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ABSTRACTS OF THE NATIONAL CONGRESS OF THE ITALIAN SOCIETY OF URODYNAMICS (SIUD) ROME, 15–17 JUNE 2023

1 - The role of nurses in setting up the endoscopic room for major endoscopic procedures in bladder outlet obstruction

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Introduction and aim of the study: To assess nurse setting of endoscopic room (ER) in major endoscopic procedures for bladder outlet obstruction (BOO): bipolar (b) TURP and HOLEP.

Materials and methods: This was a pilot prospective study on nurse experience of ER setting for b-TURP and HOLEP in a Tertiary Urological Center (May/Dec 2022). Data recorded were: surgical kit components, number of components and serving tables, preparation times of material used for the endoscopic procedures and ER, patient change times, nurse perceived complexity of ER setting and helping surgeon, critical issues in ER setting/helping surgeon. VAS scale for complexity was: 0 no, 10 max. A skilled surgeon was involved, and 3 nurses: 1 high level experience (HLE) in urological endoscopy (>6 years), 1 mild level (MLE) (1–6 years), 1 low level (<1 year). All nurses had a preliminary teaching session before the first procedure.

Results: Data were collected on 6 procedures of TURP, 6 of HOLEP. Mean surgical time was 54 min for b-TURP, 114 min for HOLEP. No intra- and post-operative complications occurred. Data on ER setting and complexity of ER preparation are reported in Table 1. Overall nursing time needed for each patient (mean preparation components and ER, mean patient change time) was 36.6 min for b-TURP and 55 min for HOLEP.

Table 1
Nurse ER setting and complexity of ER preparation nurses according to level of experience.

	Bipolar TURP	HOLEP
Surgical kit components	11	23
Number of components	20	29
Number of serving tables	1	2
Material preparation time (min)		
- HLE nurse	9	12
- MLE nurse	12	18
- LLE nurse	18	24
- Overall (mean of 3 nurses)	13	18
ER preparation time (min)		
- HLE nurse	9	10
- MLE nurse	11	13
- LLE nurse	15	22
- Overall (mean of 3 nurses)	11.6	15
Patient time change (min)	12	22
Complexity of ER setting		
- HLE nurse	1	4
- MLE nurse	4	6
- LLE nurse	7	9
- Overall (mean of 3 nurses)	4	6.3
Complexity in helping surgeon		
- HLE nurse	1	5
- MLE nurse	6	7
- LLE nurse	7	8
- Overall (mean of 3 nurses)	4.7	6.7
Critical issues in ER setting/helping surgeon		
- HLE nurse-	-	unknown equipment
- MLE nurse	speed in surgical steps	unknown equipment incorrect assembly worry of device breakage or activation
- LLE nurse	unknown equipment speed in surgical steps	unknown equipment incorrect assembly worry of device breakage or activation need of equipment change

Interpretation of results: HOLEP has been perceived by nurses as a procedure of greater complexity in both the ER setting and in the helping of the surgeon. This finding can be explained by the greater number of components and serving tables for HOLEP, and by the increased issues complexities reported. Only minor complexities were reported for b-TURP. Great differences in time of ER setting was found comparing HLE nurse and LLN, showing doubled preparation time in the latter. Only slight difference was documented between HLE and MLE, while fair difference between MLE and LLE. These results highlight the importance of nurse's experience in endoscopic treatments. Components for b-TURP are more common in the general urological endoscopy, and this may explain the differences in timing of ER setting and nurse-perceived complexity between the 2 procedures. Overall nurse-time needed for each patient was relevantly lower for b-TURP.

Conclusions: Nurse's time duration and complexity grade were higher for HOLEP. Nurse experience in endoscopic procedures was the most important characteristic in reducing ER setting time.

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2 - Efficacy of bladder instillations of Adelmidrol and sodium hyaluronate for the treatment of actinic cystitis

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Introduction and aim of the study: Actinic cystitis is a common complication of radiotherapy. Main symptoms are hematuria, pain during micturition, sovrapubic and pelvic pain, urgency/frequency and incontinence. We retrospectively evaluated a group of patients that underwent radiotherpy for prostate, bladder, cervix and hematological cancer and who developed symptomatic actinic cystitis. The aim of this study is to evaluate the symptoms reductions after bladder instillations of a solution of Adelmidrol and sodium hyaluronate.

Materials and methods: We retrospectively evaluated from February 2020 until December 2022 all consecutive patients with asymptomatic actinic cystitis. We collected the related symptoms from clinical records (urgency, frequency, macroscopic hematuria, incontinence episodes and pain, evaluated with the VAS questionnaire). Each patient underwent weekly bladder instillations of a solution composed of 1000 mg of Adelmidrol and 50 mg of Sodium Hyaluronate, postponing micturition for at least 60 min. All patient received a weekly bladder instillation for at least 6 weeks; in case of persistence of symptoms a second instillation cycle was performed.

Results: We enrolled 13 patients, 3 females and 10 males. The total radiation dose was different in each patients and depended on different treatment modalities and cancer localization. All patients complained of urgency, macroscopic hematuria and pelvic pain before starting the treatment. After a cycle of bladder instillations we found a significant reduction on symptoms, especially for macroscopic hematuria that was resolved in all patients ($p = 0.0265$). We found a reduction of urgency and incontinence episodes, however without reaching a statistical significance. We reported a significant reduction of pelvic pain, as demonstrated by the reduction of the VAS score from an average value of 4 to 0 (Wilcoxon test, $p < 0.05$).

Interpretation of results: Adelmidrol exerts its effect with an anti-inflammatory mechanism, restoring the physiological level of Palmytoylethanolamide in the bladder wall interstice, and with a restorative effect of the bladder surface, reducing hematuria. The re-epithelializing effect could be responsible for a lower exposure of the nerve endings to nociceptive stimuli, reducing pelvic pain.

Conclusions: The treatment with an intravesical solution of Adelmidrol and hyaluronic acid appears to be effective in reducing episodes of macroscopic hematuria and pelvic pain in patients with actinic cystitis.

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3 - Efficacy and safety of native tissue cystocele repair by modified surgical technique of bilateral pubococcygeus plication: A multicenter study

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Introduction: Aim of the study was to report long term follow-up of women underwent anterior vaginal wall repair by modified surgical technique of bilateral pubococcygeus plication (BPC) for symptomatic cystocele.

Materials and methods: This was a multicenter prospective study on women undergoing BPC for symptomatic anterior vaginal wall defect (AVWD) with data retrospectively collected (2010–2022). Inclusion criteria were: symptomatic AVWD $\geq$ 2 associated or not to urinary incontinence. Exclusion criteria were: apical or posterior associated compartment defect. All women had native tissues repair with the same standardized technique (BPC). Preoperative evaluation included medical history, physical evaluation, urinalysis. Urodynamic was always performed in the cases with associated UI. Surgical data and intra-/peri-/post-operative complications were collected. Catheter was removed 48 h after surgery and post-operative urinary retention (POUR) was investigated by catheterization (POUR: PVR >100 ml). Likert scale (pre- and post-operative) assessed subjective evaluation. Objective success was asymptomatic AVWD < 2° POP-Q stage.

Results: Data were completed on 215 women, mean f-up was 72.4 months (range 4–216). Mean operating time was 53 (28–122) minutes. Transient POUR (<10 days) was found in 1 patient (0.5%). Complications (5.6%) were: intraoperative bladder injury (3), hematoma (4), pain requiring therapy (2), vaginal sinsynechiae (2), wound dehiscence (1). Objective success rate was 92.0%, subjective success rate was 94.2%. Reoperation rate was 3/215 (1.4%).

Interpretation of results: Our data showed that native tissue repair by BPC was a safe end effective surgical technique for AWVD repair with a mean follow-up of 6 years. The rate of complications was low, and only a few cases were major. Objective and subjective success was obtained in more than 90% of

the women, with results higher than those reported in literature with other AWVD surgical repair techniques. POUR and voiding dysfunction were almost lacking due to the urethral sparing technique.

Conclusions: This multicentric study on BPC technique showed the long-term efficacy of this native tissue surgical repair for AVWD and its reproducibility on others Centers.

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4 - Neurogenic male stress urinary incontinence: Is synthetic sling still a challenge?

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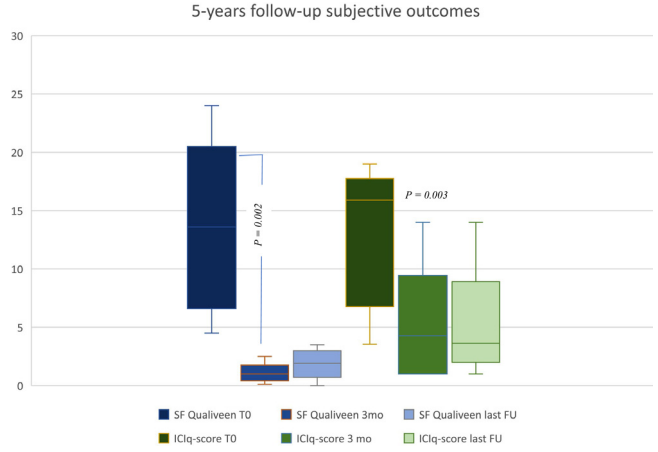
Introduction and aim of the study: Aim of the study was to evaluate the mid-term outcomes of transobturator male sling (TMS) in neurogenic stress urinary incontinence (N-SUI).

Materials and methods: Data from neurological adult men submitted to AdVance™ were retrospectively collected over the last 10-years. Bladder diary, urodynamic and questionnaires were retrieved at baseline, 3 months and then annually. A patient global impression of improvement (PGI-I) was administered at each follow-up. Primary endpoint was the achievement of dryness. Secondary endpoint was any statistically significant change in International Consultation on Incontinence Questionnaire-SF (ICIQ-SF) and Qualiveen-SF questionnaires. Paired-t and Pearson were used to compared data ($p<0.05$).

Results: From Feb 2013 to July 2019, 13 men, 7 spinal cord injury and 6 spina bifida were included. Mean age 50 ± 20.4 years. Mean follow up 67 ± 28.4 months. All patients were already exclusively managed by intermittent catheterization (IC) before surgery. Respectively, 5 (38.4%) were on antimuscarinics, while six (46%) were previously treated with bulking agents for N-SUI. Dryness was achieved in 11 patients (84.6%) at 3 months. At last follow-up, mean daily pads varied from 3.7 ± 1.2 to 0.3 ± 0.6, eleven reported a PGI-I ≤ 2 of whom 10 (77%) were dry. No statistical differences in pads, questionnaire total scores were observed comparing follow-ups. See tab 1. None changed baseline antimuscarinic treatment. One showed de novo detrusor overactivity at low pressure. Difficulty to perform IC was complained by 2 (15.4%) and solved by different tip. Improvement at questionnaires was not statistically correlated to better continence. No major complications found.

Interpretation of results: To date, there are no evidence-based recommendations about the use of TMS in male N-SUI. The major concern in the treatment choice is the bladder management with IC. In our sample, all patients were on IC before surgery. This is the first study evaluating the impact on QoL in neurological patients submitted to TMS, confirming the safety and efficacy in a follow-up longer than 1 year. Nonetheless, considering the improvement on QoL, it was not possible to separately analyse results at each domain. Moreover, our sample size was too small to detect any possible correlation with SUI.

Conclusions: TMS can be offered to treat male N-SUI chronically managed by IC with satisfactory mid-term, stable effectiveness in continence and improving QoL.



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5 - Influence of overactive bladder on sexual function of male patients with multiple sclerosis

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Introduction and aim of the study: Overactive bladder (OAB) and sexual dysfunction are common symptoms in patients with multiple sclerosis (MS) having both a great impact on quality of life. This study has the aim to assess the association between OAB and erectile function in MS patients.

Materials and methods: Data of consecutive male patients with diagnosis of MS that attended our outpatients clinic between June 2021 and September 2022 were collected. Patients were clinically classified as Group A (patients with OAB) or Group B (patients without OAB) according to 3-days bladder diary (at least 1 episode/day). Variables including age, expanded disability status scale (EDSS), prostate volume (PVol), presence of urinary incontinence (UI) and maximum urinary flow rate at uroflowmetry (Qmax) with post-voiding residual volume were collected. Patients were asked to complete validated questionnaires to assess lower urinary tract symptoms (LUTS) by international consultation on incontinence questionnaire male lower urinary tract symptoms module (ICIQ-MLUTS), erectile function by international index of erectile function (IIEF-5) and patient perception of bladder condition (PPBC). T-student test and $\chi 2$ were used to assess statistically significant differences between the two groups. Multivariate logistic regression analysis was performed to identify variables associated with OAB.

Results: 74 MS patients were included in the present analysis. 33 were included in Group A and 41 were included in Group B. There were no statistically significant differences between the two groups regarding age, EDSS score, prostate volume, QMax, PPBC score, presence of UI and PVR ($p > 0.05$). ED was present in 32 patients in group A (78%) and 17 in group B (39%) ($p < 0.001$). Patients in group A had a longer disease duration respect to patients in group B ($p < 0.03$). Patients in group A had worse results regarding LUTS assessed by ICIQ-MLUTS ($p < 0.02$) and erectile function assessed by IIEF-5 ($p < 0.001$). The results showed that erectile dysfunction assessed by IIEF-5 was associated with the presence of overactive bladder ($p < 0.001$).

Conclusions: OAB in MS patients has a great impact in sexual health and should always be assessed and managed with the best options available to improve quality of life in these highly complex patients.

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6 - Preliminary assessment of the efficacy and tolerability of solifenacin for the treatment of neurogenic overactive bladder in patients affected by multiple sclerosis

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Introduction and aim of the study: Scarce evidence on the role of the antimuscarinic drug Solifenacin (Sol) for the treatment of Neurogenic Overactive Bladder syndrome (nOAB) in patients affected by Multiple Sclerosis (MS) exists. The aim of this study is to analyse the efficacy and tolerability of Sol in the MS patient population.

Materials and methods: A retrospective clinical outcome analysis of consecutive patients referred to a dedicated MS neuro-urological outpatient service for nOAB has been performed. Records from 2021 onwards were screened to include patients receiving Sol at any stage of their urological therapeutic management. Patients without a uroflowmetry at first assessment and at least one follow-up appointment after the introduction of solifenacin were not included.

Results: 31 patients were included in the analysis, of which 22 (70.9%) were female. Median age was 51y (IQR 41;56) and median MS duration was 14y (IQR 3;19). 24 patients (77.4%) had relapsing remittent MS while 7 had a primary progressive disease type. Urgency urinary incontinence (UUI) was reported by 23 (74.2%) patients. Sol was introduced as first-line therapy in 26 (83.8%) patients while it replaced either another anticholinergic or mirabegron in the remaining patients. A head-to-head comparison of clinical outcomes after the introduction of Sol at a median follow-up of 12 mo (IQR 7;18) is shown in Table 1. During treatment, a 16.2% rate of nOAB resolution with Sol was observed, while UUI was interrupted in 6/23 (26.1%) of the patients. The impact of Sol on uroflowmetry was overall negligible, and a direct comparison of uroflowmetry results in the 17 patients repeating the exam at follow-up showed comparable post-void residuals (PVR) (20 ml (IQR 0;50) at first assessment vs 20 ml (IQR 0;37.5) at follow-up). 6 Clavien–Dindo I adverse events were observed during treatment. Sol was continued by 71% of the patients, of which 22.6% needed to increase the dosage to 10 mg per day to achieve adequate symptom control.

Table 1
Pre- and Post-Treatment outcome comparison at 12 months of median follow-up in 31 patients affected by multiple sclerosis receiving solifenacin for neurogenic overactive bladder syndrome.

Outcome[a]		First assessment	During treatment
Symptoms	Neurogenic Overactive Bladder Syndrome (nOAB)	31 (100%)	26 (83.8%)
	Urgency Urinary Incontinence (UUI)	23 (74.2%)	17 (54.8%)
Uroflowmetry[b]	Voided volume (VVOID)	230 ml (155;315)	230 ml (113;385)
	Maximum flow rate (Qmax)	17 ml/s (7;23)	14 ml/s (9.5;26)
	Post-void residual (PVR)	10 ml (0;40)	20 ml (0;37.5)
Adverse Events	Constipation		2 (6.5%)
	Worsening of lower urinary tract symptoms		2 (6.5%)
	Acute Urinary Retention		1 (3.2%)

(*continued on next page*)

Table 1 (*continued*).

Outcome[a]		First assessment	During treatment
	Allergic Reaction		1 (3.2%)
Therapeutic Outcomes	Continuation, 5 mg per day		15 (48.4%)
	Continuation, titrated to 10 mg per day		7 (22.6%)
	Suspension, side-effects		2 (6.5%)
	Suspension, inefficacy		3 (9.7%)
	Suspension, changed to other anticholinergic		2 (6.5%)
	Suspension, changed to mirabegron		2 (6.5%)

[a]Values expressed as n(%) or median (IQR).
[b]Uroflowmetry repeated in 17 (54.8%) patients during treatment.

