Società Italiana di Urodinamica
Continenza Neurourologia Pavimento Pelvico

e-SIUD 2020

INTERACTIVE & LIVE CONGRESS

4-6 DICEMBRE 2020

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Poster Non Discussi - Abstract Book

1. CORRESPONDENCE BETWEEN URINARY SYMPTOMS OF UNDERACTIVE BLADDER AND DIAGNOSIS OF DETRUSOR UNDERACTIVITY ACCORDING TO THE MAIN URODYNAMIC DIAGNOSTIC CRITERIA IN WOMEN UNDERWENT MIDDLE URETHRAL SLING

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INTRODUCTION AND AIM OF THE STUDY

The latest symptomatic definition of underactive bladder (UAB) proposed by a Working Group set up by the ICS in 2016 is: “underactive bladder is characterized by a slow urinary stream, hesitancy and straining to void, with or without a feeling of incomplete bladder emptying and dribbling, often with storage symptoms”. Aim of this study was to compare the main urinary symptoms of UAB to those of detrusor underactivity (DUA) stratified according to the main urodynamic (UDS) diagnostic criteria in women underwent middle urethral sling (MUS) for stress urinary incontinence (SUI).

MATERIALS AND METHODS

The latest definition of UAB is based on three crucial urinary symptoms: slow urinary stream, hesitancy and straining to void, while feeling of incomplete bladder emptying and dribbling may be optional, as well storage symptoms. Thus, we analysed the major three urinary symptoms reported in the UAB definition and also the most important additional urinary symptoms (feeling of incomplete bladder emptying and dribbling) in a cohort of women with SUI, naïve for SUI surgery, underwent MUS from January 2014 to January 2019. This was a prospective study. Exclusion criteria were: previous SUI surgery, associated pelvic organ prolapse, previous pelvic surgery and/or radiotherapy, neurologic diseases. Informed consent was obtained. All patients performed preoperative UDS. Patients were stratified according to the 4 main available UDS criteria of DUA: i) Pdet@Qmax ≤10 cm H2O and Qmax ≤12 mL/s (Jeong et al.); ii) Pdet@Qmax<30 cm H2O and Qmax<10 mL/s (Abarbanel and Marcus); iii) Pdet@Qmax<20 cm H2O and Qmax<15 mL/s and BVE<90% (BVE criteria); iiii) Pdet@Qmax<20 cm H2O + Qmax (PIP1 Griffiths). The control group (CG) was comprised by women with no-DUA. Preoperative LUTS were evaluated. The prevalence of the main UAB urinary symptoms was compared among each group of DUA and with the overall DUA (O-DUA) group and the CG. The rate of the concurrent main urinary symptoms was also assessed and compared among the DUA groups and with CG. Statistical analysis tests used were: T student, Mann Whitney, ANOVA.

RESULTS

Data was analysed on 102 women treated with MUS. Overall patients with DUA, regardless the UD criteria, were 58/102 (56.8%). Table 1 reports patients mean age, prevalence of the main UAB urinary symptoms for the CG, for each DUA group, and for the O-DUA group. The comparison of UAB urinary symptoms between DUA groups and the CG is also showed. Prevalence of UAB urinary symptoms was higher in all the DUA groups than in the CG. Among the three UAB major urinary symptoms, the rate of slow stream and straining was statistically associated to all DUA groups, but only the slow stream also to the O-DUA group. Hesitancy was poorly associated to DU, indeed its prevalence was significantly higher only in 1/4 DUA group. The rate of the additional UAB urinary symptoms was not significantly associated to the O-DUA group. Incomplete emptying rate was statistically correlated to only 2/4 DUA groups, while dribbling to only 1/4 DUA groups. The patients rate with the concomitant three major UAB urinary symptoms was 27.6% in O-DUA group, almost two times higher than in CG (13.6%), while the women prevalence with the concurrent two commonest UAB urinary symptoms (slow stream, straining) was 41.3% in O-DUA group, almost two times greater than in CG (22.7%). In DUA groups, the rate of the coexistent three major UAB urinary symptoms ranged from 25.4% to 36.7%, while in the concomitant two major UAB urinary symptoms from 40 to 53.3%.

INTERPRETATION OF RESULTS

The prevalence of all the UAB urinary symptoms was higher in all DUA groups than in CG. Among major UAB urinary symptoms, slow stream and straining were the most associated to DUA, although only slow stream was correlated to all DUA groups and then was the more reliable. Hesitancy was poorly indicative of DUA. Additional UAB urinary symptoms were poorly suggestive of DUA because they were associated only to some of the DUA groups. In overall DUA group, both rates of the concomitant three or two major UAB urinary symptoms were low (one quarter of the cases and about 40% respectively), but almost two times higher than in the CG. Although slow stream and straining were correlated to DUA, both concomitant urinary symptoms occurred only in less than a half of the women with a diagnosis of DUA underwent SUI surgery. Thus, the clinical and symptomatic DUA diagnosis was poor reliable and the most accurate and functional evaluation of these patients still remains the urodynamic investigations. Limit of this study was the low sample size, and further larger data will be needed to confirm these results.

CONCLUSIONS

This study showed that only some of the UAB urinary symptoms (slow stream and straining) had a clear association with the UDS diagnosis of DUA. The correspondence of the all major UAB urinary symptoms, or of some of them, with a diagnosis of DUA was scarce. Thus, in women underwent SUI surgery, preoperative urodynamics is still the most accurate tool to investigate the lower urinary tract function.

Overall Patients n= 102	**Control Group (CG) n= 44 (43.1%) mean age 61.9(±10.9)**	**Jeong vs CG n= 30 (29.4%) mean age 66.8(±8.1)**	**Abarbanel vs CG n= 23 (22.5%) mean age 68.5(±10.7)**	**BVE vs CG n= 17 (16.7%) mean age 66.5(±8.2)**	**PIP1 vs CG n= 55 (53.9%) mean age 66.1(±9.6)**	**Overall DUA vs CG n= 58 (56.8%) mean age 66.9(±11.8)**
Slow Stream	40.9%	66.6% p<0.01*	60.9% p<0.01*	82.3% p<0.01*	61.8% p<0.01*	66.% p<0.01*
Hesitancy	31.8%	46.6% p<0.2	30% p<0.2	41.2% p<0.2	45.4% p<0.01*	40.8% p<0.1
Straining	34.1%	66.6% p<0.01*	47.8% p<0.02*	58.8% p<0.01*	50.9% p<0.01*	56.2% p<0.2
Dribbling	15.9%	23.3% p<0.3	17.4% p<0.5	35.3% p<0.03*	30.9% p<0.2	26.7% p<0.3
Incomplete emptying	31.8%	60% p<0.01	47.8% p<0.1	58.8% p<0.1	60% p<0.01	56.6% p<0.1

Table 1. Prevalence of the main UAB urinary symptoms in control group, in each DUA group and in overall DUA group and comparison between each DUA group, overall DUA group to control group. *Statistical significance. Student's t test, Mann Whitney test and ANOVA.

Overall PTS n=102	**Jeong n= 30 (29.4%)**	**Abarbanel n= 23 (22.5%)**	**BVE n= 17 (16.7%)**	**PIP1 n= 55 (53.9%)**	**Overall DUA n= 58 (56.8%)**	**Control group n=44 (43.1%)**
Slow stream + Hesitancy + Straining	**11 (36.7%)**	**6 (26.1%)**	**5 (29.4%)**	**14 (25.4%)**	**16 (27.6%)**	**6 (13.6%)**
Slow stream + Straining	**16 (53.3%)**	**10/23 (43.5%)**	**10 (58.8%)**	**22 (40%)**	**24 (41.3%)**	**10 (22.7%)**

Table 2. Prevalence of the major concomitant UAB urinary symptoms.

2. EFFICACY AND SAFETY OF OSPEMIFENE TREATMENT IN POST MENOPAUSAL PATIENTS SUFFERING CONCOMITANT LOWER URINARY TRACT SYMPTOMS (LUTS) AND VULVO-VAGINAL ATROPHY (VVA)

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INTRODUCTION AND AIM OF THE STUDY

Symptoms and severity of pelvic floor disease (PFD) increase after the menopausal transition and worsen with time. The effect of ageing and menopause cannot be separate in midlife women but the hormonal dependence of genital tract tissues has been advocated in order to explain the appearance of female low urinary tract symptoms (FLUTS) at the menopause. Urge urinary incontinence (UUI), urgency, frequency and nocturia are common symptoms in post-menopausal women (PMW)(1). There are evidences that UUI and other FLUTS may improve with local hormonal treatment. There are not clear data regarding the possible role of other menopausal therapies on FLUTS. Ospemifene is a novel selective estrogen receptor modulator (SERM) licensed for oral treatment of dyspareunia, a symptom of vulvovaginal atrophy (VVA)(2). The aim of this study was to evaluate the safety and effectiveness of Ospemifene in the treatment of PMW suffering concomitant FLUTS and VVA.

MATERIALS AND METHODS

This is a prospective open-label intervention trial on consecutive 20 patients suffering concomitant FLUTS and VVA. The study was approved by the local ethics committee. Urodynamic assessment was done using Urobank Maestro (HC ITALIA). Patients characteristics and pelvic examination was evaluated at baseline. All patients received oral Ospemifene 60 mg mg/die for 12 weeks. Objective (urodynamic study) and subjective 3-days bladder diary, International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form (ICIQ-UI SF) and International Consultation on Incontinence Questionnaire-Overactive Bladder Short Form (ICIQ-OAB SF) data were assessed at baseline and after 12 weeks. Side-effects were monitored during treatment. Statistical analysis was performed using GraphPad Prism 7 (GraphPad Software Inc., California, USA). Continuous variables were presented with means and standard deviations. Shapiro-Wilk normality test was used to determine the normality of data distribution. In accordance, to study the pre and post-treatment outcome one-tailed paired t-test was performed. The values of $p<0.05$ were considered significant.

RESULTS

Twenty patients were included. The mean age was 53.56 ± 4.68, the mean BMI was 26.66 ± 4.22. In table 1, comparison of the voiding diary and quality of life before and after treatment are reported. In brief, all parameters were found significant improved. The mean number of voids in 24 h was found reduced from 9.33 ± 2.50 to 7.33 ± 1.51 (p= 0.044), the urge urinary incontinence in 24 h was reduced from 6.32 ± 1.48 to 4.12 ± 1.41 (p= 0.0032), and the mean number of nocturia events was also found reduced from 3.23 ± 1.21 to 2.13 ± 1.11 (p= 0.0483). In addition, the mean overall score of ICIQ-UI and ICIQ-OAB before and after treatment was found improved from 13.2 ± 0.84 to 9.8 ± 2.28 (p= 0.0059) and from 10.65 ± 0.96 to 8 ± 1.8 (p= 0.0005) respectively. Comparison of urodynamic data before and after treatment is presented in Table 2. A statically significant improvement after treatment was detected in the following parameters: First Voiding Desire (FDV) from 114.9 ± 27.8 to 154.20 ± 24.92 (p= 0.0002), Normal Voiding Desire (NDV) from 186.7 ± 52.08 to 233.70 ± 40.51 ml (p= 0.0009) and Strong Voiding Desire (SDV) from 269.2 ± 65.63 to 299.70 ± 51.11 ml (p= 0.0101). However, no differences were found in the following parameters: maximum flow

rate (Qmax), average flow rate (Qave), maximum cystometric capacity (CC), detrusor pressure at maximum flow (PdetQmax), Maximum Urethral Close Pressure (MUCP) and Functional Urethral Length (FL). Side effects were observed in two patients: continuous headache regressed to the drug suspension and lower limb rigidity and muscle crumps after 6 months Opsemifene assumption.

INTERPRETATION OF RESULTS

Treatment with Ospemifene in PMW suffering from FLUTS is associated with an improvement on quality of life. Urodynamic analysis showed an improvement in term of bladder sensibility that maybe is consistent with the effect of SERM on urogenital atrophy.

CONCLUSIONS

These preliminary data suggest a potential role of SERM in improving urinary urgency symptoms in PMW with VVA.

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Table 1 Comparison of the parameters related to 3-days Voiding Diary and Questionnaires (n = 20)

	Baseline	12 weeks follow-up	*p*
Mean number of voids (24 h)	9.33 ± 2.50	7.33 ± 1.51	0.044 *
Urge urinary incontinence (24 h)	6.32 ± 1.48	4.12 ± 1.41	0.0032 **
Mean number of nocturia events	3.23 ± 1.21	2.13 ± 1.11	0.0483 *
ICIQ-UI-SF	13.2 ± 0.84	9.80 ± 2.28	0.0059 **
OAB-Q-SF	10.6 ± 0.96	8.00 ± 1.8	0.0005 ***

Data are presented as mean ± standard deviations. To analyze the outcomes after treatment, one-tailed paired t-test was performed. The values of $p<0.05$ were considered significant.

Table 2 Comparison of the urodynamic parameters (n = 20)

Parameters (unit of measurement)	Baseline	12 weeks follow-up	*p*
Qmax (ml/sec)	22.00 ± 4.27	22.67 ± 4.95	0.1208 ns
Qave (ml/sec)	10.44 ± 1.51	11 ± 1.87	0.2081 ns

FDV (ml)	114.9 ± 27.8	154.20 ± 24.92	0.0002 ***
NDV (ml)	186.7 ± 52.08	233.70 ± 40.51	0.0009 ***
SDV (ml)	269.2 ± 65.63	299.70 ± 51.11	0.0101 *
BC (ml)	334.2 ± 70.44	384.40 ± 54.11	0.0001 ***
CC (ml)	53.89 ± 20.11	53.22 ± 14.11	0.4390 ns
PdetQmax (cmH_2O)	32.11 ± 4.28	33.00 ± 2.40	0.2432 ns
MUCP (cmH_2O)	62.56 ± 9.51	62.44 ± 8.63	0.4518 ns
FL (mm)	1.92 ± 0.33	1.93 ± 0.25	0.4122 ns

Data are presented as mean ± standard deviations. To analyze the outcomes after treatment, one-tailed paired t-test was performed. The values of $p<0.05$ were considered significant.

3. METABOLIC SYNDROME CAN AFFECT THE EFFICACY OUTCOMES OF COMBINATION THERAPY WITH DAILY TADALAFIL 5MG PLUS TAMSULOSIN 0.4MG IN MEN WITH LUTS AND ED.

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INTRODUCTION AND AIM OF THE STUDY

Metabolic Syndrome (METS) has a high prevalence (26.5%–55.6%) in men with LUTS and erectile dysfunction (ED). Daily tadalafil 5mg intake is currently recognized as an effective pharmacological treatment for male LUTS, alone or in combination with alpha-lithics (AL) such as tamsulosin 0,4mg, ensuring a greater LUTS relieve. Aim of the study is to assess how the presence of METS could affect the efficacy of combination therapy with daily tadalafil 5mg plus tamsulosin 0,4mg in men with LUTS and ED.

MATERIALS AND METHODS

Across 12 months, patients aged >40 to 80 years, with moderate to severe LUTS (IPSS >7) and mild to severe ED (IIEF-5 <22) were enrolled and treated with combination of tadalafil 5mg plus tamsulosin 0,4mg for 12 weeks. The assessment of patients included age, body mass index (BMI), METS features - waist circumference (WC), blood pressure, clinical laboratory parameters- digital rectal examination, IPSS, OABq, uroflowmetry and postvoid residual (PVR) volume, IIEF-5. METS was defined according to NCEP ATP III. Differences were calculated by unpaired sample t-test at baseline and 12 weeks. The analysis of variance (ANOVA) was used to find between-group differences. Continuous variables are reported as Mean (Standard deviation). Analysis were made with IBM SPSS.

RESULTS

Among 50 patients enrolled, 31 (62.0%) had METS. Mean age was similar with 65.5 years (9.1) in patients without METS and 67.1 years (7.2) in METS patients, p=0.133. Baseline IPSS, OAB-q and IPSS QoL were significantly higher in patients with METS ($p<0.05$), while IIEF was higher in patients without METS (p=0.039) at baseline (see Table1). After 3 months of combination therapy, IIEF, total IPSS and subscores, OAB-q and Qmax significantly improved in both groups. ΔIPSS, ΔQMax and ΔIIEF were similar between groups ($p>0.05$). However, total IPSS, IPSS QoL, IPSS Voiding and IPSS Storage were significantly better at the end of the trial in men without METS. Conversely, 12wks IIEF was similar in patients with or without METS (16.3 vs 17.7 p=0.238) (see Table2).

INTERPRETATION OF RESULTS

The METS, a worldwide epidemic complex disorder, describes the combination or clustering of several metabolic abnormalities. Recently, increasing evidence from several clinical studies has revealed a possible synergic relationship between METS and its components, and the occurrence and progression of LUTS and ED. Although insulin resistance and obesity are considered the core of the pathophysiology of MetS, other factors such as atherogenic, dyslipidemia, deregulations of the hypothalamic–pituitary-adrenal axis, proinflammatory state, and cellular oxidative stress can also be involved in its pathogenesis and potential interactions[1]. Therefore, in these patients with METS, LUTS and ED could be present at the same time and a combination therapy (AL with PDE5-I) could become a better approach. According to our findings, patients with METS have a de facto better symptom relief, especially for ED, with combination therapy when compared to patients without. In fact, PDE5-Is not only increase nitric oxide in smooth muscle for penile erection, but also act on the relaxation of bladder neck and prostate, thus allowing a direct action on micturition phases. Moreover, they exert a potent anti-inflammatory effects on prostate, thus reducing

fibrosis and overgrowth. All these beneficial effects help in maintaining prostatic structural anatomy and physiological activity.[2]

CONCLUSIONS

Combination therapy with tadalafil plus tamsulosin represents an effective LUTS treatment in male with or without METS. Patients with METS had worse initial LUTS and ED. Despite a similar improvement of LUTS and ED(delta), interestingly, the improvement of sexual function was greater in men with METS and, after 3 months of treatment, IEEF-5 scores were similar in the two groups.

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Table 1

Twelve Weeks Follow up Patients' Characteristics (n=50)	METS				
	No (19, 38.0%)		Yes (31, 62.0%)		p
	Mean	Standard Deviation	Mean	Standard Deviation	
IPSS	8.2	4.6	13.8	4.8	<0.001
IPSS Voiding	2.9	2.1	5.7	2.7	<0.001
IPSS Storage	3.7	2.4	6.0	2.5	0.003
IPSS Quality of Life	1.7	1.3	2.5	0.9	0.016
IIEF	17.7	4.7	16.3	3.8	0.238
OAB-q	33.9	10.4	43.9	10.5	0.003
QMax (ml/s)	16.4	4.4	15.6	3.6	0.489
DeltaIPSS	9.6	7.8	8.03	5.1	0.399
DeltaIPSS Voiding	4.3	4.4	3.7	2.8	0.534
DeltaIPSS Storage	3.7	3.5	2.8	2.2	0.296
DeltaIPSS Quality of Life	1.7	1.3	1.6	1.1	0.716
DeltaIIEF	3.7	5.7	4.9	3.3	0.353
Delta QMax (ml/s)	2.9	4.3	3.1	3.6	0.873
Legend: IPSS: International Prostate Symptom Score; IIEF: International Index of Erectile Function; OAB-q: OverActive Bladder questionnaire					

Table 2

Patients' characteristics from baseline to follow-up (n=50)	METS					
	No (19, 38.0%)			Yes (31, 62.0%)		
	Baseline	Twelve Weeks Follow Up	p	Baseline	Twelve Weeks Follow Up	p
IPSS	17.8 (6.6)	8.2 (4.6)	<0.001	21.8 (6.0)	13.8 (4.8)	<0.001
IPSS Voiding	7.3 (3.9)	2.9 (2.1)	<0.001	9.4 (3.6)	5.7 (2.7)	<0.001
IPSS Storage	7.4 (3.8)	3.7 (2.4)	<0.001	8.9 (2.6)	6.0 (2.5)	<0.001
IPSS Quality of Life	3.5 (1.1)	1.7 (1.3)	<0.001	4.1 (1.0)	2.5 (0.9)	<0.001
IIEF	14.1 (5.7)	17.7 (4.7)	0.012	11.4 (3.1)	16.3 (3.8)	<0.001
OAB-q	44.3 (10.4)	33.9 (10.4)	<0.001	58.2 (11.5)	43.9 (10.5)	<0.001
QMax (ml/s)	13.5 (5.7)	16.4 (4.4)	0.008	12.5 (3.9)	15.6 (3.6)	<0.001
All values are reported as mean (standard deviation) Legend: IPSS: International Prostate Symptom Score; IIEF: International Index of Erectile Function; OAB-q: OverActive Bladder questionnaire						

4. TAILORED THERAPY USING ATOMS® SYSTEM IMPLANT FOR POSTOPERATIVE MALE URINARY INCONTINENCE

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INTRODUCTION AND AIM OF THE STUDY

Male stress urinary incontinence (SUI) still represent a major drawback of prostate surgery, despite recent technological innovations. The reference treatment is represented by the artificial urinary sphincter (AUS), however extraurethral compressive devices may be an alternative. The aim of this study is to evaluate mid-term efficacy and safety of ATOMS® system implant in a single center.

MATERIALS AND METHODS

We included in this study all male patients referring to our Institution for postoperative SUI and treated with ATOMS system from January 2015 to July 2019. Patients had a minimum follow-up of six months. All patients received anamnesis, 24h pad test and pad count, physical examination, urodynamic evaluation, ICIQ-UI SF questionnaire. We excluded patients with low bladder capacity and compliance, uncontrolled detrusor overactivity. We defined mild incontinence a 24h pad test <200g, moderate incontinence if comprehended between 200g and 400g, severe incontinence if >400g. Patients were considered “continent” when dry or when wearing a security pad (social continence).

