FGSI score above 9 is sensitive and specific as a mortality predictor in FG patients. We reviewed retrospectively the data of 13 patients treated primarily or followed in our center between 2013 and 2016 with FG. The median age was 64.8 years old (range 46-91 years old). The mean hospital stay of patients was 16 days (range 18-25 days). Diabete mellitus was present in 10 patients, 8 patients were HCV + and 2 patients were indwelling catheter. The median admission FGSI scores for survivors and nonsurvivors were 8 and 2.6 respectively. In our experience FGSI scores does not correlate with specific survival in FG patients.

#### Reference

Evaluation of the Utility of the Fournier's Gangrene Severity Index in the Management of Fournier's Gangrene in ....: Satyajeet Verma, Ashutosh Sayana, J Cutan Aesthet Surg. 2012 Oct-Dec; 5(4): 273-276.

Outcome prediction in patients with Fournier's gangrene. Laor E, Palmer LS, Tolia BM, Reid RE, Winter HI J Urol. 1995 Jul; 154(1):

#### **10.** #148: LOW INTENSITY EMSW TREATMENT IN ERECTILE DISFUNCTION (PRELIMINARI EXPERIENCE ON 158 PTS)

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#### Objective

The purpose of this study is to define the feasybility and efficacy of LI-SWT in the treatment of erectile disfunction in 158 pts with ED.

#### Materials and Methods

We enrolled, between 2015 april and 2016 december, 158 pts suffering of erectile disfunction.

110 pts (Group A) had vasculogenic impotence (82 arteriogenic and 28 with venous leak). 48 pts (Group B) had ED subsequent to NSRP (both robotic and laparoscopic). 110 pts with pure vasculogenic ED were treated with 4 weeks course of LISWT for a total abstracts XXIV Congresso Nazionale AURO.it - PISA 19 - 21 maggio 2017

Comunicazioni 7 - Dulcis in Fundo

amount of 16000 SW in 4 different sites(cavernosal bodies and crura) with a frequency of 180 shock waves / min and an energy flow density of 0.09 mj/cm2. 48 pts with ED after NSRP had a 6 weeks course of LI-ESWT for a total amount of 18000 SW with same frequency and energy in 2 different sites (only corpora cavernosa). All patients were treated at the same time with PDE5 inhibitors and Tribulus Terrestris Plus Arginine for 2 mnths. The positive response means sexual performance improvement (PDE5 responder can suspend the medication & PDE5 not responder became responder) based on IIEF5 test and EHS.

#### Results

The A Group presented a positive response in 77 pts (70 %). The IIEF5 score improved in mean 5 points; EHS score passed from 2 to 4. The B Group had a positive response in 20 pts (48%). In this case IIEF5 had a mean improvement of 9 points; EHS score passed from 1 to 3.

#### Discussions

LI-SWT showed in many sudies the capacity to create a new angiogenesis of the corporal bodies through the increase of local VEGF, that stimulates local stem cells to create new vessels.

#### Conclusion

The PDE5 medication don't treat the cause of ED. The LI-ESWT directly works on the corporal vascular system, stimulating the new angiogenesis, that improve the blood flow to restart the erection.

Reference

- 1. Hatzichristou D, d'Anzeo G, Porst H, et al. Tadalafil 5 mg once daily for the treatment of erectile dysfunction during a 6-month observational study (EDATE): impact of patient characteristics and comorbidities. BMC Urol 2015;15:111.
- 2. Frey A, Sonksen J, Fode M. Low-intensity extracorporeal shockwave therapy in the treatment of postprostatectomy erectile dysfunction: a pilot study. Scand J Urol 2016;50:123–7.
- 3. Zhihua Lu , Guiting Lin , Amanda Reed-Maldonado, Chunxi Wang, Yung-Chin Lee , Tom F. Lue Low-intensity Extracorporeal Shock Wave Treatment Improves Erectile Function: A Systematic Review and Meta-analysis EUROPEAN UROLOGY 71 (2017) 223–233

#### **11.** #90: THE ROLE OF MAGNETIC RESONANCE OF PROSTATE IN PATIENTS WITH HIGH GRADE PROSTATIC INTRAEPITHELIAL NEOPLASM AND ATYPICAL SMALL ACINAR PROLIFERATION

#### C. Maccagnano<sup>1</sup>, F. Bianchi<sup>1</sup>, M. Corinti<sup>1</sup>, E. Cretarola<sup>1</sup>, G.N. Conti<sup>1</sup>

<sup>1</sup> ASST Lariana Ospedale Sant'Anna (San Fermo della Battaglia )

#### Objective

Men diagnosed with High Grade Prostatic Intraepithelial Neoplasm (HGPIN) and Atypical Small Acinar Proliferation (ASAP) are usually counseled to undergo re-biopsy because of the variable risk of prostate cancer (PCa). Multiparametric Magnetic Resonance of the prostate (mpMRI) may offer an opportunity to verify the specific areas in the prostate and eventually to target subsequent biopsy in this group of patients.

#### Materials and Methods

In our Centre, we use 1.5 T mpMRI incorporating a 16-channel surface coil. Two dedicated Uro-radiologists evaluated the exams, which included T2-weighted, diffusion weighted and dynamic contrast enhanced imaging. The reports referred to PI-RADS 1.0 scoring system. We retrospectively analyzed the use of mpMRI in monitoring patients with previous diagnosis of HGPIN and ASAP since 2014 up to august 2016. Additionally, we compared our experience with literature data in Pubmed, searching for the key-words: "High Grade Prostatic Intraepithelial Neoplasm", "Atypical Small Acinar Proliferation", "Multiparametric Magnetic Resonance", "prostate" and "Biopsy".

#### Results

We identified a total of 10 pts, divided into 3 groups: a) 5 pts with HGPIN, b) 3 with ASAP and c) 2 with ASAP and HGPIN together. The characteristics of the patients were reported in table 1.

According to literature (based on trials conducted with sextant techniques), 40% of men with ASAP are diagnosed with PCA on the first rebiopsy. Because no clinical variables are able to predict which men with ASAP are at higher risk, current guidelines suggest to perform re-biopsy in 3 to 6. PCa is found in the same sextant as original ASAP in 48% to 57% of cases but, in contrast, in the contro-lateral lobe of the prostate in 17%. However, because the exact biopsy location can only be estimated by conventional TRUS guidance, it is strictly operator-dependent. In this context, mpMRI is a promising technique for PCa detection , also because the exam is specifically validated in the setting of active surveillance. Additionally, this cohort of patients lays in the "Grey Zone PSA Level and prior negative biopsy" (PSA 2.5-10 ng/mL).

#### Discussions

#### SEE RESULTS

#### Conclusion

This preliminary results suggest that mp-MRI could be a valid technique in order to refer or to avoid PBx in patients with diagnosis of HGPIN or ASAP.