Interpretation of results: This low volume analysis showed a promising safety profile for Sol in view of a negligible effect on PVRs and few therapy related adverse events. The therapeutic regimen was confirmed by the majority of patients as an effective symptomatic treatment, with complete symptom regression in some cases.

Conclusions: A high volume prospective assessment of Sol in the MS population is advocated to confirm the encouraging results of this analysis.

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7 - Multi platform robotic reconstructive surgery of the pelvic floor in patients with genital prolapse: Anatomical, functional and quality of life outcomes

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Introduction and aim of the study: Anatomical, functional, and quality of life outcomes in patients with genital prolapse undergoing multi-platform robotic reconstructive surgery of the pelvic floor at a tertiary referral center.

Materials and methods: Pre-post interventional study was conducted in women with symptomatic genital prolapse undergoing robotic pelvic floor surgery between November 2021 and October 2022. The validated P-QOL, PFDI-20, and PISQ-12 questionnaires were administered before surgery and 6 months after. The obtained scores were described with means and standard deviations and compared with the paired data t-test. The anatomical assessment was quantified by the POP-Q system preoperatively and at 6 months.

Results: Forty-six women underwent surgery. At the time of abstract submission, the postoperative outcomes of 15 patients (age 65 ± 11, BMI 28 ± 4 Kg/m2, 34 first operations, 2 operations for recurrent prolapse) with tri-compartmental (n=9), bicompartmental (n=4) and single hysterocele prolapse (n=2); 10 third degree, 11 fourth degree, were available. Of these, 10 underwent robotic promontofixation (including one with Burch) or lateral suspension according to Dubuisson (n=5). There was a significant improvement in quality-of-life scores (PQOL $p<0.001$) symptomatology (PFDI-20 $p<0.001$) and sexual function (PISQ-12 $p=0.036$). Six patients (all undergoing lateral suspension according to Dubuisson) presented an anatomical recurrence in the 6 months of observation (13%), of which only 3 (6%) were symptomatic.

Interpretation of results: Our initial experience shows that reconstructive pelvic floor surgery is feasible with the leading robotic platforms. Outcomes are comparable to the laparoscopic approach.

Conclusions: Preliminary results suggest that robotic reconstructive pelvic floor surgery holds promise for symptomatic, sexual, and quality-of-life outcomes of women with even pluricompartmental and severe grade prolapse.

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8 - Transperineal laser ablation (TPLA) of the prostate with EchoLaser™ system: Assessing the 6-months Trifecta and Pentafecta in a single center cohort

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Introduction and aim of the study: TPLA is an emerging ultra-minimally-invasive surgical technique available for the treatment of male LUTS due to benign prostatic obstruction. Herein we report our experience and the rates of Tri- and Pentafecta at a 6-months followup

Materials and methods: After Institutional Ethical Committee Approval, data from all consecutive patients undergoing TPLA at our institution between April 2021 and April 2022 were prospectively collected. Data regarding functional and sexual outcomes evaluated by validated questionnaires (IPSS, MSHQ 3-items, QoL, IIEF-5) and uroflowmetry data were analyzed.

All the procedures were performed in an outpatient setting, under local anesthesia and conscious sedation, using EchoLaser™ device. Trifecta was defined as a combination of reduction >20% of IPSS, improvement >20% of Qmax and MSHQ 3-items at 6 months followup. Pentafecta was defined considering the previous criteria and absence of early failure (no acute retention within 30 days, no Clavien–Dindo ≥2 complication) and late failure (need of indwelling catheter, shift to other treatment, or reintroduction of alpha-blockers within 6 months).

Results: Overall, 57 patients underwent TPLA at our institution during the study period. The median prostate volume was 48 mL (IQR 40 - 70). The median energy delivered was 2800 J (IQR 2400 - 3000) at 5 W power setting. All patients but one were discharged within 8 h of hospital stay. No perioperative Clavien–Dindo grade ≥2 complication was recorded. All patients preserved ejaculatory and sexual function. Trifecta and Pentafecta were reached in 42% and 35% of patients, respectively. Specifically, considering Trifecta, 16 (28%) patients experienced a Qmax failure, 8 (14%) an IPSS failure and 21 (37%) a MSHQ 3-items failure; of those, 12 (21%) patients reported an overlapping for 1 or more item, for a total of 33 (58%) patients not reaching Trifecta. After excluding patients not reaching Trifecta, 4 (7%) patients experienced failure in Pentafecta achievement, with 3 (5%) cases of late failure and 2 (3.5%) of early failure, with 1 (2%) patient with an overlapping of the two items. Notably, considering a subgroup of patients in the analytic cohort [<60-year-old, prostate volume <60 mL and IPSS ≤19, n=27 (47%)] the percentage of Tri- and Pentafecta achievement slightly increased, reaching 75% and 70%, respectively.

Interpretation of results: A careful patient selection for both symptoms and prostate characteristics plays a pivotal role in the success of this emerging technique.

Conclusions: TPLA can be a feasible, safe and effective ultra-minimally invasive procedure.

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9 - Emerging opportunities in minimally invasive BPO management: A single center experience with transperineal interstitial laser ablation of the prostate (TPLA)

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Introduction and aim of the study: Lower urinary tract symptoms (LUTS) due to benign prostatic obstruction (BPO) can result in a non-negligible impact on the quality of life. Although for years the treatment of BPO/LUTS had transurethral resection of the prostate (TURP) as its mainstay, to date several evidence-supported minimally invasive techniques (MISTs) are revolutionizing the treatment scenario. Particularly, among these, transperineal interstitial laser ablation (TPLA) of the prostate adenoma plays a prominent role. We present perioperative and short term functional and sexual outcomes of carefully selected patients treated with TPLA for BPO.

Materials and methods: The Ethical Committee approved this study. We prospectively collected data from consecutive patients with moderate LUTS due to BPO undergoing TPLA at our institution between April 2021 and March 2022, with prostate volume <100 ml. Procedures were performed in an outpatient setting using local anesthesia and conscious sedation, using EchoLaser® device, a multisource diode laser generator. The International Prostate Symptom Score (IPSS), the International Index of Erectile Function (IIEF-15), Male Sexual Health Questionnaire-Ejaculatory Dysfunction Short Form (MSHQ-EjD SF), non-invasive urodynamics data (Qmax, PVR), patient management (catheterization, medications, PSA) data were recorded pre- and postoperatively at 1-, 3-months and last follow up (LF-UP) for descriptive analyses.

Results: Overall, 56 patients were enrolled, including 8 (14.2%) patients with indwelling catheter before TPLA. Median follow-up time was 10 months (IQR 8-12). Median prostate volume was 50 ml (IQR 40-70); median preoperative IPSS, IIEF-15 and MSHQ-EjD SF were 21.5 (IQR 18-28), 15.5 (IQR 7-24) and 6 (IQR 3-11.5) respectively. Median operative time was 31 min (IQR 28-37). All patients except one were discharged on the same day as the procedure, recording no Clavien–Dindo grade ≥2 perioperative complications. Median catheterization time was 7 days (IQR 7-9). Median Qmax improvement was 17% (IQR 5-45), 24% (IQR 5-49) and 34% (IQR 11-65) at 1-, 3- and LF-UP; PVR decreased by 40% (IQR 68-1), 42% (IQR 66-7) and 57% (IQR 73-14) in the same study period. Median IPSS, IIEF-15 and MSHQ-EjD SF were 12.5 (IQR 10-18.5), 16 (IQR 7-24) and 6 (2-10); 10 (IQR 6-11), 16 (IQR 7-23.5) and 8 (IQR 7-11); 12 (IQR 10-16), 17 (IQR 8-22) and 10 (IQR 8-13) at 1-, 3-months and LF-UP, respectively. In all patients, ejaculation and sexual function were preserved. 4 patients (7%), already catheter-bearing, experienced acute urinary retention after TPLA and required catheter replacement.

Interpretation of results: In carefully selected patients, this new technique seems effective in improving short term symptoms and functional parameters, ensuring the preservation of ejaculatory function.

Conclusions: In our experience, TPLA appears to be a safe and feasible option in the treatment landscape for BPH

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10 - Perineal outcomes of pluriparous women with previous OASIS

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Introduction and aim of the study: Incidence of severe obstetric anal sphincter injury (OASIS, III or IV degree according to Sultan classification) is 6,3%, with a risk of recurrence of 3%. Aim of the study is to analyse perineal outcome of pluriparous women with previous OASIS.

Materials and methods: This monocentric retrospective study analyses pregnancy outcomes after previous OASIS (01/2017-12/2020). These patients received urogynaecological examination, anus-rectal manometry, trans-rectal ultrasound and counselling about delivery mode. Informations were extracted from hospital records. Pts were divided into two groups: group A, who received prophylactic episiotomy for fetal posterior presentation or previous gas incontinence; group B, who did not had it. Finally we compared the maternal, neonatal, intrapartum factors that could condition recurrence of injuries.

Results: 61 pts (0,9% of 6778 deliveries) had OASIS (1 IV degree, 60 III degree, 28 IIIA, 11 IIIB, 10 IIIC and 11 III non specified). Mean age was 30,9 years old, mean neonatal weight was 3514 g, mean head circumference was 34,7 cm. The rate of subsequent pregnancy was 52,4% (32 patients). According to clinical and instrumental evaluations, all of these were considered suitable for vaginal delivery, except one who was unfit (diabetes and fetal macrosomia). Nobody had faecal incontinence, 3 pts had gas incontinence, decreased in 3 months. Considering all of subsequent pregnancies, 26 pts (79%) had vaginal delivery, 3 (9%) had miscarriage, 1 (3%) is still pregnant and 3 (9%) had caesarean section: 1 for breech presentation, 1 for pathological CTG and 1 because of the previous OASIS (III C). Considering the pts who had a vaginal delivery after a previous OASIS, 10 had a prophylactic episiotomy (38,4%), 16 patients did not have it (61.5%). 26,6% (4 patients) of group B sustained no spontaneous perineal trauma, 20% (3) had a I degree injury, 53,3% (8) a II degree.

	Prophylactic episiotomy (Group A) 10 patients	No prophylactic episiotomy (Group B) 16 patients
Age	29,81 (DS 4,33)	28,81 (DS 4,14)
BMI	26,4 (DS 2.3)	27,1 (DS 3.1)
Previous pregnancies	1,2 (DS 0,35)	1,25 (DS 0,42)
Labour induction	5 (50%)	4 (25%)
Operative vaginal birth	0	1 (6%)
Epidural analgesia	0	1 (6%)
Fetal position	OISA 30%, OIDP 50%, OISP 20%	OIDA 31,2%, OISA 58,6%, Unknown 10,2%
Neonatal weight	3077 (DS 485)	3353 (DS 456)

Interpretation of results: Prophylactic episiotomy does not seem to be protective for further perineal injuries and recurrent OASIS. Patients with previous OASIS decided to have a vaginal delivery after counselling with clinical evaluation.

Conclusions: In further pregnancies, patients who had a previous OASIS could be safely admitted to vaginal delivery. Perform prophylactic episiotomy in order to prevent recurrent OASIS should be considered analysing bigger samples.

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11 - Transalbugineal artificial urinary sphincter: A refined implantation technique to improve surgical outcomes

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Introduction and aim of the study: The artificial urinary sphincter (AUS) is the most effective treatment option for moderate to severe male stress urinary incontinence (UI) after prostatic surgery. However, AUS implantation is an invasive procedure that can result in troublesome complications such as intraoperative urethral lesions, postoperative infections, and erosions.

Given that the tunica albuginea of the corpora cavernosa is a multi-layered structure, we assessed an alternative transalbugineal surgical technique of AUS cuff placement, with the aim to decrease the risk of urethral lesions and erosions while preserving the integrity of the corpora cavernosa.

Materials and methods: A retrospective evaluation was conducted in a tertiary referral center from September 2012 to October 2021, including 48 consecutive patients undergoing AUS (AMS 800®) transalbugineal implantation. Perioperative data were collected and analyzed. The primary outcome was the rate of patients not experiencing intraoperative urethral injuries or spontaneous postoperative erosions evaluated at 12-mos and 5-yrs follow-up.

Functional urinary outcomes were evaluated with 24-hour pad use, 24-hour pad weighing test, and the ICIQ-UI SF Questionnaire. Erectile function was assessed with the IIEF-5 Questionnaire and the patient's quality of life with the EQ-5D-5L Questionnaire.

Results: Of 48 included patients, the mean age was 75 ± 4.7 years, and the mean BMI was 28 ± 3.44 kg/m2. 39 patients presented with stress UI (81.25%) and 9 with mixed UI (18.75%) related to prostate surgery, including radical prostatectomy (45 patients) and TURP (3 patients). 23 patients (47.9%) had previously undergone radiation therapy, and 18 (37.5%) had a history of bladder neck contracture.

At a median (IQR) follow-up of 60 (24–84) months, no intraoperative urethral injuries and only one spontaneous erosion occurred. Overall, three urethral erosions occurred, two of which were iatrogenic: one post-AUS second radiotherapy and one due to catheterization in the emergency department.

The AUS overall erosion-free actuarial rate was 95.8% (CI 95%: 84.3-98.9) at 12-mos and 91.8% (CI 95%: 75.4-97.5) at 5-yrs follow-up. In 12 preoperatively potent patients, the IIEF-5 score remained unchanged. The overall reoperation (for any reason)-free survival rate was 89.6% (95% CI: 76.8-95.5) at 12-mos and 82.5% (95% CI: 65.8-91.5) at 5-yrs follow-up.

The social continence rate (0–1 pas per day) was 83.3% (CI 95%: 67.1-89.8) at 12-mos and 79.2% (CI 95%: 61.5-86.2) at 5-yrs follow-up.

Interpretation of results: Our technically refined approach to AUS implantation may help to avoid intraoperative urethral lesions and lower the risk of subsequent spontaneous erosion without compromising sexual function in potent patients.

Conclusions: Our study is the first to describe the AUS transalbugineal placement, showing that it is a technically feasible, safe, and effective procedure.

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12 - Qmax during pressure flow study: What is the impact of the catheter?

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Introduction and aim of the study: This study aims to compare the parameters of free and invasive uroflowmetry among female patients with different referral diagnoses in order to describe if the known difference between these two measurements may be significant (in terms of changing the final urodynamic findings) or if it varies in different clinical settings as previously reported.

Materials and methods: This is a retrospective study. We reviewed urodynamic studies performed from 2021 to 2022. Urodynamics were conducted following ICS good practices. Female adult patients were selected. Only patients who voided at least 150 ml in both free and invasive flowmetry were included. Patients were classified into different groups (urinary stress incontinence, USI, detrusor underactivity, DU using the Abarbanel and Marcus criteria, bladder outlet obstruction, BOO using the Blaivas parameters; detrusor overactivity, DO) on the basis of the urodynamic diagnosis. The difference between both Qmax [freeQmax (fQmax) vs invasiveQmax (iQmax)] was calculated in all patients and in the different subcategories of patients. A p-values < 0.05 was considered as statistically significant.

Results: A total of 100 urodynamic studies of female patients (age range 18–75 years) were evaluated. These patients were classified into groups: DO (37%), DU (9%), BOO (7%), USI (13%), DO + BOO (6%), and patients without normal urodynamic findings (28%). Considering all patients, a 11% reduction of fQmax was observed compared to iQmax, the mean fQmax being 24.6 ml/s and the mean iQmax being 22.8 ml/s (a difference of 2.8 ml/s, $p < 0.009$). Patients with BOO showed the greatest difference between fQmax and iQmax (difference 4.5 ml/s (26%). Differences of negligible values between fQmax and iQmax were identified only in patients with isolated stress urinary incontinence. Despite these findings, using the fQmax value instead of the iQmax value as a basis for formulating a DU or BOO diagnosis would change the final urodynamic findings for only 4 of the patients (4%, 2 in DU and 2 in BOO group).

Interpretation of results: Our data demonstrate that there is a variation between fQmax and iQmax values, and that patients who benefit most are those diagnosed with BOO. Conversely, patients diagnosed with USI are not significantly related to this condition. This phenomenon may be supported by a reduction of the cross-sectional area of the urethra or poor relaxation of the urethral-pelvic floor.

Conclusions: The presence of a bladder catheter has a significant effect on the measurement of urine flow. This phenomenon changes between the different types of patients, but it does not significantly modify the final urodynamic diagnosis.

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13 - Analysis of the configuration and the port-training criteria of the Versius robotic system (CMR) in patients undergoing robotic surgery for benign gynaecological pathology: Preliminary report

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Introduction and aim of the study: To analyze the configuration and the port-training criteria of the Versius system (CMR) in patients undergoing robotic surgery for benign gynecological pathology in a tertiary referral center.

Materials and methods: Eight patients underwent surgery for benign gynaecological pathology in the period between September and November 2022. Demographics, pre-surgical variables, intra-operative robotic events (number and characteristics of collisions, need for detaching the instruments and for moving the trays during surgery), and peri-operative clinical outcomes were collected. The factors impacting the occurrence of high-priority collisions (those requiring the disconnection of instruments and restarting of the port training) were analyzed.