RESULTS

From January 2015 to July 2019 we treated 104 patients with ATOMS implant. Median age was 75.2 years (IQR 69.9-79.6). 80 patients had undergone open radical prostatectomy, 10 radical laparoscopic and 4 robot-assisted prostatectomy, 3 simple prostatectomy and 7 TURP. 20 patients had undergone adjuvant radiotherapy (RT) and 50 previous incontinence surgery (PIS: 45 ProACT, 3 AUS, 4 both). Median preoperative 24h pad test was 360g (IQR 300-412.5). 11 patients had mild, 67 moderate and 26 severe incontinence. Median follow up was 30 months (IQR 14.3-43.42), maximum follow-up was 60 months. Median surgical time was 54 minutes (IQR 49-60). Median number of refilling was 1 (IQR 0-2) and median filling volume was 10ml (IQR 6-15). At last follow up we had a significant reduction in postoperative 24h pad test with a median value of 50g (IQR 0-100); 30 patients (28.8%) were dry and 50 (48.1%) reached social continence. We had a significant reduction in ICIQ-SF scores from median value of 16 (IQL 15-17) to a median value of 7 (IQR 5-9). Continence results in sub-populations with different grades of incontinence, RT and PIS are displayed in Table1. There is no statistical correlation between RT and global continence results (p=0.72), on the other hand PIS is significantly correlated to lower global continence results (p=0.033). Early postoperative complications were 3 cases of temporary scrotal edema, 4 cases of temporary urinary retention treated with device deflate, 11 cases of scrotal and perineal pain treated with oral therapy, 2 cases of superficial wound dehiscence. Late postoperative complications were 8 cases of persistent pain that required device removal in 5 cases, 6 cases of port displacement requiring surgical repositioning, 3 cases of voiding straining requiring further device deflate, 2 cases of epidydimitis.

INTERPRETATION OF RESULTS

The results of this study evidence that the ATOMS system is an effective treatment for male SUI with a global continence result of 76.9% at a median follow-up of 30 months. Patients with a severe grade of incontinence had lower continence results, however results are acceptable even in this sub-population with positive results in 65.4% of patients. We had good results in radiotreated patients, whether patients who received previous incontinence

surgery had lower continence results. These results indicate that this device is effective even in complicated cases such as severe grade of incontinence or radiotreated patients; offering ATOMS implant as a first line treatment may maximize continence results. The device is safe with early and late postoperative complications in 19.2% and 18.3% of cases respectively; most of complications are self limiting and requiring only oral therapy or device deflate (Clavien-Dindo<2). The only complications that led to surgical reintervention were the displacement of the port (5.8%) or the persistence of perineal pain (4.8%). It is of notice that all explantations were not related to infections.

CONCLUSIONS

ATOMS® system represents an effective and safe treatment for postoperative male SUI even in complicated cases. Patients with a sever grade of incontinence have slightly lower continence results. Primary implant have a higher probability to reach good continence results. Complicated cases do not represent a controindicationa to ATOMS® implant.

Table 1: Continence results in general population and sub-populations

	Dry n(%)	Social continence n(%)	Global continence results n(%)
Global population (n=105)	30 (20.8%)	50 (48.1%)	80 (76.9%)
Mild incontinence (n=11)	4 (36.4%)	6 (54.5%)	10 (90.9%)
Moderate incontinence (n=67)	22 (32.8%)	32 (47.8%)	54 (80.6%)
Severe incontinence (n=26)	5 (19.2%)	12 (46.2%)	17 (65.4%)
Adjuvant radiotherapy (n=20)	5 (25%)	11 (55%)	16 (80%)
Previous incontinence surgery (n=52)	8 (15.4%)	28 (53.8%)	36 (69.2%)

5. TRANSITIONAL CARE OF INCONTINENCE RELATED TO CONGENITAL MALFORMATIONS: RESULTS BY AN ITALIAN MPCQ SURVEY BETWEEN ADULTS AND PEDIATRICS HEALTH CARE PROVIDER.

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INTRODUCTION AND AIM OF THE STUDY

Actually there is no single, worldwide accepted, document addressing all elements required to define a transitional care process from adolescence to adult life for people with lower urinary tract and pelvic floor dysfunction related either to a congenital malformation either to an acquired condition during childhood. The causes of incontinence, requiring a life-long care, are rare disease: bladder exstrophy, posterior urethral valves, neurogenic bladder related to spina bifida, anorectal malformation, dysfunction related to spinal cord injury or pelvic tumor in childhood. Neverthless the high rate survival , is creating an increasing specific population. Uptonow different adult Health care provider (HCP): urologist, gynecologist, coloproctologist, physiotherapist, nurse, etc are involved on the care of these patients with paediatrics (urologist, surgeon, nurses) in different program and organization, mainly not well defined. Aim of our paper has been to define the actual situation in the main Institution involved in Italy in transitional care, either adult center either paediatrics ones, in order to define advantages, concerns, satisfaction.

MATERIALS AND METHODS

A multidisciplinary working group (WG) involving well experienced HCP with transitional care has been created.Urologist, pediatric urologist, gynaecologist, surgeon ,pediatric surgeon, physiotherapist, nurses, of different Institutions , located in all part of Italy, have been created. A multiple choice questionnaire (MCPQ) has been defined by two senior urologist/pediatric urologist, and submitted for a critical review to the WG. The reviewed version of 18 questions then has been submitted to adult and pediatric center involved in continence care, specifically requiring their experience for transitional care. Data have been evalutatd using SPSS Windows package and statistically computed by Kruskall Wallis test.

RESULTS

20 pediatric urology and pediaric surgery center, Group Pediatric (GP) have been involved with 10 adult urology center., group adult (GA). The institution involved presented similar in both groups (60% public hospital, 20 private hospital, 10% University, 10 others), with a quite similar activity for the congenital urological disease (80% vs 60%. In GP the majority of HCP involved are pediatric surgeon (30%) vs urologist in GA (60%). The clinical experience of these HCP has been reported higher in GP, 75%>20 yrs versus GA, 40%>20yrs. No statistical difference has bene reported for volume activity between both groups. Only in 30% in GP and GA a specific program for transition is present.These programs are active by > 5yrs only in 15% of GP and 30% GA. The team composition between adult and pediatric specialist is mainly undefined and, where present, only 20% in both groups reported a defined and structured team. Uroptherapist are present in 50%of GA and only in 5% of GP. Same results for the other specialist (orthopaedic, gynaecologist,psychologist): 30% in GP vs 50% in GA. The majority of HCP is working with individual connection between centers based on friendship, 80-90% without a well defined program. Most HCP consider useful a relevant role of pediatric urologist and /or adult urologist specialized in reconstructive/functional urologist, as “adolescent urologist “(60%, 40%). 55% of pediatrics vs 40% adults are satisfied about the clinical program of transitional care in their institution, with an high rate of satisfaction by patients, 50% vs 70%.

INTERPRETATION OF RESULTS.

In our knowledge this is the first report about transitional care for continence based on experience of both pediatric and adult center in Italy. The results of our survey confirmed previous investigations in paediatrics, where the lack of specific program is commonly reported. Different institution are applying different program organization, where the difference could be partially explained by different logistic (pediatric hospital departed by adult hospital or cohexisting with or inside it. Significant data is the lack of specific nurse, urotherapist, mainly in pediatric, as well as the different organization of HCP team. Furthermore is interesting to see that instead of pediatric urologist in many center is present a pediatric surgeon as coordinator. In many adult center early career professionals are involved in transitional care, as for reduced interest.

CONCLUSIONS

The result of this survey confirmed the need to define a common specific program for transitional care in Italy. Scientific Societies involved in the care of these adults, growing up with their disabilities, as Italian Society of Pediatric Urology and Italian Society of Urodynamics, started to work together. This snapshot on Italian organization is resulting useful in order start an active joint WG in order to ameliorate assistance to these chronic complex disease.

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6. "FIVE YEARS OF OASIS'S REPAIR IN A SINGLE UROGYNAECOLOGIC CENTER"

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INTRODUCTION AND AIM OF THE STUDY

An estimated 4% to 6.6% of women delivering vaginally sustain obstetrical anal sphincter injuries (OASIS).
Perineal tears, can be classified, according to RCOG , into four degrees: : 1st degree if involved only perineal skin; 2nd degree if involved perineal muscles but not involved anal sphincter;3rd degree if involved anal sphincter complex (IIIA less than 50%of thickness torn, IIIB more than 50% of thickness torn and IIIC both EAS(external anal sphincter) and IAS(internal anal sphincter), 4th degree if involved anal sphincter complex (IAS and EAS) and anal epithelium [1]
The prevalence of women with ano-rectal symptoms increases with the severity of the OASIS. The prevalence of OASIS is between 0.25 to 6%. The prevalence of OASIS in primiparous women is between 1.4 and 16% and thus, should be considered more important than among the multiparous women (0.4 to 2.7%). In women with a history of previous OASIS, the risk of occurrence is higher and varies between 5.1 and 10.7% following childbirth. The aim of this study is to evaluate different outcomes in terms of gas leakage, urge urinary incontinence, faecal incontinence and dyspareunia in patients with OASIS repaired by repaired by a highly trained urogynaecologist versus gynaecologists without specific training in this issue.

MATERIALS AND METHODS

This was an observational analytical prospective cohort study performed in a single Urogynaecological unit between January 2015 and January 2020. We included all women who have had anal sphincter injury according to RCOG classification. Exclusion criteria was: previous history of faecal incontinence; urinary incontinence and gas leakage. The screening visit was designed at visit 0, six weeks after labour. At this visit, patients were submitted to medical history collection (demographic data, symptoms of lower urinary tract, faecal incontinence, gas leakage and dyspareunia), physical examination, pelvic ultrasonography. Each patient was asked to record the disturbance given by visual analogue scale (VAS) with score to 0 to 10. All women who have had anal sphincter injury were directed to rehabilitative therapy.

RESULTS

During the study period 86 women met the inclusion criteria and were included in our study. We divided patients into 2 groups: group 1 repaired by an urogynaecologist with a specific training and group 2 repaired by gynaecologists without specific training in this issue. The characteristics of the 2 groups were described in Tab. 1. In Tab. 3 we resume the degree of tears and , for each category, we indicate the p-value: in group 1 there are twelve IIIC degrees while in group 2 there are three IIIC degrees with a p-value < 0,0001. . In group 2 we have two complications that need reintervention: one women underwent to sphincterotomy and one women was re-sutured 3 days after the first suture for wound dehiscence. Analyzing patient's symptoms we found that in group 1 a patient (1/21, 4,7%), repaired for a IV degree tear, complaints soiling while in group 2 27/65 (41,5%) were symptomatic for pelvic floor dysfunction after surgical repair.
At first visit, in group 2, perineal trauma was associated with LUTS: 3/65 (4,6 %) had urge urinary incontinence; 7/65,10,7 %) stress urinary incontinence, 10/65, 15,4 %) gas leakage, 5/65, 7,7 %) faecal incontinence and 7/65 , 10,8 %) dyspareunia.

INTERPRETATION OF RESULTS

Our results showed that there is a positive correlation between the training of the gynaecologist and low rate of complications and pelvic floor dysfunctions, such as urge urinary incontinence, stress urinary incontinence, faecal incontinence and gas leakage after labour complicated by OASIS. There was a single adverse outcome in the group of patients with OASIS repaired by a trained urogynaecologist: the patient had a 4th degree tear and, 6 weeks after labour, complaints soiling. Our findings highlight the importance of adequate reconstruction of anal sphincter injury during primary repair.

CONCLUSIONS

A non-optimal repair of perineal tears can compromise the women's quality of life in terms of urinary and anal incontinence symptoms and dyspareunia. We should minimize the risks of OASIS and, at the same time, should be focused on training to recognize severe perineal tears.

Optimal repair of perineal tears should be a high clinical priority: surgical skills are basics for optimal repair. Physical rehabilitative treatment can be resolutive of symptoms, is not invasive, inexpensive and expose to minimal risk for the patient.

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7. URODYNAMIC EVALUATION BEFORE AND AFTER SURGERY FOR RETETHERING IN PATIENTS WITH MYELOMENINGOCELE

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INTRODUCTION AND AIM OF THE STUDY

Tethered spinal cord syndrome (TCS) is a spectrum of neurologic disorder caused by an abnormal attachment of the spinal cord which determines its pathological stretching over time. TCS can imply functional and morphological disorders like pain, motor and sensory deficits of the lower extremities, orthopaedic malformations of the feet, development of scoliosis, and deterioration of bladder and bowel function. Standard treatment of TCS is the surgical release of the spinal cord, nowadays by microinvasive technique. Generally, surgical treatment leads to an improvement or stabilization of neurological symptoms. However, about 10 to 30% of children might develop retethering following myelomeningocele repair. Recurrence is generally due to scars and local inflammatory reactions and needs a second untethering.
The aim of the study is to evaluate urinary symptoms in patients with retethering before and after surgery.

MATERIALS AND METHODS

Retrospective review of clinical notes of patients treated for retethering at a single institution from 2005 to 2019. All patients were treated at birth for myelomeningocele, except for one child who underwent intrauterine surgery. For each patient data from neurological and urological evaluations before and after the second untethering were collected. Cistometry was performed before the second untethering, at 6 months and then annually. T-test was performed for statistical analysis.

RESULTS

Data about 7 female and 1 male were available. Before surgery, 7/8 patients practiced CIC of whom 2/7 also use *Valsalva* to empty the bladder. 1/8 uses *Credè* manoeuvre only. 2/8 patients were on antibiotic prophylaxis for recurrent UTIs. 6/8 Patients presented detrusor overactivity with reduced compliance. 2/8 patients had hypoactive detrusor activity with normal compliance.
Mean age at second untethering was 17,5 years (range 7-38). For 2/8 patients retethering was suspected because of worsening of urodynamic findings: reduction of compliance and increased detrusor pressure. 6/8 patients presented with motor and neurological symptoms. After surgery, 3/8 patients had an improvement of urodynamic parameters (mean follow-up 7,5 years, range 1-14). The 2 patients with recurrent UTIs had no more episods of infections. 1/8 developed urge incontinence between CICs with parallel increased detrusor pressure at cystometry. Urodynamics parameters did not changed before and after surgery for 4/8 patients. Pdet max in the 6 patients with detrusor overactivity were not significatively different before and after surgery (p=0.36). (Tab 1)

INTERPRETATION OF RESULTS

In our experience mean age at retethering is higher compared with literature. *Samuels et al*. reported a mean age of 5.7 ± 4.8 years [1]. *Ogiwara et al*. a mean age of 10.6 years (range 7–17.5 years) [2].
In terms of symptoms at retethering, our findings are similar to those reported in literature, with urinary incontinence, low-back and leg pain, walking difficulties and constipation being the most common. Despite this, in the present series the incidence of urinary symptoms at retethering presentation is lower than what reported in other studies [2], [3].

CONCLUSIONS

Urinary symptoms do not seem to be a common presentation of retethering. The urodynamic pattern also does not change significatively after second untethering. At long-term follow-up attention must be paid mostly on neurological and motor symptoms if the suspect of retethering arise. A multidisciplinary approach is essential in order to manage those patients adequately.

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Tab. n° 1

Name	Sex	1° surgery	Before 2°surgery				2° surgery	Last follow up after 2°surgery			
			Pdet max (cmH2O)	Cisto capacity (mL)	CIC n°/die	Oxybutynin (mg/die)		Pdet max (cmH2O)	Cisto capacity (mL)	CIC n°/die	Oxybutynin (mg/die)
E. D.	f	1994	22	270	6	15	2014	35	320	6	15
A. G.	f	2011	30	230	5	5	2019	25	122	4	5
J. A.	f	2012	17	118	6	5	2019	19	180	6	5
V. B.	f	1989	10	320	4	10	2008	12	395	5	12,5
V. T.	m	1974	35	200	0	10	2005	27	400	0	10
I. C.	f	2011	50	176	3	5	2019	25	165	4	10
V. G.	f	1979	10	320	2	0	2017	12	350	2	0
V. C.	f	2001	30	150	4	5	2010	29	207	6	5

8. TWO STAGE HYPOSPADIAS REPAIR WITH TUBULARIZED BLADDER MUCOSA: URODYNAMIC RESULTS AT LONG TERM FOLLOW-UP

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INTRODUCTION AND AIM OF THE STUDY

Hypospadias is the most common congenital malformation of the penis, characterized by hypoplasia of the ventral tissues in varying degrees. Proximal hypospadias represents about 20% of cases. Treatment is surgical, with the purpose of reconstructing a straight penile shaft with the urethral meatus as close as possible to its natural position, to allow standing micturition and normal intercourse in adult life. The aim of the study is to evaluate the urinary pattern at uroflow at long term follow-up of patients who underwent two-stage proximal hypospadias repair with bladder mucosal graft at our center.

MATERIALS AND METHODS

Retrospective review of urinary flow rates of children who underwent two-stage proximal hypospadias repair with bladder mucosal graft for proximal hypospadias between 2005 and 2009.
In all cases the first stage included chordee correction with creation of perineal-urethrostomy and the second stage completed the repair with tubularized bladder mucosal graft. Clinical follow-up was performed at 1-3-6-12 months after surgery. Urodynamic follow-up started upon reaching urinary continence and was performed afterwards annually with clinical examination and flowmetry test. The uroflowmetry data were plotted on age-volume-dependent nomograms with normal controls.

RESULTS

Data were available for 36 patients. Mean age of patients at the time of surgery was 24 months (range 10-150 months). Mean time between the first and the second stage was 6-9 months. Mean follow-up was 10 years.
Post-operatively, 10/36 patients (27%) underwent urethral dilations due to stenosis of the urethral meatus. 7/36 patients (19%) presented with recurrent UTIs upon reaching complete urinary continence, treated with urotherapy.
Mean maximum urine flow rate was 12 ml/s (range 4-29), mean average urine flow rate was 6,15 ml/s (range 1-15 ml/s), mean voided volume was 218,7 ml (range 54-636), mean post void residual was 19,2 ml (range 0-102), the mean voiding time was 67 sec (range 29-154 sec).

INTERPRETATION OF RESULTS

Proximal hypospadias repair is a challenging surgery, presenting complications at short and long time follow-up, in particular with regard to stenosis of the neo-urethra. Therefore, it is mandatory to include the hypospadias patient in a clinical and urodynamic follow-up path, to ensure a correct bladder management and preserve upper urinary tract from possible damages. Even if the uroflow is suboptimal for many patients, in the absence of symptoms of obstruction those data should be interpreted as normal considering the reduced compliance of the reconstructed penile urethra.

CONCLUSIONS

Our results are substantially in line with data reported in the literature in terms of urodynamic parameters. It is recommended that this type of patient continue urological follow-up during adulthood.

9. UVENTA URETHRAL STENTS: ARE WE TAKING A STEP FORWARD? THE FIRST CLINICAL SERIES

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INTRODUCTION AND AIM OF THE STUDY

Aim of this study is to describe first clinical results of temporary placement of UVENTA urethral stent in the treatment of benign urethral disorders.

MATERIALS AND METHODS

UVENTA urethral Stent (Taewoong Medical) is a temporary self expandable covered metallic stent. Anti-migration system in the distal tip and different radial force distribution are the two main innovations. This is a retrospective evaluation of UVENTA stent placements for urethral diseases (stricture and fistula) in two Centers. Data regarding placement and removal procedures, tolerance and complications were primary outcomes. Success to treat the disease after removal was a secondary outcome. Success was defined as the lack of stricture on urethroscopy performed with a 16 ch flexible cystoscope 6 months after stent removal and no need fo further procedure; in case of urethral fistula the absence of leakage on urethrogram was considered. Patients with at least 6 months of follow-up after stent removal were included.

RESULTS

18 patients underwent UVENTA stent placement between 2016 and 2018. Pre-, intra- and post-operative data are reported in Tab 1. No specific intraoperative events were recorded. One patient reported urethral pain related to the stent in the first month. Three patients had urinary infection treated with antibiotics. 3 out of 4 stents placed on the bladder neck migrated in the bladder two, three and six months after implantation; none of the other stents migrated. At removal no significant incrustation, stone or tissue ingrowth were noted. New proximal or distal strictures with stent in situ were never noted at stent removal. Migrated stents were removed without any problems. All procedures were easy and quick. Median follow up is 9,5 months (6-24). Considering strictures overall success rate is 73% (11/15): 82% for bulbar urethra (9/11) and 50% for bladder neck (2/4). Urethral fistula was repaired in all cases (3/3).

INTERPRETATION OF RESULTS

Stent related complications are few and low grade. Anchoring system avoid stent migration when correctly placed. Bladder neck stents have a high risk of migration because the antimigration system doesn’t work because free in the bladder. Efficacy in the long term must be explored by further and larger study with longer follow up. Proper indications needs also to be identified.

CONCLUSIONS

UVENTA stent proved to be easy to place and remove and safe. Despite promising results, real efficacy needs to be explored.

Pt	Urethral disease	Site of disease	Cause	Previous surgery (2)	Kind of stent (mm)	Bladder drainage	Complications	Migration	Site of migration	Indwelling time (months)	Follow up (months)	Recurrence
1	Stricture	Bladder neck	RARP + RT	U-thomy (4)	60x14	SP tube	None	Yes	Bladder	3	9	Yes
2	Stricture	Bladder neck	RRP	U-thomy (3)	40x16	None	None	Yes	Bladder	6	6	No
3	Stricture	Bladder neck	RARP + RT	U-thomy (5)	40x16	SP tube	SP displacement	No	-	2	7	No
4	Stricture	Bladder neck	RRP	U-thomy (2)	40x14	SP tube	none	Yes	Bladder	2	7	Yes
5	Stricture	Bulbar	Trauma with incomplete fracture	U-thomy (3)	40x14	none	none	No	-	12	8	No
6	Stricture	Bulbar	Trauma with incomplete fracture	U-plasty	40x14	none	UTI	No	-	12	24	No
7	Stricture	Bulbar	Trauma with complete fracture	U-plasty	40x14	none	none	No	-	12	11	Yes
8	Stricture	Membranous-bulbar	TURP	U-thomy (1)	40x14	none	none	No	-	6	10	No
9	Stricture	Bulbar	TURP	U-thomy (1)	40x14	SP tube	Urethral pain	No	-	6	9	No
10	Stricture	Bulbar	Exeresis of urethral diverticulum	U-plasty	40x14	none	none	No	-	6	6	No
11	Stricture	Bulbar	Catheter*	U-thomy (1)	40x14	none	none	No	-	6	24	No
12	Stricture	Bulbar	Idiopatic*	U-thomy (2)	40x14	none	UTI	No	-	6	21	No
13	Stricture	Membranous	Catheter*	U-plasty (1)	60x14	none	UTI	No	-	6	20	No
14	Stricture	Bulbar	Catheter**	U-thomy (3)	40x14	none	none	No	-	6	7	No
15	Stricture	Bulbar	Idiopatic	U-plasty U-thomy	40x14	none	none	No	-	11	6	Yes
16	Fistula	Recto-urethralis	Prostatitis	None	60x16	none	none	No	-	4	15	No
17	Fistula	Recto-urethralis	Prostatitis	None	60x16	none	none	No	-	5	12	No
18	Fistula	Ischial-urethral	Paraplegy	None	40x16	none	none	No	-	6	18	No

10. FIRST ITALIAN EXPERIENCE WITH ATOMS® SYSTEM IMPLANT IN NEUROGENIC STRESS URINARY INCONTINENCE

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INTRODUCTION AND AIM OF THE STUDY

Neurogenic patients with sacral and sub-sacral lesion often have underactive bladder and a common emptying method is clean intermittent catheterization (CIC). Some patients have sphincteric deficiency that may determine stress urinary incontinence. In this specific population, the artificial urinary sphincter on the bladder neck still represents the reference technique, however a disadvantage is represented by the high revision and removal rate, up to 60%. [1] The aim of this study is to evaluate efficacy and safety of ATOMS® implant in neurogenic patients with stress incontinence performing CIC.