#### Reference

- 1. De Visschere PJ, Vral A, Perletti G, Pattyn E, Praet M, Magri V, Villeirs GM.Multiparametric magnetic resonance imaging characteristics of normal, benign and malignant conditions in the prostate. Eur Radiol. 2016
- 2. Girometti R, Bazzocchi M, Como G, Brondani G, Del Pin M, Frea B, Martinez G, Zuiani C. Negative predictive value for cancer in patients with "gray-zone" PSA level and prior negative biopsy: preliminary results with multiparametric 3.0 Tesla MR. J Magn Reson Imaging 2012;36(4):943-50.
- 3. Raskolnikov D, Rais-Bahrami S, George AK, Turkbey B, Shakir NA, Okoro C, Rothwax JT, Walton-Diaz A, Siddiqui MM, Su D, Stamatakis L, Yan P, Kruecker J, Xu S, Merino MJ, Choyke PL, Wood BJ, Pinto PA.The role of image guided biopsy targeting in patients with atypical

# **12.** #89: THE ROLE OF MULTIPARAMETRIC RESONANCE IN THE MULTIDISCIPLINARY TEAM FOR PROSTATE CANCER

#### C. Maccagnano<sup>1</sup>, F. Bianchi<sup>1</sup>, M. Corinti<sup>1</sup>, V. Lancini<sup>1</sup>, G.N. Conti<sup>1</sup>

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#### Objective

Multi-Parametric Magnetic Resonance Imaging (MP-MRI) may improve the detection of clinically significant prostate cancer (PCa). Thus, the exam may be extremely useful in the context of multi-disciplinary team (MDT) of prostate cancer unit (PCU). We analyzed the clinical significance of MP-MRI in the context of the PCU of our Centre during 2015. Additionally, we compared our experience with those reported in literature.

#### Materials and Methods

We analyzed the story of patients (pts) followed by PCU, constituted by an Urologist, a Medical Oncologist and a Radiation Oncologist during 2015. All the patients executed MP-MRI. Moreover, we reviewed literature using Medline, Embase and Cochrane Library with the key words: "Prostate Cancer", "Multi-Disciplinary Team ", "Multi-parametric Magnetic Resonance" Results

120 pts with PCa were followed by PCU in 2015 in Our Centre. They all executed mp-MRI. The pts' main features were reported in table 1. The main indication for mp-MRI was surveillance because both of pre-neoplastic lesions, and elevated PSA level and active surveillance protocol itself (Figure 1).

#### Discussions

The clinical utility of MP-MRI, defined as the ability to change the management of the pts was about 57%. The details are reported in table 2. Since its beginning in 2014, the total cost of MP-MRI in the context of PCU was about  $\in$  30.256,8. The mean annual cost was about  $\in$  15.128. We considered these costs as adequate relating to the clinical advantages. According to the most recent literature, mp-MRI plays a fundamental role in the management of the pts by the MTD of PCU.

#### Conclusion

Mp-MRI is an important exam for the diagnosis, therapy and follow-up of pts in the context of PCU. The costs are not so high and well balanced by the clinical advantages. Additional perspectives trials are necessary to confirm these data as well as Specialists dedicated PCa, including members of PCU, an Uro-Radiologist and a Pathologist.

#### Reference

- 1. Lebacle C, Roudot-Thoraval F, Moktefi A, Bouanane M, De La Taille A, Salomon L. Integration of MRI to clinical nomogram for predicting pathological stage before radical prostatectomy. World J Urol. 2016 Dec 19.
- Moghanaki D, Turkbey B, Vapiwala N, Ehdaie B, Frank SJ, McLaughlin PW, Harisinghani M. Advances in Prostate Cancer Magnetic Resonance Imaging and Positron Emission Tomography-Computed Tomography for Staging and Radiotherapy Treatment Planning. Semin Radiat Oncol 2017; 27(1): 21-33.
- . Tsivian M, Gupta RT, Tsivian E, Qi P, Mendez MH, Abern MR, Tay KJ, Polascik TJ. Assessing clinically significant prostate cancer: Diagnostic properties of multiparametric magnetic resonance imaging compared to three-dimensional transperineal template mapping histopathology. Int J Urol. 2016 Nov 8. doi: 10.1111/iju.13251.

#### 13. #87: SALVAGE HIGH INTENSITY FOCUS ULTRASOUND (HIFU) FOLLOWING PRIMARY BRACHYTHERAPY FOR PROSTATE CANCER: CASE REPORT AND LITERATURE REVIEW

#### C. Maccagnano<sup>1</sup>, A. Paulesu<sup>1</sup>, M. Corinti<sup>1</sup>, A. D'Onofrio<sup>1</sup>, G.N. Conti<sup>1</sup>

<sup>1</sup> ASST Lariana Ospedale Sant'Anna (San Fermo della Battaglia)

#### Objective

The treatment of recurrent disease following primary brachytherapy (BT) for localized prostate cancer (PCa) is possible but nothing about this field is described in literature. Theoretical therapeutic options may include salvage prostatectomy, salvage radio-therapy, hormonal therapy, observation and salvage HIFU.

#### Materials and Methods

We report our experience with one patient with PCa treated with BT and retreated with HIFU because of local recurrence.

We search in Medline using the key words "prostate cancer", "prostate barchytherapy", "salvage High Intensity Focus Ultrasound". Results

69 year-old man, treated with BT because of prostatic adenocarcinoma Gleason 3 + 3 in another center. The patient did not describe any short- or long term complications, except erectile dysfunction. PSA progressively increased during years after the procedure, until it reaches 5.35 ng/mL. Thus, the patient executed HIFU. There were no short- or long term complications. The man described mild urgency but no urinary incontinence. The PSA nadir was 0.48 ng/mL, 6 months after the salvage HIFU. The last PSA, 24 months after the treatment, was 0.48 ng/mL. No androgenic blockade was administered. He is still on follow-up. We did not find any paper about the sequential employment of BT and HIFU for the treatment of PCa.

#### Discussions

SEE RESULTS

Conclusion

Salvage HIFU after BT is feasible, without significant short- and long term complications. It allows a good control of PCa,

granting a good quality of life for the patient. More trials are necessary to obtain some definitive conclusions. HIFU represents a chance of curing patients who refused surgery or are preferable not to be administered with androgenic blockade. Reference

- 1. Yutkin V, Ahmed HU, Donaldson I, McCartan N, Siddiqui K, Emberton M, Chin JL. Salvage high-intensity focused ultrasound for patients with recurrent prostate cancer after brachytherapy. Urology 2014; 84(5):1157-62
- 2. Taneja SS. Re: Salvage High-Intensity Focused Ultrasound for Patients with Recurrent Prostate Cancer after Brachytherapy. J Urol 2015; 194(1).
- 3, Uchida T, Shoji S, Nakano M, Hongo S, Nitta M, Usui Y, Nagata Y.High-intensity focused ultrasound as salvage therapy for patients with recurrent prostate cancer after external beam radiation, brachytherapy or proton therapy. BJU Int 2011; 107(3): 378-82.

#### 14. #167: URODYNAMICS PARAMETERS AND METABOLIC SYNDROME: PROSPECTIVE **PILOT STUDY**

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#### Objective

Metabolic syndrome (MetS) is a worldwide and complex disorder with a severe socioeconomics impact due to the high rate of morbidity and mortality [1]. Metabolic syndrome (MetS) is defined by the International Diabetes Federation as a "cluster of the most dangerous heart attack" risk factors. MetS would not only increase the risk of cardiovascular disease, but represents a significative risk factor for cancers HPV infection, erectile dysfunction, and death [2-4]. Also in urology, a significant amount of epidemiological evidence indicates a possible association between MetS and several disorders like male hypogonadism, erectile dysfunction and infertility. Furthermore male patients with MetS seems to reveal a higher incident of low urinary tract symptoms (LUTS) due to developement of benign prostate enlargement (BPE)[5]. Moreover, in literature have been underlined the correlation between METs and the pathophysiology of overactive bladder (OAB). The aim of our study was to evaluate the correlation between METs and urodynamic parameters in a cohort of 81 female patients with lower urinary tract symptoms (LUTS).