Results: All surgeries were carried out uneventfully and without conversion. Collisions of any type occurred in 6 out of 8 operations, including 4 High Priority Collisions. Angles between trocars, the distance between them and the target, and the third arm-carrying the grasper-position emerged to be factors impacting the need to restart the system.

Interpretation of results: The analyzed data illustrate that too close distance of the operative trocar to the target organ seems to correlate with the number of critical collisions. More data are needed to define the minimum and maximum cut-off distance between the target organ and operative trocar to optimize the function of the robotic arm.

Conclusions: Versius robotic system appeared to be a safe option for benign gynaecological surgery. Our experience suggests 150° as the ideal angle between trocars, 5 cm as the minimal distance between the target and the operative trocar, and 25–35 cm as the distance of the third arm to the table — trying to limit collisions and alarms. These suggestions may enhance the technology by establishing a universally reproducible gynaecological port placement and surgical setting.

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14 - Urodynamic outcomes and incontinence specific heart-related quality of life in patients undergoing robot-assisted radical cystectomy with intracorporeal Y-modified neobladder "Bordeaux neobladder"

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Introduction and aim of the study: Evaluation of urodynamic outcomes and incontinence specific heart-related quality of life in patients treated with robot-assisted radical cystectomy with intracorporeal Y-modified neobladder "Bordeaux Neobladder".

Materials and methods: A Prospective evaluation of 26 patients submitted to robotic radical cystectomy with intracorporeal orthotropic neobladder between September 2018–November 2020 in a high-volume referral center by the same surgeon. All the patients were selected for our new ERAS protocol. The patients underwent clinical evaluation and multichannel urodynamics (UDS) three months and 1 year after surgery. The incontinence quality of life (I-QoL) questionnaire was used to evaluate HRQoL. Continence was classified into day-time and night-time and clinically defined as the use of zero pads.

Results: The mean age at surgery was 65.4 years. The mean follow-up was 27 months. Urodynamic outcome data were collected in 17/23 patients for early evaluation and in 13 patients for early and dilated testing. The continent rate was 58.8% (10/17) for the day and 23.5% (4/17) for the night and the mean postoperative of the quality-of-life score was 103.3.

Mean maximum bladder capacity was 430 cc (range 200–553) and the mean post-voiding residue was 100 ml (0–310). The first sensation of bladder fullness was at volume of 337 cm^3. Mean max flow at T1 was 15 ml/s and at t2 was 18 ml/s. We did not observe significant changes in urodynamic outcomes during follow-up and the rate of clean intermittent catheterization was 17,6%.

2/17 patients had I/II grade of hydronephrosis on the left kidney. No cases of hyperchloremic acidosis were identified in the blood gas analysis.

Conclusions: This analysis of urodynamic parameters shows that the Bordeaux Neobladder has adequate functional characteristics in terms of capacity, post-voiding, residual and compliance. It is associated with a reduced chance of upper urinary tract abnormalities and metabolic complications that improve quality of life.

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15 - Tamsulosin in lower urinary tract dysfunctions of patients with Multiple Sclerosis

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Introduction and aim of the study: Lower urinary tract dysfunctions (LUTDs) are very common in Multiple Sclerosis (MS). Many patients suffer from storage and voiding disorders requiring medical therapy. Aim of this study is to assess the effect of tamsulosin on patients symptoms and quality of life.

Materials and methods: From January 2017 to January 2023 130 patients were prospectively evaluated at the Cure Centre for Urinary Incontinence of University Hospital. Inclusion criteria were diagnosis of MS with clinical evidence of overactive bladder (OAB) symptoms (urgency/frequency/urgency urinary incontinence), underactive bladder (UAB) symptoms/signs (sensation of incomplete bladder emptying and/or postvoid residual [PVR] >100 ml and/or Qmax ≤12 ml/s on uroflowmetry in both men and women) and coexistence of overactive-underactive bladder (COUB). All patients fulfilled the International Consultation on Incontinence Questionnaire-Urinary Incontinence short form (ICI-UI-SF, 2006 Italian version) and QoL in Neurogenic Lower Tract Dysfunction Questionnaire (Qualiveen-sf, 2011 Italian version) 8-items short form. Age and sex of patients, BMI, personal history, parity in women, urinary tract infection (UTI) rate, sexual activity, previous gynecological surgery, presence, and stage of pelvic organ prolapse, stress/urgency urinary incontinence, COUB syndrome, medical therapy, intermittent catheterization, advanced treatments data were collected.

Results: Seventy-nine patients were affected by MS (60,8%). Mean Age was 47.1 ± 10.7 ys (R 29-79). Male/female rate was 25/54. Mean BMI 24.7 (R 18-32). Patients complained of LUTS from OAB 40/79 (50.6%), UAB 12/79 (15.2%), COUB 25/79 (31.6%), stress urinary incontinence (SUI) 2/79 (2.5%). Twenty-three out of 79 (29.1%) showed urinary incontinence defined as 24h-pad test positive. Mean parity was 1.7 (R 0-4); UTI rate was 15/79 (18.9%). ICI-UI-sf mean score at the diagnosis (T0) was 16.8 ± 2.1 (R 12-20) and mean score at the follow-up check (Tfu) was 11.8 ± 4.6 (R 5-20) with general significant improvement of UI ($p<0.0001$). Qualiveen-sf at the diagnosis (T0) was 24.1 ± 4.2 (R 12-32) and mean score at the follow-up check was 16.8 ± 5.7 (R 8-29) with general significant improvement of QoL ($p<0.0001$). Seventy patients were treated by medical therapy: 44/70 (62.9%) alpha-blocker tamsulosin, 39/70 (55.7%) antimuscarinics, 2/70 (2.9%) mirabegron and 15/70 (21.4) combinations, and had high efficacy rate and low rate of side effects.

Self-catheterism was necessary in 4 patients (5%) and intradetrusorial botulinum toxin injection was performed in 4 patients (5%). Mean follow-ups of 27 ± 1.7 months (1–72).

Table 1

	No pts	ICI (T0)	ICI (T-fu)	*P*-value	Qualiveen (T0)	Qualiveen (T-fu)	*P*-value
Medical therapy	70	16,1	11	*<0,0001*	24,7	16,3	*<0,0001*
Alpha-blockers	29	16,1	9	*<0,0001*	23,8	13,9	*<0,0001*
Antimuscarinics	24	15,7	12,7	*<0,0063*	25,7	21	*<0,0003*
Alpha-blockers + Antimuscarinics	15	17,1	9	*<0,0001*	26,4	14,3	*<0,0001*
OAB treated with Tamsulosin	15	–	–	–	24,2	14,1	*<0,0001*
COUB treated with Tamsulosin	20	–	–	–	25,2	14,5	*<0,0001*

Table 1 shows comparative results of questionnaires at the diagnosis (T0) and at the follow-up check (Tfu).

Interpretation of results: LUTDs in MS are well managed by conservative approach, particularly by medical therapy. Tamsulosin appeared to be effective and safe in long term treatment both in storage and voiding symptoms, even if used in combination with other drugs. It should be administered continuously to be successful.

Conclusions: Tamsulosin reduces both storage and voiding LUTDs and improves quality of life in patients with neurogenic bladder by Multiple Sclerosis.

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16 - Survey on bladder and bowel dysfunctions in a young autism spectrum disorder population

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Introduction and aim of the study: To evaluate lower urinary tract symptoms (LUTS) and bowel disorders in a population of young subjects with autism spectrum disorder (ADS) by a national survey and to assess the relationship between the occurrence, frequency and type of LUTS and the severity of behavioral and neuropsychiatric characteristics.

Materials and methods: A survey on LUTS and bowel disorders in ASD population was send by mail and social media through the main Italian Associations of ASD between February and September 2022. Correlation between LUTS and ASD severity was also assessed.

Results: The survey was completed by 502 subjects with a mean age of 16.6 ± 10 years: males were 413 (mean age: 16.5 ± 9.8 yrs), while females 98 (mean age: 17.2 ± 10.9 yrs). ADS severity was found low in 29.9%, moderate in 27.1%, and severe in 43%. LUTS were reported by 77.1%, storage symptoms in 51.4%, and voiding symptoms in 60.6%. Urinary incontinence was reported by 12.5%. Enuresis was reported by 14.3% (72/502) of the respondents: primary enuresis in 70.8% (51/72), secondary in the remaining. Pads were used by 40 subjects with a median of 2.9 pads/day (range 0–8). A toilet training program was performed by 61 of the respondents, with satisfactory results in 40/61 (65.6%). A significant correlation was found between greater ASD severity and higher LUTS rates. Mean VAS score on the impact of LUTS on family relationship was: 2 ± 2.9. Regular bowel function was reported by 57.4% (288/502) of the respondents, while increased daily defecations was present in 11.2% (56/502), constipation in 31.5% (158/502), and faecal incontinence in 7.9% (40/502).

Interpretation of results: This survey showed in one of the largest samples that LUTS are very common in young ASD subjects (>70%), particularly voiding symptoms. More than a half of the respondents reported storage symptoms, while urinary incontinence and enuresis were less frequent. These data help to highlight that urological disorders, as other comorbidities, have to be carefully assessed and not ignored or derubricated as a "social problem". A higher rate of overall LUTS, storage and voiding symptoms was associated to a great ASD severity. Interestingly, the negative influence of LUTS on the family relationship was low. This finding may be due to a high awareness and resilience of the family's members.

Conclusions: This survey demonstrated that LUTS are very common in young ASD population and that urinary symptoms prevalence is related to a higher severity of ASD condition. Bowel disorders are often associated to urinary symptoms and dysfunctions. Urologists should be aware of the frequent occurrence of urological disorders and symptoms in individuals with ASD and should be involved in their clinical management in a multidisciplinary team that cares for these people.

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17 - Role of PTNS in patients affected by underactive bladder: When a stimulation can improve quality of life

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Introduction and aim of the study: Percutaneous Tibial Nerve Stimulation (PTNS) is a mini-invasive treatment recommended in patients affected by different bladder dysfunctions, with the major evidence of efficacy in patients with overactive bladder (OAB). On the other hand, PTNS may also be offered to patients affected by underactive bladder (UAB), even if evidence is lacking. We retrospectively evaluated patients with UAB, treated by PTNS in our center.

Materials and methods: We included patients with UAB and a urodynamic diagnosis of detrusor underactivity, who had been treated by PTNS from October 2020 to October 2022. All patients performed 12 30-minute sessions of treatment, once a week. During first and last visit, uroflowmetry with ultrasound evaluation of post void residual (PVR) was performed and a questionnaire about quality of life (Likert scale ranging from 0 = completely fine, to 6 = very unhappy with the possibility to maintain this urological condition for all life) was administered. Patients that cannot perform a valid uroflowmetry were excluded from the study.

Table 1

	Session 1	Session 12	Variation	Variation in %
VVoid	289,55 ml	335,25 ml	+45,70 ml	+15,78%
RPM	92,86 ml	71,65 ml	−21,21 ml	−22,84%
QoL Index	4,23 ml	3,29 ml	−0,93 ml	−22,10%

Results: We included in the final report 17 patients (M:7 - F:10; average age: 49,6 ± 18 yrs). During the last session, average voided volume had increased by 15,78% (+45,7 ml); average PVR and QoL index had decreased respectively by 22,84% (−21,2 ml) and 22,10% (−0,93 pt) in comparison to first session. Results are shown in Table 1. 2/17 patients practiced CIC (3/die) at the start of treatment, reduction of number of CIC (2/die) was observed in one of these.

Interpretation of results: Our study suggests that PTNS can be effective in patients with UAB and detrusor underactivity. Results of uroflowmetry reflect the improvement of urinary function and an improvement of the emptying capacity, compromised in these patients. These results positively impact on the quality of life. QoL index had decreased of about 1 point: from 4.2, corresponding at relatively dissatisfied about urological condition, to 3.3 corresponding at middling satisfied. These small changes into urological function, have an important impact for person with underactive bladder.

Conclusions: Patients affected by underactive bladder suffered by symptoms that have a negative impact in their QoL. The possibility to improve this index using a mini-invasive, once-weekly treatment is an important result, worthy of further studies, also to include persons that cannot performed an uroflowmetry.

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18 - A multicentre pilot study on intravesical hyaluronic acid and chondroitin sulphate administration in the refractory Bacillus Calmette Guerin-induced chemical cystitis

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Introduction and aim of the study: Intravesical immunotherapy with Bacillus Calmette-Guérin (BCG) is the most effective prophylactic treatment for patients with non-muscle invasive bladder cancer (BCa) at intermediate and high risk of recurrence and/or progression after complete tumour removal. Chemical cystitis is the most common local side effect reported in up to 80% of patients.

We investigated the efficacy and safety of sequential intravesical instillations of combined hyaluronic acid (HA) and chondroitin sulphate (CS) in patients with BCG-induced chemical cystitis.

Materials and methods: This was a multicentric study. Subjects undergoing BCG intravesical administration after the first surgical procedure of Transurethral Resection of Bladder Tumour (TURBT) for high risk NMIBC received intravesical (i) HA+CS. Baseline (functional urologic evaluation): medical and urological history, physical examination, urinalysis and culture, VAS score for bladder pain (0 = no pain; 10= strong pain), 3-day voiding diary. Patients received iHA+CS after every BCG instillation. Follow-up was at 3 and 6 months with the 3-day voiding diary, urinalysis and culture and VAS.

Results: We enrolled 60 patients (12 F, 48 M). Mean ± SD age was 66.7 ± 22.1 yrs. Storage symptoms and VAS significantly decreased at 3 and 6 months follow-up (Table 1), and no patients had urinary tract infections. No local or major side effects were reported during or after treatment.

Interpretation of results: This study shows a possible role of iHA+CS in reducing BCG side-effects during the induction cycle when LUTS are more severe than in the maintenance period.

After 3 and 6 months of treatment, the vast majority of the patients was significantly improved in term of urinary frequency, urgency and episodes of urge incontinence. No drop-out related to side effect was documented, and the treatment was well tolerated.

Conclusions: In this preliminary report, was demonstrated that i-HA+CS is a safe, effective and long-lasting treatment for BCG-induced chemical cystitis. VAS score also, was relevantly improved, highlighting the role of this treatment in reducing bladder pain/discomfort. This study documented that i-HA+CS could be a reliable alternative management of patients with chemical cystitis due to BCG.

Table 1
Storage symptoms and VAS at pre-instillation, 3 and 6 months follow-up.

	Pre-Instillation	3-mos follow-up	6-mos follow-up	p
Day-time urinary frequency (mean ±SD)	9.2 ± 3.5	8.2 ± 0.1	7.7 ± 1.1	0.01
Night-time urinary frequency (mean ±SD)	3.7 ± 1.9	3.1 ± 0.8	2.2 ± 0.5	0.1
Urgency episodes/day (mean ±SD)	6.1 ± 2.3	5.7 ± 0.7	3.1 ± 1.8	0.01
UI episodes/day (mean ±SD)	2.3 ± 1.8	1.8 ± 0.9	0.9 ± 0.7	0.01
VAS (mean ±SD)	7.6 ± 1.8	7.1 ± 0.7	5.5 ± 1.3	0.1

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19 - Efficacy of Percutaneous Tibial Nerve Stimulation (PTNS) in children with dysfunctional voiding: Are motor and sensory response related to treatment effectiveness?

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Introduction and aim of the study: Percutaneous Tibial Nerve Stimulation (PTNS) is well tollerated in paediatric population and is used to treat dysfunctional voiding (DV) in children. Electrical stimulation performed by PTNS determines a sensory response, as a tingling and, generally, a motor response, corresponding

at plantar and toe flexion. This sign is not always present, particularly in children. Aim of the study is investigate results of PTNS treatment in relation to toes' plantar flexion.

Materials and methods: We retrospectively evaluated patients affected by LUTS with a diagnosis of DV arrived at our center and subject to PTNS treatment from September 2021 to June 2022. All patients performed 12 sessions, 30 min, of PTNS, once a week. At the end of treatment all children has been evaluated regarding improvement of urological symptoms.

Results: We enrolled 11 children (6 M–5 F; 11, 6 ± 3 yrs), 10 affected by DV and 1 affected by neurogenic bladder resulting from transverse myelitis. All patients completed the 12 sessions without reporting discomfort or pain. While sensory response was reported by each patient, motor response was present only in 6/11 children (54,5%). Above these 3 of them referred an improvement of symptoms at the end of treatment and 3 not. Plantar toe flexion was not observed in 5 patients (45,5%), 4 of them referred benefit from treatment and 1 not, corresponding at patient with neurological bladder. An improvement of LUTS, at large, was referred by 7/11 children (63,6%).