MATERIALS AND METHODS

We included patients with neurogenic sacral or sub-sacral lesion with underactive bladder and stress urinary incontinence and treated with ATOMS® implant between January and December 2018. All patients received anamnesis, 24h pad test and pad count, physical examination, video-urodynamic evaluation, Qualiveen questionnaire. All patients were followed up at 12 months after implantation. Patients were considered “continent” when dry or when wearing a security pad (social continence).

RESULTS

From January to December 2018 we treated 5 male patients with ATOMS® implant. Median age was 30 years (IQR 18-34). Three patients were affected by myelomeningocele and two by cauda equine syndrome. Preoperative video-urodynamic testing evidenced median maximum cystometric capacity of 450 ml (IQR 450-500ml), bladder compliance always >20 ml/cmH2O, urodynamic stress incontinence due to sphincter deficiency, VLLP of 40 cmH2O (IQR 28-58cmH2O). Neurogenic detrusor overactivity was not present at the moment of implant. All patients performed CIC as evacuative maneuver. Median preoperative 24h pad test was 260g (IQR 200-300g). Median surgical time was 65 minutes (IQR 58-68 mins). During the surgical procedure we did not fill the cushion to prevent postoperative urethral injuries when performing CIC in the early postoperative time. At one month after implant, we performed cushion filling with a median filling volume of 6ml (IQR 6-7ml). At last follow up we had a significant reduction in postoperative 24h pad test with a median value of 5g (IQR 0-10, $p<0.05$); all patients were dry, however two patients still wear a safety pad, even if dry. We had a significant reduction in the Qualiveen scores ($p<0.05$). Early postoperative complications were 3 cases of temporary scrotal edema (Clavien-Dindo 1). We had no late postoperative complications at last follow-up. All patients resumed CIC without urethral traumatism or catheter insertion difficulties. We had no cases of device infection nor device removal.

INTERPRETATION OF RESULTS

The results of this study evidence that ATOMS® implant is an effective and safe treatment for neurogenic stress urinary incontinence in patents performing CIC. The device did not interfere with the CIC maneuver without notice of urethral traumatism. All patients were dry at 12 months follow-up; the use of a safety pad may be due to the fear of concomitant fecal loss (a possible consequence of the neurogenic lesion) or due to a patient's habit related to the long-standing neurological pathology. Assuming that intra-operatory pressurization could determine subsequent catheterization difficulties, we considered cautiously to postpone pressurization minimizing the risk of complications. Early complications were

minor and self-limiting. A mayor advantage of this procedure in such patients is the possibility to maintain the muscular layer overlying the urethra.
The strength of this study is that this short-term preliminary experience represents a unique clinical experience of the outcomes of ATOMS® implant in neurogenic patients. The mail limitations of this study are the small sample size and the length of the follow-up.

CONCLUSIONS

Implantation of ATOMS® device is an effective and safe minimally invasive procedure also in neurological patients with a low rate of post-operative complications. To our knowledge, this cohort represents the only experience available in such peculiar population, in which surgical alternatives are unsatisfactory.

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11. IMPLANT OF AN ALTERNATIVE ARTIFICIAL URINARY SPHINCTER (VICTO®) FOR THE TREATMENT OF POST-PROSTATECTOMY INCONTINENCE: EARLY PERIOPERATIVE EXPERIENCE AND SHORT-TERM RESULTS

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INTRODUCTION AND AIM OF THE STUDY

Post-operative stress urinary incontinence (SUI) is a common problem following pelvic surgery, in particular for prostate cancer. The Artificial Urinary Sphincter (AUS) AMS800 is widely accepted as the reference technique for the treatment of male urodynamic stress urinary incontinence. Nevertheless, a surgical revision rate of over 30% has been reported. A number of these revisions are secondary to urethral atrophy, erosion, mechanical failure and infection. We aimed to evaluate the use of a new alternative AUS (VICTO®) that has been recently introduced at our Institution.

MATERIALS AND METHODS

The VICTO® sphincter is a new one-piece hydraulic AUS with the possibility of adjusting the pressure within the system post-operatively. The VICTO-plus version has also an extra pressure transmission balloon to transfer increased intra-abdominal pressure directly to the cuff. While the pressure of the urethral cuff is low (<40cm H2O) at rest, in the event of an effort, intra-abdominal pressure peaks will be transferred to the cuff. VICTO and VICTOplus represents a direct evolution of FlowSecure artificial sphincter that was introduced years ago and subsequently removed from the market, due to construction anomalies. We evaluated male patients with SUI following prostate surgery to establish feasibility, safety and short-term efficacy of the procedure. Patients were assessed at baseline using anamnesis, urodynamic evaluation, 24-hours pad testing, which was repeated post operatively. Perioperative details were recorded. All patients were discharged from the hospital after three days.

RESULTS

Seven male patients have been implanted with VICTO from March 2019 to December 2019. Median age 69.5 years (range 65-75) with a median follow up of 6 months. Previous prostate surgery included retropubic Prostatectomy in all patients, 3 patients had received adjuvant Radiotherapy. All patients had failed conservative therapy. Most patients had undergone a previous surgery for their incontinence including: ProACT (2) and AMS800 (4). Median operative time was 80 mins (55-110). Three patients required 1 adjustment in an outpatient setting. Four patients reached continence exclusively with the activation of the device. At last follow up, 3 patients were dry, 4 patients continued to wear 1 safety pad per day. Post void residual was negligible (< 50ml). No perioperative or postoperative complications were observed. No patients were explanted.

INTERPRETATION OF RESULTS

The VICTO® artificial sphincter incorporates many characteristics that aim to overcome some of the disadvantages of the AMS800. The principal design features of the new device include the following: a new self-sealing port in the pump assembly for in-situ pressure adjustment, one-piece assembly to facilitate implantation and minimize mechanical failures, improved cuff design to reduce potential for creasing and fracture and patient-activated rapid cuff re-inflation facility. As the risk of urethral atrophy is always present in case of artificial sphincter implant, with this device is not necessary to change the urethral cuff but is possible to adjust the pressure simply through the scrotal port. We have had no erosions considering the short follow-up. In our experience, the implantation of the device was technically feasible and would appear to be safe and effective in the short term for the treatment of SUI in male

in the absence of mechanical complications. Prior anti-incontinence surgery and radiotherapy do not appear to be an impediment to implantation. The VICTO® artificial sphincter is an easily implantable prosthesis, which allows for adjustability when needed.

CONCLUSIONS

The VICTO® artificial sphincter is an interesting device as incorporates many innovative features. A long term follow up is needed to confirm if this new device overcome some of the disadvantages of the classical artificial sphincter.

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12. POST-PROSTATECTOMY INCONTINENCE WORSENING IN LATE AFTERNOON: DOES URETHRAL TONE PLAY A ROLE?

A. Biroli, R. Furnari, R. Carone

INTRODUCTION AND AIM OF THE STUDY

Prostatectomy is one of the most important cause of incontinence in men, being present in up to 70% of patients at the catheter removal, although during the following months a great majority of patients becomes continent. It is a common complain in the population of post-prostatectomy incontinent men that leakages get worse in the late afternoon, while the continence is regained earlier during the night and in the morning. The night continence can be easily explained with the clinostatic position, but other explanations have to be found for the difference between leakages in the morning and in late afternoon. One common hypothesis is that there could be a urethral sphincter complex fatigability, so the urethra could be able to offer higher resistance in the morning, declining through the day. A second hypothesis could be that a circadian rhythm control exists for the urethral function, as demonstrated for other organs and function, including bladder capacity and urine production. Both the hypothesis imply that changes in the urethral function occur through the day, but in literature there is a lack of data about them. To our knowledge this could be the first study investigating urethral function at a different time of day.
Aim of the study was to verify if the complaint of leakage worsening in post-prostatectomy incontinent men could be related or not to urethral tone modifications at different time of day, in the morning and in the late afternoon.

MATERIALS AND METHODS

Perfusion sphincterometry was performed in 10 men affected by postprostatectomy incontinence in order to measure retrograde urethral perfusion pressure, being bladder empty. The test was repeated at two different time of day (at 9 am and in the late afternoon at 6 pm). All patients filled a 3 days bladder diary in order to quantify incontinence. In this population mean age was 68,7 (range 57-75) and time since surgery was 10,4 months (range 2-30). Mean leakage /day was 259,7 g (range 32-910 g) and mean voided volumes/day were 1436 ml.

RESULTS

Retrograde urethral perfusion pressure when measured in the morning ranged 41-80 cm H20 (mean 53,5 cm H20 +- 12,3, when repated in the late afternoon in the same subjects ranged 34-81cmH20 (mean 54,9 +- 13.0). 7 pts showed an increase in pressure values in the afternoon (mean 3,28 range 1-7) whereas only 3 pts showed a decrease in pressure (mean 3,33 cm H20, range 1-7). P value for paired test was 0,36 .

INTERPRETATION OF RESULTS

No statistically significative differences were demonstrated between morning and late afternoon urethral pressure measurements. Moreover when analyzing the 3 cases that showed a decrease in values in the afternoon, in 2 of them the difference was 1 cm H20, a very low difference value, that has a low probability to be sufficient to explain a subjectively perceived worsening of incontinence in the afternoon.

CONCLUSIONS

Although many clinicians assume that a change in urethral function due to sphincter complex fatigability or circadian rhythm could explain worsening of incontinence in postprostatectomy incontinent patients, preliminary data don’t support this hypothesis. Despite a low number

of patients examinated, this study represents the first attempt to study the causes of incontinence worsening through day as reported by many patients.

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13. MANAGEMENT OF COMPLEX ISCHIAL-URETHRAL FISTULA IN NEUROGENIC PATIENTS PERFORMING CLEAN INTERMITTENT SELF-CATHETERIZATION

E. Ammirati, A. Manassero, D. Vercelli, M. Falcone, S. Chierchia, P. Geretto, M. Petrillo, R. Carone, A. Giammò

INTRODUCTION AND AIM OF THE STUDY

Patients affected by spinal cord lesion may have detrusor underactivity with associated weak or normal urethral sphincter function and/or detrusor overactivity managed by antimuscarinic drugs/onabotulinumtoxin. One of the most frequent emptying technique applied is clean intermittent self-catheterization (CIC). The most frequent complications related to CIC are urinary tract infections and urethral injuries, such as urethral bleeding, false passage and urethral strictures. Paraplegic patients are also at high risk to develop ischiatic skin pressure ulcers. In some of these patients undergoing CIC an urethral erosion may develop, resulting in ischio-urethreal fistulas. In this work we present our single-center experience in dealing with this peculiar complication.

MATERIALS AND METHODS

In this work we included all neurogenic patients performing CIC treated at out Institution for ischial-urethral fistulas. All patients had a spinal cord injury or myelomenicocele. Nine patients performed exclusively CIC, one reflex micturitions and Credè maneuver with complementary CIC for post-void residual. Two patients performing CIC had been previously treated with Prolastic periurethral injection for neurogenic sphinteric deficiency. Patients performed periodic urine cultures, so that in case of symptomatic UTI, they were treated with targeted antimicrobial agents. The diagnosis of ischial-urethral fistulas was made in patients that developed a skin pressure ulcer in the ischial region, that did not heal after conservative topical treatment and that required surgical toilette, and recurrent UTI. The diagnose was confirmed by a X-ray contrast fistulography and with a retrograde urethrography.

RESULTS

During the last four years we treated 10 patients, 8 with spinal cord injury (1 at T4 level, 1 at T7 level, 3 at T12 level, 2 at L1 level, 1 at L2 level) and 2 with myelomenicocele. All patients were male and had been performing CIC without any difficulty for many years. None of the patients had a history of urethral injury. One patient had diabetes type 2 with a difficult metabolic control and two patients had BMI > 30. Median age was 55.4 years (IQR 49.4-61.1). Four patients have been treated with the placement of a new generation urethral stent (Uventa) after surgical toilette of the skin ulcer and placement of a temporary sovrapubic catheter. The stent was kept in place for 6 months and then endoscopically removed. In one case we had a displacement of the stent in the bladder, that required the repositioning of a longer one. One patient that had previous Prolastic implant required an open surgical procedure with sovrapubic access to remove the residual material that migrated into the bladder lumen. All patients demonstrated a complete healing of the urethral lesion at stent removal and continued CIC without any difficulty. Five patients have been treated with perineal urethroplasty, requiring a buccal mucosal graft in two cases. One of them was treated with a second surgical revision for persistence of a small residual fistula. In two of these patients a sovrapubic permanent catheter was placed for a simpler bladder management due to the patients' comorbidities. In one case the incidental finding of an high grade muscle invasive urothelial bladder cancer, made it mandatory to perform an uretheroileocutaneostomy.

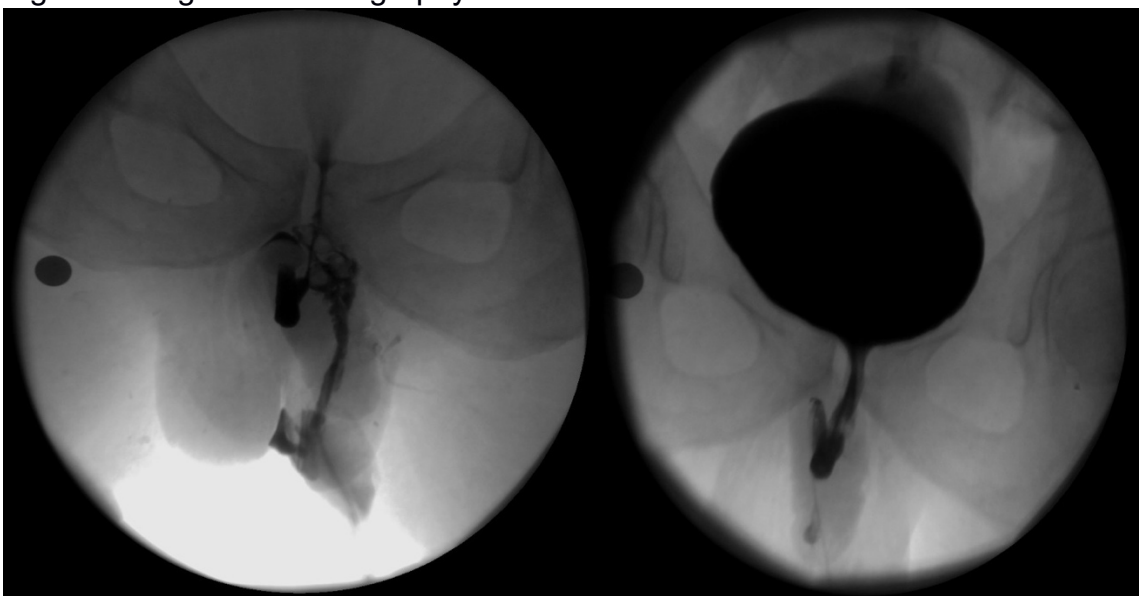
INTERPRETATION OF RESULTS

This work represent a unique series of ischio-uretal fistulas in neurogenic patients performing CIC. The ischial region represent a weakness area in a peculiar population that spend most of their time in a sitting position, exercising pressure over it. The urethral tissue in neurogenic patient performing CIC is chronically populated by bacteria and even prolonged antibiotic therapies have demonstrated to fail the eradication of bacteria. Furthermore patients with sacral and subsacral neurogenic lesions often have a lack of sensibility in the genital and perineal area and may not recognize a traumatic catheter insertion. A combination of these factors may be responsible of the development of ischio-uretal fistulas, and it is not possible to identify which of these is the primary event. Two patients in our population had received a Prolastic periurethral injection; the chronic traumatism of the catheter passage over hard tissues may have led to an urethral lesion with urinal spillage that spread towards the ischiatic region.
The treatment of the skin ulcer and the use of new generation urethral stents (Uventa) seems promising as it allowed a complete closure of the urethral defect. We preferred the concomitant placement of a temporary sovrapubic catheter to prevent urethral manipulation that could determine the stent displacement and to keep the fistula completely dry during the healing process. The removal of the stent after six months appeared to be easy and without complications.

CONCLUSIONS

The presence of an ischial ulcer in neurogenic patients performing CIC should rise the suspicion for a possible urethral involvement. Surgical urethral reconstruction, often with the use of buccal mucosa in large lesions, may be a difficult solution in neurogenic patients, new generation stents (Uventa) represent a minimally invasive, effective and safe alternative.

Figure: retrograde urethrography before and after Uventa urethral stent treatment



14. PREDICTING GLOBAL QUALITY OF LIFE OUTCOME IN PATIENTS UNDERGOING RADICAL CYSTECTOMY WITH ORTHOTOPIC NEOBLADDER OR ILEAL CONDUIT URINARY DIVERSION: NOMOGRAM DEVELOPMENT AND INTERNAL VALIDATION.

S. Siracusano, A. Zaka, E. Zaffuto, A.B. Porcaro, R. Talamini, R. Colombo, C. Lonardi

INTRODUCTION AND AIM OF THE STUDY

Radical cystectomy (RC) is a complex procedure with detrimental consequences on patients' quality of life (QoL). During the last decades, long-term QoL outcomes in patients undergoing RC with orthotopic ileal neobladder (ONB) or ileal conduit (IC) has been investigated. However, little is known on factors that can predict QoL outcomes after RC for the individual patient according to the type of urinary diversion. The aim of the study was to develop a multivariable prediction model of global QoL outcome in patients with muscle-invasive bladder cancer (MIBC) undergoing RC with ONB or IC urinary diversion.

MATERIALS AND METHODS

A cohort of 319 patients diagnosed with MIBC who underwent RC and ONB or IC urinary diversion were enrolled and QoL was measured using the European Organization for Research and Treatment of Cancer Quality of Life Core Questionnaire (EORTC QLQ-C30). Patient baseline characteristics included age at surgery, gender and body mass index (BMI). Comorbidities were assessed using the Charlson comorbidity index (CCI). Multivariable linear regression analyses were used to predict the global QoL score of the EORTC QLQ-C30, according to the patient characteristics and urinary diversion. Leave-one-out cross-validation was performed to test the internal validity of the model. Finally, a preliminary nomogram was developed to ease the calculation of the predicted global health status/QoL score.

RESULTS

174/319 (54.5%) patients underwent ONB while 145/319 (45.5%) underwent IC urinary diversion. Median age was 68 (IQR: 61-74). Patients free from chronic cardiac failure ($p<0.001$), chronic kidney disease ($p<0.01$) and hypertension ($p<0.03$) were less represented in the ONB compared to the IC strata. Conversely, patients free from diabetic disease ($p=0.02$) and chronic arthritis ($p=0.02$) were more represented in the ONB compared to the IC strata. No difference was observed in the prevalence of peripheral vascular disease ($p=0.9$) across the two groups. QoL was evaluated at a median follow-up of 25-36 months after RC. On multivariable analysis, patient age at surgery, urinary diversion, chronic cardiac disease and peripheral vascular disease were the statistically significant predictors of the postoperative global QoL score (all $p<0.03$). The calibration plot of the prediction model showed a systematic overestimation of the predicted global QoL score over the observed scores, with a slight underestimation for observed global QoL scores between 57 and 72. The root mean square error (RMSE) of the developed prediction model was 23.6. After performing leave-one-out cross validation, RMSE emerged as 24.0.

INTERPRETATION OF RESULTS

The model shows that younger patients have lower median global QoL score compared to older patients. This result is consistent with other findings in literature. We internally validated the nomogram that resulted reliable in the prediction of the global QoL score at a median follow-up of 25-36 months for the individual patient.

CONCLUSIONS

We developed and internally validated a multivariable prediction model of the mid-to-long term global QoL in patients with MIBC undergoing RC and ONB or IC urinary diversion. This prediction could support the preoperative patient counselling for informed and personalized treatment decision.

15. RENAL FUNCTION IN PEDIATRIC AND YOUNG ADULT PATIENTS WITH NTD AND NEUROGENIC BLADDER TREATED WITH CONSERVATIVE APPROACH

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INTRODUCTION AND AIM OF THE STUDY

Neurogenic bladder (NGB) is considered as a lack bladder control due to a lesion at any level in nervous system. This condition increases the risk to develop chronic pyelonephritis and consequently chronic kidney disease (CKD). Prevention of urinary tract deterioration and improving continence are at the base of the correct management[1]. Our primary objectives have been the preservation of renal function, the achievement of an acceptable continence and the improvement of the quality of life (QOL). These results have been achieved with a proactive approach that starts early, from the first days of life. Clean intermittent catheterization (CIC) in combination with anticholinergic (oxybutynin at dosage 0.2-0.4 mg/kg weight per day) are the first line treatment[2]. Botulinum toxin-A injection into detrusor is a possible alternative in patients with insufficient response or significant side effects to anticholinergic (oral or intravesical instillation) therapy. It is also common to find neurogenic bowel (NB) in individuals with NGB. This condition causes constipation or incontinence and can be prevented by transanal irrigation (TAI) which is performed in most of our patients. When the conservative therapy fail, surgery has to be valued. We reported our experience to evaluate the outcome in patients with NGB due to neuronal tube defect (NTD) treated medically.

MATERIALS AND METHODS

In a four year period (2016-2019) we observed 62 patients with NTD and we studied 28 patients with NGB and NB due to NTD: 18 aged 19 to 49 years and 12 aged 3 to 17 years. There were 13 males (53%) and 15 females (53%). 34 patients were excluded from our retrospective study for lacking of compliance, for having left the follow up or for have had a surgery.
Diagnosis was confirmed by voiding-cysto-urethrography (VCUG) and urodynamic study.
Age, sex, creatinine, glomerular filtration rate (GFR), number of CIC/die, number of TAI/die, polyethylene glycol (PEG) solutions, urinary tract infections (UTI) and continence (as indirect mark of good quality life) were analyzed by descriptive statistical.
Creatinine Clearance was estimated from serum creatinine, the patient's height and a proportionality constant using the original Schwartz method for pediatric patients and CKD-EPI (Chronic Kidney Disease Epidemiology Collaboration) equation were used to estimate glomerular filtrate rate (GFR) from serum creatinine, gender, age and race in young adult patients[3].
Good quality life were evaluated indirectly administering a survey about continence and satisfaction.
We considered GFR>80 mL/min per 1.73 m² as a fairly stable kidney function.