#### Materials and Methods

We prospectively enrolled 81 female patients affected by LUTS in two Italian academic centers. All patients were > 18 yrs and presented a history of LUTS with or without incontinence. Patients with neurologic diseases, oncologic disease, previous radio/ chemotherapy or pelvic organ prolapse were excluded from the analysis. All the patients were evaluated with: urological history, bladder diary, blood values (not older than 6 months) and a complete urogynecological and general examination including waist circumference. All data were recorded in a database. All patients underwent urodynamic evaluation according to the ICS Good Urodynamic Practice. Continuous normally distributed variables were reported as mean values and SD; chi square was used to compare categorical data and a p < 0.05 was considered to indicate statistical significance.

Results

According to the IDF Guidelines, 12 female patients was affected by MetS. Regarding LUTS, 28 pts were affected by stress urinary incontinence and 20 by urge incontinence; mean pads per day/used was 1.8 (Table I). At urodynamic evaluation, mean cystocapacity was 386.5 cc and first desire presented at 156 cc; 61 pts showed, moreover, a detrusor overactivity. With regard to preoperative evaluation, presence of prolapse of any type or stress urinary incontinence did not showed a METs correlations (p > 0.05); on the contrary, the presence of urge incontinence was related with METs (p 0.03).

Table I Clinical characteristics of the patients

Similear characteristics of the patients		
Clinical data	Mean	DS ±
HDL (mg/dL)	54.6	16.9
Triglycerids (mg/dL)	113.7	54.6
Fasting glucose (mg/dL)	101.4	25.7
Diastolic Press (mm/Hg)	77.7	10.4
Sistolic pressure (mm/Hg)	124.9	16.7
Waist (cm)	82.8	11.8
Urethral lenght (mm)	19.5	9.6
Volume voided (ml)	299.6	170.3
First desire (ml)	156.0	98.8
Normal desire (ml)	224.4	113.4
Strong desire (ml)	307.9	130.9
Cysto Capacity (ml)	386.5	149.9

Q max (ml/sec)	15.0	9.5
Pad/day (n)	1.8	2.2
Age (years)	62.5	13.4

#### Discussions

The literature regarding MetS and OAB or LUTS in women is sparse and with limited evidences, but MetS is considered a predictor of lower urinary tract symptoms in female patients. A recent systematic review suggests, moreover, that there may be important links between MetS and OAB and components of MetS such as obesity [6]. In our pilot study, we observed a correlation between MetS and urge incontinence. In this pilot study the group size is too small to underline strong evidence but a correlation between OAB wet and MetS could be hypothesized.

#### Conclusion

In literature MetS is a risk factor for OAB. We observed a correlation between MetS and urge incontinence. Further larger RCT's are needed to confirm and validate our observations.

#### Reference

- 1. Isra A, Khurana L. Obesity and the metabolic syndrome in developing countries. J Clin Endocrinol Metab 2008; 93 Supp 1.
- 2. Corona G, Rastrelli G, Morelli A et al. Hypogonadism and metabolic syndrome. J Endocrinol Invest 2011; 34: 557-67.
- 3. Eckel RH, Alberti KG, Grundy SM, Zimmet PZ. The metabolic syndrome. Lancet 2010; 16: 181-3.
- 4. Cornier MA, Dabelea D, Hernandez TL et al. The metabolic syndrome. Endocr Rev 2008; 29: 777-822.
- Mauro Gacci, Giovanni Corona, Linda Vignozzi, Matteo Salvi, Sergio Serni, Cosimo De Nunzio, Andrea Tubaro, Matthias Oelke, Marco Carini and Mario Maggi. Metabolic syndrome and benign prostatic enlargement: a systematic review and meta-analysis. BJU Int 2015; 115: 24–31).
- 6. Bunn F, Kirby M, Pinkney E, Cardozo L, Chapple C, Chester K, Cruz F, Haab F, Kelleher C, Milsom I, Sievart KD, Tubaro A, Wagg A.Is there a link between overactive bladder and the metabolic syndrome in women? A systematic review of observational studies. Int J Clin Pract. 2015 Feb;69(2):199-217.

Comunicazioni 7 - Dulcis in Fundo

:30 - 19:00

# 20 maggio 2017 sala Auditorium

# Video 2 -Bladder Video Show

Moderatori: S. Guaglianone, C. Leonardo, G. Musi

#### 1. #158: UTILIZZO DI PROTAGHI ROBOTIZZATO PER CONFEZIONARE L'ANASTOMOSI VESCICO-URETERALE DURANTE PROSTATECTOMIA RADICALE LAPAROSCOPICA

#### V. Varca<sup>1</sup>, A. Benelli<sup>1</sup>, F. Gaboardi<sup>2</sup>, A. Gregori<sup>1</sup>

- <sup>1</sup> Ospedale G. Salvini, U.O. Urologia (Garbagnate Milanese)
- <sup>2</sup> Ospedale Ville Turro (Milano)

#### Abstract

/ideo **2** - Bladder video show

Lo scopo di questo lavoro è quello di valutare l'utilità di un nuovo portaghi laparoscopico con punta robotizzata nell'eseguire l'anastomosi vescico-uretrale dopo prostatectomia radicale laparoscopica (LRP).

Abbiamo arruolato quaranta pazienti consecutivi randomizzati in 4 gruppi: gruppo A (LRP eseguita da un chirurgo esperto), gruppo B (chirurgia robotica eseguita dallo stesso chirurgo esperto), gruppo C (LRP eseguita da un giovane chirurgo) e gruppo D (LRP eseguita da un altro giovane chirurgo con l'aiuto del portaghi robotizzato). Abbiamo valutato il tempo di anastomosi (TA), l'assenza di leakage, il giorno di rimozione del catetere vescicale, il tasso di complicanze tardive, la continenza urinaria a 3, 6 e 12 mesi.

I nostri dati hanno dimostrato un TA significativamente ridotto nel gruppo C rispetto al D; 3/10 pazienti appartenenti del gruppo C presentavano un leakage, 1/10 pazienti appartenenti il gruppo D hanno prolungato la cateterizzazione. A tre mesi la continenza nei 4 gruppi era del 65%, 63%, 48%, 50%, rispettivamente; a sei mesi è stata dell'86%, 89%, 81%, 87%; infine a un anno è stata 95%, 97%, 93% e 95%.

I nostri dati suggeriscono che il portaghi robotizzato Dèxtèritè costituisce un aiuto tecnologico supplementare alla chirurgia laparoscopica arricchendo un portaghi laparoscopico dei vantaggi del robot.

#### 2. #140: A NEW TECHNIQUE FOR RECONSTRUCTION OF THE BLADDER NECK DURING RADICAL PROSTATECTOMY

#### B. De Concilio<sup>1</sup>, G. Chiapparrone<sup>2</sup>, G. Zeccolini<sup>1</sup>, A.. Celia<sup>1</sup>

<sup>1</sup> Ospedale San Bassiano, S.C. Urologia (Bassano del grappa)

<sup>2</sup> Ospedale di Cattinara, S.C. Urologia (Trieste)

#### Abstract

The technique used for the bladder neck reconstruction during robotic assisted radical prostatectomy (RALP), can influence the continence rate. In this video we present a new technique we have adopted for the reconstruction of the bladder neck: this procedure belongs from gastrointestinal surgery and it is used to close bowel anastomosis according to the technique described by Gambee or O' Conell. This technique consists in a single-layer through-and-through anastomosis: the suture goes from serous to mucosal surface, back into the mucosa on the same side of the incision, out into the middle of the cut surface to be approximated, across the incision into the wound edge opposite, down into gut lumen, back through the mucosa and through the wall to the serous surface and a tie with the tail of the suture across the incision. This technique allows to create a bladder neck more similar to the native one if compared with the anterior tennis racket technique and may lead to improved functional outcomes. An improved and more accurate reconstruction of the bladder neck may lead to more favourable functional outcome, this particular technique has never been utilized before to reconstruct the bladder neck. Urologists should consider to adopt it to increase the early continence rate.