Interpretation of results: According to literature, our study shown efficacy of PTNS treatment in paediatric population, regardless toes' plantar flexion. In our small group, results seem to be not correlated with motor response. We can hypothesize that a higher voltage would allow plantar flexion to be evidenced and theoretically could be more effective. Anyway, treatment was generally performed at lowest perceived voltage, where sensitive perception, tingling, could impair the real effectiveness. In children we sometimes observe a fear of the needle and a willingness to stop the increase in voltage at the initial perception of the plantar tingling. For those future studies are required including urodynamic examination during PTNS session, comparing the use of PTNS and Transcutaneous tibial nerve stimulation (TPTNS), and a special focus on role of plantar toe flexion in neurogenic patients.

Conclusions: Our preliminary study opens for discussion further application of PTNS and TPTNS considering the role of motor and sensory response in patients' selection.

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20 - Reconstructive surgery for continence (augmentation and derivation): A EUROGEN centre 5 years experience

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Introduction and aim of the study: Surgical procedures for lower urinary tract (LUT) in pediatrics are indicated to improve continence and preserve upper urinary tract (UUT) when conservative or less invasive treatment failed. In order to consider their safety, effectiveness and concerns we retrospectively reviewed our last 5 years experience.

Materials and methods: Data of patients with a minimum 12 months follow-up operated from January 2017 to December 2021 have been selected. All patients have been evaluated before and after surgery for continence, UUT, satisfaction.

Results: 19 bladder augmentation and 20 derivation (17 Mitrofanoff and 3 Monti) have been performed Among these we have considered only procedures performed by our team (using same surgical technique and protocol): 17/19 augmentation with ileum and 17/20 derivation (14 Mitrofanoff and 3 Monti) in 24 patients. Diagnosis: neurogenic bladder 16 pts, valve bladder 2, bladder exstrophy 2, urethral duplication 1, epispadia 1, cloacal exstrophy 1, severe urethral iatrogenic stenosis 1, Mean age 13.5 years (9.3–18.8). All patients have been operated with open surgery. 10 patients performed at the same time augmentation and derivation, 7 only augmentation and 7 derivation (6 Mitrofanoff, 1 Monti). 5 patients performed also bladder neck reconstruction with augmentation, 3 bladder neck closure, 2 reimplantation. No deaths have been reported. 1 patient presented pulmonary embolism. No reoperation for bleeding, 1 small bowel obstruction, 1 perforation, 1 wound infection, 5 patients presented bladder stones in one with upper urinary tract stones associated, 1 Monti required further operation in order to reduce channel length and 3 Mitrofanoff required revision for stricture after 2 years. Urodynamic parameters, continence status, renal function, quality of life improved in all but 2 patients All patients actually are performing regularly CIC for urethra or stoma.11/24 presented concerns on adherence on CIC and medical treatment solved during time.

Interpretation of results: Major surgery is still required nevertheless the use of onabotulinum toxin for reconstruction of LUT. When outlet procedure are required evaluation of bladder function permits a correct surgical strategy to protect UUT. 11/24, have been unsuccessfully previously operated in other centers with incorrect surgical strategy.

Conclusions: In our experience major surgery is still required for treatment of complex congenital malformation in pediatric urological patients. The choice of surgical procedures must be based on the age of the child, other comorbidities or physical limitations. Urodynamic/videourodynamic is in our mind mandatory in reconstructive surgery of LUT, as well as an urotherapist team and a multidisciplinary approach including psychologist. In order to optimize results major reconstructive surgery must be centralized directly in selected center according to EUROGEN standard requirement.

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21 - Sacral neuromodulation (SNM) in pediatric population: What we learned after 65 implants

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Introduction and aim of the study: In pediatrics, safety and effectiveness of SNM have not been established and specific success or failure factors of implanting have not been defined; thus, SNM remains an off-label therapy. Our experience in 65 pediatric implanted patients is reported, presenting our protocol for selection implant.

Materials and methods: SNM is considered as a III line treatment. Protocol was defined and approved by our Hospital Scientific Committee in 2008. Patients (pts) were treated according to this protocol: **(A)** pre-operative, **(B)** surgical, **(C)** post-operative and follow-up. **(A)** All pts underwent: clinical evaluation, urinalysis, blood exams, 48 h urinary/ bowel diaries, sacrum X-ray, renal/bladder US, UD evaluation, neurophysiological test, psychological evaluation, QoL. Pts with renal function (RF), upper urinary tract (UUT), mental impairment were excluded. Successful implant was considered when pts reported own satisfaction plus 50% improvement in 1/more of following parameters:leaking episodes/day, pads/day, PVR, intermittent catheterisms/day, episodes of faecal incontinence/day, defecation/day. **(B)** All pts underwent 2 stage technique. Implant was performed after successful control period of 2–8 weeks from advanced test, excluding worsening of RF and UUT. **(C)** Controls were performed at 1, 4, 12, 36, 52 weeks and then twice/year. Pts with a minimum of 12 months follow-up were included.

Results: From 2008 to 2021, 72 pts. (aged 11–19 yrs) underwent SNM.7 pts were excluded: 3 with follow-up <12 months, 4 did not meet criteria for II stage. Among 65 pts, 39 had neurogenic bladder (NB), 15 non neurogenic urinary retention, 8 overactive bladder, 6 bowel dysfunction with fecal incontinence. Overall success rate was 70% at 12 months and 65% later, maintaining during time. Early complications were:1 intraoperative electrode breaking during removal, 4 infection, 2 electrode removal. All required reoperation. Later complications were found in 9 pts:5 electrode breaking, 4 battery dislocation (infection, skin erosion), which required reimplant of new battery in contralateral side. Success rate in NB was 65% (80% iatrogenic injury, 90% peripheral neuropathy, 50% occult spinal dysraphysm and 0% myelomeningocele, lypomeningocele and complete SCI). 15 pts removed device for symptoms resolution.

Interpretation of results: Based on our results, careful selection seems mandatory to choosing correct indication and side of implant. Iatrogenic injury or peripheral lesion (incomplete damage) seems to offer best chance for positive response than SCI or MMC (complete damage). Younger age seems to offer a better response at cost of higher complications rate, probably relate to height grow-up and change in body mass index.

Conclusions: Careful pts selection, skills to perform implant and manage complications indicate that SNM in pediatrics must be used only in very few high level selected center, with a multidisciplinary team and high rate volume activity (minimum of 5 implants/year).

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22 - Developing and validating the integrated bladder & bowel diary: Preliminary results of a new Italian tool to assess neurogenic lower urinary tract and bowel dysfunction

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Introduction and aim of the study: The aim of our study is to develop an Italian validated bladder and bowel diary for neurological patients using a psychometric validation protocol.

Materials and methods: We are conducting a multicentre prospective crossover randomized study recruiting spinal cord injury (SCI) and multiple sclerosis (MS) adults. Randomization is stratified for each single centre in a 1:1 ratio. All patients are asked to fill the diaries for 5 consecutive days. Group A is required to complete the integrated diary for 5 days and subsequently the diaries in separate form (bladder and intestinal diary). Conversely, separated diaries are firstly given to group B who complete the integrated form afterwards. Finally, each patient is asked to fill out a satisfaction questionnaire on the integrated diary. The following hypothesis has been established for the construct validity: (1) autonomic dysreflexia > in SCI above T6; (2) Urinary incontinence (UI) and faecal incontinence > in SCI than MS; (3) stress urinary incontinence > in sacral SCI; (4) urgency > MS than SCI. Cohen Kappa concordance is calculated considering the frequency of UI and evacuation. Kappa statistic with a $K = 0.7$ an error of 0.11 and a CI of 95% was used. A patient is considered incontinent if he experiences > 1 episode of UI on at least 3/5 days. A patient is considered constipated if he has < 3 spontaneous evacuations in 5 days.

Results: Data from 26 SCI and 13 MS (mean age 45 ± 11.6) were collected (20 group A and 19 group B). Median age of neurological illness was 10 years. Overall, 250 days were analysed in 25/39 patients. UI was observed in 25% of women and 18% of men ($p = 0.999$). Constipation was complained by 63% women and 53% men ($p = 0.262$). Recordings of UI showed an agreement of 92%. Whereas a k value of 60% was observed among patients defined as constipated (80% of agreement). At phase 1, UI was observed in 14.3% and 18% in integrated and separated diaries. While, in the second phase the percentage increased up to 27.3% (integrated) and 24.4% (separated diaries). Conversely, constipation was detected in 57.1% and 54.6% at phase 1 and in 45.5% and 50% at phase 2 respectively using the integrated and separated tools.

Interpretation of results: Although bladder and bowel diaries are commonly used in both clinical practice and research, a validated tool to concomitantly assess both systems in patients often suffering from more than one lower urinary and bowel dysfunction (e.g., neurological) is still missing. Despite the small sample our preliminary data shows a good agreement between the new integrated tool and the separated diaries.

Conclusions: Although it is not possible to provide evidence yet, this study shows the preliminary results of an Italian consensus process between experts, which not only aims to design an integrated tool in order to collect standardized and homogeneous data, but also to enhance patients' empowerment and improve their symptoms.

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23 - Minimally invasive Mitrofanoff: Laparoscopic versus laparoscopic-assisted technique

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Introduction and aim of the study: Mitrofanoff appendicovesicostomy is a well-established open surgical technique, which aims to create a conduit for clean intermittent catheterization in children with uncatheterizable urethra.

The laparoscopic Mitrofanoff (LM) technique and the modified laparoscopic-assisted procedure (LAM) has been rarely reported due to its technical challenges.

We present our experience on laparoscopic Mitrofanoff technique and a more recent modified laparoscopic-assisted procedure.

Materials and methods: From February 2016 to September 2020, seven patients underwent mini-invasive Mitrofanoff. Patient clinical data were retrospectively reviewed.

In all cases, the Mitrofanoff conduit was placed on the anterior bladder wall, with the stoma at the umbilicus, and clean intermittent catheterization started after 3 weeks. Data were statistically analyzed.

Results: Patients mean age was 10.42 ± 0.95 years (range 9–12): 3 underwent LM (43%), 4 LAM (57%).

Primary disease was 1 epispadias, 1 ureterocele with single kidney, 1 urethral syringocele with single kidney, 1 occult spinal dysraphism with anorectal malformation, 3 posterior urethral valves. Operative time was 273.33 ± 20.55 min in LM-group (range 200–350) and 203.75 ± 24.33 min in the LAM group (range 180–235), $p < 0.05$. No intraoperative complications occurred. In LM patients a 3-port transperitoneal approach was used, except in one case which required a fourth port due to sub-hepatic appendix.

The mean postoperative follow-up was 43.33 ± 10.87 months in the LM group (range 32–58) and 26.25 ± 5.40 months in the LAM group (range 20–33).

In the LM group 2 patients required a surgical revision (1 stomal stenosis, 1 Mitrofanoff leak).

The qualitative cosmetic outcome was judged as "excellent" by all the patients.

Interpretation of results: The LAM procedure is easier and quicker than formal LM, with similar functional and aesthetic results.

Conclusions: The minimally invasive approach for Mitrofanoff appendicovesicostomy is feasible and successful in children, with particular advantages in adolescents. The laparoscopic-assisted procedure, compared with the laparoscopic one, is easier and quick, but is also easier to teach and can be performed by less expert laparoscopists.

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24 - Is obesity a risk factor for children enuresis?

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Introduction and aim of the study: Obesity is a worldwide emergency, with an estimated prevalence of 30% in Italian children. Relationships between obesity and enuresis (EN) are described as controversial, despite it might be a risk factor.

International Children Continence Society classifies EN as primary, secondary, monosymptomatic (MNE) and non-monosymptomatic (NMNE).

Our study aims to assess the relationship between EN and obesity in our pediatric population.

Materials and methods: A retrospective study was conducted on enuretic children data at our Urological Department from 1st January 2019 to 31st December 2021.

Correlations were evaluated between BMI and: family history for EN, type of EN, LUTS, fecal incontinence and obstipation, UTIs, urinal US findings, type of therapy and outcome, age and gender.

Statistical analysis was performed with Fisher's and Chi-squared Tests.

Results: 79 patients were enrolled, 55 males (M) and 24 females (F), aged 5–14 years (51 pt 5–10 years and 28 pt 10–14 years).

22/79 (27.85%) were obese (OB), 9 F (40.9%), and 13 M (59.1%), 15 between 5–10 years (68.2%) and 7 between 10–14 years (31.8%).

12/79 patients (15.2%) had EN family history, with a significant correlation between family history and F gender (p 0,02).

EN was primary in 60/79 patients (75.9%), secondary in 19/79 (24.1%), MNE in 36/79 (45.6%), NMNE in 43/79 (54.4%).

The analysis of the two groups revealed:

- primary EN in 14/22 OP (63.6%) and 46/57 (80.7%) nOP
- secondary EN in 8/22 (36.4%) OP and 11/57 (19.3%) nOP
- MNE in 11/22 OP (50%) and 25/57 (43.9%) NOP
- NMNE in 11/22 OP (50%) and 32/57 (56.1%) NOP.

No significant differences between the two populations were found.

Obstipation was equally observed among two groups ($p > 0.05$).

Minor US abnormalities were observed n 4/22 OP (18.2%) and in 14/57 NOP (24.6%) ($p > 0.05$).

All the children were first treated with behavioral therapy which solved the EN forms in 6/22 OP (27.3%) and 32/57 NOP (56.1%).

16/22 OP (72.7%) and 25/57 NOP (43.9%) required combined pharmacologic and drug therapy with a significant difference (p 0,02).

Overall, the combined therapy success rate was not significantly different between OP and NOP.

Interpretation of results: There was no difference according to family history of EN between OP and non-NOP.

The prevalence of primary, secondary, MS, nMS forms was not different between OP and NOP patients as well as US-minor abnormalities and obstipation.

Conclusions: We did not find an increase of NMNE enuresis nor LUTS neither UTIs in enuretic patients with obesity. However, OP responded less to behavioral treatment and often required the association of pharmacotherapy.

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25 - Spiral-Monti in adults: The initial experience with a continent catheterizable channel

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Introduction and aim of the study: The principle of Mitrofanoff is routinely applied in the reconstructive pediatric urology, to create a channel for clean intermittent catheterization (CIC) in patients with a non-catheterizable urethra. When the appendix is not available, a short segment of ileum can be used according to Yang–Monti technique. Reports on this technique in adults are scanty.

We present a case series of 9 Monti channel performed in adults from July 2020 to December 2022, resulting from a strict cooperation of adult and pediatric urologists.

Materials and methods: 7 patients in which an ileal orthotopic neobladder was contraindicated (5 urothelial cancer at the urethra in the intraoperative frozen specimen, 1 bladder neck incompetence and 1 recurrent neobladder vaginal fistula), were treated with radical cystectomy and continent urinary diversion with a Monti catheterizable channel. Reservoirs were configured according to Studer, Hautmann and Camey II techniques in 3, 1 and 1 patients, respectively.

Two further patients in which a bladder augmentation and a Mitrofanoff channel were performed during infancy (1 pt with bladder exstrophy aged 41, 1 pt with PUV aged 26) due to long tight stenosis of the Mitrofanoff channel underwent a Monti procedure together with a Re-Do ileal augmentation. Three weeks post op cystogram of the reservoir was performed, and CIC started at 4 weeks. Intra- and postoperative complications were recorded according to Clavien–Dindo classification.

Results: Out of the 9 patients, 7 were males, 2 females, median age 58 years. Open Surgery was adopted, median operative time 370 min. The catheterizable channel was always reconfigured from a 5 cm ileal segment tubularized over a 14-F catheter according to the Spiral-Monti technique and it was implanted on the anterior surface of the neobladder, posteriorly sustained by the neobladder itself. The technique of Spiral Monti was deemed necessary due to the subcutaneous tissue thick in the vast majority of adult patients and therefore the necessity of a long catheterizable channel.

The stoma was placed at the umbilicus in all the patients, but in 1 wheelchair bound patient with spina bifida we choose the easiest catheterizable place in the right iliac fossa.

One intraoperative complication was reported (rectal injury) that was promptly repaired. Postoperative complications occurred in 4 patients: 1 grade 3a (infected lymphocele requiring percutaneous drainage) and 3 grade 2 (1 UTI requiring antibiotics, 1 bleeding requiring transfusion and 1 urinary fistula requiring long-term catheterization). To date, 7 patients are continent and able to perform self-CIC without problems. One year after surgery, one patient underwent emergency removal of the augmentation due to massive bleeding from a previous gastrocystoplasty.

1 year after surgery, 1 patient has urinary incontinence of the reservoir not treated due to systemic disease.

Interpretation of results: Cooperation between adult and pediatric urologists result in a successful construction of a Monti/Spiral Monti catheterizable channel in adults.

Conclusions: Continent urinary diversion with Monti/Spiral Monti conduit could be considered an alternative in adults when ileal orthotopic neobladder is contraindicated. Monti conduit could be also be necessary in patients with severe urological malformations and complex urological reconstruction performed in childhood reaching the adult life, when the previous Mitrofanoff become not usable, then a re-do catheterizable channel may be required.