RESULTS

Among 12 pediatric patients, all of them (100%) had GFR>80 mL/min per 1.73 m².
9 (75%) performed TAI and 10 (83,3%) performed CIC. Furthermore, 7 of them (58,3%) used to take PEG solutions daily. Just 3 pediatric patients (25%) have reported recurrent UTI; 2 of the 12 (16,6%), who didn't assume PEG solutions and nor make TAI, couldn't manage both urinary and bowel incontinence.
Concerning the adults group, mostly of them (94,4%) had GFR>80 mL/min per 1.73 m².
All the young adults (100%) performed CIC, and 12 (66%) performed TAI too. Moreover, only 4 of the adults group (33,3%) used to take regularly PEG solutions. Only 2 young adults

(11%) have reported recurrent UTI and only 3 young adults (16,6%) were unable to manage the incontinence despite treatment.

INTERPRETATION OF RESULTS

According to our results 96,6% of our patients have a good kidney function. Most of them have a good life quality relating to continence with CIC and TAI treatment.
Any of them have reported recurrent UTI episodes.
Overall nowadays we can affirm that all of our patients do not need surgical treatment.

CONCLUSIONS

Neurogenic bladder due to NTD could be an important cause of UTI and consequent kidney damage. An early diagnosis and management in pediatric patients affected by NGB and NB can delay or even avoid the development in CKD. In our experience, according to the literature, conservative treatment at first line therapy was effective to protect the upper urinary tract, maintaining a low-pressure reservoir, achieving complete bladder and bowel, emptying and saving urinary and bowel continence.

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16. HIFEM™ TECHNOLOGY CAN IMPROVE QUALITY OF LIFE OF INCONTINENT PATIENTS

E. Tartaglia

INTRODUCTION AND AIM OF THE STUDY

The aim was to investigate the effect of High-Intensity Focused Electromagnetic technology (HIFEM) on QoL of incontinent patients.(1)High-intensity Focused Electromagnetic technology (HIFEM) triggers intense pelvic floor muscles contractions by targeting neuromuscular tissue and inducing electric currents. Electric currents depolarize neurons resulting in concentric contractions and lift up of all pelvic floor muscles. Key effectiveness is based on focused electromagnetic energy, in-depth penetration, and stimulation of the entire pelvic floor area. The HIFEM technology brings deep PFM stimulation and restoration of the neuromuscular control. The HIFEM passes non-invasively through pelvic floor area. Therefore, it represents a non-invasive solution for incontinent patients, who remain fully clothed during the therapy

MATERIALS AND METHODS

20 women (mean age 63.05 years) with stress, urge and mixed type of UI took part in the pilot study. They attended 6 therapies scheduled 2x a week. QoL was assessed through King's Health Questionnaire (KHQ). The number of used hygienic pads and patients' subjective feedback were recorded. Data was collected pre-, post-treatment, during 2- 4- 6- 10 month follow-ups. KHQ scores were statistically evaluated through t-test ($p<0.05$). Number of used hygienic pads and patients' subjective feedback were evaluated through frequency of occurence. Exclusion criteria
Women with pacemakers, metal implants, blood coagulation disorders, tumors, fever, menstruation and pregnant women were not included in this study. In this pilot study, FDA and EMA approved device for female urinary incontinence treatment BTL EMSELLA (BTL EMSELLA, BTL Industries Inc.) was used .Frequency range 20-30 Hz with trapezoid intensity modulation was used to achieve gradual motor unit recruitment. Relative intensity (in %) was gradually increased from patients' motor up to above the motor threshold .All women absolved 6 therapies scheduled 2x a week. Therapy was performed by medical personnel, who positioned patients fully dressed into a comfortable sitting position, feet on the floor, hip, knee and ankle joints perpendicularly flexed. 30-minute duration for each treatment session.

RESULTS

After 6 treatments, 95 % of treated patients improved their QoL according to the scores of the KHQ. These results were maintained during the 2- and 4-month follow-ups in all patinets 5 /20 (25%)needed a second cicle after 6 month. 67 % of the treated patients reduced or totally eliminated the use of hygienic pads in day-to-day life. 100 % of patients reported better awareness of the pelvic floor muscles .Additionally, patients answered the question 'What is the major difference you noticed after the BTL EMSELLA therapies?'40 % of patients reported that they are able to perform proper contraction of the PFM; 28 % of patients were able to contract PFM selectively; 20 % of patients reported better muscle firmness and 12 % of patients reported that the period between micturition is longer. Additionally, all patients (n=15; 100 %) reported better awareness of pelvic floor muscles.

INTERPRETATION OF RESULTS

To regain continence, regular pelvic floor muscles exercising is required. Normally, 300-500 contractions of the pelvic floor muscles should be performed to begin to develop a new motor pattern, whereas 3,000-5,000 contractions are required to erase and correct poor

motor pattern. During 1 session using HIFEM technology, thousands PFM contractions are performed. This method is extremely important to PFM re-education as the patients are not able to perform this high-repetition rate pattern due to PFM weakness and an inability to consistently contract this muscle group. After 6 therapeutic sessions with HIFEM therapy, patients developed the new motor pattern needed to better control pelvic floor muscles and also regained muscle strength and continence control

CONCLUSIONS

UI represents a significant psycho-socio-economical healthcare problem that has a major negative impact on today's modern lifestyles. The majority of patients are not satisfied with the current treatment methods offered, which include surgical intervention, drug therapy, pelvic floor muscles exercising (Kegel) or minimally invasive intravaginal procedures. This latest research, as well as, previous studies suggest that HIFEM technology leads to significant improvement in QoL of incontinent patients, maintains a patient's privacy all while avoiding more invasive approaches.

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17. URODYNAMIC OUTCOME OF DETETHERING SURGERY IN 92 CHILDREN: OUR EXPERIENCE WITH PEDIATRIC PATIENTS

F. Marinoni, G. Del Re, M. Babini, G. Selvaggio

INTRODUCTION AND AIM OF THE STUDY

Tethered cord syndrome (TCS) refers to a wide group of abnormal fixation of the spinal cord, which stretches the nervous fibers leading to their ischemia and hypoxia. TCS is mainly associated with neuromuscular defects and urinary symptoms. Timing of intervention is still controversial. In this study we want to investigate the urological outcome of detethering procedures in our pediatric patients, focusing on their urodynamic (UD) tests.

MATERIALS AND METHODS

Data of urodynamic tests in 92 pediatric patients treated from 2000 to 2018 have been retrospectively analyzed. Mean age at dethetering was 33,3 months (0,6-225,7), of which 47 females and 45 males. We've focused on detrusor activity and on the post-voiding residual urine volume, measured in preoperative time and at 1 year after surgery. We've also evaluated the correlation between urodynamic outcomes and etiology of the TCS. 40 were affected by conus lipoma (CL) (18 caotic, 11 dorsal and 11 caudal), 24 by filum lipoma (FL), 16 by limited dorsal myeloschisis (LDM), 4 by retained medullary cord (RMC), 5 by terminal myelocystocele (TMC) and 3 by split cord malformation type 2 (SCM) according to Pang Classification.

RESULTS

After surgery 4/92 (4,3%) showed an improvement of urodynamic profile, 61 (67,3%) remained stable, while 24/92 (26%) had a worsening. Of this last group, 22 (91,6%) need clean intermittent catheterization (CIC), 7 immediately after surgery (31,8%). 4 of these 7 presented normal urodynamic profile before detethering. In the worsen patients group we had 17 CL (70,8%), (17/18 caotic type (94,4%)), 2 FL (8,3%), 2 SCM, 2 LDM and 1 TMC.

INTERPRETATION OF RESULTS

As worsening we've considered the translation from a normal UD study to an overactive bladder (46%) or to an underactive bladder/areflexia (54%).

CONCLUSIONS

With this study we can observe how surgery outcome is strictly related to the etiology of the TCS, seeing that caotic conum lipoma is the most connected condition to worsening. Is still unclear if early profilactic surgery in this group of patient could lead to a real improvement in bladder function. In FL we've seen instead that intervention, especially in early age, can prevent its deterioration. We haven't seen any correlation between sex and the outcomes. On the clinical aspect, any of our toilette-trained patients has requested surgical urological procedure to achieve continence, guaranteed only by CIC and pharmacological therapy.

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18. LOW-COST DIAGNOSTIC UNIT FOR INTEGRATED VIDEO-PRESSURE EXAMINATION OF FEMALE URINARY INCONTINENCE

V. Piloni, F. Rossi, T. Felici, J. Andreatini, N. Lucchetti

INTRODUCTION AND AIM OF THE STUDY

To describe the equipments and use of a minimally expensive technique for combined US/X-ray video-pressure study.

MATERIALS AND METHODS

Environment/equipment

- Bring a multipurpose US scanner equipped with 3.5 MHz convex probe inside a four square meters room with leaded walls and digital X-rays equipment (Figure 1). Put the patient horizontally on a mobile stretcher with wheels and gently insert a 16 Foley catheter inside her bladder for contrast administration (Ultravist 370 mg/ml, 200 mL, Bayer).
- Hang the bottle with water soluble contrast medium to a vertical rod, 100 cm high from the stretcher's plane and attach a measuring tape to it with the zero point positioned at the level of patient's pelvis (Figure 2).

Procedure

- During progressive bladder distention with contrast, calculate the bladder pressure relative to the volume injected by simply lowering the bottle of contrast until interrupting the infusion and register the corresponding vertical distance (cm) above the zero level on the measuring tape.
- Use ultrasonography for continuous recording during progressive bladder distention with contrast and register the patient's filling sensation until urgency (or leakage) is experienced (Figure 3).
- At capacity, withdraw the catheter, then position the patient upright to obtain antero-posterior oblique X-ray films during coughing, straining and voiding.

RESULTS

Ten consecutive females (mean age 51.4 yr, range 38-62 yrs) with clinical evidence of urinary incontinence were enrolled into the experimental video-pressure study described above. Of them, 5 stress, 3 urge and 2 mixed types of urinary incontinence were correctly identified (as confirmed by urodynamic examination). Interestingly, at the end all patients have testified their preference towards the method compared to the classic one in the face of the complexity of the study.

INTERPRETATION OF RESULTS

Using ultrasonographic recording and simultaneous pressure registration instead of X-ray films during progressive bladder distention prevents fleeting episodes of incontinence from being lost, thus increasing the diagnostic yield of the examination.

CONCLUSIONS

After history taking and the physical examination of females with urinary incontinence, the reported method is ideally suited for the every day clinical practice of a Urologic Department

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Figure 1

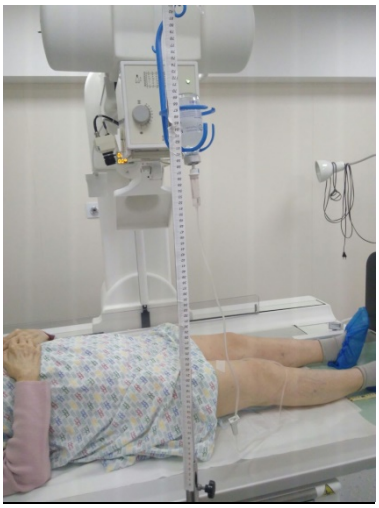

Figure 2

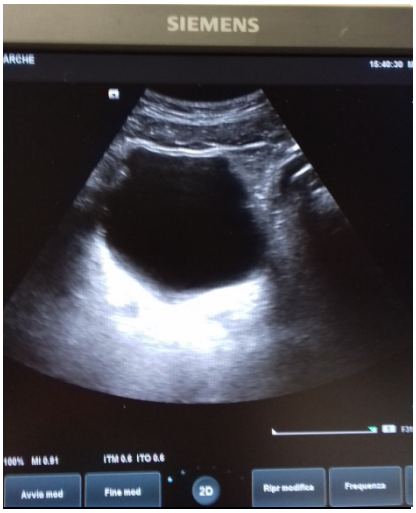

Figure 3

19. MODIFIED MALONE CONTINENCE ENEMA (MACE) PROCEDURE WITH A MODIFIED METHOD FOR ANTEROGRADE FLUSHING: OUR PRELIMINARY EXPERIENCE

M. Spinelli, L. Rizzato, S. Cimbanassi, F. Sammartano, M. Zarbo, G. Sampogna, E. Montanari, O. Chiara

INTRODUCTION AND AIM OF THE STUDY

The Modified Malone Continence Enema (MACE) is a surgical procedure designed to help patients with neurogenic bowel (chronic constipation and/or inability to control stool elimination due to a neurologic problem) when conservative approach and transanal irrigation programs fail before to realize a colostomy. Many patients with neurogenic bowel also are unable to sense when a bowel movement is impending and so have “accidents” and require the use of continence aids. The original operation involves connecting the appendix to the abdominal wall and fashioning a valve mechanism that allows catheterization of the appendix, but avoids leakage of stool through it. If the appendix was previously removed or is unusable, a neoappendix can be created with a cecal flap. So, if one can “irrigate” or flush the colon daily, on the toilet, flushing all the stool out of the colon, accidents usually do not occur over the next 24 hours. The limit of the original idea is in long term stenosis of the appendix with difficulties in catheter introduction. We introduced a novel approach using the distal ileum and cecal valve associated with a modified system for transanal irrigation to perform anterograde flushing.

MATERIALS AND METHODS

Three patients, 1 dorsal incomplete lesion, 1 myelitis and one L1 lesion (34, 53, 59 years) went submitted to bowel program with laxatives and suppositories and a second step with our protocol using transanal irrigation without subjective and objective results. We decided to perform a modified continent stoma using the last part of the ileum near the ileo-cecal valve, to preserve continence, reconfigured with a new ileo-cecal anastomosis by mechanical sutures (Figure 1). To perform bowel flushing we modified the transanal irrigation system (Peristeen®) to have a connection with a Nelaton catheter to perform anterograde pressure controlled irrigation (Figure 2).

RESULTS

One patient needed a surgical revision due to subcutaneos infection resolved with drainage and antibiotics. All patients, in a mean follow up of two years, use the system every two days with complete voiding of the bowel, controlled by fluoroscopy with contrast medium, and without incontinence. They maintain an optimal bladder management without symptomatic urinary tract infections and active sexual performances.

INTERPRETATION OF RESULTS

This new approach guaranteed unexpected results according to our preliminary experience. Surgery was minimally invasive with use of a short pararettal incision and characterized by short time with mechanical sutures. The use of anterograde controlled irrigation permitted a perfect bowel voiding program.

CONCLUSIONS

In front of these results the project for future is to extend this method not only as a last choice.

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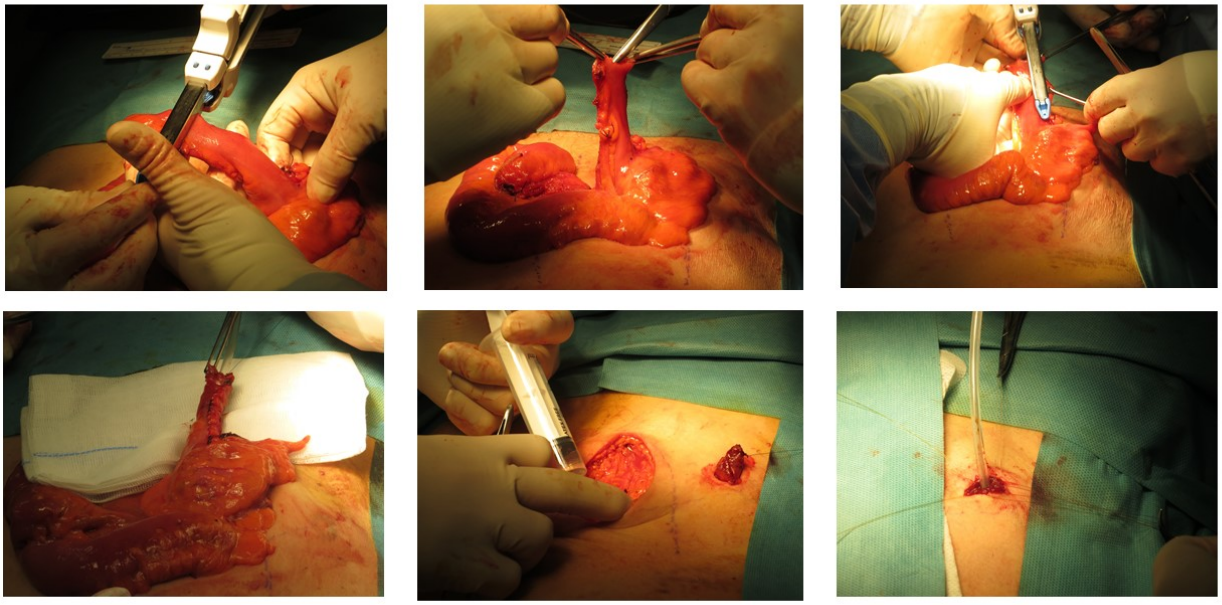

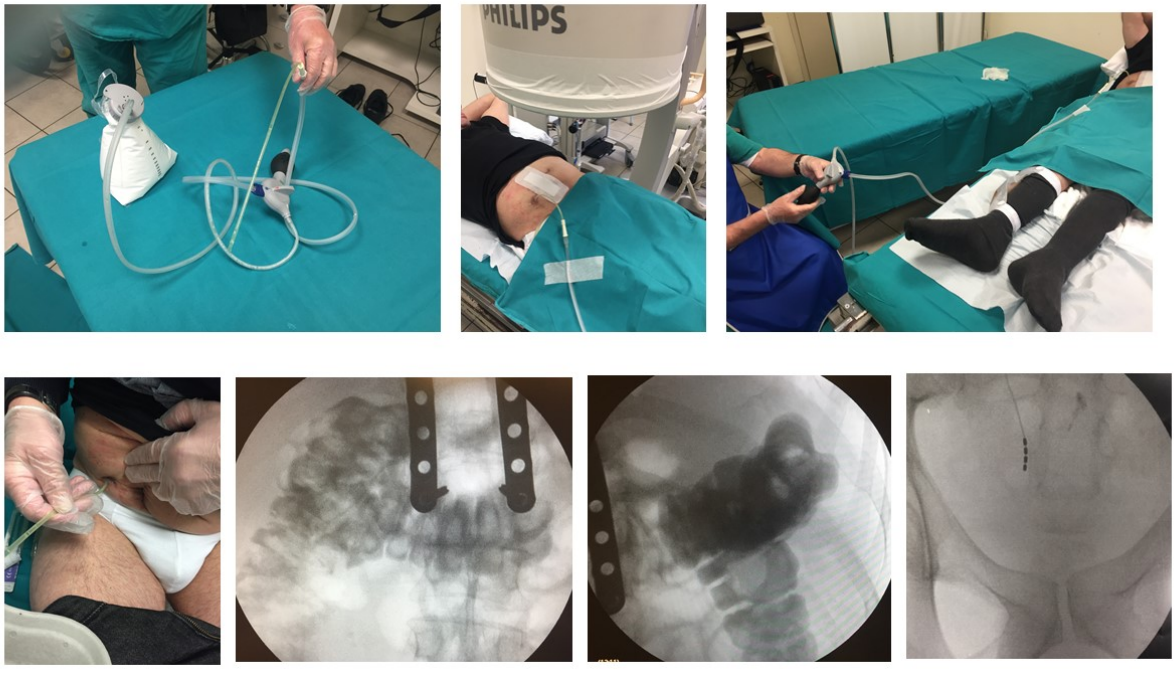

20. CHARACTERIZATION OF LEARNING CURVES FOR MULTIPLE OUTCOMES OF MALE SLING IMPLANTATION USING THE CUMULATIVE SUMMATION (CUSUM) METHOD

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INTRODUCTION AND AIM OF THE STUDY

Male rethrourethral transobturator sling (RTS) implantation for postprostatectomy urinary incontinence (PPI) is a relatively complex surgical procedure that may potentially involves a learning curve (LC), although previous publications challenged this hypothesis [1]. We aimed to perform a LC analysis of a single surgeon's series of RTS evaluating several outcomes.

MATERIALS AND METHODS

After local IRB approval, a retrospective review of prospectively collected data of consecutive PPI patients undergoing placement of TiLOOP Male, a 2-arm titanium-coated fixed RTS (pfm medical, Köln, Germany), between Jan. 2013 and Dec. 2018. A single surgeon performed the procedures using a standard technique for each patient involving an inside-out, single-incision transobturator technique, leaving the bulbourethral muscle in place. Exclusion criteria were follow-up lower than 12 months, active urinary infection, untreated urethral stenosis/bladder neck contracture, bladder neoplasia, progressive prostate cancer, previous male sling or artificial sphincter.
LC evaluation was performed using the cumulative summation (CUSUM) control chart analysis [2]. Univariate and multivariate logistic regressions were performed using surgical order, adjusted for age, BMI, incontinence severity, pelvic irradiation, and previous urethrotomy, to predict continence outcomes.
The primary outcome was the cure in non-irradiated patients (no pad use or 1 dry "security" pad). Secondary outcomes included cure in the whole experience, overall success defined as cure plus improvement (reduction of at least 50% of the pad count), Patient's Global Impression of Improvement score (PGI-I), operative time, need for further incontinence surgery and complications (Clavien-Dindo classification).

RESULTS

Sixty-five patients (mean age 68 ±5.8 years) with a mean follow-up of 46.2 (20.5) months were included. LC curves revealed a clear learning curve effect for continence outcomes, operative time and need for further incontinence surgery, but not for complications. LC effect was graphically more evident for cure, PGI-I and need for further surgery, than for overall success, with a plateau for cure achieved after 46 cases.
At multivariate analyses, surgical order (OR=0.96; CI:0.93-0.99;p=0.031) and irradiation (OR=10.7; 95%CI:1.18-97.1; p=0.035) were statistically significant for predicting cure, while irradiation was the sole variable independently predicting overall success (OR=27.4; 95%CI: 4.8-156.3;p=0.000). After excluding irradiated patients, surgical order remained an independent predictor of cure (OR=0.96; CI:0.92-0.99; p=0.0458). Surgical order and irradiation were also independent predictor of "much/very much improved" result at PGI-I and of need for further surgery.

INTERPRETATION OF RESULTS

A rather long learning curves were observed in our series of RTS placement to achieve stable proficiency when stringent (cure, much/very much improved, need for further surgery) continence outcomes were evaluated, independently from patient selection (irradiated/non-

irradiated patients). Irradiated patients had higher risk of worse continence outcomes and should be excluded from early implantation experience.