<u>'ideo 2 - Bladder video show</u>

#### **3.** #64: SINGLE SETTING 3D MRI-US GUIDED FROZEN SECTION AND FOCAL CRYOABLATION OF THE INDEX LESION: PROOF OF PRINCIPLE AND INITIAL SERIES

F.. Lugnani<sup>1</sup>, L.. Misuraca<sup>1</sup>, M. Ferriero<sup>1</sup>, V. Panebianco<sup>2</sup>, M. Del Monte<sup>2</sup>, S. Sentinelli<sup>3</sup>, M. Gallucci<sup>1</sup>, G. Simone<sup>1</sup>

<sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)

<sup>2</sup> Sapienza Università di Roma, Dipartimento di Radiologia (Roma)

<sup>3</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Anatomia Patologica (Roma)

Abstract

In this video we first report reliability of frozen section for the diagnosis of prostate cancer combined with a real time 3D focal cryoablation of the index lesion.

NaviGo system provided a real time 3D monitoring of the index lesion, while focal cryoablation is performed using the Endocare CryoCS. V-probes are used to tailor the ice ball size to the treatment area. Systematic prostate biopsy is performed to confirm absence of cancer outside the index lesion. Complications, functional and early oncologic outcomes are reported.

This initial report includes 3 patients with a clinical suspicious of prostate cancer based on PSA and a single MRI lesion with a PIRADS score 4 or 5. All patients denied consent to any radical treatment.

Prostate cancer diagnosis was histologically confirmed in all 3 patients by frozen sections. Postoperative course was uneventful and all patients were discharged on first postoperative day.

Mean PSA values decreased from 12.51 (baseline) to 1.72 ng/mL at 3-mo evaluation. Three-mo postoperative MRI images showed complete ablation of the index lesion in all patients.

Urinary continence and erectile function were preserved in all patients.

Achieving diagnosis and focal treatment of prostate cancer index lesion in a single session is a further step towards a minimally invasive and patient tailored approach.

#### 4. #135: URINARY CONTINENCE AFTER MINIMALLY INVASIVE RADICAL PROSTATECTOMY: INTRAOPERATIVE TECHNIQUES TO IMPROVE SURGICAL OUTCOME

R. Nucciotti<sup>1</sup>, F.M. Costantini<sup>1</sup>, A. Bragaglia<sup>1</sup>, F. Mengoni<sup>1</sup>, F. Viggiani<sup>1</sup>, G. Passavanti<sup>1</sup>, I. Farnetani<sup>1</sup>, V. Pizzuti<sup>1</sup>

<sup>1</sup> Ospedale Misericordia, U.O. Urologia (Grosseto)

#### Abstract

Robot-assisted radical prostatectomy has been shown to have comparable and possibly improved postoperative continent rates compared with retropubic and laparoscopic radical prostatectomy. However, postoperative urinary incontinence has remained one of the most bothersome postoperative complications. The basic concept of the intraoperative technique to improve postoperative urinary continence is to maintain as normal anatomical and functional structure in the pelvis as possible. Therefore, improved knowledge of the normal structure in the pelvis should lead to a greater understanding of the pathophysiology of urinary incontinence, and further development of intraoperative techniques to improve the outcomes of urinary continence. It might be necessary to carry out three steps to realize improvement of the early return of urinary continence after robot-assisted radical prostatectomy: 1) preservation (bladder neck, neurovascular bundle, puboprostatic ligament, pubovesical complex, and/ or urethral length, etc.); 2) reconstruction (posterior and/or anterior reconstruction, and/or reattachment of the arcus tendineus to the bladder neck, etc.). On the basis of these steps, further modifications during robot-assisted radical prostatectomy should be developed to improve urinary continence and quality of life after robot-assisted radical prostatectomy.

# 5. #63: ANATOMIC ROBOT ASSISTED RADICAL CYSTECTOMY IN FEMALE: STEP BY STEP TECHNIQUE

G. Simone<sup>1</sup>, F. Minisola<sup>1</sup>, L.. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, M. Ferriero<sup>1</sup>, S. Guaglianone<sup>1</sup>, M. Gallucci<sup>1</sup>

<sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)

#### Abstract

Robot assisted radical cystectomy (RARC) in female is a challenging procedure. We describe step by step surgical technique, presenting perioperative outcomes of a 66 yr-old female patient with a cT1/N0/M0 high grade recurrent bladder cancer who underwent RARC with totally intracorporeal orthotopic neobladder (iON).

Key steps were: ligation of gonadic pedicles, dissection of umbilical and uterine arteries and the ureters, dissection of bladder pedicles, opening of the vagina and creation of the plane between vagina and bladder. Urethra was cut and Foley catheter secured with the entire specimen into an Endocatch bag to minimize any urine spillage. Specimen was removed through the vagina. Extended pelvic lymph node dissection. Vagina was sutured and a peritoneal flap used as posterior neobladder support.

Operative time was 295 minutes, EBL was 250 mL, time to flatus was 3 days. Hemoglobin and creatinine at discharge were 10.3 g/dL and 0.76 mg/dL, respectively. Pathologic stage was pT0 pN0. Nodes removed were 26. Postoperative course was uneventful. Daytime continence was recovered after 45 days.

A meticulous dissection of bladder vascular suppliers, a natural orifice specimen retrieval and the ease of posterior neobladder support, thanks to a perfect vision of the small pelvis anatomic structures, may contribute to minimize invasiveness, improving outcomes of RARC in female patients.

- Bladder video show

#### **6.** #69: INTRACORPOREAL PARTLY STAPLED PADUA ILEAL BLADDER USING ROBOTIC STAPLERS: SURGICAL TECHNIQUE, PERIOPERATIVE AND EARLY FUNCTIONAL OUTCOMES OF A PROSPECTIVE SINGLE CENTER SERIES

G. Simone<sup>1</sup>, S. Guaglianone<sup>1</sup>, F. Minisola<sup>1</sup>, M. Ferriero<sup>1</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, M. Gallucci<sup>1</sup>

<sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)

#### Abstract

In this prospective study (www.clinicaltrials.gov NCT02665156) we assessed the feasibility, safety and time efficiency of RARC with intracorporeal partly stapled "Padua Ileal Bladder" using robotic staplers.

Twenty-two consecutive patients with muscle invasive or high grade recurrent urothelial bladder carcinoma were treated between March 2016 and October 2016. Baseline, perioperative and follow-up data were prospectively collected. Key steps of surgery include: selection of 45 centimeters of ileum and division of the distal and proximal part of the ileum using robotic staplers; detubularization of the ileal loop; creation of the neo-bladder neck with one stapler load; double folding of the proximal ileal loop using two-three stapler loads; hand-sewing of the posterior neobladders wall with barbed suture; uretero-ileal anastomoses on JJ stents with a modified split-nipple technique; urethroneobladder anastomosis is performed according to Van Velthoven; hand-sewing of the anterior neobladders wall with barbed suture.