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26 - Urinary metabolomic in neurogenic bladder of children and young adults: A new approach?

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Introduction and aim of the study: The term neurogenic bladder refers to urinary bladder dysfunction caused by trauma, disease, or injury. Metabolomic is an "-omic" science that detects metabolites in physiological and pathological conditions. Our goals were to characterize the urinary metabolomes of patients undergoing various treatments and to investigate how and why patients with clean intermittent catheterization (CIC) did not develop symptomatic urinary tract infections.

Materials and methods: There were 24 patients out of all 15 patients with neurogenic bladder and 9 healthy controls. The mean age in patients of the neurogenic bladder group was 23 years old. 10 patients were treated with CIC in conjunction with oxybutynin, 3 were untreated, and 2 had the cystostomy button. Three aliquots of their urine were then collected: two of them were subjected to chemical–physical analysis, sediment analysis and urine culture, while a third was stored at −80 °C for metabolomic analysis. The urine metabolomic analysis was carried out using mass spectrometry in conjunction with gas chromatography. Then a multivariate statistical analysis was performed to identify those with the greatest significance.

Results: The urine cultures of 14 of the 15 patients were positive. All patients were asymptomatic. Urine turbidity and positive nitrites were found in 40% and 47% of patients respectively, despite urine culture being positive in almost all patients. A paired PLS-DA model, that compared metabolomes of CIC patients and healthy subjects, revealed two distinct groups with related significant metabolites.

Interpretation of results: Several important metabolites (butyric acid, oxalic acid, serine, 2-keto-L-gluconic acid), which are part of energy metabolism, are reduced in patients' urine resulting in an energy deficiency. This could explain why there is a difference between the presence of urinary pathogens and the absence of inflammation and its symptoms. Furthermore, butyric acid changes may indicate dysbiosis of the intestinal microbiota. Other changes suggest that the patients' immune system stimulation and antioxidant capacity may be reduced.

Conclusions: To the best of our knowledge, this is the first study to investigate this disorder using metabolomic analysis. Despite the fact that these are preliminary findings, we discovered some metabolites that allow us to distinguish patients from healthy people. The significance of these differences is unknown, but we hypothesized that the energy deficiency could explain some of the differences regarding the presence of pathogens in the urine and absence of inflammation and its symptoms. More research is needed to better understand this topic and explain why these patients have a lower infection rate, in order to improve diagnosis and treatment for patients.

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27 - Optimal trans-anal irrigation (TAI) volumes may be lower than the recommended volumes and prevent lower urinary tract infections (UTIs) in children with spina bifida

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Introduction and aim of the study: Trans-anal irrigation (TAI) is a procedure used to reduce the impact of bladder and bowel dysfunctions (BBD) in children affected by spina bifida.

This study aims to evaluate:

– the volume of TAI needed in a fluoroscopy examination to clean the descending colon,

– if this volume is clinically adequate or needs to be increased to achieve an effective bowel voiding in the everyday life,

– if TAI leads to a reduction of UTIs.

Materials and methods: We collected radiological and clinical data of all patients (pts) affected by spina bifida with BBD trained for TAI between February 2021–January 2023 at our center. All the eligible pts underwent a fluoroscopy to estimate the volume of barium enema needed to reach the left colic flexure. We compared this volume with the suggested one, calculated as 15–20 ml/kg.

The follow up was scheduled with telephonic surveys at 1 week (F1), 8 weeks (F2) and 6 months (F3). Two tailed Student's T test for paired data was carried out with $p = 0,05$.

Results: 11 pts (5M, 6F) matched our criteria. Mean age was 8y (range 4,6–17,1), mean weight 21,4 kg (range 10,5–36 kg). All pts were treated with anticholinergic therapy and intermittent catheterizations. 6/11 (54,5%) had normal findings at fluoroscopy, 5 (45,5%) presented dolichocolon. 5/11 (45,5%) pts presented with recurrent UTIs before TAI.

Mean infused volume of barium enema was 295 ml (range 130–450 ml). Mean infused volume expected for weight was 389 ml (range 183–630 ml). These volumes were a mean of 23,4% lower than the mean volumes expected for weight (range -48,1% and 26,3%) (p=0,008). The infused volumes at barium TAI were lower than the expected in 9/11(81,8%) pts; higher in 2 (18,2%) presented dolichocolon. At follow up, in 4/11 (36,4%) pts the infused volumes at F3 were the same established at fluoroscopy, in 2 (18,2%) were reduced (mean −25, range −30 to −20), in 5 (45,5%) were increased (mean 106, range 50 to 200) ($p = 0,086$). However in 7/11 pts (63,6%) the volumes at F3 were still lower than the suggested ones (mean -105, range −185 to −25), in 4/11 (36,4%) pts the volumes were higher than the expected volumes (mean 44, range 16 to 73); ($p = 0,081$). 2 of these 4 patients presented dolichocolon.

No pts developed de novo UTIs. 4/ 5 pts with recurrent UTIs before TAI did not develop UTIs after TAI, 1/4 reported persistent UTIs ($p = 0,04$).

Interpretation of results: Our data confirm that the achieving of normal bowel habits reduce the incidence of UTIs. In our study the infused volume needed at barium enema is generally lower than the recommended volume. In some cases it required to be increased during the follow up, but it is still lower than the recommended volume in the majority of pts.

Conclusions: TAI can reduce the incidence of UTIs. The infused volume needed to clean the descending colon might be lower than the recommended volume, therefore we recommend to perform a fluoroscopic determination when possible.

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28 - Pro-act substitution for mechanical rupture of the periurethral balloon: Step-by-step surgical education video

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Introduction and aim of the study: Stress urinary incontinence (SUI) is a feared complication after radical prostatectomy because it impacts on the quality of life and determines a high rate of emotional distress.

When the first-line pharmacological and physical conservative treatments fail compression devices may be recommended.

Results: The Adjustable Continence Therapy prosthesis (Pro-ACT) is a postoperatively adjustable device that aims to achieve optimal outlet resistance by progressively increasing the volume of the periurethral balloons.

Furthermore, in case of mechanical rupture it may be easily substituted (removed and reimplanted) in expert centers.

Interpretation of results: In this video we present the clinical case of a male patient who had undergone PRO-ACT implantation about 10 years ago. Due to the rupture of the right balloon, its substitution was indicated and performed under ultrasound guidance.

Conclusions: Our aim is to provide a description of the surgical technique.

A set of simple steps, that makes the surgical procedure safe and easy to perform even in inexperienced hands.

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29 - Rezum and Urolift mini-invasive procedures: The nurses setting up of endoscopic room

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Introduction and aim of the study: To assess nurse setting of endoscopic room (ER) for mini-invasive bladder outlet obstruction (BOO) endoscopic treatments: Rezum and Urolif.

Materials and methods: This was a pilot prospective study on nurse experience of ER setting for Rezum and Urolift procedures in a Tertiary Urological Center (May/Dec 2022). Data recorded were: surgical kit components, number of components and serving tables, preparation times of material used for the endoscopic procedures and ER, patient change times, nurse perceived complexity of ER setting and in helping surgeon during procedure, critical issues in ER setting/helping surgeon. VAS scale for complexity evaluation was: 0 no complexity, 10 max complexity. A skilled surgeon was involved, and 3 nurses: 1 of high level of experience (HLE) in urological endoscopic procedures (>6 years), 1 of mild level (MLE) (1–6 years), 1 of low level (<1 year). All nurses had a preliminary teaching session before the first procedure.

Results: Data were collected on 6 procedures of Urolift, 6 of Rezum. Mean surgical time was 8 min for Rezum, 14 min for Urolift. No intra- and post-operative complications occurred. Data on ER setting and complexity of ER preparation are reported in Table 1. Overall nursing time needed for each patient (mean preparation components and ER, mean patient change time) was 34.3 min for Urolift and 36.9 min for Rezum.

Table 1
Nurse ER setting and complexity of ER preparation nurses according to level of experience.

	UROLIFT	REZUM
Surgical kit components	5	1
Number of components	10	11
Number of serving tables	1	1
Material preparation time (min)		
- HLE nurse	8	7
- MLE nurse	10	10
- LLE nurse	13	11
- Overall (mean of 3 nurses)	10.3	9.3
ER preparation time (min)		
- HLE nurse	14	11
- MLE nurse	18	18
- LLE nurse	25	27
- Overall (mean of 3 nurses)	19	18.6
Patient time change (min)	5	9
Complexity of ER setting		
- HLE nurse	2	2
- MLE nurse	4	3
- LLE nurse	5	5
- Overall (mean of 3 nurses)	3.7	3.3
Complexity in helping surgeon		
- HLE nurse	3	2
- MLE nurse	4	4
- LLE nurse	6	5
- Overall (mean of 3 nurses)	4.3	3.6
Critical issues in ER setting/helping surgeon		
- HLE nurse-	unknown equipment	unknown equipment
- MLE nurse	unknown equipment incorrect assembly worry of device brekage or activation	unknown equipment incorrect assembly worry of device brekage
- LLE nurse	unknown equipment incorrect assembly worry of device brekage or activation	unknown equipment incorrect assembly worry of device brekage

Interpretation of results: Time for overall ER setting was comparable for both procedures. An explanation of this result could be that both treatments had only slight differences in number of components and need of serving tables, and that critical issues reported by nurses were similar for both devices. Interestingly, great differences in time of ER setting was found comparing HLE nurse and LLN, highlighting doubled preparation time in the latter. Only slight difference was documented between HLE and MLE, while fair difference between MLE and LLE. These findings emphasize the relevance of nurse's experience in endoscopic procedures. Overall, less than 40 min were nursing time needed for each patient undergoing procedures. Therefore, considering also surgical procedure duration, approximately one hour of ER use should be considered for each patient.

Conclusions: Nurse's time duration and complexity grade were comparable for mini-invasive treatments of BOO. Nurse experience in endoscopic procedures was the most important characteristic in reducing ER setting time.

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30 - Laparoscopic repair of vesicovaginal fistula: Our experience

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Introduction and aim of the study: To demonstrate the technique of laparoscopic repair of a vesicovaginal fistula (VVF).

We present the case of a 73-year-old woman who received transvaginal surgery for pelvic organ prolapse.

Results: The surgery was complicated by the creation of a VVF. A laparoscopic approach was chosen for the definitive management of the fistula.

Following the cystoscopic placement of ureteral single-J stents and of an open-end ureteric catheter inside the VVF, the abdominal cavity was entered by a closed laparoscopic access. The intervesicovaginal space was dissected and the fistula was identified. Its margins were resected in order to obtain well vascularized tissue. The vagina and the bladder were sutured separately, having care to create perpendicular suture lines [1].

Bladder closure was confirmed by the hydrostatic leak test at 250 cc.

An attempt to interpose an epiploic appendix of the sigmoid colon between the suture lines was unsuccessful because it caused tension and angulation to the sigmoid. Thus, we used an omental flap to cover the suture lines [2].

Interpretation of results: Operating time was approximately 120 min. Blood loss was insignificant.

No intraoperative or postoperative complications occurred. Three weeks after surgery a retrograde and micturating cystogram was performed that did not put into evidence any leaks. The urinary catheter was removed.

At 12 months of follow-up there were no signs of recurrence of the fistula.

Conclusions: The laparoscopic technique represents a feasible and effective option for the repair of VVF [3].

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31 - Bipolar-TURP versus holmium laser enucleation of prostate: Functional outcomes and complications in frail elderly (>75 y.o.) patients: A prospective randomized study

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Background: The aim of this study was to compare the peri-operative and functional results between trans-urethral resection of the prostate (TURP) and holmium laser enucleation of the prostate (HoLEP) in the treatment of benign prostatic hyperplasia (BPH) associated with lower urinary tract symptoms (LUTS) in middle-old patients.

Materials and methods: This prospective single-center study included patients over 75 years old treated with B-TURP or HoLEP for BPH associated with LUTS with prostate volume (PV) < 100 mL. Primary endpoints were the intra-operative blood loss, percentage of loss of hemoglobin, blood transfusion, complications, and the comparison of functional outcomes. All patients were evaluated at 1, 3, 6, and 12 months of follow-up.

Results: Overall, 96 patients undergoing HoLEP and 104 B-TURP were eligible and enrolled for the study. Post-operative results showed statistically significant differences between the two groups, all in favor of HoLEP group, specifically in terms of removed prostate tissue, PV reduction rate, hemoglobin values at 24 h, hemoglobin loss, operative time, length of hospitalization, days of catheterization, and urinary flow rates. There was no significant difference in terms of postvoid residual urine volume, perioperative complication, blood transfusion, International Prostate Symptom Score (IPSS), and IPSS quality of life scores.

Conclusions: In middle-old patients, the HoLEP technique represents a prostate size-independent treatment option with a more favorable safety profile defined by less bleeding, lower blood transfusions, and a significantly lower hemoglobin drop than B-TURP.

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32 - A big blood clot evacuation through an urethral sheath in a Mitrofanoff appendicovesicostomy

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Introduction and aim of the study: The Mitrofanoff appendicovescicostomy provides for a catheterizable submucosal tunnel between umbilicus and bladder (or neobladder).

In patients with neobladder or augmented bladder, together with Mitrofanoff and bladder neck closure, the Mitrofanoff channel is the only way to access the bladder.

In case of complication of the intestinal bladder (stones, clots) the trans-Mitrofanoff passage of endoscopic instrumentation has enhanced concerns about the possible adverse effects on continence mechanisms and iatrogenic stomal stenosis.

In such patients, even the treatment of stones has been suggested in open surgery, while few cases have been reported with a trans Mitrofanoff endoscopic approach.

We describe a challenging case of an augmented ileal-bladder tamponade by a big blood clot, successfully evacuated though a Mitrofanoff channel.

To our knowledge, no similar cases have been reported.

Materials and methods: A 18-years-old girl developed hematuria three days after a cystolithotomy for a 30 mm bladder stone. Abdominal US showed a 10 cm large clot filling the ileal-augmented bladder, then confirmed at CT scan.

The clot was neither susceptible of a conservative approach due to its size, nor it could be managed through a trans catheter evacuation.

In general anesthesia and in supine position a rigid cystoscope 10 Ch surrounded by its own sheath was gently inserted though the appendicovesicostomy.

Leaving the sheath in place, the cystoscope was repeatedly inserted in the bladder and used to fragment the clot under direct vision. The vacuum effect of 60 ml syringe allowed the progressive aspiration of the clot fragments.

The procedure was assisted through US control till the complete clot fragmentation and removal.

Diuresis and renal function were never impacted by the clot nor after the clot removal.

The sheath of the cystoscope was removed under direct vision, ensuring the healthy conditions of the appendix duct and the surgical anastomoses.

Results: The complete clot removal was achieved in 130 min. The urethral sheath preserved the appendicovesicostomy from the continuous passages of cystoscope.

Postoperative period was uneventful. Bladder catheter was removed after two days. No channel stenosis, anastomosis dehiscence or incontinence were reported after two months.

Interpretation of results: Placing a sheath through appendicovesicostomy allowed the preservation of both stoma and Mitrofanoff conduit, making safe the clots fragmentation and removal.

Conclusions: The bladder blood clots evacuation in a closed-neck augmented bladder with a Mitrofanoff tunnel present some challenges limits. The absence of a natural endoscopically explorable channel imped the use of a resectoscope and the Mitrofanoff tunnel is highly delicate to fulfill this scope and to tolerate the necessary swinging movements. The use of urethral sheath simplifies the clots suction and makes safe the minimal endoscopic maneuvers.

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33 - Allium Ureteral Stent for the treatment of ureteral stricture and fistula after abdominal surgery

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Introduction and aim of the study: Ureteral injuries are well-known complications of abdominal surgery. The aim of the study is to evaluate the safety and feasibility of Allium ureteral prosthesis in patients with distal and upper ureteral injuries after abdominal surgery.

Materials and methods: The Allium URS is a new-developed ureteral stent made of nickel–titanium (Nitinol) meant to automatically expand when inserted in a stricture in order to restore and preserve a larger caliber. Furthermore, the stent is coated with a biochemical co-polymer which prevents tissue ingrowth and incrustations. For this study 71 consecutive patients were enrolled. All of them had iatrogenic ureteral injury in the upper, mid and distal ureter after undergoing abdominal surgery. From these 71 patients, 21 underwent gynecologic surgery. The other 50 patients underwent abdominal surgery due to: ureteral stenosis

caused by retroperitoneal lymph node metastasis (3pts 4, 22%), uretero-cysto-anastomosis (4pts 5, 63%), pyeloureteral junction stenosis (5pts 7, 04%), colectomy (6pts 8, 45%), ureteral obstruction due to bladder cancer (6pts 8, 45%), bladder cuff excision (8pts 11, 27%), ureteral stones (18 pts 25, 36%). All of them were selected for positioning the allium prosthesis between January 2017 and December 2020. Ureteral leakage and stricture were diagnosed using intravenous pyelography. During the procedure the stent was inserted anterogradely or retrogradely with intraoperative X-ray guidance after dilation of the stricture.