CONCLUSIONS

An individualized structured training with proper mentorship for urologists naïve in sling surgery should likely benefit patients treated in the initial surgeon's experience.

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21. HYPNOSIS, A SPECIFIC PROTOCOL FOR THE TREATMENT OF PAIN AND BURNING SYMPTOMS IN PATIENTS DIAGNOSED WITH CPP

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INTRODUCTION AND AIM OF THE STUDY

The relation between chronic pelvic pain (CPP) and the life experience of patients materializes in the pain and burning symptoms. The use of hypnosis is increasingly widespread as a tool in antalgic therapies and in anesthesiology, although there are no specific indications for treating CPP patients. The aim of this study is therefore to assess the effectiveness of hypnosis using a specific protocol to act on the pain ad burning symptoms.

MATERIALS AND METHODS

The study examined a sample of 58 patients (43 female and 15 males) with an average age of 36.2 (21-62). All of them received a diagnosis of CPP and the conventional treatments based on international guidelines. The study's population is characterized by the persistence of pain symptoms regardless of the conventional treatments received (lifestyle changes, oral therapies, intra-vesicle therapies). Patients undertook 3 standardized tests: Cognitive Behavioural Assessment (CBA), Sexual Evaluation Schedule Assessment Monitoring (SESAMO), Minnesota Multiphase Personality Inventory 2 (MMPI-2) and a questionnaire on hypnotic susceptibility. Further, Quality of Life Index (QL index) and Visual Analogic Scale (VAS) scores were calculated before and after the psychotherapy, which lasted six months on a weekly basis and included the use of clinical hypnosis as a specific tool.

RESULTS

At baseline the average VAS score was 8.25 (7-10), after therapy 2. 52 (0 -8) After the six-month treatment, 32% of cases (18) had VAS score of 0, 45% between 1 and 4 (26) and 23 % greater or equal to 5 (14). Before hypnosis the average QL index was 3.28 (2-5), afterwards 8.24 (4-10). Given the scores, these results imply a significant improvement in all daily activities, in sleep quality, in social interaction and in the perception of one's well-being.

INTERPRETATION OF RESULTS

Both pain and burning symptoms are at the basis of invalidating situations in the patients' lives. The consequences of these symptoms are an intense psychological suffering which affects all daily activities and in particular social interactions. It's noteworthy that in the entire population studied the symptoms observed were always in relation to experiences preceding the symptom's onset. The use of clinical hypnosis, which intervenes in this psychosomatic relationship, led to an improvement of symptoms and in some cases to their complete healing.

CONCLUSIONS

On the basis of the experience described, clinical hypnosis results as an effective tool in treating patients diagnosed with CPP that suffer from pain and burning. Therefore, it could part of a tailored therapy in which it is used alongside conventional treatments.

22. ROLE OF SELF CLEAN INTERMITTENT CATHTERIZATION IN ORTHOTOPIC ILAEL NEOBLADDER: IMPACT ON FUNCTIONAL OUTCOMES, CONTINENCE STATUS AND URINARY TRACT INFECTIONS

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INTRODUCTION AND AIM OF THE STUDY

Radical cystectomy (RC) remains the standard of care for muscle-invasive and recurrent high-grade non-muscle invasive bladder cancer. RC is still associated with high morbidity, and the rate of morbidity mainly depends on the choice of urinary diversion. Orthotopic ileal neobladder (OIN) is the preferred method of urinary diversion after RC with the advantage of preserving body image, although its quality of life improvements compared to ileal conduit are still under discussion. The principal factors associated with decrease in quality of life are continence status (both incontinence as well as urinary retention) and urinary tract infections (UTI). The rates of OIN urinary retention range between 4% and 25%. UTIs are another common complication after RC, and previous studies have reported that OIN is associated with higher incidence of UTIs than ileal conduit diversion. Symptomatic UTIs increase the risk of urosepsis and might adversely affect renal function in patients with OIN. The aim of this study is to investigate whether a clean intermittent catheterization within one month from OIN reconstruction could improve functional outcomes, continence status, and might be associated with a reduction of UTIs in the first six months after surgery follow-up.

MATERIALS AND METHODS

From September 2017 to March 2019 ,11 male patients, and 3 female patients underwent lapraoscopic RC with OIN (10 Padua a 4 Studer reconstructions). All patients were followed for a mean of 6 months (6-13 months) and were studied postoperatively at one, three, and six months after OIN. Inclusion criteria were the ability to self catheterization, and all patients were carefully educated to empty the neobladder using abdominal straining. The CIC using 12 Fr SpeediCath Compact catheter (Coloplast Denmark) was done 4 times/daily after each voluntary micturition. Exclusion criteria were diabetes mellitus, neurological conditions, cognitive impairment, and urethral strictures. The postoperative evaluation included: post-void residual volume (PVR), urine analysis and culture, number of pads/day, and the self administrated questionnaire International Consultation On Incontinence Questionnaire-Urinary Incontinence Short Form (ICIQ-UI SF).

RESULTS

All patients completed the six months follow-up. Mean age was 68 y.o. (range 61-73 years), mean body mass index (BMI) was 24.2 (23.4-27.6), and no patient was complaining of urinary incontinence. At the first follow up after 30 days all patients were able to do self CIC in a proper way. At this time mean PVR was 176.5 mL (151-197 mL), ICIQ-UI SF mean score was 16 (10-20), mean no. of pads/day was 3 (1-4), 11 patients reported 3 episodes of symptomatic UTIs (Escherichia coli as the most common implicated pathogen). At 3 and 6 months follow up after surgery the PVR was significantly reduced with a mean of 111.4 and 60.5 mL, respectively. The ICIQ-UI SF scores at 3 and 6 months were 12 and 9, respectively. The number of pads remained unchanged at 3 months whereas at 6 months decreased to 2 pads/day. The episodes of UTIs significantly decreased over the time with only 4 patients at 3 months (reporting 4 symptomatic episodes) and 1 patient at 6 months (reporting a single episode of febrile UTI). Even at these follow up times Escherichia Coli was the principal pathogen isolated at culture analysis.

CONCLUSIONS

This study confirmed that PVR is one of the most important parameter related with episodes of symptomatic UTIs, pads use and continence status. The data reported supports the early introduction of self CICs in patients with OIN after RC. Self CIC in these patients was significantly associated with quality of life improvement related to the continence status and the reduction of UTIs episodes.

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23. SACRAL NEUROMODULATION ON DEMAND FOR URINARY RETENTION THERAPY

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INTRODUCTION AND AIM OF THE STUDY

Urinary retention without an identifiable urological cause is a diagnostic and therapeutic challenge. Patients with chronic non-obstructive urinary retention are usually treated conservatively by relying on intermittent self-catheterization or permanent catheters, which significantly affect the quality of life. In selected patients with chronic non-obstructive urinary retention, sacral neuromodulation (SNM) offers an important therapeutic alternative, improving significantly the quality of life. Neuromodulation is based on chronic nerve root stimulation. The purpose of our work is to evaluate the self-managed stimulation of the patient who turns on the pulse generator 15 - 20 minutes before each urination, self-stimulating according his own needs.

MATERIALS AND METHODS

The authors do not evaluate in this paper all their patients who underwent NMS therapy treated for urine retention and who continue to benefit from the treatment. Patients who have undergone sacral neuromodulation implant since January 2018 and December 2019 are evaluated. In 8 patients suffering from non-obstructive urinary retention who performed clean self-catheterization, 3 patients underwent only a first-time intervention and were not considered suitable for the definitive implant due to a lack of response to the urination recovery. The other 5 patients were permanently implanted with NMS because they were found suitable. Of the latter 5 patients: 3 patients (2 women and 1 man) underwent bilateral caudal epidural neuromodulation (bilateral ottopolar electrodes are placed in the caudal epidural space in a anterograde approach) and 2 patients (2 women) underwent sacral neuromodulation with insertion in the unilateral sacral foramen S3 of the quadripolar electrode. The pre-operative neuro-urological work up includes: MRI of the brain and marrow, urination diary, complete urodynamic examination, urine examination and ultrasound of the urinary tract negative for pathologies worthy of note. These patients had the proprioceptive sensitivity preserved to the filling and did not show high detrusor compliance. The post-operative follow-up work up includes weekly checks for the first 30 days then quarterly with compilation of the urination diary, uroflowmetry and evaluation of the postvoid residual volume. All 5 patients performed clean bladder self-catheterization 4 to 6 times a day before the neuromodulator implantation. After the definitive implantation, they were trained and equipped with a remote control that allows them to self-stimulate by turning the pulse generator on and off, offering them self-management in the sacral stimulation mode. The originality of this work was the stimulation mode which does not provide for continuous 24-hour stimulation but a stimulation that the patient himself manages and that starts 15-20 minutes before each urination.

RESULTS

Our 5 patients aged between 23 and 67 (4 women and 1 man) turn on the pulse generator 15-20 minutes before urination and turn it off after urination is complete. All these patients in a follow-up that varies from 24 to 3 months show a satisfactory urination recovery with 4 patients who abandoned bladder self-catheterization due to the absence of significant postvoid residual volume and one patient who significantly reduced the use of self-catheterization which continue to perform it occasionally for a postvoid residual volume that does not exceed 150 ml.

INTERPRETATION OF RESULTS

We do not evaluate the difference in stimulation between the epidural technique and the peripheral neuromodulation technique at the level of S3, neither do we evaluate what may be the predictive or exclusion factors to treatment. We have noticed in our experience that patients undergoing neurostimulation for the resolution of urinary retention benefit from chronic stimulation but, in the same way, they can benefit from a self-managed stimulation that certainly offers less discomfort to the patient and a saving of battery energy that we think can certainly have a considerably prolonged validity over time. In our center, if unilateral SNM with quadripolar electrode does not offer the desired results, in some cases we have performed a bilateral test. Another therapeutic option after SNM failure is bilateral caudal epidural neuromodulation. The basic theory of this procedure is not only to bilaterally stimulate the sacral roots at the level of S3, but also at the level of S2 and S4, since these are also involved in the lower urinary tract and in the function of the pelvic floor. This approach recruits multiple neural pathways and increases therapeutic efficacy.

CONCLUSIONS

Sacral nerve stimulation is effective for restoring emptying in patients with retention refractory to other forms of treatment. Offering the possibility to stimulate innervation only when it is necessary to urinate seems to us to be a good alternative to continuous stimulation throughout life. Sacral neuromodulation in on demand mode can certainly be accepted more by the patient, reduces neuroplasticity which negatively affects the validity of the treatment over time and prolongs the exhaustion time of the pulse generator.

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24. UROLOGICAL TRANSITIONAL CARE IN PATIENTS WITH SPINA BIFIDA AND NEUROGENIC BLADDER: 8 YEAR EXPERIENCE FROM A MULTIDISCIPLINARY PEDIATRIC AND ADULT TEAM.

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INTRODUCTION AND AIM OF THE STUDY

Urological Transitional Care in patients born with spina bifida (SB) and related neurogenic bladder dysfunction are getting increasing importance because life expectancy has become higher (1). The aim of the transitional process is to continue to assure optimal and multidisciplinary medical care, at the same time encouraging the patient to take responsability in his own health care. The optimal strategy has yet to be defined.(2) The aim of the study is to present the 8 years of experience with the transitional clinic programm at our institution and the results of the process.

MATERIALS AND METHODS

A transitional clinic plan dedicated to adolescents with SB and neurogenic bladder started in 2012. The transitional process was described in a PDTA (Integrated care pathways). Adolescents enrolled in the transitional process had a yearly clinical consultation in a multidisciplinary clinical setting with pediatric urologists, adult urologists and other specialists, when needed. After 1-3 outpatient clinic consultations, patients were shifted from pediatric to adult care (from Pediatric Hospital to Adult Spinal Unit). All clinical relevant data were transmitted and pediatric specialists continued to be available.

RESULTS

From 2012 to 2019 40 patients were enrolled in the transitional SB clinical program. Age at transition ranged from 15 to 18 years. The diagnosis was: myelomenigocele in 23 cases, occult spinal dysraphism in 7, other (cancer, trauma, etc...) in 10. Seventeen patients could independently walk without any support, 10 were on wheelchair, 9 on wheelchair and/or walking with supports. Mild mental impairment was present in 5 and it was severe in 5. Nine patients voided spontaneously, 23 were on self-intermittent catetherization, 8 both. Twenty-four patients were treated with antimuscarinic therapy. Nine performed trans-anal irrigation for bowel management. Additional urological procedures performed during childhood were: botulinumtoxin injections in 4, bulking agents injection for vesicoureteral reflux and stress urinary incontinence in 4, Mitrofanoff procedure in 1, Malone antegrade continence enema procedure in 1. All patients had normal renal function. Renal ultrasonography was normal in 30, showed minor degrees of scarring or hydronephrosis in 10. When the transitional process was completed, 34 patients have been annually followed at the Adult Spinal Unit, with a follow-up ranging from 4 months to 7 years from transition. Six patients were lost at follow-up. Additional procedures performed for continence after transition were botulinum toxin injection (2 patients) and bulking agents injections (2). All patients have normal renal function.

DISCUSSION

As far as we know, this is the first experience in Italy of a structured Transitional Clinic for patients with SB and/or neurogenic bladder, with multidisciplinary pediatric and adult specialists, with a large population and relevant follow-up. The main goal of urological management in these patients is the preservation of normal renal function and it was fulfilled, in our experience, throughout childhood and adolescence up to adulthood in all cases.

CONCLUSIONS

As many patients with SB survive through childhood until adult age, the role of pediatric urologists is to assure prosecution of care until adulthood. The organization and management of the transition clinic program are challenging and is time-consuming and require personal commitment. All patients are satisfied as demostrated by the low rate of drop out (15%).

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25. PALMITOYLETHANOLAMIDE/ SERENOA REPENS: A NEW COMBINATION IN THE TREATMENT OF CHRONIC PROSTATITIS/ CHRONIC PELVIC PAIN SYNDROME

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INTRODUCTION AND AIM OF THE STUDY

Chronic Prostatitis/Chronic Pelvic Pain Syndrome (CP/CPPS) is a common clinical condition that causes severe symptoms, with a negative impact on quality of life. The aetiology is still unclear and its treatment still remains a challenge. Palmitoylethanolamide (PEA) is a cannabimimetic compound with anti-inflammatory, analgesic and neuroprotective actions and Serenoa Repens (SR) has been proven to decrease inflammatory response and to have anti-androgen and anti-proliferation effects. Aim of this study was to assess the efficacy and safety of PEA/SR (Peaprostil®) in the management of pain and lower urinary tract symptoms (LUTS) in patients suffering from CP/CPPS.

MATERIALS AND METHODS

Patients affected by CP/CPPS, naïve to urological therapy, were included in this prospective, multicentric, observational, open label, still ongoing study. Patients underwent history, physical examination, urinary symptoms evaluation with the 3-days voiding diary, uroflowmetry (UF) and pain intensity measurement on the Visual Analogue Scale (VAS: 10= worse, 0= best). Patients were also classified as having pelvic pain only (PP), pelvic pain beyond the pelvis and widespread pain They started assuming PEA/SR 600 mg (once daily, buccal solution). Clinical evaluation with the 3-days voiding diary, UF and VAS were repeated at 4 weeks follow-up. Primary end points were pelvic pain reduction, LUTS and VAS score improvement, and the assessment of reported adverse effects.

RESULTS

Twenty- six male patients were enrolled. Mean age ± SD was 50.7 ± 18.3 yrs. At baseline, pelvic pain (PP) was only observed in 21/26 (80.8%) patients, PP beyond the pelvis in 5/26 (19.2%) and widespread pain in none of cases. 15.4% of patients complained of bladder pain/ burning (P/B) sensation, 15.4% had anal P/B, 23.1% had prostate P/B, 23.1% had anal P/B and 15.4% had painful ejaculation. Sixteen cases presented with increased day-time urinary frequency, 9 with increased night-time urinary frequency and 4 with urgency. At 4 weeks follow-up, all patients showed a significant reduction in pain (mean ± SD VAS score decreased from 7.4 ± 1.2 to 4.3 ± 1.6; $p< 0.00$); only increased day-time urinary frequency persisted in one patient. The results of UF and VAS scores are reported in the Table 1. No side effects were reported.

INTERPRETATION OF RESULTS

This study showed that all patients reported a benefit in pain reduction and LUTS with PEA/SR 600 mg. Although the anti-inflammatory role of both PEA and SR is already known, there is little scientific evidence regarding the efficacy of their association in the treatment of male chronic pelvic pain and LUTS. A remarkable pharmacological feature of PEA is that its addition to therapies for chronic pain in patients with previous unsatisfactory management allows a significant reduction in the use of antinflammatory drugs. Limitations of the study were the low sample size, the no-long-term follow-up and the lack of a control group. However, this is data of a preliminary study still ongoing that will provide further data with larger sample size, longer follow-up and a control group.

CONCLUSIONS

This prospective observational study provides preliminary evidence suggesting that Palmitoylethanolamide/ Serenoa Repens is an effective and safe treatment in patients suffering from CP/CPPS as it induces a significant pain intensity reduction. Worth of noting, relief in pain was obtained in our patients without any consistent side effect. Future studies should be addressed to investigate the benefits of this pharmacological treatment, used alone or in combination, in the treatment of patients with CP/CPPS.

Table

	Baseline	4 weeks Follow- up	p
Qmax (mean ± SD)	16 ± 4.7	16.5 ± 5.1	< 0.7
VV (mean ± SD)	259 ± 75.2	284.3 ± 76.1	< 0.2
Post Void Residual volume (ml)	36.4 ± 42.9	32.8 ± 39.8	< 0.7
VAS score	4.3 ± 1.6	7.4 ± 1.2	< 0.00*

* statistical significance

26. SHOCK WAVE LITHOTRIPSY MAY TRIGGER POTENTIALLY FATAL POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME IN SPINAL CORD INJURY

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INTRODUCTION AND AIM OF THE STUDY

People with spinal cord injury (SCI) present an increased risk of developing urinary stones. In these frail patients with several comorbidities, shock wave lithotripsy (SWL) is favored in case of small stones with < 1,000 Hounsfield unit. However, SWL may trigger dysautonomic crises, which people with a (SCI), especially above T6 level, are at risk for, and consist of headache, convulsions, severe hypertension, myocardial infarction, hemorrhagic stroke, and pulmonary edema.
We report our experience with SWL in a tetraplegic person affected by a small renal stone.

MATERIALS AND METHODS

A fifteen-year-old boy became tetraplegic after a C2 complete SCI. He developed a hyperactive neurogenic bladder. After 10 months from the trauma, he was deferred to our tertiary referral center for a 10 mm stone at the level of the left ureteropelvic junction (Figure 1), provoking recurrent urinary tract infections and renal colic, triggering dysautonomic crises.

RESULTS

Firstly, the patient underwent a left double J ureteral stenting. After 10 days, a left SWL was performed under sedation. The OT was 31 min. No intra-operative complications were recorded. Upon awakening we registered hypertensive crisis, nausea, facial clonus and loss of consciousness. A head magnetic resonance imaging documented a cerebral vasculopathy (Figure 2). All these features were consistent with a rare condition, called posterior reversible encephalopathy syndrome (PRES), which demanded prompt intensive care. The patient was discharged after 34 days. An ultrasonography (US) exam showed the patient was not stone-free, so he was addressed to retrograde intrarenal surgery, using Holmium:YAG laser for lithotripsy. The OT was 136 min. At the end of the procedure, we placed a 7 Fr ureteral catheter, which was removed after 48 hours. Neither intra- nor post-operative complications were recorded and the patient was stone-free at the US after 4 weeks.

INTERPRETATION OF RESULTS

This case report outlines the importance of some good clinical practices, and the need to develop appropriate guidelines for the treatment of various diseases, like kidney stones, in patients with SCI. The treatment of urolithiasis should consider the specific challenges of these patients. In some cases, like the one reported in this paper, the application of the guidelines may not be the correct choice, because they were formulated following the experience gained in the general population. A patient-tailored approach is always mandatory, so SWL should be avoided in cervical SCI patients with small renal stones because of the risks of dysautonomic crises.

CONCLUSION

SWL is considered a non-invasive procedure for stone treatment. However, it should be avoided in patients with SCI, who are at risk for life-threatening dysautonomic crises, and even PRES. In these cases, an endourological approach is mandatory, avoiding high intra-renal pressures and assuring a high stone-free rate. Similarly, at the end of the procedure, a double J ureteral stent should be avoided in order to limit triggers for dysautonomic crises.

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Figure 1. Computed tomography showing a 10 mm stone at the level of the left ureteropelvic junction in the fifteen-year-old boy with a C2 complete spinal cord injury.

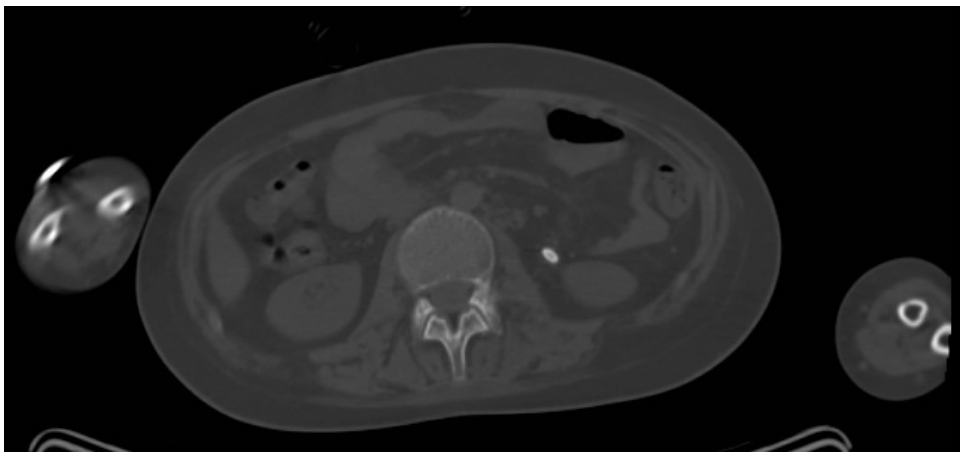
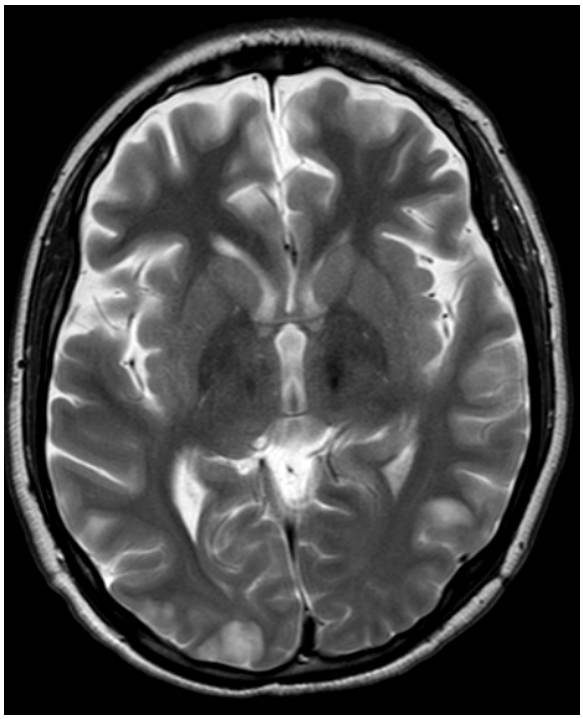


Figure 2. The head magnetic resonance imaging documented a radiological spectrum consistent with a potentially fatal cerebral vasculopathy, called posterior reversible encephalopathy syndrome (PRES).