Median total operative time ("skin to skin") was 270 minutes (IQR:255-295). Median hospital stay was 9 days (IQR 8-11). Overall complication rate was 40.1% and overall severe complication incidence was 18.2%; at a median follow-up of 3 months, no patients developed recurrence, daytime continence rate was 59%.

We first report safety, feasibility and time efficiency in the use of robotic staplers to create orthotopic neobladder.

#### 7. #66: ROBOTIC INTRACORPOREAL "PADUA ILEAL BLADDER": SURGICAL TECHNIQUE, PERIOPERATIVE, ONCOLOGIC AND FUNCTIONAL OUTCOMES

G. Simone<sup>1</sup>, R. Papalia<sup>2</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, F. Minisola<sup>1</sup>, M. Ferriero<sup>1</sup>, G. Vallati<sup>3</sup>, S. Guaglianone<sup>1</sup>, M. Gallucci<sup>1</sup>

<sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)

- <sup>2</sup> Università Campus Biomedico, Dipartimento di Urologia (Roma)
- <sup>3</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Radiologia (Roma)

#### Abstract

Robot-assisted radical cystectomy (RARC) with intracorporeal neobladder reconstruction is a challenging procedure. The aim of this video is to illustrate our technique for RARC and totally intracorporeal orthotopic "Padua Ileal Bladder".

From August 2012 to February 2014, 45 patients underwent RARC, extended pelvic lymph node dissection and intracorporeal partly stapled neobladder at a single tertiary referral centre. Surgical steps are demonstrated in the accompanying video. Demographics, clinical and pathological data were collected. Perioperative, 2-yr oncologic and 2-yr functional outcomes were reported. Intraoperative transfusion or conversion to open surgery was not necessary in any case and intracorporeal neobladder was successfully performed in all 45 patients. Median operative time was 305 minutes (IQR 282-345). Median estimated blood loss was 210 ml (IQR 50-250). Median hospital stay was 9 days (IQR 7–12). The overall incidence of perioperative, 30-d and 180-d complications were 44.4%, 57.8% and 77.8%, respectively, while severe complications occurred in 17.8%, 17.8% and 35.5%, respectively. Two-yr daytime and night-time continence rates were 73.3% and 55.5%, respectively. Two-yr disease free survival, cancer specific survival and overall survival rates were 72.5%, 82.3% and 82.4%, respectively.

Our experience supports the feasibility of totally intracorporeal neobladder following RARC. Operative times and perioperative complication rate are likely to be reduced with increasing experience.

## 8. #132: THE USE OF ROBOTIC SURGICAL STAPLING DEVICES DURING MINIMALLY INVASIVE URINARY DIVERSION

R. Nucciotti<sup>1</sup>, F.M. Costantini<sup>1</sup>, F. Viggiani<sup>1</sup>, F. Mengoni<sup>1</sup>, A. Bragaglia<sup>1</sup>, G. Passavanti<sup>1</sup>, I.. Farnetani<sup>1</sup>, V. Pizzuti<sup>1</sup>

<sup>1</sup> Ospedale Misericordia, U.O. Urologia (Grosseto)

Abstract

To date there exists no published study examining the safety and efficacy of the EndoWrist 45 (Intuitive Surgical, Inc.) robotic stapler. We compared outcomes between the robotic and comparable laparoscopic stapler in robotic-assisted neobladder and ileal-conduit. Advantages of the robotic stapler include large range of motion and 90° of articulation, which may provide a benefit when using the stapler in difficult areas like the pelvis. The robotic stapler has a comparable level of safety as a 45 mm laparoscopic stapler and is more cost effective.

The video shows how to use robotic stapler.

9:00 - 10:00

# 21 maggio 2017 sala Auditorium

# Video 3 -Io Robot

Moderatori: G. Malossini; G. Taverna; M. Amenta

88

#### 1. #68: ROBOTIC PARTIAL ADRENALECTOMY FOR SYMPTOMATIC ALDOSTERONE-SECRETING ADENOMAS: TECHNIQUE AND OUTCOMES

G. Simone<sup>1</sup>, G. Tuderti<sup>1</sup>, L. Misuraca<sup>1</sup>, A. Celia<sup>2</sup>, B. De Concilio<sup>2</sup>, A. Stigliano<sup>3</sup>, F. Minisola<sup>1</sup>, M. Ferriero<sup>1</sup>, S. Guaglianone<sup>1</sup>, M. Gallucci<sup>1</sup>

<sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)

<sup>2</sup> Ospedale "San Bassiano", Unità di Urologia (Bassano del Grappa)

<sup>3</sup> Ospedale "Sant' Andrea", Dipartimento di Medicina Clinica e Molecolare (Roma)

#### Abstract

Partial adrenalectomy for functioning adrenal masses is significantly underused.

We describe surgical technique and present perioperative and functional outcomes of a two center series including nine symptomatic aldosterone-secreting adenomas treated with robotic partial adrenalectomy (RPA) from June 2014 to October 2016 Surgical steps include: Incision of Gerota's fascia at the level of the upper pole of the kidney and exposure of the adrenal gland; careful dissection of the medial aspect of the gland, preserving adrenal vessels with a selective control of vessels feeding the adrenal mass; progressive dissection of the mass with a pure enucleation technique in order to maximize the amount of adrenal parenchyma spared; specimen retrieval into an endocatch bag; hemostasis and closure of adrenal defect with a sliding clip technique.

Two cases are demonstrated in the video.

Baseline, perioperative and early functional outcomes data are reported.

All cases were completed robotically. Intraoperative blood loss was negligible, postoperative course was uneventful in all cases, except for 1 patient who required antibiotic therapy for post-operative fever (Clavien grade 2 complication). Median hospital stay was 3 days (IQR: 2-3).

Patients became normotensive immediately after surgery. Aldosterone and plasmatic renin activity levels returned within the normal range as well.

Robotic Partial Adrenalectomy is a safe and feasible technique.

#### 2. #71: ROBOTIC PYELOLITHOTOMY FOR A STAGHORN STONE OF KIDNEY

#### A.. Serao<sup>1</sup>, P. Vota<sup>1</sup>, A. Di Stasio<sup>1</sup>

<sup>1</sup> Azienda Ospedaliera SS Antonio e Biagio (Alessandria)

#### Abstract

The video shows a case of a staghorn stone of the right kidney in a female patient 48 years old. The patient complained of recurrent infections and flank pain. The stone occupied entirely the pelvis and most of the calyces. There was no evidence of ureteropelvic

domenica 21 maggio 2017

junction obstruction. Two minor calculi were in the mid calyces. The stone was approched by robotic procedure. The renal pelvis was prepared and opened with V incision. Marked edema and hyperemia were present. The stone filling the entire pelvis and the calyces was dislocated and removed. During maneuver part of stone in the upper calyx ruptured and was removed apart. The operative time was about 120 minutes . The two residual minor calculi were approched in a second time by endourological procedure.

There was no post operative complication. The patient was discharged after two days. Double J was removed at the third month after endoscopic laser lithotripsy of two minor calculi. TC control after three months demonstrated the absence of residual stone and a normal configuration of the urinary tract. In selected cases of large renal staghorn calculi the robotic surgery is very effective. The specific articulation and the finest movements of the robotic arms allow a complete removal of stone and a precise reconstruction of the urinary tract.