Results: No major complications occurred during the stenting procedure. During the follow up (mean 36 months) 6 obstructions (8, 45%) have been reported after 8 months caused by ureteral stones all successfully treated endoscopically with holmium laser. In addition, stent migration occurred in 10 patients (14, 08%) within 3 months after its insertion, of which 5 were easily replaced and the other 5 were removed with the subsequent need of a robotic re-anastomosis. Among the 5 patients affected by pyeloureteral junction stenosis, 4 needed laparoscopic pyeloplasty due to stent migration. In 20 patients the stents were removed as planned after one year of indwelling time and remained asymptomatic in a follow-up period of up to 24 months. The removal of the left 31 stents is planned during the next 12 months.

Interpretation of results: Due to its unique structure, the Allium stent resulted superior to the standard pigtail stents in the treatment of ureteral strictures. Stent migration was seen in 19.7% (14pts) of the patients, and mainly reported in patients with stricture of the upper ureter.

Conclusions: The results of our study show that the use of Allium URS for the treatment of ureteral strictures is feasible, safe and effective. The relative ease of its insertion could encourage its use in a wide range of other indications. However, evaluating the results we do not recommend the use of Allium stent to treat pyeloureteral junction strictures because of its high risk of migration.

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34 - Ultrasound analysis of the genital hiatus after spontaneous vaginal delivery: A comparison between mediolateral episiotomy and obstetrics spontaneous tears

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Introduction and aim of the study: Obstetric tears and episiotomies on the pelvic hiatus, which often induce short- and long-term onset of pelvic floor dysfunctions (e.g., prolapse of the pelvic organs, urinary incontinence, fecal incontinence, and sexual distress) are a matter of scientific debate. Despite existing literature suggests an association among spontaneous vaginal delivery and increased genital hiatus area and diameters, there is still no clear consensus about the consequences of obstetric tears and episiotomies on such parameters.

The aim of this pilot study is to analyze the antero-posterior and transverse diameters and the genital hiatus area after spontaneous vaginal delivery in two groups of patients, women with spontaneous vaginoperineal tears (VT) and women with right medial lateral episiotomy (MLE).

Materials and methods: We enrolled a total of 20 women in the period October–December 2021, subdivided in two groups as follows: (i) VT group with 10 patients (mean age 30 ± 3.9 years), among which 7 with I and II-degree lacerations and 3 with III-degree A lacerations; (ii) MLE group with 10 patients (mean age 35 ± 4 years).

All patients were primiparous with physiological and low obstetric risk pregnancy. Each patient underwent 3D transperineal ultrasound examination to evaluate the genital hiatus and internal and external anal sphincter, beyond to urogynecological evaluation six and twelve months after delivery. All these women performed a pelvic floor exercise with an expert of pelvic floor rehabilitation and physiatrists examination in order to evaluate the performance of pelvic muscles structure and exercise and strength peri-vaginal muscles.

Results: There was not a significant difference for body mass index, weight gain during pregnancy, gestational week, and neonatal weight, between the two groups. All patients breastfeed. During the study period and follow-up, no patients reported urinary and/or fecal incontinence, superficial and/or deep dyspareunia, or difficult in the recovery of sexual activity after delivery.

Interpretation of results: Six and twelve months after delivery, ultrasound examinations performed in patients of both groups did not report statistically significant differences in terms of antero-posterior diameter, latero-lateral diameter and genital hiatus area. Moreover, 3D ultrasound imaging of the anus showed the integrity of the internal and external anal sphincter, with no signs of avulsion of the elevator ani muscles.

Conclusions: The pelvic floor rehabilitation permits to increase the muscles strength and a better self-confidence with pelvic floor structure.

To conclude, our results suggest no statistically significant difference in both the VT and MLE groups regarding the characteristics of the genital hiatus after delivery in women with at least twelve months of follow-up.

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35 - Emerging opportunities in minimally invasive BPO management: A single center experience with transperineal interstitial laser ablation of the prostate (TPLA)

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Introduction and aim of the study: Lower urinary tract symptoms (LUTS) due to benign prostatic obstruction (BPO) can result in a non-negligible impact on the quality of life. Although for years the treatment of BPO/LUTS had transurethral resection of the prostate (TURP) as its mainstay, to date several evidence-supported minimally invasive techniques (MISTs) are revolutionizing the treatment scenario. Particularly, among these, transperineal interstitial laser ablation

(TPLA) of the prostate adenoma plays a prominent role. We present perioperative and short term functional and sexual outcomes of carefully selected patients treated with TPLA for BPO.

Materials and methods: The Ethical Committee approved this study. We prospectively collected data from consecutive patients with moderate LUTS due to BPO undergoing TPLA at our institution between April 2021 and March 2022, with prostate volume <100 ml. Procedures were performed in an outpatient setting using local anesthesia and conscious sedation, using EchoLaser® device, a multisource diode laser generator. The International Prostate Symptom Score (IPSS), the International Index of Erectile Function (IIEF-15), Male Sexual Health Questionnaire-Ejaculatory Dysfunction Short Form (MSHQ-EjD SF), non-invasive urodynamics data (Qmax, PVR), patient management (catheterization, medications, PSA) data were recorded pre- and postoperatively at 1-, 3-months and last follow up (LF-UP) for descriptive analyses.

Results: Overall, 56 patients were enrolled, including 8 (14.2%) patients with indwelling catheter before TPLA. Median follow-up time was 10 months (IQR 8-12). Median prostate volume was 50 ml (IQR 40-70); median preoperative IPSS, IIEF-15 and MSHQ-EjD SF were 21.5 (IQR 18-28), 15.5 (IQR 7-24) and 6 (IQR 3-11.5) respectively. Median operative time was 31 min (IQR 28-37). All patients except one were discharged on the same day as the procedure, recording no Clavien–Dindo grade ≥2 perioperative complications. Median catheterization time was 7 days (IQR 7-9). Median Qmax improvement was 17% (IQR 5-45), 24% (IQR 5-49) and 34% (IQR 11-65) at 1-, 3- and LF-UP; PVR decreased by 40% (IQR 68-1), 42% (IQR 66-7) and 57% (IQR 73-14) in the same study period. Median IPSS, IIEF-15 and MSHQ-EjD SF were 12.5 (IQR 10-18.5), 16 (IQR 7-24) and 6 (2-10); 10 (IQR 6-11), 16 (IQR 7-23.5) and 8 (IQR 7-11); 12 (IQR 10-16), 17 (IQR 8-22) and 10 (IQR 8-13) at 1-, 3-months and LF-UP, respectively. In all patients, ejaculation and sexual function were preserved. 4 patients (7%), already catheter-bearing, experienced acute urinary retention after TPLA and required catheter replacement.

Interpretation of results: In carefully selected patients, this new technique seems effective in improving short term symptoms and functional parameters, ensuring the preservation of ejaculatory function.

Conclusions: In our experience, TPLA appears to be a safe and feasible option in the treatment landscape for BPH.

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36 - Evaluation of perioperative outcomes of patients undergoing radical cystectomy with intracorporeal reconstruction for bladder cancer following a new Enhanced Recovery after Surgery (ERAS) protocol

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Introduction and aim of the study: Enhanced recovery after surgery (ERAS) concepts are implemented in various surgical disciplines to improve morbidity, enhance recovery, and reduce hospital stays. To describe our new ERAS protocol used in patients (pts) who underwent robotic radical cystectomy (RARC) with intracorporeal ileal conduit (IIC) or ileal intracorporeal neobladder (NB) reconstructions for bladder cancer. First evaluation after 5 years of RARC in a high volume referred center.

Materials and methods: 86 RARC with intracorporeal reconstruction were performed in our centre from 2016 to July 2022, of these 52 pts were IIC and 34 were ileal NB reconstruction. All the procedures were performed by the same surgeon. All the pts were selected for our new ERAS protocol. The protocol consists of a preoperative counseling and education of patients and caregivers with optimization of medical and nutrition conditions with use of immunostimulant. The day before surgery the pt starts antithrombic prophylaxis with enoxaparine 4000 UI 1 fl administered postoperatively following EAU guidelines. Antibiotics prophylaxis with piperacillin plus tazobactam starts the day before surgery and then for 48 h. To create loading carbohydrate the pt takes 800 ml of maltodextrin the evening before and 200 ml the morning of surgery. After the procedure the nasogastric tube (NGT) is removed and support therapy consists in metoclopramide 3 times day for three days, paracetamol 1 gr 3 times days for 48 h and 2000 ml of normal saline for 1 day. We normally encourage mobilization the first postoperative day and then progressively day by day, we suggest use of chewing gum during the day. Oral nutrition can start with soft food the 2nd day after surgery, increasing progressively. We analyzed perioperative surgical, functional outcomes and complications.

Results: Median age was 70,3 yrs (range 49–87). Mean BMI was 27 (range 19–40). Mean follow-up was 6 months. The median operative time was 332 (range 185–546 min). The median length of hospital stay was 10,6 (range 5–27). In 8 (6,9%) pts NGT was repositioned after 48 h from surgery because of nausea and vomit and in 9 pts (7,7%) was removed some days after surgery. Mean bowel canalization was 2 days, mean stool canalization was 5 days later. 22 pts (18,9%) developed complications clavien dindo (CD) < 2 (10 anemizations, 10 urinary infection or sepsis, 2 TEP, 1 lymphocele, 1 urinoma) and in 2 cases (1,7%) CD > 3b, one reintervention for abdominal occlusion and one for laparocele.

Conclusions: These initial results show that a careful nutritional evaluation and a progressive rehabilitation are fundamental for the rapid recovery of bowel canalization in case of RARC with intracorporeal ileal reconstructions. This first analysis of our new ERAS protocol shows promising results, a multidisciplinary approach with nutritionist and physiotherapist can improve the recovery of the canalization after surgery.

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37 - Development of a multiprofessional pathway for patients with pelvic dysfunction: The birth of the pelvic unit

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Introduction and aim of the study: To develop a multidisciplinary pathway for patients with pelvic dysfunction: the birth of the pelvic unit at our tertiary referral center.

Materials and methods: A multi-professional team of doctors, nurses, and psychologists analyzed the international guidelines on pelvic area dysfunctions and related issues. When consensus was reached among experts, a multi-specialist pathway was designed, involving gynecology, urology, general surgery, internal

medicine, radiology, neurology, psychiatry, infectivology, endoscopy, psychology, and gastroenterology units, and specialist nurses. A gynecologist team leader was nominated, supported by a nurse team manager and a scientific coordinator for outcome analysis and clinical trial management.

Results: The project, which has been running for 14 months, is taking its final shape. Preliminary results showed a 4-fold increase (from 2 per month to 2 per week) in urogynecological services. One hundred and fifty women have been operated from the pelvic unit specialists for pelvic floor pathology, while the waiting lists have been reduced by 66%. An increase in patients accessing rehabilitation is expected in the coming months. Data collection on women's quality of life before and after our intervention was also started. Initial results indicate a positive change.

Interpretation of results: Our initial experience shows that a multidisciplinary team for the treatment of pelvic floor disfunction is more efficient than a mono-compartimental care as proved by an increase of outpatients and a decrease of the waiting list.

Conclusions: The outlined approach aims to address this gynecological issue in a multi-specialist overview. By providing the doctors involved in the project with the possibility of sharing clinical documentation, requesting examinations and specialist services, and discussing treatment options in a multidisciplinary team, the patient is offered the best care possible.

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38 - Role of menopause in severe nocturia in women with lower urinary tract symptoms

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Introduction and aim of the study: Aim of our study was to evaluate possible risk factors for severe nocturia in women with lower urinary tract symptoms.

Materials and methods: A consecutive series of women patients undergoing urodynamics were prospectively enrolled. All patients were evaluated with detailed clinical history and physical examination. Pelvic organ prolapse was graded according to the HWS system. Nocturia was evaluated using dedicated questionnaires. Severe Nocturia was defined as >1 episode a night. Logistic regression analysis were used to evaluate risk factors for severe nocturia.

Results: Overall 486 women were enrolled with a median age of 61 (51/72) and median BMI of 25 (22/29) were prospectively enrolled. Overall,361/486 presented severe nocturia (>1 episode). Women with nocturia were older (64 vs 56; $p << 0,05$), were more likely to be on menopause (224/361: 62% vs 59/125: 47%; $p < 0,05$) and were on menopause since more years than women with mild/no nocturia.

Interpretation of results: POP was not related to nocturia. The risk of severe nocturia is increased by 82% per year of menopause (OR: 1,82; $p = 0,004$)

Conclusions: In women with LUTS, years from menopause represent a risk factor for severe nocturia.

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39 - Technical testing and patients and providers satisfaction of new telemedicine platform for telemonitoring and telerehabilitation in patients undergoing robot-assisted radical prostatectomy (RARP)

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Introduction and aim of the study: It has been demonstrated how early postoperative monitoring and rehabilitation protocols provide better recovery of continence and erectile function in patient underwent RARP, but their adoption is limited by the lack of human resources and local services. The aim of this research was to investigate patient and providers satisfaction in the use of a new telemedicine (TM) platform designed for telemonitoring and telerehabilitation of patient undergoing RARP.

Materials and methods: We collaborated with software engineers to modify and implement the existing MAIA TM platform (ab medica s.p.a.) to obtain a suitable tool that could meets clinical needs in urology practice. The TM system was composed as follows: an online platform usable by medical providers that enables the acquisition, management, classification, and archiving of preoperative, intraoperative and postoperative data and allows defining a treatment plan and monitoring of the clinical response of the rehabilitation activities; secondly, an App for SmartPhone and Tablet devices that is provided to the patient and enables receiving notifications for medication intake and/or rehabilitation exercises and uploading information for monitoring of clinical parameters (such as validated questionnaires or PAD tests).

Patients undergoing RARP in our institution during September 2022 who had internet access via PC/Tablet/Smartphone were included in this first part of the study.

Patients and providers self-reported their level of satisfaction on a visual analog scale (VAS; range 0–100) after 30 days of MAIA TM system use. Patient satisfaction was additionally measured using a validated Telemedicine Satisfaction Questionnaire (TSQ; range 1–5). Technical issues and platform/app malfunctions were recorded.

Results: 28 patients and 3 providers were enrolled in this first phase of the study. Patients and providers mean (SD) VAS satisfaction scores were 88.7 (17.2) and 82.2 (11.2), respectively. The mean (SD) TSQ score was 4.6 (0.4), all 28 patients reported they would use this new telemedicine platform again and would recommend it to other people. 10/28 (35.7%) patients reported App technical issues, namely 6 (21.4%) notification malfunctions and 4 (14.2%) online

questionnaires filling failures. All these issues were easily solved by changing the smartphone's accessibility settings. Providers reported no technical malfunctions of the online MAIA platform.

Conclusions: Our new TM MAIA platform specifically designed for telemonitoring and telerehabilitation of patients undergoing RARP appears to be user-friendly and shows a high level of satisfaction among both patients and providers. The prosecution of this study will be necessary to evaluate the long-term satisfaction and clinical effectiveness of this TM platform.

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40 - Risk of clinical overdiagnosis and relationship to histological findings in interstitial cystitis: A single-center pilot study

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Introduction and aim of the study: The European Society for the Study of IC/BPS (ESSIC) has proposed to achieve diagnosis and classification of interstitial cystitis/bladder pain syndrome (IC/BPS) by cystoscopy after hydrodistension and bladder biopsies. Primary aim of the study was to assess whether there is currently a clinical overdiagnosis of IC; second purpose was to investigate the correlation between clinical and histological IC diagnosis achieved by bladder biopsy. **Materials and methods:** This was a single-center, prospective, observational study. 11 consecutive females with clinical diagnosis suggestive of IC underwent cystoscopy with bladder biopsy, were evaluated at 1-year follow-up. Patients were assessed with demographic, medical and urological history and classified with a pain site map. Pain severity was evaluated by pain numeric rating scale (PNRS: 0 = worst pain imaginable; 10 = no pain). Each patients had 4 deep withdrawals (particularly in inflammatory/bloody areas of bladder mucosa), performed with tong. An anatomopathological study of the biopsies was performed to analyze the mast cells count.

Table 1
Pain site map and concomitant urinary symptoms.

Patients (%)	Type of pain
25,6%	Pelvic pain only (PP)
57,3%	Pelvic pain beyond the pelvis (PPB)
6,6%	Widespread pain (WP)
Patients (n.o)	**Urinary symptoms**
Increased day-time urinary frequency	10/11
Increased night-time urinary frequency	7/11
Urgency	8/11
Urge urinary incontinence	3/11

Results: Patient's mean age was 41.8 ± 16.2 yrs. 2/11 pts had headache, 1/11 fibromyalgia, 1/11 systemic hypertension, 2/11 hyperthyroidism. Type of pain and concomitant urinary symptoms are reported in Table 1. All women complained of pelvic pain associated to urinary symptoms. No patients referred recurrent UTIs and voiding LUTS. Mean ± SD PNRS was 3.6 ± 1.8. In 3/11 (27.3%) patients IC clinical diagnosis was confirmed by the histological finding (CD117/ mm^2 > 93 mm^2).