27. SACRAL NEUROMODULATION IN URINARY RETENTION. A CLINICAL PATHWAY FOR PHYSICIANS AND PATIENTS.

M. Agnello, M. Vottero, P. Bertapelle

INTRODUCTION

Sacral neuromodulation (SNM) can be a valid option for patients affected by non-obstructive urinary retention (UR) and good residual bladder contraction, and close attention must be paid to avoid treatment failure due to incorrect timing of intervention or not having explored all possible therapeutic options. We discuss the clinical pathway used in our centre to manage this cohort of patients, when SNM is offered.

MATERIALS AND METHODS

A multidisciplinary party, which included two neuro-urologists and four nurses with high expertise in sacral neuromodulation, convened an internal meeting to discuss and refine a flowchart (*Figure 1*) commonly used in the last decade to decide what to do in a patient during SNM testing period or after definitive implant, depending on responses to stimulation and clinical results.

RESULTS

After electrode placement using a standardized percutaneous technique[1], a testing-period of 2-months using the Verify® temporary evaluation system is performed. In time this testing-period has been considered long enough to detect late responders to stimulation as well as to assess definitive results in acute responders. Patients are asked to report clinical improvements and changes in stimulation parameters weekly, by email and outpatient visits. If testing period is positive (a benefit in symptoms control >50% from baseline is observed), a definitive impulse generator device (IPG – Medtronic® 3058) is inserted in a subcutaneous gluteal pocket. Stimulation threshold during surgery is maintained below 1.1 Volt. If test is positive, but high intensities (>2 Volts) are needed to feel typical paraesthesias or clinical improvements are sub-optimal, an outpatient device reprogramming with changes in stimulation parameters is performed. If results are still not satisfactory, a sacral X-ray with frontal and lateral view may help evaluate electrode position, and eventually lead to percutaneous re-placement at the same side.

If test is negative, and there is no reason to suspect a lead displacement or a system malfunctioning, a new test may be performed contralaterally, when contralateral neural pathway is intact. In this case, physicians could leave in place the first electrode (if a sub-optimal result was observed) or remove it (if no results at all were recorded).

After definitive IPG implant, a long-term follow up is planned. Patients undergo regular nursing assessments to check wound dressing, to evaluate device function and eventually reprogram stimulation, in order to optimize response to SNM. If results decrease through time, intensities of stimulation become higher, paraesthesias change or are no longer perceived, with no clinical reasons related to the natural history of the disease, a new check is necessary. Compliance of patient to device use, IPG battery level and system impedance, lead displacement on X-rays, anatomical changes on X-ray or CT scan (e.g. after trauma) are all elements that must be considered. Revision and opening of subcutaneous gluteal pocket should be avoided as much as possible, in order to reduce risks of infection and lead/connectors damage.

If a new implant attempt on the same side is planned (e.g. because of lead migration, damage or sub-optimal localisation in other sacral foramens than S3), a new lead can be placed with its temporary evaluation system, after removing the first lead and leaving the IPG – whenever still functioning and with enough battery level - inside its pocket. We

discouraged the direct connection of a new lead to the previously implanted IPG, and we support the need for a new 2 month-testing period before deciding to connect the new lead to the IPG, or – in case no more significant results are expected from SNM – to remove the entire system. The same approach can be adopted if a contralateral implant is offered: a temporary evaluation system connected with a new lead is placed, leaving the IPG and eventually the contralateral non functioning lead in place, putting off the decision to connect the new lead to the IPG or not, after a trial-period.

CONCLUSIONS

An accurate and definite clinical pathway in patients treated with SNM for non-obstructive urinary retention may guarantee to patients the best chance to take advantage from SNM, preventing physicians from excluding from treatment those patients who do not respond in specific conditions, but may still benefit from the technique.

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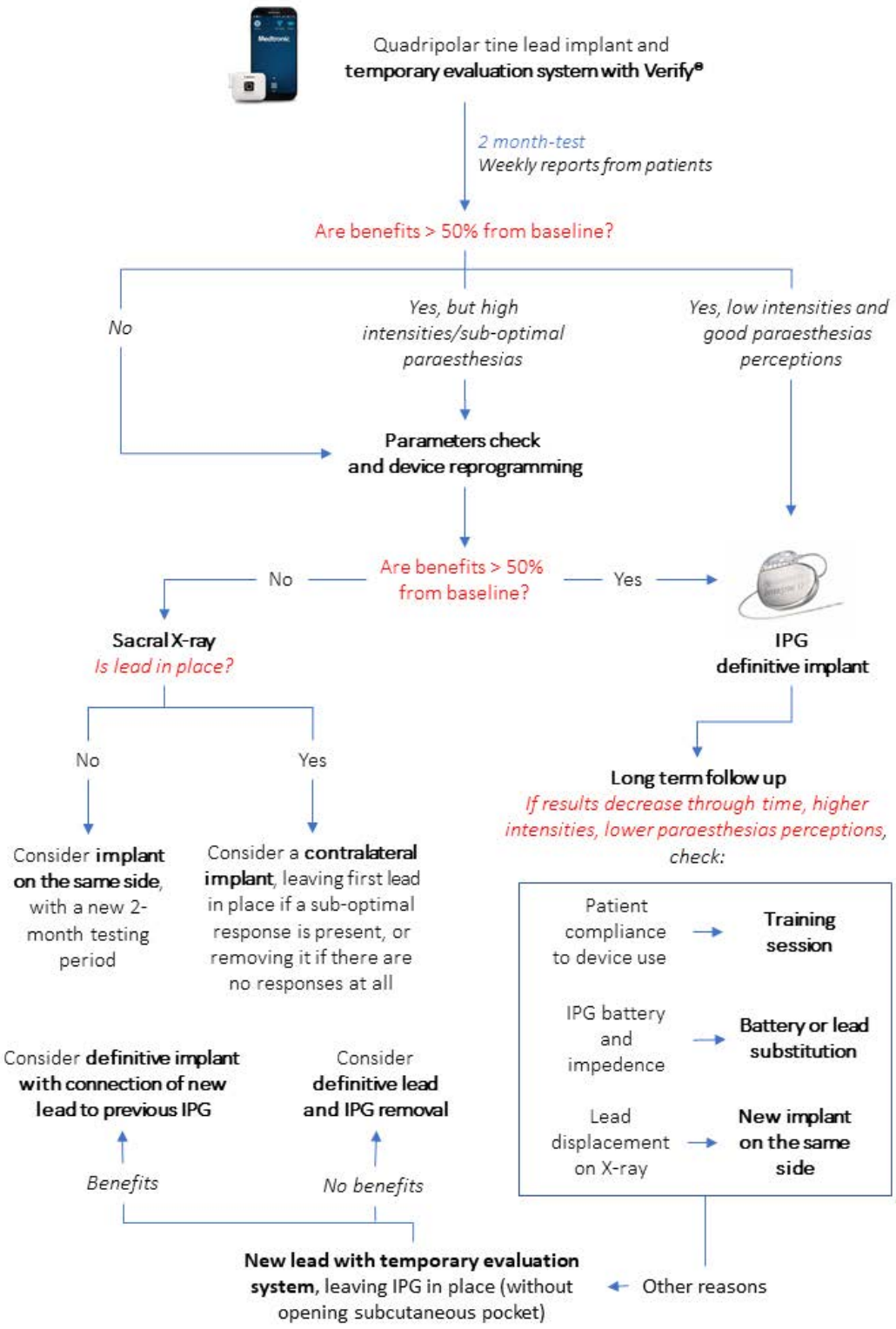

Figure 1 *- Clinical pathway for SNM in urinary retention: our centre experience*

28. AUTE CYSTITIS SYMPTOM SCORE (ACSS): ITALIAN VALIDATION OF A NEW DIAGNOSTIC TOOL

T. Di Vico, J. Durante, A. Tognarelli, K.G. Naber, R. Bartoletti

INTRODUCTION AND AIM OF THE STUDY

The Acute Cystitis Symptom Score (ACSS) is an 18-item self-reporting questionnaire for clinical diagnosis and follow-up of acute uncomplicated cystitis in women. The ACSS, originally developed in Uzbek and Russian language, is now available in several languages. The purpose of the study is to validate the ACSS questionnaire in Italian language.

MATERIALS AND METHODS

Translation process was performed by using the validated British (UK) English version of the ACSS as source. Linguistic validation was carried out according to Linguistic Validation Manual for Patient-Reported Outcomes Instruments guidelines. Clinical validation was carried out enrolling one hundred Italian speaking women. The questionnaire was administered to the patients during medical visit in addition to urinalysis and urine culture. Descriptive statistical analysis has been used.

RESULTS

Fifty-two women, median age 36 (IQR 28 – 49) were diagnosed with acute uncomplicated cystitis, while 48 women, median age 38 (IQR 29 – 45) were enrolled as control group. Most common isolated pathogen was *Escherichia coli* (40; 76.9%), followed by *Enterococcus faecalis* (7; 13.4%) and *Staphylococcus saprophyticus* (3; 5.7%). ROC curve analysis performed at the first diagnostic visit on typical domain cut-off score of 6 presented a sensitivity of 92.5% and specificity of 97.8%.

INTERPRETATION OF RESULTS

This Italian language version of ACSS has proven to be useful to diagnose of acute uncomplicated cystitis in women thanks to the statistically significant correlations existing between the typical domain scores and results of urinalyses. The peculiarity of the ACSS questionnaire is the assessment of the severity of symptoms, their effect on quality of life, and the differentiation of cystitis from other urogenital disorders. The Italian language version of ACSS showed sensitivity of 94% and 92.5% and specificity of 98% and 97.8% at a sum score of “Typical” domain of 5.5 and 6, respectively, in line with the other language validation. The Hungarian ACSS version showed sensitivity of 90% and specificity of 97% at a sum score of 6

CONCLUSIONS

Italian version of ACSS has demonstrated to be a simple, reliable and useful tool with a high accuracy in the diagnosis and follow-up of acute uncomplicated cystitis in women. Moreover, it may be also useful for clinical and epidemiological studies on cystitis in women.

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29. HIGH RATE OF COMPLICATIONS IN FRAIL PATIENTS WITH NEUROGENIC LOWER URINARY TRACT DYSFUNCTION TREATED FOR RENO-URETERAL STONES

G. Sampogna, M. Maltagliati, A. Galfano, A. Bocciardi, B. Rocco, S. Micali, E. Montanari, M. Spinelli

INTRODUCTION AND AIM OF THE STUDY

Patients with neurogenic lower urinary tract dysfunction (NLUTD) have an increased risk of developing reno-ureteral stones due to several well-known predisposing conditions. These patients are usually frail and need a treatment characterized by a high stone-free rate (SFR) and a minimally invasive approach to limit complications.
The aim of our study was to present our experience with the treatment of reno-ureteral calculi in patients with NLUTD followed by a tertiary referral center.

MATERIALS AND METHODS

We retrospectively collected data from our patients, who underwent surgery for reno-ureteral stones from May 2017 to May 2019. Pre-operative stone burden was assessed with a computed tomography (CT) scan. Depending on the case, we performed semirigid ureteroscopy (sURS) for ureteral stones, and shock wave lithotripsy (SWL), retrograde intra-renal surgery (RIRS) or percutaneous nephrolithotomy (PCNL) for renal calculi. The sURS was performed with a 7.5 Fr semirigid ureteroscope, while RIRS with an 8 Fr flexible fiberoptic ureteroscope and a 11/13 Fr ureteral sheath. In these cases, lapaxy was performed with a 1.5 Fr tipless nitinol basket. PCNL was performed with a 16-Fr-large nephrostomy sheath equipped with a lateral arm connected to an aspiration system to perform litholapaxy. Lithotripsy was always performed with a high-power Holmium:YAG laser. All procedures were performed by two expert endourologists. We estimated stone-free rate (SFR) with a CT scan after 4 weeks to evaluate the absence of < 4mm residuals. We collected and analyzed pre-, intra- and post-operative data.

RESULTS

From May 2017 to May 2019, 4 male patients with a median age of 35 years followed by our center were addressed to surgery for reno-ureteral stones (Table 1). We performed 11 procedures: sURS (n=1, 9.1%), SWL (n=1, 9.1%), RIRS (n=1, 9.1%), and PCNL (n=8, 72.7%). The SFR after the 1st procedure was 42.9% (3/7), which increased to 100% with a second procedure (1 RIRS and 3 PCNLs). Prior to surgery all patients underwent a full-course antibiotic therapy according to the antibiogram because of positive pre-operative urine culture. Five out of 11 procedures (45.5%) were characterized by different-graded complications.

INTERPRETATION OF RESULTS

Frail patients with NLUTD may pose specific challenges limiting the SFR and increasing the risks of complications. In particular, SWL triggered a dysautonomic crisis, which patients with spinal cord injuries above T6 are at risk for. Therefore, SWL should be avoided in these patients in favor of endourological procedures, which are associated with higher SFRs. The high rate of asymptomatic bacteriuria requires antibiotic therapy prior to surgery to limit the risk of infective complications. An adequate bowel preparation prior to surgery may be useful to limit the risk of colic perforation during PCNL in patients affected by neurogenic bowel.

CONCLUSIONS

Our series proved a high rate of complications in frail patients with NLUTD, affected by reno-ureteral stones. Clinicians should monitor patients with NLUTD limiting the predisposing risks for urolithiasis and performing an abdominal ultrasound periodically in order to identify and treat stones precociously, limiting the risks of life-threating complications.

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Table 1. Data collected from our patients with neurogenic lower urinary tract dysfunction undergoing surgery for reno-ureteral stones.
Acronyms: MMC = myelomeningocele; MS = multiple sclerosis; PCNL = percutaneous nephrolithotomy; PRES = posterior reversible encephalopathy syndrome; SCI = spinal cord injury; SFS = stone-free status; sURS = semirigid ureteroscopy; SWL = shock-wave lithotripsy.

Patient n°	**Baseline condition**	**Age at surgery (years) and sex**	**Stone burden**	**Surgeries (SFS; complications)**
1	MMC	22, male	Staghorn left kidney stone	PCNL (no; sepsis)
				PCNL II look (yes; none)
2	SCI (C2 level)	15, male	10 mm stone at the left uretero-pelvic junction	SWL (no; dysautonomic crisis and PRES)
				RIRS (yes; none)
			10 mm stone in left lumbar ureter	sURS (yes; none)
			18 mm stone in right renal pelvis	PCNL (yes; none)
3	MS	61, male	15 mm calculus in left inferior calyx	PCNL (yes; colic perforation needing urgent colostomy)
4	Iatrogenic	47, male	Staghorn right kidney stone	PCNL (no; hemorrhage needing 2 blood transfusions)
				PCNL II look (yes; none)
			Staghorn left kidney stone	PCNL (no; sepsis)
				PCNL II look (yes; none)

30. THREE YEARS FOLLOW-UP IN PATIENTS WITH URINARY STRESS INCONTINENCE TREATED WITH ALTIS® SINGLE INCISION SLING

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INTRODUCTION AND AIM OF THE STUDY

The purpose of the study is to report three years follow-up of single incision slings for the treatment of stress urinary incontinence (SUI). The main outcomes are to evaluate the efficacy of the device and to assess safety, adverse events, quality of life, demographic features of treated women and prognostic factors for SUI.

MATERIALS AND METHODS

We performed a retrospective, double-center, single-arm study. Data were collected by medical records and a telephone interview 3 years after the implant of the minisling. Complication rate, subjective efficacy and degree of satisfaction were investigated.

RESULTS

54 patients were treated between March 2015 and March 2017, of which 47 answered the survey. 41 out of 47 procedures (87.2%) were considered effective. Among more relevant complications, there were a case of extrusion of mesh and three cases of new onset of urinary disfunction, of which two cases of urgency urinary incontinence (UUI) and one case of de novo SUI. Most complications were solved within few days after the procedure. Concerning the subjective impression of improvement, investigated by using the Patient Global Impression of Improvement (PGI-I) questionnaires, 41 patients reported subjective satisfaction, 3 reported no change in quality of life and 3 patients had worsening of symptoms.

INTERPRETATION OF RESULTS

During the follow up, all detected complications referred to vaginal or urinary tract and the majority of them occurred shortly after the SIS placement. All patients with persisting or new onset of urinary symptoms presented several and combined risk factors for urinary dysfunction, such as menopausal status, parity or familiarity. However only three our patients complained worsening in quality of life while the objective complications used to be more in our trial. Many investigators report the same complications occurred after the SIMS implant, as de novo UUI incontinence, urinary retention, dyspareunia and mesh erosions.

CONCLUSIONS

The SIS procedure seems to be safe and effective for the treatment of SUI and, in particular, Altis® mini-sling has shown good subjective results and a high subjective cure rate, even if it reported a major complication. However more consistent evidences are needed to confirm our results.

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Table I. International Urogynecological Association (IUGA) Category Classification

Compartment	GROUP A	GROUP B	GROUP C	GROUP D
Vaginal	0/47	3/47 2 dyspareunie 1 extrusion mesh	0/47	0/47
Urinary	1/47 1bladder bleeding	8/47 5 acute urinary retention 2 UUI 1 SUI	0/47	0/47
Bowel	0/47	0/47	0/47	0/47
Skin/musculoskeletal	0/47	0/47	0/47	0/47
Systemic	0/47	0/47	0/47	0/47

Table II. Accordion severity classification

Severity grade	
Grade 1 (mild complications)	1/47 1 acute urinary retention (undergone to a relaxation of the sling 6 days after the implantation)
Grade 2 (moderate complications)	5/47 4 acute urinary retention (treated with prednisone) 1 bladder bleeding (treated with a bonding agent)
Grade 3 (severe complications)	1/47 1 extrusion of mesh (needed a reoperation)
Grade 4 (death)	0/47

Table III. Patient Global Impression of Improvement (PGI-I)

PGI-I questionnaires	
Improvement (“very much better”, “much better” or “a bit better”)	41/47 (87.2%)
No change	3/47 (6.3 %)
Worsening (“a bit worse”, “much worse”, “very much worse”)	3/47 (6.3 %)

31. THE IMPACT OF PREOPERATIVE CATHETERIZATION ON POSTOPERATIVE OUTCOMES IN PATIENTS TREATED WITH THULIUM LASER VAPOENUCLEATION OR THULIUM LASER VAPORIZATION FOR BENIGN PROSTATIC OBSTRUCTION: A LARGE INST

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INTRODUCTION AND AIM OF THE STUDY

The impact of preoperative indwelling catheter in patients undergoing transurethral surgery for benign prostatic obstruction is still unknown. We tested the impact of preoperative catheterization on perioperative and postoperative complications and functional outcomes.

MATERIALS AND METHODS

Within our institutional database with prospectively collected data we identified patients treated with thulium laser vapoenucleation (ThuVep) or thulium laser vaporization (Thuvep). Patients were stratified according to preoperative catheterization or not. Univariable and multivariable linear and logistic regression models (MLRMs) were used.

RESULTS

Between 2012 and 2018, we identified 692 patients treated with either ThuVep [442 (63.9%)] or ThuVap [250 (36.1%)]. 158 patients (22.8 %) had indwelling catheter. Mean cathterizazion time before the procedure was 5.1 months. Indwelling catheter patients had higher mean Prostatic Specific Antigene (5.7 vs 3.5 ng/mL, p<0.001), higher mean age (71.1 vs 67.9 ng/mL, p<0.001) and higher mean prostate volume (90.2 vs 78.6 ml, p<0.001). Postoperative complication (17.7 vs 13.7 %, p = 0.1), and acute urinary retention (10.8 vs 7.1 ng/mL, p = 0.5) rates were similar between the two groups.

INTERPRETATION OF RESULTS

In MLRMs pre-operative catheterization failed to achieve the indipendent predictor status for higher complication rates (OR: 1.02; p=0.9). Morever, pre-operative catheterization failed to achieve the indipendent predictor status for higher acute urinary retention rates (OR: 1.89; p= 0.3). Finally, in multivarible linear regression models preoperative catheterization was not associated with Lower International Prostatic Symptoms Score drop at one year (-3.4, p = 0.2).

CONCLUSIONS

Based on our results patients with preoperative indwelling catheter do not represent a different entity. Perioperative and postoperative outcomes are comparable to non-catheterized patients.

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32. URETHRAL BULKING THERAPY FAILURE: A REAL-LIFE EXPERIENCE IN TREATMENT CHOICE

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INTRODUCTION AND AIM OF THE STUDY

Urethral bulking is a long-known technique used to treat stress urinary incontinence (SUI) in female. According to a Cochrane review published in 2017[1] urethral bulking effectiveness on naïve patients is lower than other urinary incontinence devices, such as Mid Urethral Slings (MUS), though its safety profile is more favorable. On the other hand, very low evidence is present about reintervention efficacy in literature. Very few studies suggest how urethral bulking following previous failed anti-incontinence procedures (both urethral bulking and other surgical procedures) can lead to a urinary continence improvement. In this work a descriptive analysis of a single center series of reintervention cases after urethral bulking is performed.

MATERIALS AND METHODS

Out of 97 female patients who underwent urethral bulking with Bulkamid® within years 2017-2019 by our Center as a treatment for urodynamic SUI or mixed incontinence, 35 underwent reintervention within 1 year from the first procedure. Reintervention was proposed to patients because of absolute or relative inefficacy of the first urethral bulking (no benefit on urinary continence, significant but personally non satisfying continence improvement or progressive loss of efficacy). Reintervention consisted either in re-urethral bulking or other surgical procedures such as mid urethral sling (MUS), sacral neuromodulation, botulinum toxin-A detrusor injections or combined procedures. A descriptive analysis of reintervention outcomes is performed in order to suggest clinical efficacy of urethral re-bulking with Bulkamid® following urethral bulking.