# **3.** #129: A NOVEL TECHNIQUE FOR ROBOTIC PROSTATIC ADENOMECTOMY: AN EVOLUTION OF TRANSDOUGLAS ROBOTIC PROSTATECTOMY

#### B. De Concilio<sup>1</sup>, G. Zeccolini<sup>1</sup>, P. Silvestre<sup>1</sup>, A. Caruso<sup>1</sup>, A. Celia<sup>1</sup>

<sup>1</sup> Ospedale San Bassiano, S.C. Urologia (Bassano del Grappa)

#### Abstract

Robotic prostate adenomectomy has nowadays an unclear role in the treatment of prostatic enlargement because of the leading role of endoscopic treatment. Only few reports are known about the use of robotic surgery for prostate benign enlargement. Transdouglas approach has been tested in order to perform prostatic adenomectomy for severe benign prostatic enlargement. Four 8 mm robotic trocars and one 12 mm trocar for the assistant are placed, as during robotic assisted radical prostatectomy. Transdouglas approach is performed in order to perform bladder neck sparing adenomectomy. The video shows the opening of the prostate capsule from below, according to the access to the prostate described by Bocciardi. The adenoma, together with the middle lobe, is split by the capsule from the base to the veru montanum. The adenomectomy so performed by transdouglas access is easy and quick. Blood loss is almost undetectable because the dissection is anatomical, helped by great vision and assisted by bipolar haemostays. After the enuclation of the adenoma, the bladder neck is sutured to the prostatic capsule and then it is closed by double layer watertight suture. Finally the peritoneum is sutured. Robotic Transdouglas prostate adenomectomy is safe and effective minimally invasive treatment for benign prostatic enlargement.

## **4.** #160: ROBOTIC VESICO-VAGINAL FISTULA REPAIR WITH BOVINE PERICARDIAL PATCH INTERPOSITION

G. Pomara<sup>1</sup>, L. Tesi<sup>1</sup>, R. Baldesi<sup>1</sup>, M. Santarsieri<sup>1</sup>, F. Francesca<sup>1</sup>

<sup>1</sup> AOUP, U.O.Urologia II (Pisa)

Abstract

A vesico-vaginal fistula (VVF) is a fistulous tract that connects bladder and vagina, causing

urine leakage via the vagina. Iatrogenic postoperative VVF is the most common case.

Classically, when treating a VVF via the abdominal route, an abdominal flap is mobilized and interposed between the bladder and the vagina. In our video, we describe a robotic VVF repair technique with bovine Pericardial Patch interposition instead of omental flap for a vaginal vault-located fistula. Duration of surgery was 115 min, estimated blood loss was <50 ml. The postoperative course was uneventful. At 40 days follow-up, which included clinical and cystographic examinations, the patient had not experienced any recurrence. In our opinion bovine Pericardial Patch interposition after a V-lock suturing technique using continuous sutures for vaginal closure and for perpendicular bladder closure is a safety procedure alternative to omental flap, reducing operating time and possible complications related to accidental peritoneal injuries.

# **5.** #70: ROBOTIC URETERAL REIMPLANTATION FOR URETERO-ENTERIC ANASTOMOTIC STRICTURES IN DIFFERENT URINARY DIVERSIONS

### G. Simone<sup>1</sup>, C. Fay<sup>2</sup>, D. Freitas<sup>2</sup>, S. Chopra<sup>2</sup>, L. Misuraca<sup>1</sup>, G. Tuderti<sup>1</sup>, M. Ferriero<sup>1</sup>, F. Minisola<sup>1</sup>, S. Guaglianone<sup>1</sup>, I.S. Gill<sup>2</sup>, A. Berger<sup>2</sup>, M. Desai<sup>2</sup>, A. Goh<sup>3</sup>, M. Aron<sup>2</sup>

- <sup>1</sup> Istituto Nazionale Tumori "Regina Elena", Unità di Urologia (Roma)
- <sup>2</sup> Keck School of Medicine, University of Southern California, USC Institute of Urology ( Los Angeles)
- <sup>3</sup> Methodist Hospital, Dept. of Urology (Houston)

#### Abstract

In this video we describe the techniques and outcomes of robotic ureteral reimplantation for ureteroenteric anastomotic strictures in different UDs. From April 2013 to July 2016 12 patients underwent robotic ureteral reimplantation in three tertiary referral centers. Out of 12 patients, 7 had orthotopic neobladder, 4 ileal conduit and 1 Indiana pouch. All patients had prior robot assisted radical cystectomy and all but one had intracorporeal UD. Surgical steps include a careful ureteral dissection on the surface of the ureter/s to avoid injurying the iliac vessels, spatulation of the ureters, JJ stent insertion and finally uretero-ileal anastomosis. Three cases (one ileal conduit, one neobladder and one Indiana Pouch) are demonstrated in the video. Baseline, perioperative and functional outcomes data are reported. Mean stricture length was 2 cm (range 0.5-3), median operative time was 201 minutes (83-310) and median length of stay was 2 days (2-12). Intraoperative blood loss was negligible. Four patients experienced a Clavien grade 2 complication (urinary tract infection requiring antibiotics). At a mean follow-up of 1-yr no patient developed recurrence.

The suboptimal success rate of endoscopic treatment, the minimally invasiveness of robotic surgery and the high success rate of robotic repair may contribute to an increased adoption of this surgical option in the near future.

# **6.** #111: REIMPIANTO URETERALE ROBOTICO. INIZIALE ESPERIENZA IN UN CENTRO DI ALTA SPECIALITÀ LAPAROSCOPICA

#### F.. Chiancone<sup>1</sup>, M. Fedelini<sup>1</sup>, A. Oliva<sup>1</sup>, D. Mattace Raso<sup>1</sup>, D.. Di Lorenzo<sup>1</sup>, P. Fedelini<sup>1</sup>

<sup>1</sup> AORN A. Cardarelli, U.O.C. Urologia (Napoli)

#### Abstract

Il video mostra il caso di una stenosi ureterale da danno iatrogeno dell'uretere pelvico in una giovane donna. La paziente viene posizionata in posizione supina, con un Trendelemburg di circa 20°. Viene effettuato un primo accesso open per un trocar robotico sulla linea mediana a 2cm dall'ombelico verso l'appendice xifoidea. Sulla linea trasversale passante per il primo trocar vengono posizionati altri 2 trocar da 8 mm robotici (uno a destra e uno a sinistra). Viene posizionato un trocar ausiliario robotico a due centimetri dalla SIAS sinistra lungo una linea che congiunge la SIAS al trocar centrale. Viene posizionato un trocar airseal da 8 mm a due centimetri dalla SIAS destra lungo una linea che congiunge la SIAS al trocar centrale. Dopo aver liberato il sigma dalle sue aderenze con l'ovaio, il mesosigma viene inciso fino a raggiungere la regione in cui l'uretere incrocia i vasi iliaci. Si procede ad isolamento dell'uretere e si incide a tutto spessore la regione cupolare vescicale dove si effettuerà il reimpianto in Vicryl 5-0, su stent doppio J. La sutura in due emicontinue viene effettuata a tutto spessore, comprendendo anche la mucosa vescicale ed alcuni punti di rinforzo vengono posizionati al termine della procedura.