Interpretation of results: This pilot study demonstrated a low correspondence between clinical diagnosis and histological finding, showing a clinical overdiagnosis of IC. This result confirmed previous literature reports and that there are great differences between clinical and bioptic diagnosis. However, all women complained of symptoms suggestive of IC. Therefore, our preliminary data highlighted that these patients can usually show misleading symptoms and that IC can represent the real disorder only in a minor part of them. Indeed, IC is only a part of the large spectrum of diseases comprised in the painful bladder syndrome. Bladder biopsy was helpful to avoid incorrect diagnosis and unfitting treatments.

Conclusions: Bladder biopsy had a crucial role in the identification of women with true IC even within a sample of patients showing symptoms suggestive of IC. IC clinical diagnosis was unsatisfactory and overrated.

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41 - Ventral onlay buccal mucosa graft urethroplasty for female urethral stricture: Medium-term results in our referral center

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Introduction: Female urethral stricture (FUS) is a relatively rare condition. The pts reported lower urinary tract symptoms (LUTS), sexual dysfunction and psychological bother.

To date, concerning FUS there is a lack of data, without standardized guidelines, diagnostics, and therapeutics as well as variable definitions of success. In the present study, we report our experience with ventral buccal mucosa graft (VBMG) urethroplasty and medium term results.

Materials and methods: Between 2017 and 2021, 42 pts were treated with VBMG urethroplasty for FUS.

The inclusion criteria were a non-obstructive FUS. Exclusion criteria were obstructive urethral stricture and concomitant urethral pathologies.

Diagnostic workup was based on medical history, physical examination with the assess of inability to pass into the urethra a 14 Ch catheter, ultrasonography with full bladder and postvoiding residue measurement (PVR), urine culture, uroflowmetry, voiding urethrography and urethroscopy.

Follow-up included outpatient medical review, symptom assessment, physical examination, PVR, uroflowmetry every 4 weeks for the first year and then annually.

Success was defined as the restoration of urinary flow and disappearance of symptoms, without the need for any postoperative procedure, including dilations.

Results: The median age was 51 (23–68) yrs.

All patients reported significant LUTS and sexual dysfunction.

Etiology was catheterization in 9 (21,4%) and unknown in 33 pts (78,6%).

All pts (100%) underwent previous urethral dilations, 6 pts (14,2%) underwent urethroplasty and 2 pts (4,7%) urethrotomy.

Median preoperative Qmax was 8 (4–15) ml/s. Median postoperative Qmax was 25 (18–42) ml/s.

Median stricture length was 2 cm (1.5–3).

The median graft length and width was 2,5 cm (2–4) and 1 cm (1–1.5)

Mean operative time was 50 min (40–70).

No perioperative and postoperative complications occurred.

All patients were discharged in the second postoperative day.

The catheter was left in place 4 weeks after surgery

After a median follow up of 25 mo (12–51), no patients develop urinary incontinence or fistula.

39 pts (93%) restored urinary flow.

3 pts (7%) develops recurrent urethral stricture and were treated with redo urethroplasty.

The 31 sexual active pts (100%) restored sexual function.

Interpretation of the results: Female urethroplasty provides excellent cure rates and represent a real solution for FUS with low health commitment and low costs compared to repeated dilations, self-catheterization or urethrotomies. The data continue to be inadequate to recommend one technique or approach over another or to recommend to use graft or flap. Our series with the use of VBMG urethroplasty guarantee the preservation of the urethral sphincter and allows incontinence. The pts reported improving of the urinary flow and sexual function.

Conclusions: This technique results feasible and reproducible. Longer follow-up and comparisons of series are necessary to clarify the success rate in the long time.

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42 - Telemedicine application in post-operative care

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Introduction and aim of the study: The term 'telemedicine' was introduced in the 1970s by Thomas Bird, an American who used it to refer to the delivery of medical assistance via telecommunication devices without a physical meeting between doctors and patients [1].

During the Covid19 pandemic, we immediately introduced the telemedicine service at our Urogynecology unit to take care of and monitor patients by limiting their access to the hospital. Positively impressed, we recently introduced the telemedicine service for operated patients: we regularly contact by phone the patients in the 7 days after the hospital discharge in order to verify their good conditions and the non-appearance of warning symptoms before the scheduled outpatient visit in day 30 after the surgery. The aim of this study was to recollect patients' satisfaction and their feedback regarding this new service.

Materials and methods: We carried out a simple telephone interview in which we contacted our patients who had undergone surgery and who had used the telemedicine service immediately after surgery.

Table 1
All patients recommended the continuation of the service.

Patients' groups	Satisfaction level VAS 0 – 10/10	N°	Would you recommend this service?
Extremely satisfied	10/10	19 (61%)	Yes
Very satisfied	8 – 9/10	11 (35%)	yes
Satisfied	7-6/10	1 (4%)	yes
Not satisfied	< 6/10	0	/

Results: Between July and December 2022 we contacted 36 patients: 31 of them (86%) completed the survey. Patients were asked their level of satisfaction with a VAS scale (0-10/10) and if they would recommend the continuation of the service. We stratified answers in four groups. Results are listed in Table 1.

Interpretation of results: Most of the patients (96%) experienced high satisfaction of this Telehealth initiative and all these women would recommend the maintenance of the service.

Conclusions: From these preliminary data we assume that a direct and early contact with the hospital, in addition to the routine post-operative checks, can not only allow the surgeons to keep sight of the patients but also allows the patients not to lose contact with the surgeons feeling totally took charge even once at their own home.

[1] Bird K., Telemedicine;concept and practice. Springfield, Illinois:Thomas, 1975

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43 - Surgical timing in patients with retention/dysuria after mid-urethral sling: A modified Delphi consensus

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Introduction and aim of the study: To develop a modified Delphi consensus statement regarding the surgical timing in patients with retention/dysuria after mid-urethral sling.

Materials and methods: A Systematic review of Pubmed, Embase and Scopus was performed to evaluate the available evidence on the best surgical timing in patients with retention/dysuria after mid-urethral sling. Overall, only 4 studies with poor evidence were identified, therefore a consensus statement was performed. Four rounds of Delphi were performed and final statements were submitted anonymously using Survey Monkey. All statements were voted on a 1 to 10 scale. In order to approve the statement consensus should be >80%. In case of a consensus between 60 and 80% the statement was discussed by all the members of the consensus and submitted again in a fourth round.

Table 1

Statement	Agreement Round 3	Agreement Round 4	
Early surgical treatment of urinary retention/dysuria after MUS should be prefered		85%	
Timing of surgical treatment of retention/dysuria after MUS depends on the severity of the urinary retention/dysuria		79%	90%

Results: Overall, four studies were identified evaluating the best surgical timing in patients with retention/dysuria after mid-urethral sling. No randomized clinical trials were retrieved, and the level of evidence was low. In the first round based on four expert opinion and on the evidence retrieved four statements were developed. On round two a group of ten experts discussed and modified the statements to avoid redundancy and improve readability before submitting it to the expert panel resulting in two final statements. On round three the statements (Table 1) were submitted to 40 experts which voted the statements. One statements needed a round four and reached consensus after discussion. Results of the consensus are written in Table 1.

Interpretation of results: Two statements reached a satisfactory level of consensus:

- Early surgical treatment of urinary retention/dysuria after MUS should be prefer
- Timing of surgical treatment of retention/dysuria after MUS depends on the severity of the urinary retention/dysuria

Conclusions: The present consensus statement answers some unmet needs on the right timing of surgical treatment of retention/dysuria after MUS. The lack of evidence in this setting warrants well designed clinical trials to answer these questions.

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44 - Trends and incidence of reported events associated with male slings: An analysis of the food and drug administration's manufacturer and user facility device experience database

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Introduction and aim of the study: To summarize medical device reports (MDRs) between 2013 and 2022 relating to male slings within the Manufacturer and User Facility Device Experience (MAUDE) database maintained by The Food and Drug Administration (FDA).

Materials and methods: The MAUDE database was analyzed for all MDRs relating to each FDA-approved male slings for the last ten years. Event descriptions were reviewed and characterized into specific event types. Outcome measures include specific ureteroscopes and reported events as detailed by the MDRs. All data is de-identified and in compliance with the Health Insurance Portability and Accountability Act (HIPAA). No further data was available in the database. Pooled Relative risk was used to compare data.

Results: Overall, 1356 reports were retrieved in 10 years, between 2019 and 2021 a higher number of events were reported. Overall, 1308/1356 (96%) were reported as injury while 41/1356 (3%) as malfunction of the device. The most frequently reported adverse events (AEs) were Unsolved Incontinence in 495/1356 (37%), pain in 40/1356 (3%), erosion in 34/1356 (3%) and infection in 23/1356 (1,7%) of the cases.

Interpretation of results: Overall 144/1356 (115)events were from Coloplast, 1161/1356 (85%) from Boston and 51/1356 (45) from AMS. Rates of AEs per manufacturer are described in figure 1. Incontinence (PRR: 1,4-2,2; $p < 0,05$) and Erosions (PRR: 2-12; $p < 0,05$) were more frequently reported in Coloplast slings while Infection (PRR : 2-6; $p < 0,05$) and pain (PRR:5-8; $p < 0,05$) in AMS slings.

Conclusions Standing to MAUDE database the most frequent complications related to male slings is unsolved incontinence. Profiles differ between brands (see Table 1).

Table 1

	Unsolved incontinence	Pain	Erosion	Infection
Coloplast	72/144 (50%)	11/144 (8%)	17/144 (12%)	9/144 (6%)
Boston	412/1161 (35%)	8/1161 (1%)	14/1161 (1%)	8/1161 (1%)
AMS	11/51 (22%)	21/51 (41%)	3/51 (6%)	6/51 (12%)

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45 - Prognostic role of urodynamic findings on continence outcomes of nonadjustable male slings: A random-effects meta-analysis

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Introduction and aim of the study: Slings are an established surgical treatment for post-prostatectomy stress urinary incontinence (PPI) and nonadjustable slings (NAS) are the most investigated and used type. However, a significant portion of patients experience postoperative failure. Urodynamic features have been investigated in several previous studies as potential predictors of sling failure. We aimed to summarize the published evidence about the impact of urodynamic findings on NAS outcomes by systematic review and meta-analysis.

Materials and methods: PubMed, Web of Science, Scopus, and Cochrane databases were searched from inception to December 2022 for observational or randomized studies evaluating the efficacy NAS for PPI, with at least 6 months follow-up and 30 analysed patients. Study quality was assessed using QUIPS tool. A random-effect model was used to pool adjusted (primary meta-analysis) and unadjusted (supplementary meta-analysis) odds ratios (OR). Outcome measures were the failure of cure (FoC) and the failure of overall success (FoS). I^2 statistics was used to assess heterogeneity.

Results: Pooled effect estimate was in favour of a statistically significant association between detrusor overactivity and FoS (2 studies, OR 3.78; 95%CI 1.44-9.98; $p = 0.007$; $I^2 = 0\%$); there was a trend toward an association with FoC (2 studies, OR 6.4; 95%CI 0.95-43.26; $p = 0.06$; $I^2 = 29\%$). Results of the supplementary meta-analysis were similar (8 studies, OR 2.39; 95%CI 1.60-3.56; $p = 0.001$; $I^2 = 0\%$ for FoS; 5 studies, OR 2.35; 95%CI 0.97-5.68; $p = 0.055$; $I^2 = 18\%$ for FoC).

For a lower Valsalva leak point pressure, a statistically significant association was observed with FoS (2 studies, pooled OR per 10 cmH2O decrease, 1.53; 95%CI 1.17-2.01; $p = 0.002$; $I^2 = 27\%$) but not with FoC (5 studies, pooled OR per 10 cmH2O decrease, 1.49; 95%CI 0.89-2.5; $p = 0.10$; $I^2 = 78\%$) in primary analysis. At supplementary meta-analysis, pooled effect estimates per 10 cmH2O decrease were not statistically significant (4 studies, pooled OR 1.11; 95%CI 0.88-1.41; $p = 0.25$; $I^2 = 10\%$ for FoS, and four studies, pooled OR 1.28; 95%CI 0.60-2.74; $p = 0.38$; $I^2 = 87\%$ for FoC).

Two studies evaluated the association of a reduced compliance with FoS by univariable analysis resulting in a statistically significant association (pooled OR 5.91; 95%CI, 2.6-13.4; $p < 0.001$; $I^2 = 0\%$).

None of the meta-analyses assessing bladder capacity, Retrograd Leak Point Pressure (2 studies), Qmax (3 studies), PdetQmax (2 studies) and maximal urethral closure pressure (3 studies) yielded in a statistically significant association with continence outcomes.

Conclusions: This is the first review aimed to summarize the available evidence on the impact of urodynamic findings on patients' benefits after NAS placement. Our results indicate that at least some urodynamic features may significantly affect NAS efficacy, although the strength of the evidence (GRADE) is from low to very low. As a result, our findings need to be interpreted with caution.

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46 - Long term follow-up outcomes of pelvic floor rehabilitation in subjects suffering from lifelong premature ejaculation: Retrospective multicentre study

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Introduction and aim of the study: The aim of the study is to investigate the long-term follow-up outcomes of pelvic floor muscle (PFM) rehabilitation in males suffering from lifelong premature ejaculation (LPE). To evaluate LPE, patients were investigated with intravaginal ejaculatory latency time (IELT) and the self-report Premature Ejaculation Diagnostic Tool (PEDT. These two collected data represented the primary outcome endpoints.

Methods: This retrospective study evaluated 227 subjects with LPE diagnosis, and a total of 171 pts out of 227 (75%) completed the training protocol and at least the follow-up of 72 months. At baseline, all participants reported an IELT ≤60 s and PEDT score >11. Participants completed a 12-week program of PFM rehabilitation, including physio-kinesiotherapy treatment, electrostimulation, and biofeedback, with three sessions per week, with 20 min for each component completed at each session. The effectiveness of intervention was evaluated by comparing the geometric means of IELT times and PEDT scores observed from baseline, to 6, and 12 months during the intervention, and at 24, 36, 48, 60 and 72 months postintervention, using a paired sample 2-tailed t-test, including the associated 95% confidence intervals.

Results: One hundred seventy-one participants completed the PFM rehabilitation protocol with 36 sessions of PFM. All subjects achieved the control of ejaculation reflex, reporting a mean IELT of 181.4 s and PEDT score of 2.5 at the 12-week endpoint of the intervention, representing an increase from baseline of 54.9 s and 16.6 scores, respectively, for IELT and PEDT ($P < 0.0001$). Of the 171 participants who completed the 60-month follow-up, 80%, 78%, 74%, 69 and 67% reported a satisfactory ejaculation control maintenance through the follow-up evaluations at 24, 36, 48, 60 and 72 months after completing PFM rehabilitation, respectively.

Conclusions: Our study is the first on LPE treatment with such long-term follow-up (6 years). The results observed are statistically significant and support a role of PFM as an effective and safe therapy in LPE subjects. A prospective randomized study is requested to assess the role of PFM in PE.

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47 - Detection and management of early complication after robot-assisted radical cystectomy (RARC): Use and role of Tytocare™ telemedicine system in postoperative home care

Sabrina De Cilis [i], Daniele Amparore [i], Enrico Checcucci [ii], Federico Piramide [i], Alberto Piana [i], Gabriele Volpi [ii], Michele Sica [i], Mariano Burgio [i], Davide Zamengo [i], Edoardo Cisero [i], Alberto Quarà [i], Giovanni Busacca [i], Marcello Della Corte [i], Angelo Giordano [i], Dalia Cidda [i], Martina Mandaletti [i], Michele Ortenzi [i], Matteo Manfredi [i], Cristian Fiori [i], Francesco Porpiglia [i]

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Introduction and aim of the study: The aim of this study was to assess the role of Tytocare™ telemedicine system (Multimed spa) in the postoperative home care of patient underwent robot-assisted radical cystectomy (RARC).

Materials and methods: Tytocare™ system is composed by an all-in-one hand-held device that monitor body temperature, heart rate, heart, lung and abdominal sounds and wound/ostomy appearance via an in-built camera; a mobile phone app used by the patients to interact with the Tytocare™ device, send data and pictures to health care providers and perform teleconsultations; an online platform used by the health care provider to evaluate patient's clinical parameters and perform teleconsultations. Patients underwent RARC from March 2022 to September 2022 were provided with Tytocare™ Mobile Phone App and Tytocare™ hand-held device at the time of discharge. Demographics and perioperative data were recorded during hospitalization. Postoperative complications (classified according to Clavien–Dindo), diuresis, bowel motility and canalization, body temperature, ostomy status and surgical wound status were recorded through the device weekly for the first 30 days after discharge. Moreover, a teleconsultation was performed once a week for each patient for the first 30 days after discharge.