RESULTS

Median age at surgery was 67. Median follow up after reintervention was 6 months. 21 re-bulking and 14 different anti-incontinence procedures were performed. 8 patients subjected to urethral re-bulking (38%) reported complete continence after the first procedure (no pads), 11 of them (52%) reported mild incontinence after first procedure (security pad), in only 2 of them (10%) a significant incontinence endured (no benefit from first urethral bulking). Out of the 14 patients to whom a different reintervention was proposed (7 urethral mini-sling surgery, 2 botulinum toxin intradetrusor injections, 1 sacral neuromodulation device implant, 1 ACT implant, 3 combined urethral bulking + botulinum toxin injections), 5 reported no benefit after the previous urethral bulking, 7 reported persistence of mild incontinence and 2 reported complete continence. Out of the 21 re-bulking patients, 11 reported complete continence after re-bulking (52%), 10 patients (48%) reported significant continence improvement (security pad). None reported complete re-bulking failure.

INTERPRETATION OF RESULTS

Patients who underwent urethral re-bulking showed in most cases positive results from the first procedure. Good results after the first urethral bulking suggest in first place that a non-negligible portion of patients subjected to urethral bulking with Bulkamid report a loss of efficacy within 1 year, with the need of a new intervention. On the other hand, complete continence after the first procedure with subsequent loss of efficacy or incomplete efficacy seem to be more likely to lead to a re-bulking than complete urethral bulking inefficacy. Our case series show a very encouraging outcome of re-bulking, with 52% of dry patients and

48% of significant continence improvement. Nevertheless, this outcome could be biased by the low incontinence severity of the population subjected to reintervention and by the good results of a prior urethral bulking.

CONCLUSIONS

Urethral re-bulking appears to be an effective and feasible technique for patients who reported complete or partial efficacy after urethral bulking who were not satisfied after urethral bulking or following a loss of efficacy of a prior urethral bulking. On the other hand, patients reporting complete inefficacy after prior urethral bulking are apparently more likely to be subjected to different anti-incontinence procedures. Large cohorts and statistic comparison between re-bulking patients, patients subjected to different reintervention procedures such as MUS and patients non subjected to reintervention are needed to study the outcomes hereby described.

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33. A CONSECUTIVE SERIES OF PATIENTS UNDERGOING TRANS-URETHRAL CYSTOLITHOTRIPSY BY A TERTIARY REFERRAL CENTER FOR NEUROGENIC BLADDER

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INTRODUCTION AND AIM OF THE STUDY

Patients with neurogenic bladder (NB) have an increased risk of developing bladder stones due to bladder catheter, incomplete bladder emptying, recurrent urinary tract infections, and immobilization. In these patients, minimally invasive treatments are usually adopted, as noninvasive extracorporeal shockwave lithotripsy is limited by the risk of not clearing all stone fragments, and open surgery is usually discouraged because of the frailty in severe baseline conditions, like spinal cord injury (SCI) or myelomeningocele (MMC).
The aim of our study was to present our experience with trans-urethral cystolithotripsy (TUCL) in patients treated by a tertiary referral center for NB.

MATERIALS AND METHODS

We retrospectively collected pre-, intra- and post-operative data from our patients, who underwent TUCL from October 2013 to October 2019. Stone burden was estimated endoscopically at the beginning of the procedure. The procedure was performed with a 24 Fr cystoscope and a ballistic lithotripter. Lapaxy was performed with Ellik bladder evacuator. At the end of the procedure, we placed a silicone two-way bladder catheter. We administered peri-operative antibiotic prophylaxis with a third-generation cephalosporin, or with aminoglycoside in case of allergy. All procedures were performed by two expert surgeons. Stone-free rate (SFR) was defined as the percentage of patients with absence of residual fragments > 2 mm in diameter. We performed a statistical analysis to evaluate the correlation between SFR and all other variables collected (statistical significance was set as p value < 0.05).

RESULTS

In Table 1 we reported all data of our 91 TUCLs performed consecutively in 75 patients during the selected period. In 7 patients, bladder stones relapsed and they underwent a novel TUCL; among them, a 3rd TUCL was performed in 3 patients. Our statistical analysis outlined the SFR was affected in a statistically significant way by sex and baseline condition. Indeed, four patients underwent a II look: 2 men vs. 2 women; 2 patients with MMC vs. 2 patients with SCI.

INTERPRETATION OF RESULTS

TUCL with ballistic lithotripsy proved to be safe and effective in our NB patients. The SFR was negatively affected by female sex and MMC. Considering our single-institution case series, further multicenter randomized controlled trials are mandatory to validate definitively TUCL as the gold standard therapy for bladder urolithiasis in NB patients, and to identify proper risk factors limiting the SFR. Most bladder stones were diagnosed and treated precociously (median stone cumulative diameter: 20 mm) because of our follow-up strategy, based on an annual abdomen ultrasound (US) screening in patients with NB.

CONCLUSION

Our series proved the safety and efficacy of TUCL with ballistic lithotripsy in NB patients. These valid outcomes were obtained with a low-cost equipment, made up of a rigid cystoscope and a low-powerful ballistic lithotripter. Considering the increased incidence of

bladder stones and the raising prevalence of patients with NB in underdeveloped countries, our methodology may serve as a reference for urological services with restricted resources. An annual abdomen US screening is mandatory to diagnose and treat precociously bladder stones, obtaining good clinical outcomes.

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Table 1. Pre-, intra- and post-operative data collected from our consecutive series of patients with neurogenic bladder undergoing trans-urethral cystolithotripsy.
Acronyms: MMC: myelomeningocele; SCI = spinal cord injury; SFR = stone-free rate; TUCL = trans-urethral cystolithotripsy.

Data	Value
No. TUCL	91
No. patients	75
Neurogenic bladder: Etiology	SCI above C8: 36 (48%) SCI below T1: 29 (38.7%) MMC: 6 (8%) Iatrogenic: 3 (4%) Multiple Sclerosis: 1 (1.3%)
Age median (range)	43.5 (15-84)
Sex	Males: 65 (86.7%) Females: 10 (13.3%)
Stone number median (range)	1 (1-5)
Stone cumulative diameter median (range)	20 mm (6-86 mm)
Operative time median (range)	40 min (20-150 min)
Intra-operative complications	Macrohematuria: 1 (1.1%)*
Post-operative complications	Macrohematuria: 1 (1.1%)*
Length of stay median (range)	1 day (1-7 days)*
SFR after 1st TUCL	94.1% (80/85)
SFR after 2st TUCL	98.8% (84/85)
SFR after 3st TUCL	100% (85/85)

* The length of stay was 1 day after 89/90 TUCLs and 7 days in the patient who presented macrohematuria both intra- and post-operatively.

34. URODYNAMIC FINDINGS IN PATIENTS WITH DETRUSOR UNDERACTIVITY PERFORMING INTERMITTENT SELF CATHETERIZATION OR WITH INDWELLING BLADDER CATHETER

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INTRODUCTION AND AIM OF THE STUDY

Male patients, due to aging and benign prostatic hypertrophy (BPH), are subject to develop both voiding and storage LUTS. However, there are some exceptions, especially patients with unknown concomitant detrusor underactivity (DU), that are therefore submitted to BPH treatment, with mild or none symptoms relief. Aim of this study is to describe common urodynamic findings in these patients

MATERIALS AND METHODS

We retrospectively evaluated male patients who were submitted to intermittent self-catheterization (IC) or to indwelling bladder catheter (IBC) due to DU. We considered patients evaluated from 2017 to 2019. Inclusion criteria were male sex, complete pressure/flow urodynamic exam, IBC or IC. We then made a descriptive statistical analysis to define the urodynamic profile of these category of patients. All continuous variables are reported as mean (standard deviation), while categorical as n (%).

RESULTS

A total of 30 patients were identified in the considered time period who met the inclusion criteria. Mean age was 69 years (11), while prostate volume was 31 cc (15). Patients with previous BPH surgery were 17 (56.7%), and DU diagnosis was made after failed surgery. Patients with IBC were 13 (43.3%) and they also had concomitant Urinary Tract Infections (UTIs), while patients who practiced IC were 17 (56.7%), with a mean of 4 (1) IC per die, they had no UTIs. About symptoms before diagnosis, 5 (16.7%) patients presented with overflow incontinence, the others with high Post Void Residue, 14 (46.7%) or Acute Urinary Retention (AUR) 11 (36.7%). Regarding urodynamic findings, only 19 (63.3%) patients had a free flow, with a mean maximum flow (QMax) of 7 ml/s (4), mean voided volume of 216ml (183) and a PVR of 557ml (310). Mean cystometric capacity was 514 ml (163), first desire was present in 24pts (80%) and was at a mean 269ml (180). Voiding part of pressure/flow study was obtained in only 16 pts (53.3%) and mean QMax was 11ml/s (10), while PVR 523ml (445). Mean Pdet at QMax was 34cmH2O (19) and mean Bladder Outlet Obstruction Index 28 (15), while bladder voiding efficacy was 26% (16). Decision to undergo IC or IBC was made according to patients capabilities and preferences.

INTERPRETATION OF RESULTS

Few things are known regarding common urodynamic profile of male patients with DU that requires IC or IBC. In many cases diagnosis is made only after a previous failed BPH surgery, that although may partially improve the situation, usually provide only a scarce improvement at the cost of surgery risks, that makes it usually unworthy. However, literature tell us that the possibility to regain the voiding capability had a significant improvement in patients Quality of Life, despite the DU[1]. In fact, at present time there are no factors or urodynamic findings that allow us to predict surgery success[2]. Despite the risk that surgery may be unsuccessful, Urologist are actually still willing to offer BPH surgery in this setting of patients, regardless urodynamic findings[3]. According to our findings, a preoperative urodynamic may have avoided surgery to 17 pts, especially to the 3 pts who didn't regained voiding capability after surgery and that maintained IBC. Furthermore, trials and possibly

systematic reviews and meta-analysis should be advocated to clearly elucidate urodynamic predictors of surgical success and their effect magnitude.

CONCLUSIONS

Urodynamic diagnosis of DU and of scarce Bladder Outlet Obstruction Index may clearly avoid surgery in a certain sub setting of patients. However, current knowledge it's insufficient to certainly identify them, thus further trials and studies are advocated to elucidate the problem.

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	MEAN	STANDARD DEVIATION
PRESSURE/FLOW STUDY		
Detrusor Leak Point Pressure	64	47
Abdominal Leak Point Pressure	60	39
First Desire	269	180
Cistometric capacity (CC)	514	163
Compliance	75	111
Q max	7	4
Pdet at Q max	34	19
Bladder Outlet Obstruction Index (BOOI)	28	15
Bladder Voiding Efficiency (BVE)	26	15
PVR (Post-void Residual)	523	445
Bladder Contractility Index (BCI)	67	32
MUCP	63	31
UROFLOWMETRY		
Q max	11	10
Voided volume	216	183
PVR	557	575

35. PELVIC FLOOR REHABILITATION IN FEMALE PATIENTS WITH FECAL INCONTINENCE: THE ROLE OF AGE AND PARITY ON RESULTS

C. Guerci, E. Bolzoni, A. Bondurri, P. Danelli

INTRODUCTION AND AIM OF THE STUDY

Fecal incontinence (FI) is defined as the loss of gas, liquid, or solid stool. It is a hygienic issue with an important influence on social behavior. Pelvic floor rehabilitation is well established as a clinical intervention for patients with fecal incontinence. Pelvic floor physical therapists utilize a range of treatment tools, including bowel management education, manual therapy, pelvic floor muscle training, biofeedback therapy, electrical stimulation, transanal irrigation (TAI). However, there is still a lack of agreement on selecting criteria, predictors of good outcomes, and the most effective treatment protocols. The primary aim of this retrospective study is to evaluate the efficacy of pelvic floor rehabilitation in incontinent female patients. Another goal is to determine how the results of the treatment could be affected by age and parity.

MATERIALS AND METHODS

From 2009 to 2019, 43 patients affected by fecal incontinence underwent pelvic floor rehabilitation in our center. Anorectal manometry, anal US or defecography were performed before the treatment. Each patient was evaluated by Wexner score at the beginning and the end of the rehabilitation. The rehabilitation program included pelvic floor muscle training, biofeedback, electrical stimulation (twice a week, 10 sessions in total) and/or TAI. These sessions were performed by a dedicated nurse. The difference between pre- and post-treatment data was analyzed by a Student t-test.

RESULTS

The median age was 62, and 13 patients were ≥75 years old at the moment of the evaluation. Nulliparous women were 12, uniparous and multiparous patients were 14 and 17 respectively. 14 patients had a history of at least a delivery episiotomy or vaginal tear. Median Wexner score before rehabilitation was 9,3, whilst after therapy it was 4,2. The median pre-treatment and post-treatment Wexner scores amongst patients ≥75 years old were 8,3 and 3,4 respectively, while in younger patients, they were 9,7 and 4,5. Results based on Wexner score were classified in improvement, no change, and worsening in symptoms. 38 patients (88,37%) reported an improvement after the rehabilitation, 3 patients (6,98%) reported no change, 2 patients (4,65%) reported worsening in symptoms.

INTERPRETATION OF RESULTS

The difference between median pre-treatment and post-treatment Wexner scores was statistically significant ($p<0,05$). There was no significant difference between patients ≥75 years old and younger patients, in terms of improving. Considering pre-treatment Wexner scores, there was no significant difference between nulliparous and uniparous/multiparous patients, as well as between women who had normal childbirths and women who had episiotomies or vaginal tears; the same can be said even considering post-treatment Wexner scores.

CONCLUSIONS

This study confirmed that pelvic floor rehabilitation is an effective treatment for patients affected by fecal incontinence. Wexner score improved in the majority of patients. It has been also demonstrated that the results are not affected by age, parity and obstetric history.

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36. TRANS-ANAL IRRIGATION FOR FECAL INCONTINENCE: PRELIMINARY DATA FROM A MONOCENTRIC STUDY.

G. Zaffaroni, A. Bondurri, C. Guerci

INTRODUCTION AND AIM OF THE STUDY

Fecal incontinence (FI) is defined as the loss of gas, liquid, or solid stool. Even if FI is a benign condition, it impacts on quality of life (QoL). The purpose of Trans-Anal Irrigation (TAI) is to allow people with bowel dysfunction to flush out the lower part of the bowel as part of their bowel management strategy.
The procedure requires medical and nursing training, an extreme awareness, and sometimes it could appear complicated.
The aim of this retrospective study is to evaluate the efficacy of TAI in incontinent patients using Wexner score, the improvement of QoL using a VAS score and the patients' adherence to the procedure.

MATERIALS AND METHODS

Between 09/2016 and 01/2020 we identified 21 patients suffering from FI, including patients affected by Low Anterior Resection Syndrome (LARS) that could benefit from TAI. The rehabilitation program include a training with a specialized nurse, a fifteen-day telephonic follow-up, and a clinical follow-up at 1, 6, 12 and 24 months. The difference between pre- and during-treatment data was analyzed by a Student t-test.

RESULTS

Five patients were Male. Seven patients suffer from LARS. Nine patients refused the treatment before training, one left just after, and one is waiting for it. Ten patients have started TAI at home, while two patients have stopped it at 4 and 6 months respectively.
The median age was 65,04 globally, 62,58 in patients who accepted training, 68,33 in patient who refused TAI. The median Wexner score was 12,4. The median pre-treatment score among the 8 patients using TAI was 13,375, while at the last follow up it was 7 (p: 0,0328). The median VAS was 3,5 at the beginning versus 7,2 after one month and it further improved over time. All patients reported an improvement in Wexner score and VAS. One patient stopped the treatment for hematochezia.

INTERPRETATION OF RESULT

The difference between median pre-treatment Wexner scores and during the follow-up was statistically significant ($p<0,05$). There is a difference in the median age between the group who accepted the training and the group who did not, but it is not significant.

CONCLUSIONS

This study shows that TAI is a possible indication in patients suffering from IF. A good training is mandatory for the adherence and to recognize adverse events. The patients compliant to TAI experienced significant Wexner score and VAS improvement.

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37. GLI EFFETTI DI UN TRATTAMENTO RIABILITATIVO PELVI-PERINEALE CON L'UTILIZZO DI TECNICHE IPOPRESSIVE INTEGRATE A CHINESITERAPIA SU SEGNI E SINTOMI DEL PROLASSO URO-GENITALE DI I E II GRADO: STUDIO PILOTA

M. Tess, E. Dimitrova, N. Valè, G.C. Zanni

INTRODUZIONE E SCOPO DELLO STUDIO

Il prolasso degli organi pelvici (POP) è una condizione patologica caratterizzata dal *descensus* di uno o più organi pelvici per cedimento delle strutture di sostegno. Può interessare le donne di tutte le età, tuttavia colpisce maggiormente durante il periodo post-menopausa e in seguito a più parti vaginali. I sintomi sono molti e possono variare tra "senso di pesantezza" fino a difficoltà di evacuare, incontinenza di gas, feci, o incontinenza urinaria da sforzo. Alla base della patogenesi vi è il cedimento delle strutture muscolo-aponeurotiche e legamentose costituenti il sistema di sostegno e sospensione dei muscoli del pavimento pelvico (MPP). Il POP è una condizione "dinamica" e i fattori che determinano la sua progressione o la sua regressione necessitano sempre di ulteriori e nuovi approfondimenti. Per questo motivo anche il management può risultare complesso, in quanto, spesso coesistono diversi difetti di sostegno del pavimento pelvico la cui semplice correzione chirurgica non restituisce la normale funzionalità del sistema.

Il training muscolare del pavimento pelvico (PFMT) è raccomandato come trattamento di I° livello nella gestione della incontinenza urinaria. Studi sperimentali hanno dimostrato la sua efficacia anche nel trattamento del POP.

L'aumento delle pressioni addominali compromette l'attività dei muscoli perineali in termini di timing di attivazione e capacità contrattile. Gli esercizi ipopressivi (EI) sono stati proposti come metodo per la gestione degli aumenti della pressione intraddominale (PIA). In seguito alla riduzione della PIA ottenuta tramite gli EI vengono attivati per via riflessa i MPP e il trasverso dell'addome (TrA), con effetti a lungo termine che prevedono tonificazione e rinforzo della muscolatura trattata.

Le tecniche ipopressive potrebbero essere un metodo complementare al tradizionale PFMT. Tuttavia, allo stato attuale non vi sono evidenze scientifiche riguardo l'efficacia conseguente alla combinazione di queste due modalità di trattamento.

Obiettivo dello studio: valutare gli effetti di un trattamento riabilitativo che utilizza tecniche ipopressive integrate al PFMT sulla riduzione e la percezione della sintomatologia e sulla qualità della vita nelle pazienti con POP di I e II grado.

MATERIALI E METODI

Disegno dello studio: E' stato condotto uno studio prospettico non controllato. ***Partecipanti:*** Pazienti ambulatoriali con sintomatologia da prolasso genitale in attesa di intervento chirurgico per la correzione del disturbo.

Criteri di inclusione: Età > 18 anni; presenza di prolasso non sottoposto in precedenza a chirurgia correttiva; prolasso di I o II grado.

Criteri di esclusione: presenza di malattia neuromuscolare; diagnosi di malattia tumorale maligna; prolasso con grado maggiore di II grado.

Procedure di Valutazione: Le valutazioni sono state effettuate in tre tempi diversi: prima dell'inizio del trattamento (T0) e immediatamente dopo il trattamento (T1).

Misura di outcome primaria: Visual Analogue Scale (VAS) per la percezione dei sintomi.

Misure di outcome secondarie: Pelvic Organ Prolapse- Quantification (POP-Q); PC- test secondo la standardizzazione di AIPDA (sono stati considerati il Test Muscolare e la Coordinazione Respiratoria); Questionario Prolapse Qiality of Life (P-QoL).

Procedura di Trattamento: Ciascuna delle pazienti è stata sottoposta a 8 trattamenti individuali con sessioni di 60 minuti per 1 giorno/settimana per 8 settimane consecutive. Il protocollo riabilitativo prevedeva esercizi ipopressivi integrati al PFMT.

Analisi Statistica: I dati sono stati analizzati mediante test descrittivi e inferenziali. Gli effetti intra-gruppo sono stati valutati mediante test di *test dei ranghi con segno di Wilcoxon per campioni accoppiati* (T0, T1). Il livello di significatività è stato impostato con p-value uguale a 0,05. I dati sono stati analizzati utilizzando il pacchetto software SPSS v. 22.0.

RISULTATI

Per lo studio sono state considerate 34 pazienti, delle quali sono 24 state escluse, poichè non rientravano nei criteri di inclusione, 3 non hanno accettato il trattamento. Nello studio sono state coinvolte 7 pazienti.