/ideo 3 - lo Robot

# 21 maggio 2017 sala Pacinotti

# 9:00 - 10:00

# Video 4 -L'arte della ricostruzione

Moderatori: E. Palminteri; G. Zarrelli; R. Nucciotti

#### 1. #261: URETEROCISTONEOSTOMIA LAPAROSCOPICA DESTRA CON LEMBO DI BOARI PER STENOSI URETRALE > 8 CM

#### A. Polara<sup>1</sup>, Z. Zukerman<sup>1</sup>, L. Aresu<sup>1</sup>, G. Grosso<sup>1</sup>

<sup>1</sup> Casa di Cura Pederzoli (Peschiera del Garda)

#### Abstract

Il video descrive il trattamento laparoscopico di una stenosi ureterale destra in una donna di 65 anni.

La stenosi dell'uretere, secondaria ad intervento chirurgico di sigmoidectomia, appendicectomia, linfoadenectomia lomboaortica e pelvica effettuato nel Gennaio 2016 per recidiva di carcinoma ovarico, è stata valutata mediante TC addome completo e pielografia ascendente e transnefrostomica, con misurazione di soluzione di continuo ureterale destra > 8 cm.

E' stata posta indicazione al trattamento laparoscopico mediante ureteroneocistostomia con lembo vescicale, dopo tentativi infruttuosi di posizionamento stent ureterale dx. Il video descrive l'isolamento dell' uretere e la mobilizzazione della vescica. Per la soluzione di continuo rilevata, è stato necessario psoizzare la vescica. Si descrive l'incisione di lembo vescicale, l'anastomosi ureterovescicale del piatto posteriore, lo stenting retrogrado intracorporeo, la tubularizzazione del lembo e la prova di tenuta.

I tempi operatori sono stati 150 min, le perdite ematiche intraoperatorie 100ml. In IV giornata è stata eseguita cistografia ed è stato rimosso il catetere vescicale. La paziente è stata dimessa in VI giornata postoperatoria dopo rimozione del drenaggio. Lo stent ureterale è stato rimosso in XXVIII giornata postoperatoria. La contrastografia mostra la riconfigurazione vescicale e

l'integrità delle alte vie escretrici, in paziente asintomatica.

#### 2. #110: PIELOPLASTICA VIDEOLAPAROSCOPICA ROBOT-ASSISTITA SINISTRA. INIZIALE ESPERIENZA

M. Fedelini<sup>1</sup>, C. Meccariello<sup>1</sup>, F. Monaco<sup>1</sup>, F. Chiancone<sup>1</sup>, R. Giannella<sup>1</sup>, P. Fedelini<sup>1</sup>

<sup>1</sup> AORN A. Cardarelli, U.O.C. Urologia (NAPOLI)

#### Abstract

Il video mostra uno dei nostri primi interventi chirurgici di correzione della stenosi del giunto pielo-ureterale effettuato con l'ausilio del robot da Vinci XI. il paziente viene posizionato in decubito laterale, con una spezzatura del bacino di circa 10 gradi. -Viene effettuato un accesso open all'incrocio tra la linea ombelicale trasversa e la pararettale. Introdotto il primo trocar robotico da 8mm per l'ottica, si posizionano in visione sulla linea pararettale alta e bassa e a circa 7-8 cm dal primo, altri due trocar per l'operatività robotica. Il trocar per il sistema AerSeal da 8mm viene posizionato tra il trocar dell'ottica e il trocar posizionato sulla pararettale bassa, quasi a ridosso della linea xifopubica. Quando possibile preferiamo effettuare un isolamento "in situ" del giunto; in questo caso clinico specifico, il paziente presentava una pelvi anteriorizzata e l'uretere decorreva a ridosso del polo inferiore del rene. Per cui, prima di procedere alla pieloplastica, è stato effettuato anche l'isolamento del polo inferiore del rene. Viene ricostruito prima il piatto posteriore in Vicryl 5-0, successivamente lo stent viene posizionato per via retrograda e viene conclusa la pieloplastica con la ricostruzione del piatto anteriore in Vicryl 5-0.

/ideo 4 - L'arte della ricostruzione

# domenica 21 maggio 2017

# **3.** #205: ANTERIOR-APICAL SINGLE-INCISION MESH SURGERY (SIMS) IN THE TREATMENT OF ANTERIOR VAGINAL WALL PROLAPSE, OUR EXPERIENCE

#### B.C. Gentile<sup>1</sup>, G. Mirabile<sup>1</sup>, P. Tariciotti<sup>1</sup>, R. Giulianelli<sup>1</sup>, L. Albanesi<sup>1</sup>, G. Rizzo<sup>1</sup>, M. Buscarini<sup>2</sup>

<sup>1</sup> Nuova Villa Claudia (Roma)

<sup>2</sup> Campus Biomedico (Roma)

#### Abstract

Thirty-five patients underwent surgery to treat their symptoms of POP (> stage II). The primary objectives were the anatomical correction of anterior POP (> stage II), and resolution of cervico-urethral obstruction with elevated post-void residual assessed prior to surgery by means of urodynamic testing. Thirty-five women with cystocele (15 stage III, 20 stage IV), underwent surgery using the single-incision technique via the transvaginal route. The intermediate follow-up was two years. Restorelle SmartMesh with the Digitex suture delivery system via a single-incision technique was used in all patients. All patients showed a significant improvement in terms of anatomical outcome after prolapse surgery (p <0.05), and there were no recurrences requiring further surgical intervention. The anatomical success coefficient was 97.7% with a significant improvement in quality of life (p <0.0001) and a significant reduction in post-void residual. There was a simultaneous significant improvement in POPDI-6, UDI-6, IIQ-7, and PISQ-12 scores after surgery. There were no cases of mesh dislocation. No de novo dyspareunia was reported. No mesh extrusion has been reported to date. The Anterior-apical single-incision mesh surgery is an evolution of the prolapse's surgery. It have minor complications and the results are good and durable in a long time.

#### **4.** #141: RICOSTRUZIONE ESTETICA DEL PENE IN PAZIENTE ADULTO CON IPOSPADIA COMPLICATA

#### E.. Palminteri<sup>1</sup>, E. Berdondini<sup>2</sup>, G. Cucchiarale<sup>3</sup>, G. Di Pierro<sup>4</sup>, N. Ghidini<sup>5</sup>, L. Gatti<sup>5</sup>, G. Ferrari<sup>5</sup>

- <sup>1</sup> Centro di Chirurgia Uretrale-Genitale, Arezzo Humanitas Cellini, Torino (Torino)
- <sup>2</sup> Centro di Chirurgia Uretrale-Genitale, Arezzo Humanitas Cellini, Torino (Torino)
- <sup>3</sup> Humanitas Cellini, Unità di Urologia (Torino)
- <sup>4</sup> Università La Sapienza (Roma)
- <sup>5</sup> Hesperia Hospital, Unità di Urologia (Modena)

#### Abstract

Il Video mostra i concetti di riparazione uretrale ed estetica del pene in un paziente adulto con riparazione fallita di ipospadia nell'infanzia.

Al momento dell'intervento il paziente presentava un meato ipospadico residuo ed un piatto uretrale distale ampio dopo innesto di cute prepuziale avvenuto durante un precedente intervento.

Il nostro intervento mostra la ricostruzione dell'uretra distale impiegando un lembo cutaneo secondo Mathieu.

Il Video inoltre mostra la creazione del neomeato e la preparazione delle ali glandari con lo scopo di ottenere quello che è il sogno di molti pazienti con Ipospadia fallita: la ricostruzione uretrale combinata ad una ricostruzione estetica del glande e del meato che si avvicini quanto più possibile ad un "pene normale".

#### 5. #180: VENTRAL-LATERAL ONLAY URETHROPLASTY USING BUCCAL MUCOSA GRAFT

#### A. Ruffo<sup>1</sup>, F. Trama<sup>2</sup>, L. Romis<sup>1</sup>, G. Di Lauro<sup>1</sup>, G. Romeo<sup>2</sup>, F. Iacono<sup>2</sup>

- <sup>1</sup> Ospedale Santa Maria delle Grazie (Pozzuoli)
- <sup>2</sup> Università di Napoli Federico II (Napoli)

#### Abstract

In questo video mostreremo un intervento di uretroplastica con innesto ventrale e laterale di mucosa buccale in un paziente con stenosi recidivante dell'uretra bulbare.

Il paziente era già stato sottoposto in altri centri a tre interventi di uretrotomia secondo Sachse e diversi tentativi di dilatazioni uretrali. Si pratica un primo tempo endoscopico per visualizzare la stenosi utilizzando un ureteroscopio e si inserisce un filo guida per facilitare il ritrovamento del lume uretrale stenotico una volta inciso il piatto uretrale.

L'incisione viene effettuata a livello perineale. Si procede all'apertura della fascia di Colles e si incide medialmente il muscolo bulbo-spongioso. Viene così esposta l'uretra bulbare. Si pratica un'incisione ventrale fino a repertare il filo guida.

L'incisione effettuata è di circa 5 cm fino al raggiungimento di mucosa uretrale sana. Si procede a prelevare un graft di mucosa buccale dalla guancia sinistra del paziente. Il difetto viene chiuso in sutura continua in Vicryl 5.0.

Si appone un catetere Foley Ch 16 in silicone che verrà tenuto per due settimane. Si sutura il graft lateralmente e ventralmente con due suture continue in Vicryl 6.0.

Il corpo spongioso dell'uretra viene richiuso sul graft. Chiusura del muscolo bulbo-spongioso, della fascia di Colles e del tessuto grasso sottocutaneo. Cute suturata in punti staccati Vicyil 5.0.

9:00 - 10:00

# 21 maggio 2017

## sala **Fermi**

# Video 5 -Tiriamo le somme sui calcoli

Moderatori: S. Ferretti; F. Longo; P. Mastrangelo

# **1.** #130: URETEROPIELOSCOPIA RIGID AND FLEXIBLE: SIMPLIFICATION OF THE TECHNIQUE IN OUR EXPERIENCE

S. Marinacci<sup>1</sup>, G. Palumbo<sup>1</sup>, G.. Caretto<sup>1</sup>, P. Cantelmo<sup>1</sup>, A. Filoni<sup>1</sup>

<sup>1</sup> Ospedale "Vito Fazzi", U.O.C. Urologia (Lecce)

#### Abstract

/ideo **5** - Tiriamo le somme sui calcoli

ureteropieloscopy rigid and flexible: simplification of the technique according to our experience

The authors suggest some maneuvers to simplify the ureteropieloscopy diagnostic and therapeutic procedure that can reduce: 1) execution times, 2) minor urethral trauma, 3) reduction in the risk of dislocamneto rail, 4) use of simplified instrumentation

#### 2. #151: NEFROLITOTOMIA PERCUTANEA E CISTOLITOLAPASSI DI STENT URETERALE CALCIFICO IN RENE TRAPIANTATO

#### G. Deiana<sup>1</sup>, M. Roscigno<sup>1</sup>, L.F. Da Pozzo<sup>1</sup>

<sup>1</sup> ASST Papa Giovanni XXIII (Bergamo)

#### Abstract

Presentiamo il caso di un uomo di 64 anni con stent ureterale calcifico in rene trapiantato. Il paziente sottoposto a trapianto renale e posizionamento di stent ureterale a tutela dell'anastomosi uretero-vescicale 8 mesi prima, perso al follow up dal centro di riferimento, giungeva alla nostra osservazione per sintomatologia disurica irritativa e macroematuria. La TC addome mostrava la presenza di uno stent ureterale calcifico a livello del ricciolo situato in pelvi ed in vescica ed alcune calcificazioni segmentarie lungo il corpo dello stent medesimo. Descriviamo la strategia terapeutica utilizzata per la rimozione dello stent ureterale calcifico mediante litotrissia vescicale per via transureteroscopica, nefrolitotrissia ed estrazione dello stent per via percutanea ottenendo la bonifica completa della via escretrice in tempo unico. La procedura è stata priva di complicanze ed ha consentito di salvaguardare la funzione del rene trapiantato.

#### **3.** #171: ECIRS: A NEW PROPOSAL FOR THE PATIENT POSITION

W. Giannubilo<sup>1</sup>, M. Diambrini<sup>1</sup>, B. Azizi<sup>1</sup>, C. Scaldazza Vecchioli<sup>1</sup>, P. Fulvi<sup>1</sup>, V. Ferrara<sup>1</sup>

<sup>1</sup> Ospedale Carlo Urbani, U.O.C. Urologia (Jesi)

#### Abstract

Intrarenal Combined Endoscopic Surgery (ECIRS) is a combination between retrograde intra-renal (RIRS) and percutaneous nephrolithotripsy (PCNL) surgery. It is a very effective technique to treat: complex renal stones and contextual ureteral ones, in case of uretero-pelvic junction obstruction. Most important things to perform this procedure are: surgical instruments, patient's position, side of kidney puncture/dilation, intracorporeal lithotripsy, nephrostomy/stenting. Valdivia Uria – Galdakao modified position is milestone to the technique development, according to the undoubted surgical and anesthetic advantages. The video shows our procedure to perform ECIRS, using a new modified position, which in our experience can allows:

- patient in supine position, avoiding his 30 ° inclination on the operatory table

- respect of anatomical access to the kidney

domenica 21 maggio 2017

– more space for the surgeon to perform the procedure

- increased chance to spontaneous leaking gravity of stones fragments

#### 4. #258: CALICOTOMIA SINISTRA LOMBOSCOPICA PER IDROCALICE LITIASICO

#### A. Polara<sup>1</sup>, Z. Ziv<sup>1</sup>, G. Grosso<sup>1</sup>

<sup>1</sup> Casa di Cura Pederzoli (Peschiera del Garda)

#### Abstract

Presentiamo il trattamento di un paziente di 48 anni, affetto da coliche renali a sinistra ed IVU ricorrenti, con riscontro TC di litiasi renale sinistra in idrocalice superiore sinistro. E' stata posta indicazione al trattamento laparoscopico del caso clinico. Il video descrive la sede dei trocars, la preparazione dello spazio di lavoro retroperitoneale e l'isolamento parziale del polo superiore del rene sinistro, l'incisione della corticale renale assottigliata, la litolapassi con pinza. Attraverso cateterino ureterale preventivamente posizionato, si inietta indaco di carminio, con individuazione del collettore puntiforme del calice superiore, che viene suturato. Segue prova di tenuta idraulica negativa. Il tempo operatorio è stato di 80 minuti, sono state registrate perdite ematiche pari a 50 ml. L'emoglobina preoperatoria è stata 15.4, in I giornata postoperatoria 14.6. La creatininemia preoperatoria è stata 1.0, in I giornata 0.8. Al paziente è stato rimosso il catetere ed il cateterino ureterale in I giornata. Le dimissioni sono state in II giornata dopo rimozione del drenaggio. L'ecografia di controllo a 3 mesi evidenzia assenza di ectasia calico pielica, in paziente asintomatico con urine abatteriche.