Tabella 3. Confronto intra-gruppo degli effetti del trattamento, *test dei ranghi con segno di Wilcoxon*

		Mediana T0	IQ T0	Mediana T1	IQ T1	p valuee
Outcome primaria	**VAS**	6.0	5,0 - 7,0	3.0	1,0 - 5,0	**0,017***
	POP-Q	2.0	2,0 - 2,0	2.0	2,0 - 2,0	0.257
Outcomes secondarie	**PC**	2.0	2,0 - 3,0	3.0	2,0 - 4,0	0.063
	CR	3.0	0 - 5,0	0.0	0 - 0	**0,042***

VAS: Visual Analogue Scale, POP-Q: Pelvic Organ Prolapse Quantification, PC test: test del muscolo Pubo-Coccigeo, CR: Coordinazione della Respirazione, IQ: range Interquartile

Tabella 4. Confronto intra-gruppo degli effetti del trattamento, *test dei ranghi con segno di Wilcoxon*

P-QoL		Mediana T0	IQ T0	Mediana T1	IQ T1	p valuee
Dominio 1	*Percezione generale*	2	1,0 - 3,0	2	1,0 - 2,0	0.157
Dominio 2	*Impatto*	3	2,0 - 3,0	3	2,0 - 3,0	0.564
Dominio 3	*Limitazioni ADL*	14	13,0 - 15,0	12	11,0 - 13,0	**0,040***
Dominio 4	*Limitazioni fisiche*	3	2,0 - 5,0	2	2,0 - 4,0	0.408
Dominio 5	*Limitazioni sociali*	6	4,0 - 8,0	5	4,0 - 7,0	0.221
Dominio 6	*Relazioni personali*	8	6,0 - 9,0	7	6,0 - 8,0	0.221
Dominio 7	*Stato emotivo*	6	5,0 - 8,0	7	4,0 - 8,0	1
Dominio 8	*Sonno/energia*	3	2,0 - 4,0	2	2,0 - 3,0	0.102
Dominio 9	*Severità dei sintomi*	6	6,0 - 9,0	7	6,0 - 8,0	1

INTERPRETATION OF RESULTS / DISCUSSIONE

I risultati di questo studio dimostrano come questo approccio può ridurre il livello di percezione della sintomatologia valutata con la VAS (p=0.017) con conseguente miglioramento della qualità della vita (P-QoV III°dominio, p=0.040). Abbiamo trovato che gli EI associati al PFMT possono migliorare la coordinazione tra l'attività respiratoria e la contrazione dei muscoli del pavimento pelvico. L'accrescimento della forza muscolare non ha mostrato valori statisticamente significativi (p=0.063). Possibile spiegazione possiamo trovare nella qualità del tessuto muscolare. A cominciare dall'età tra 50 e 60 anni, nelle

donne si verifica una riduzione della massa muscolare (dal 10% al 16%) con aumento della percentuale del grasso e tessuto connettivo all'interno del tessuto muscolare. Diversamente da quanto ipotizzato, non è stata riscontrata riduzione del grado del prolasso valutato con la POP-Q. Una possibile spiegazione potremmo trovare nella durata del trattamento che prevedeva soltanto 8 settimane che probabilmente non è sufficiente per poter determinare dei cambiamenti più importanti. L'ottimizzazione della coordinazione tra la respirazione e la contrazione dei muscoli perineali possiamo attribuire all'aumento della capacità di attivare il TrA, durante la gestione di situazioni di aumento della PIA e di generare una forza contrattile dei muscoli perineali tale da poter controbilanciare simili condizioni. Il training muscolare perineale agisce sui muscoli del pavimento pelvico, incrementando la forza, la resistenza allo sforzo e la velocità di accorciamento del muscolo, modificando l'estensibilità e l'elasticità. Le tecniche ipopressive invece si avvalgono dell'alleanza tra respirazione, attivazione della parete addominale, reclutamento perineale e postura, contribuiscono a migliorare la capacità di gestire le variazioni di pressioni conseguenti allo sforzo, all'attività fisica e i cambi posturali.

CONCLUSIONS / CONCLUSIONI

I dati ottenuti ci suggeriscono che questo approccio riabilitativo può essere indicato nell'ambito del trattamento della sintomatologia dovuta al POP di I e II grado in quanto ha portato degli effetti positivi sulla percezione dei sintomi, sulla coordinazione della respirazione e sulla qualità della vita di queste pazienti. La valutazione degli effetti ottenuti attraverso questo approccio riabilitativo dovrebbe essere orientata piuttosto sui miglioramenti funzionali, che sull'aumento della forza muscolare.
Sono necessari studi su casistiche più ampie per valutare in modo più approfondito gli effetti di questo approccio riabilitativo.

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38. DOLORE PELVICO CRONICO E FISIOTERAPIA DEL PAVIMENTO PELVICO - CASE REPORT

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INTRODUCTION AND AIM OF THE STUDY / INTRODUZIONE E SCOPO DELLO STUDIO

La prostatite cronica/dolore pelvico cronico (CP/CPPS) è definito come dolore urologico o discomfort nella regione pelvica associato spesso a conseguenze negative, cognitive, comportamentali ed emotive. La terapia chirurgica è risolutiva per le disfunzioni urinarie ma spesso è fallimentare nelle condizioni dolorose associate a frequenza/urgenza.
Il case report narra di un paziente con CPPS e urgenza/frequenza notturne da tre anni e di come il protrarsi di una patologia urologica possa innescare dolore cronico correttamente gestito con approccio riabilitativo multimodale.

MATERIALS AND METHODS / MATERIALI E METODI

Un uomo di 76 anni accede al percorso riabilitativo su invio chirurgico con diagnosi di CPPS. L'intervento chirurgico di TURP /TUIP e la terapia farmacologica non hanno trovato successo per la gestione del dolore invariato da tre anni. Il paziente è stato educato circa la neurofisiologia del dolore, trattato per inibire i trigger points(TrPs) al di fuori del pavimento pelvico, sottoposto a terapia manuale per il rachide toraco-lombare, muscoli del pavimento pelvico per via indiretta; è stato trattato con tecniche di neurodinamica, è stato sottoposto ad esercizio terapeutico sia in sede di trattamento che a casa ed invitato a svolgere esercizio aerobico a basso carico.

RESULTS / RISULTATI

Il cambiamento nel paziente ha rilevato una riduzione di almeno del 30% nella NPRS, dato clinicamente significativo nonché riduzione dei fenomeni di urgenza/frequenza notturni. Questi outcomes hanno risposto alla richiesta d'aiuto del paziente. Il paziente attualmente è alla sua sesta seduta con una riduzione della sintomatologia sulla scala della NPRS di 3 punti. Al momento della sua quarta seduta aveva riscontrato una riduzione di 5 punti sulla scala NPRS, riscontrabile anche con una quasi assente provocabilità dei TPrs e dei distretti muscoloscheletrici, con un sostanziale miglioramento della urgenza/frequenza dilazionata in soli 2 episodi per notte non associati a dolore.
Visto il flare up, si sta lavorando in maniera più mirata sui TrPs ed è stata data variabilità all'esercizio terapeutico in studio e a domicilio

INTERPRETATION OF RESULTS / DISCUSSIONE

È stato visto come la riabilitazione dei muscoli del pavimento pelvico(PFPT) con un terapista esperto è uno degli strumenti più utili nel trattamento di pazienti con CPP/CPPS, specialmente se un elevato numero di pazienti proviene da un periodo di trattamenti fallimentari[1]. CPP/CPPS è una sindrome, non una malattia, e come tale i pazienti possono presentare una vasta gamma di sintomi. Questo è probabilmente il motivo per cui ampi studi sulla monoterapia non hanno costantemente dimostrato efficacia rispetto il placebo.
Il nostro paziente presentava dolore muscoloscheletrico inguinale evocabile tramite la palpazione del retto dell'addome nella sua inserzione sovrapubica, dell'ileopsoas e dopo aver eseguito PA sulla giunzione toracolombare. Solo la valutazione intrarettale ha esacerbato in maniera esponenziale la sintomatologia algica, tanto da portarci a trattare il pavimento pelvico in maniera indiretta visti gli esiti. I sintomi urinari traducibili in urgenza/frequenza erano direttamente correlati alla riaucutizzazione del dolore notturno tanto da portarlo ad aumentare la frequenza minzionale ad una distanza di un'ora circa. Tramite la fisioterapia del pavimento pelvico il paziente ha recuperato in termini di sintomi

di frequenza e di svuotamento, nonché ha ridotto gli episodi algici, avvalorando l'utilità di un approccio multidisciplinare ad un paziente con CPP/CPPS

CONCLUSIONS / CONCLUSIONI

Il dolore pelvico cronico è una condizione estremamente invalidante e rischia di non essere gestito nella maniera adeguata se non si considerano tutti i domini dal quale può essere scatenato e perpetuato. Una corretta conoscenza multidisciplinare da parte degli addetti ai lavori in grado di consentire concreti e produttivi referral, può garantire la cura delle persone che riferiscono dolore pelvico cronico.

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39. PREVENZIONE PRIMARIA E PATOLOGIE DISFUNZIONALI DEL PAVIMENTO PELVICO. INDAGINE CONOSCITIVA.

E. Malinverno, S. Rivoire, S. Rossi, G. Fizzotti

INTRODUZIONE E SCOPO DELLO STUDIO

Diffondere il concetto di prevenzione è importante per conservare la buona salute delle persone. La prevenzione primaria si rivolge al soggetto sano modificando i fattori di rischio e riducendo le probabilità che si verifichi un evento avverso; la prevenzione secondaria interviene su soggetti con problematiche anche in fase iniziale ed è finalizzata a interrompere o rallentare il decorso di una patologia; la terziaria è rivolta al contenimento degli esiti ed al controllo delle complicazioni (1). Lo scopo di questo studio è stato quello di verificare se i pazienti candidati alla riabilitazione del pavimento pelvico fossero a conoscenza dei fattori predisponenti le patologie disfunzionali del pavimento pelvico e delle norme comportamentali per una corretta prevenzione.

MATERIALI E METODI

Abbiamo considerato 50 donne, in età compresa tra i 30 ed 80 con diagnosi di prolasso multi- compartimentale del pavimento pelvico in attesa di progetto riabilitativo individuale, nel periodo compreso tra Gennaio 2019 e Dicembre 2019. Il questionario anamnestico di accesso al trattamento conservativo comprendeva i dati anagrafici, l'anamnesi familiare e personale e le domande mirate ad identificare i fattori che solitamente contribuiscono allo sviluppo di tale patologia: il parto, se naturale, l'obesità, la stipsi, l'età, gli interventi chirurgici ginecologici quali l'isterectomia, l'attività lavorativa, tutte le situazioni che possono portare ad un cronico aumento della pressione endoaddominale.

RISULTATI

Dalla valutazione delle risposte è emerso che 49 delle donne considerate non conoscevano i fattori predisponenti e le strategie comportamentali finalizzate ad una corretta prevenzione primaria delle patologie disfunzionali del pavimento pelvico.

DISCUSSIONE

I risultati hanno evidenziato la mancata conoscenza da parte delle donne delle condizioni favorenti una patologia che le investe direttamente La prevenzione primaria rappresenta il primo step per ridurre la probabilità che una patologia si verifichi. Le specifiche competenze dovrebbero essere già presenti prima che la persona identifichi un percorso riabilitativo di tipo conservativo.

CONCLUSIONI

La programmazione di attività non necessariamente mediche, ad esempio l'**educazione sanitaria** nelle scuole o attraverso i mezzi di comunicazione è una forma di prevenzione, dal momento che le giovani donne, imparando strategie comportamentali quotidiane, avranno un minor rischio di sviluppare patologie a livello perineale La prevenzione dovrebbe coinvolgere varie figure e professioni in campo sanitario ma non solo: medico, infermiere, fisioterapista, insegnante, psicologo, psicoterapeuta, genitore. L'indagine conoscitiva circostanziata al piccolo gruppo considerato evidenzia la necessità dell'informazione di base rivolta a soggetti giovani a cui non siano state riscontrate disfunzioni del pavimento pelvico.

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INTRODUZIONE E SCOPO DELLO STUDIO

Per lo studio effettuato sono stati reclutati pazienti con costipazione associata a dissinergia addomino-pelvica. Diversi studi hanno dimostrato che la costipazione ha un effetto negativo sulla qualità della vita; infatti quest'ultima è significativamente più bassa nei soggetti costipati rispetto a quelli non costipati (1). La costipazione può essere classificata in tre categorie: transito normale, transito lento, e disfunzioni nel transito. Può essere associata a dissinergia pubo-rettale che rappresenta fino al 25% della costipazione legata alla disfunzione dell'evacuazione (2). La dissinergia pubo-rettale è caratterizzata da una contrazione paradossale del muscolo pubo-rettale e dello sfintere anale esterno, che porta alla capacità significativamente ridotta di espellere le feci durante i tentativi di defecazione. Il corretto processo di defecazione richiede quindi il lavoro coordinato di muscoli del pavimento pelvico, del torchio addominale e del diaframma; in caso di stipsi associata a dissinergia questo non avviene ed occorre intervenire con metodiche di riabilitazione del piano perineale o in alcuni casi si ricorre alla chirurgia. Le metodiche di intervento conservativo come la riabilitazione perineale rappresentano un trattamento efficace nei sintomi clinici e funzionali della stipsi associata a dissinergia addomino-pelvica o sindrome da non rilasciamento del pubo-rettale. Tuttavia pochi studi hanno utilizzato una misura dello stato di salute sia generica che specifica della problematica, per effettuare valutazioni esaustive degli effetti della riabilitazione sulla variazione dello stato funzionale e sintomatologico della problematica e sulla qualità della vita delle persone affette da stipsi. Lo studio si propone di valutare gli effetti della riabilitazione proctologica in pazienti con costipazione associata a dissinergia addomino-pelvica . Lo studio ha come obiettivo la valutazione del miglioramento della qualità della vita grazie all'utilizzo dell' SF 36 (questionario in forma ridotta, più generico, per la valutazione della qualità di vita) e del PAQ-QoL, il "*Patient Assessment of Constipation Quality of Life*"(questionario più specifico per valutare il miglioramento della qualità della vita correlato alla problematica di stipsi).

MATERIALI E METODI

Lo studio condotto ha previsto l'arruolamento di un campione di 5 pazienti di sesso maschile e femminile, dai 20 ai 60 anni, con costipazione associata a dissinergia pubo-rettale. I criteri di inclusione per la selezione del campione sono stati i seguenti: età 18-60 anni con diagnosi di dissinergia addomino-pelvica, stipsi, pre/post intervento di chirurgia proctologica. I criteri di esclusione sono stati: dolore pelvico cronico; prolassi severi degli organi pelvici (maggiori di grado 2 secondo classificazione ICS); denervazione perineale; pazienti affetti da patologie del sistema nervoso centrale; pazienti con patologie infiammatorie in atto. Lo studio si basa su un protocollo riabilitativo suddiviso in 3 fasi; la fase 1 include la valutazione iniziale prima del trattamento (T0), composta da anamnesi/colloquio verbale, somministrazione del questionario SF 36 e PAQ-QoL; la fase 2 include il trattamento (T): ha la durata di 4 settimane con cadenza settimanale da 60 minuti. Si effettua un training di coscientizzazione del piano perineale attraverso la chinesi pelvica-perineale; esercizi di feedback tattili e visivi; esercizi di coordinazione addomino-pelvica; esercizi con biofeedback. La fase 3 comprende la valutazione finale dopo il trattamento (T1) composta da un colloquio verbale, somministrazione dei questionari SF 36 e PAC-QoL.

RISULTATI

Risultati SF 36 sul totale dei pazienti: miglioramento di tutte le medie delle sottoscale a T1 (dopo il trattamento) rispetto a T0 (prima del trattamento); netto aumento AF(attività fisica), RF(ruolo e salute fisica), DF (dolore fisico), SG (salute in generale) che fanno parte della componente fisica (CF) dell'SF 36 (grafico 1); netto miglioramento RE (ruolo e stato emotivo), VT (vitalità), AS (attività sociali), SM (salute mentale), facenti parte della componente emotivo/relazionale (CER) dell'SF 36 (grafico 2). Risultati PAQ-QoL, mediati sul totale dei pazienti: miglioramento di tutte le sottoscale a T1 rispetto a T0 quindi diminuzione di : DF (disagio fisico), DPS (disagio psico-sociale), PS (preoccupazioni e sentimenti), S (soddisfazione dell'evacuazione) (grafico 3). Per quanto concerne la domanda del PAC-QoL sul grado di soddisfazione al trattamento possiamo notare che i pazienti sono molto soddisfatti al termine del ciclo riabilitativo (grafico 4).

DISCUSSIONE

Dai risultati ottenuti, attraverso i questionari SF 36 e PAC-QoL, possiamo dedurre che abbiamo ottenuto importanti miglioramenti della qualità di vita e dello stato di salute dei pazienti trattati con tecniche di coscientizzazione del piano perineale.

CONCLUSIONI

Dallo studio condotto si vuole eviendeziare l'importanza delle tecniche di coscientizzazione del piano perineale nel trattamento della costipazione associata a dissinergia addomino-pelvica ed il miglioramento della qualità di vita e dello stato di salute di questi pazienti

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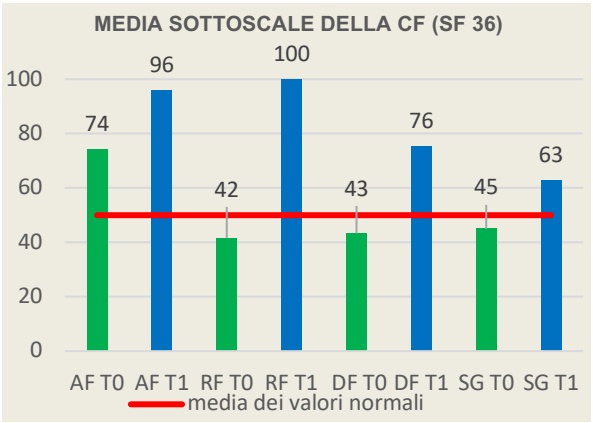

Grafico 1

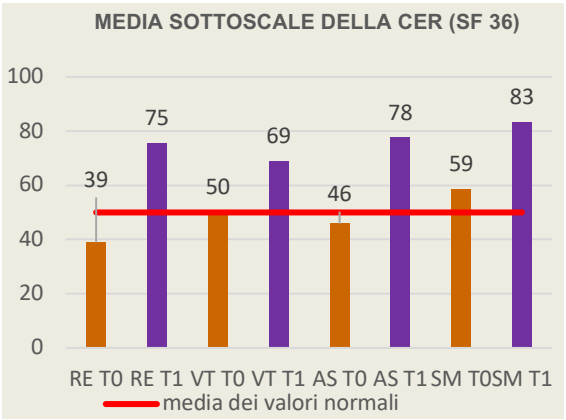

Grafico 2

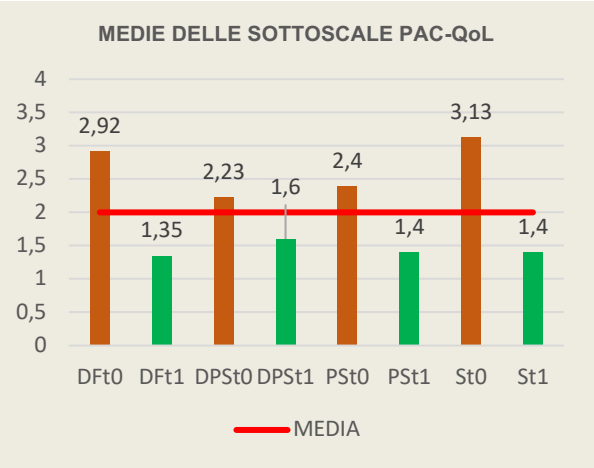

Grafico 3

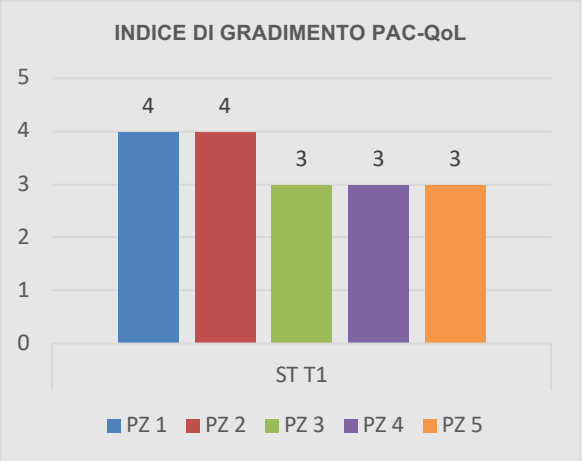

Grafico 4

41. BLADDER PAIN SYNDROME ED INSTILLAZIONI VESCICALI DI ADELMIDROL ED ACIDO JALURONICO: STUDIO PROSPETTICO D'EFFICACIA

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INTRODUZIONE E SCOPO DELLO STUDIO

La BLADDER PAIN SINDROME (BPS) o sindrome del dolore vescicale è caratterizzata principalmente dal sintomo del dolore, urgenza e frequenza minzionale. Essa s'inserisce nell'ambito del "dolore pelvico cronico" e ingloba la condizione patologica più nota della Cistite Interstiziale (IC). Scopo dello studio è analizzare i dati raccolti su un campione di pazienti afferiti all'ambulatorio, sugli effetti terapeutici in seguito alle instillazioni endovescicali con Adelmidrol 2% ed Acido Jaluronico 0,1% (Vessilen).

MATERIALI E METODI

Sono stati reclutati 10 soggetti con diagnosi di BPS, tra marzo 2018 ad aprile 2019.Il campione ha effettuato un totale di 8 sedute di trattamento di instillazioni endovescicali con Vessilen con cadenza settimanale. Inoltre ai pazienti è stato somministrato Peacist (Palmitoiletanolamide-acido jaluronico-condroitina solfato)1 cp al giorno per 6 mesi.
Il trattamento prevedeva 1 instillazione settimanale di 50 ml di Vessilen; con cateteri monouso 10 Ch autolubrificati e attacco Luer-Lock. Il farmaco è stato instillato in vescica, dopo aver drenato l'eventuale contenuto urinario ed è stato ritenuto in vescica fino alla minzione spontanea.
Al fine della valutazione dell'efficacia del trattamento nel tempo sono stati assunti come indicatori di outcome i seguenti strumenti: diario minzionale per 3 giorni, scala V.A.S, questionario P.U.F "Pelvic Pain and Urgency/Frequency, questionario S.F-12 , tutti da compilare all'inizio del trattamento (T0) ed alla fine (T7).

RISULTATI

L'età media dei soggetti 66 anni (range 39-77aa), di cui 6 uomini e 4 donne. Per quanto riguarda il diario minzionale: il valore medio del numero delle minzioni è passato da 12 a 10; il volume medio è passato da 151 ml a 158 ml (non significativo).Nella valutazione della scala VAS in tutti i pazienti osserviamo un graduale miglioramento: valore medio del dolore ad inizio trattamento 3,4, a fine trattamento 1,3 (Δ=2,1); valore medio dell'urgenza ad inizio trattamento 3,8, a fine trattamento 2 (Δ=1,8); valore medio della frequenza ad inizio trattamento 4,2, a fine trattamento 2,3 (Δ=1,9).Nel questionario PUF la differenza tra inizio trattamento (T0=36,5) e fine trattamento (T7=21,5) risulta essere significativa (Δ=15). Per il questionario SF12, si è osservato, al termine del trattamento, un miglioramento seppur minimo degli indici della componente fisica e mentale (T0=6,2; T7=7,3; Δ=1,1)

DISCUSSIONE

Dall'analisi dei risultati, si verifica un'apprezzabile riduzione della sintomatologia dolorosa, dell'urgenza e della frequenza minzionale. Questo risultato si è dimostrato in linea con quanto riportato da altri Autori nel corso di un'analoga esperienza con l'impiego dell'associazione Adelmidrol/Acido Jaluronico L'impatto positivo sulla sintomatologia clinica è stato confermato dal confronto fra i risultati del questionario PUF sui sintomi e i fastidi somministrati prima e dopo la terapia (Δ=15).

CONCLUSIONI

Nella nostra preliminare esperienza l'impiego del Vessilen per via endovescicale nel trattamento della sintomatologia associata a BPS è risultato efficace e ben tollerato. Un follow-up a medio e lungo termine, ci consentirà di valutarne la stabilità dei risultati.

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