Table 1

	Week 1	Week 2	Week 3	Week 4
Pain (NRS-VAS) Median IQR	5 3–7	3 1–4	2 1–2	1 1
Diuresis Median (cc/24 h) IQR	1400 1000–1900	1600 1300–1900	1800 1600–2100	2100 1800-2200
Bowel motility (*n.*, %)	11 (100)	11 (100)	11 (100)	11 (100)
Canalization (*n.*, %)	11 (100)	11 (100)	11 (100)	11 (100)
Ostomy				

(*continued on next page*)

Table 1 (*continued*).

	Week 1	Week 2	Week 3	Week 4
• Normal (*n.*, %)	10 (90.9)	10 (90.9)	11 (100)	11 (100)
• ischaemic suffering (*n.*, %)	0 (0)	0 (0)	0 (0)	0 (0)
• infected (*n.*, %)	0 (0)	0 (0)	0 (0)	0 (0)
• dehiscence (*n.*, %)	0 (0)	1 (9.0)	0 (0)	0 (0)
Surgical Wound				
• Normal (*n.*, %)	11 (100)	10 (90.9)	11 (100)	11 (100)
• ischaemic suffering (*n.*, %)	0 (0)	0 (0)	0 (0)	0 (0)
• infected (*n.*, %)	0 (0)	1 (9.0)	0 (0)	0 (0)
• dehiscence (*n.*, %)	0 (0)	0 (0)	0 (0)	0 (0)
Body temperature				
• Normal (*n.*, %)	11 (100)	10 (90.9)	10 (90.9)	11 (100)
• Hypertermic (*n.*, %)	0 (0)	1 (9.0)	1 (9.0)	0 (0)
Complications Cliven–Dindo				
• Grade < 3 (*n*, %)	0 (0)	2 (18.1)	1 (9.0)	0 (0)
• Grade ≥ 3 (*n*, %)	0 (0)	0 (0)	0 (0)	0 (0)

Results: 11 patients were prospectively involved in this study (10 male, 1 female). Mean (SD) age and BMI were 63.1 (+11.7) and 23.4 (+1.9), respectively. 3/11 (27.2%) of patients underwent orthotopic Y neobladder, whilst 8/11 (73.8%) underwent ileal conduit diversion. Median (IQR) hospital stay was 12 (10–16) days. Postoperative data are summarized in Table 1. 3/11 (27.2%) postoperative complication were recorded between discharge and 1 month follow up, namely 2 Clavien–Dindo grade 2 complications (1 ostomy dehiscence and 1 surgical wound infection with fever) and 1 Clavien–Dindo grade 3 (acute kidney failure with serum creatinine of 8.9 mg/dl). All the complications were detected early (via in-built camera and diuresis contraction report) and promptly managed thanks to the data collected via the Tytocare™ system.

Conclusions: Postoperative home care with Tytocare™ system allowed an early detection and prompt management of postoperative complications in patients underwent RARC.

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48 - Comparison study between artificial urinary sphincter and the adjustable male device ATOMS™: Safety and survival of the prostheses

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Introduction and aim of the study: To compare the safety and the survival of artificial urinary sphincter (AUS) and of the adjustable male device ATOMS™

Materials and methods: Data from consecutive patients subjected to implantation of either AUS or ATOMS device in the treatment of post-surgical stress or mixed urinary incontinence were retrospectively collected. Outcomes were evaluated at the last follow-up. The comparison between prostheses included intra and post-operative complications, reintervention and survival of the prosthesis until explantation. Then, we analysed the role of baseline characteristic as predictors of reintervention. Statistical analysis was performed using the Mann–Whitney's U test and the Chi2 test. Survival was expressed using Kaplan–Meier's curves and the log-rank test.

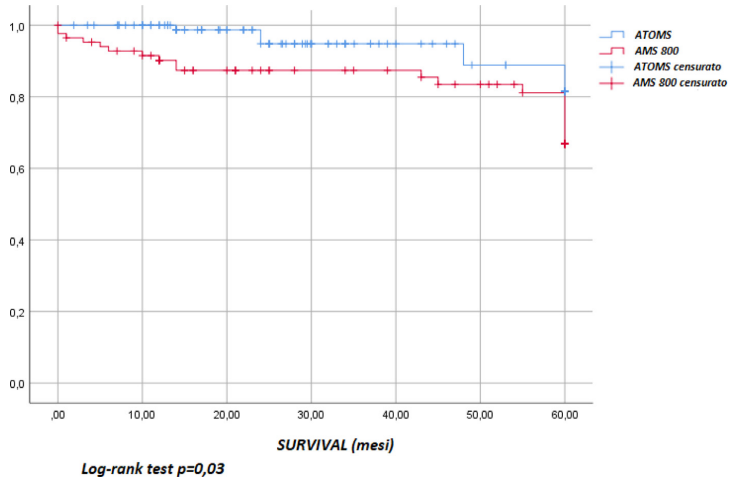

Fig. 1. Survival until explantation.

Results: 94 AUS and 95 ATOMS prostheses implantation were included. Baseline characteristics significantly differed between groups in terms of age at surgery (ATOMS 71,5+-6,7y; AUS 69+-10y; p=0,001); previous pelvic RT (25.2%;38.2%; p=0.02), androgen deprivation therapy (11.6%; 34.5%; p<0.001) and urine loss/24 h (421+-196 g;646+-325 g; p<0.001) while they were homogeneous in the remaining characteristics (eg.comorbidities and previous surgery). Mean follow up was 43+-35 months (31+-1.8; 56.2+-5; p<0.001). In the AUS group, 3 intraoperative complications were recorded (urethral injury). Postoperatively, the two groups did not differ significantly in terms of total complications (34.7%; 47%; p>0.05). However, in the AUS group Clavien>=3 complications were significantly higher (14.7%; 45%; P<0.001) and significantly more reinterventions (22.1%; 50%;p<0.001) and explantations (5.2%;13%;p<0.001) were recorded. Time to reintervention did not significantly differ between the two groups (19,2(7,2-29,4) months;21(6,5-52,5) months; p>0.05). AUS survival was significantly inferior to ATOMS (67%+-7%; 53%+-6% at 5 years; p=0.03), Fig. 1. At univariable analysis the kind of intervention was the only significant predictor of reintervention (p<0.001).

Interpretation of results: AUS is associated with a higher risk of high-grade complications, reintervention and shorter life span than ATOMS. The kind of intervention (AUS vs ATOMS) is the only predictor of reintervention.

Conclusions: AUS should be proposed to patients who accept the risk of more high-grade complications, reinterventions and the shorter prosthesis survival when compared to the adjustable device ATOMS

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49 - Does overactive bladder impact on erectile function and sexual quality of life? A single cohort analysis

Valerio Iacovelli [i], Marco Carilli [i], Marta Signoretti [i], Chiara Cipriani [i], Filomena Petta [i], Riccardo Bertolo [i], Francesco Maiorino [i], Michele Antonucci [i], Matteo Vittori [i], Enrico Finazzi Agrò [ii], Pierluigi Bove [i]

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Introduction and aim of the study: There is evidence that sexual dysfunction is associated to overactive bladder (OAB) in men with a negative impact on quality of life (QoL). The present study was conceived to explore the prevalence of erectile dysfunction (ED) in OAB patients focusing on the quality of sexual activity and satisfaction.

Materials and methods: Data of consecutive male patients who referred to our Institution for uro-andrological consultation were collected on a dedicated prospectively maintained database between Jan-2022 and Sep-2022. Patients were clinically classified as OAB or no-OAB according to 3-days bladder diary (at least 1 episode/day). Variables including age, body mass index (BMI), comorbidities assessed by Charlson's Comorbidity Index (CCI), prostate volume (PVol), maximum urinary flow rate at uroflowmetry (Qmax) with post-voiding residual volume (PVR), and serum prostate specific antigen (PSA) were collected. Patients were asked to fulfill standardized questionnaires to assess lower urinary tract symptoms (LUTS) by International Prostate Symptom Score (IPSS); erectile function by International Index of Erectile Function (IIEF-5) and Quality of Erection Questionnaire (QEQ) and, sexual relationship satisfaction by Self-Esteem And Relationship Questionnaire (SEAR).

Results: One hundred and fifty-eight patients were included in the present analysis. Sixty-two patients were classified as OAB and 96 as no-OAB. Statistically significant differences were found in PVol [58 cc (IQR 36–76) vs 45 cc (35–60), OAB vs no-OAB, $p = 0.003$] and Qmax [10 ml/s (IQR 6–14) vs 13 ml/s (10–20), OAB vs no-OAB, $p = 0.004$]. ED was recorded in 47 OAB patients (75.8%) and 54 no-OAB patients (56.3%) ($p = 0.009$). Statistically significant differences were found for all the questionnaires administered favoring no-OAB patients in terms of LUTS assessed by IPSS ($p < 0.001$), erectile function assessed by IIEF-5 ($p = 0.020$) + QEQ ($p = 0.006$), and all domains of sexual relationship satisfaction assessed by SEAR [sexual relationship ($p = 0.009$), confidence ($p = 0.005$), self-esteem ($p = 0.014$), overall relationship ($p = 0.004$)].

Interpretation of results: In clinical practice, sexual health is a not fully explored aspect in patients presenting OAB. Our results showed that ED could be considered a comorbidity of OAB, and clinician should be aware of this correlation during initial diagnostic framework of OAB patients.

Conclusions: The impact of OAB was evident across all domains of sexual health in men indicating that sexual health should be assessed in all men presenting OAB and vice versa.

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50 - TransPerineal Laser Ablation for low- and intermediate risk prostate cancer: Short-term functional outcomes

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Introduction and aim of the study: Focal therapy has been proposed as an alternative to radical treatment in carefully selected patients with prostate cancer (PCa). This study aimed to explore the role of TransPerineal Laser Ablation (TPLA) on early post-operative functional outcomes.

Materials and methods: Patients with low- and intermediate-risk localized PCa were prospectively treated with a focal MRI/US guided TPLA between Jan-2022 and Apr-2022. Patients were classified as clinical stage T1c-T2, with a PSA < 20 ng/ml, International Society of Urological Pathology (ISUP) grade ≤ 2, single MRI-fusion biopsy confirmed lesion classified as PI-RADS v2.1 ≥ 3. Intra-, peri-, and postoperative data were collected. Variables including age, PSA, prostate volume (PVol), number of positive cores, International Prostate Symptom Score (IPSS) with quality of life (QoL), International Consultation on Incontinence Questionnaire-Short Form, (ICIQ-SF), International Index of Erectile Function (IIEF-5), maintenance of antegrade ejaculation (yes/no), and Patients' Global Impression of Change (PGI-I) were collected at baseline, 3 and 6 months after TPLA.

Results: Twenty patients were enrolled. Baseline features were age [66.5 years (IQR 54.5-69.5)], PSA [5.0 ng/ml (4.0-7.5)], PVol [62.5 ml (52.0-77.5)], no. positive cores [2.0 (1.5-2.5)], IPSS [9.0 (4.5-14.0)], QoL [2.0 (1.0-3.0)], ICIQ-SF [0 (0-0)], IIEF-5 [19.5 (15.0-23.0)], MSHQ-EjD [0 (0-0.5)]. At mpMRI, 3

patients had PI-RADS v2.1 = 3, 15 had PI-RADS v2.1 = 4 and 2 had PI-RADS v2.1 = 5. Biopsy positive cores were 2.0 (1.5-2.5) with 12 ISUP 1 and 8 ISUP 2 cases. The median operative time was 32.5 min (28.0-37.0)], the total delivered energy was 2600 J (1800–3600). Visual analogue scale (VAS) after 12 h from TPLA was 0 (0-1). The post-operative course was regular for all patients. At 3-months follow-up, a statistically significant reduction was found for IPSS [7.0 (IQR 5.0-11.5), p=0.02], that was stable at 6-months [6.0 (5.0-10.0), p=0.5] and QoL [1.0 (IQR 0.5-2.0), p=0.001] that was stable at 6-months [1.0 (0.0-2.0), p=0.9]. Continence was preserved in all the patients with an ICIQ-SF = 0 at both 3 and 6 months. Sexual outcomes did not report any statistically significant difference during follow-up [3-months IIEF-5 = 20.0 (15.3-23.5), p=0.3; 6-months IIEF-5 = 20.5 (15.5-24.0), p=0.22)]; all patients maintained post-operative antegrade ejaculation. Patients were satisfied about the treatment with a PGI-I at 3-months [3.0 (2.0-4.0)].

Interpretation of results: Once a focal therapy is proposed for PCa treatment, continence and sexual outcomes are fundamental keypoints that should be discussed. Preliminary results with focal TPLA showed that continence has been preserved as well as erectile and ejaculatory function.

Conclusions: Short-term functional TPLA results seemed to be encouraging. TPLA is a safe, painless, and effective technique leading to a good preservation of continence and sexual outcomes.

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51 - A drug-coated balloon treatment (Optilume©) for urethral stricture disease: An Italian real-life report on early functional outcomes

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Introduction and aim of the study: The common aetiology of the urethral stricture is lichen sclerosis, trauma, infections, iatrogenic and idiopathic, and post-hypospadias repair. Endoscopic management of male anterior urethral stricture disease is common. Here we report experience of two urological centres where was used Optilume® drug coated balloon (DCB) in men with urethral strictures.

Materials and methods: Patients with urethral strictures or bladder neck stricture were treated with the Optilume© DCB. We evaluated reduction in International Prostate Symptom Score (IPSS), the change in quality of life (QoL), IIEF5 score, maximum flow rate (QMax), post-void residual urine volume (PVR), and freedom from repeat intervention in short term of follow-up.

Results: A total of 23 subjects were enrolled and treated; median follow-up was three months. Two on 23 patients had an indwelling Foley catheter, one had suprapubic tube. Among these 20 had anterior or bulbar urethral stricture and 3 patients bladder neck stricture. There were no serious adverse events related to treatment and during follow-up. 2 patients had acute urinary retention and 1 urinary infection. Mean length of strictures was 1, 14 cm The predominant aetiology was iatrogenic 78% whereas 18% and 4% was of unknown and infective origins. Median operative time was 22 minutes. IPSS and QoL improved from a mean of 20 and 4.19 points at baseline to 6 and 1.4 points respectively at follow-up. Freedom from repeat intervention of the study stricture was 100%. Mean QMax and post-void residual urine volumes significantly improved from 8.15 ml/sec at baseline to 18.11 ml/sec and from 34 ml (0–416) to 4 ml (0–90) at last follow-up. There was no impact on sexual function (no variations in terms of IIEF5, and no variation of the ejaculatory function).

Interpretation of results: in our experience, the Optilume© represents a valid option in the management of patients with urethral stricture, together with or as an alternative to other therapies.

Conclusions: Subjects with recurrent urethral stricture treated in the real-life setting with Optilume© paclitaxel-coated balloon experienced significant improvements of urinary and sexual outcomes. Longer follow-up are urgently required in order to better define the durability of this minimally invasive procedure.

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52 - ATOMS implant for the treatment of male stress urinary incontinence: Long term results and device survival

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Introduction and aim of the study: Stress urinary incontinence (SUI) still represent a major drawback of prostate surgery. The aim of this study is to evaluate long term efficacy, safety and survival of ATOMS system implant in a single center.

Materials and methods: We retrospectively included all consecutive patients treated with ATOMS implant for SUI from October 2014 to July 2019. Patients received anamnesis, urodynamic evaluation, pre- and postoperative 24 h pad test and count. Patients were considered "continent" when dry or wearing a security pad (social continence).

Results: We treated 99 patients with median age 77.98 years. Most patients had undergone radical prostatectomy. Median preoperative 24 h pad test was 350 g, with a daily pad count of 4. 50 patients had undergone previous incontinence surgery (44 ProACT, 2 AUS, 1 sling, 3 ProACT and then AUS, 1 ProACT and then urethral bulking). Median follow-up was 62.9 months (IQR 47.5-75.9).

At last follow-up we had a significant reduction in median 24 h pad test to 60 g (IQR 0-100 g, p< .00001) and pad count to 1 (IQR 0-1, p< .00001); 29 patients were dry, 45 reached social continence. RT (p=0.44 and p =0.55) or previous urethral surgery (p=0.68 and p=0.88) did not interfere with continence results; we found worse continence result in patients who had previous continence (24 h pad test variation +50 g, p=0.035; pad count variation +0.54, p=0.005). We had late postoperative complications in 28 patients [7 port dislocations requiring surgical repositioning (CD 3a), 11 device removals (CD 3a) due to port erosion (2), inefficacy (2), cushion leakage (1), mesh detachment (1), perineal pain (5), 2 cases of port extrusion solved with port removal leaving the device in place (CD 3a), 2 superficial wound dehiscence (CD 1), 2 UTI (CD 1), 1 scrotal edema (CD 1), 1 cushion deflate (CD 1), 1 dysuria (CD 1), 1 perineal pain (CD 1).

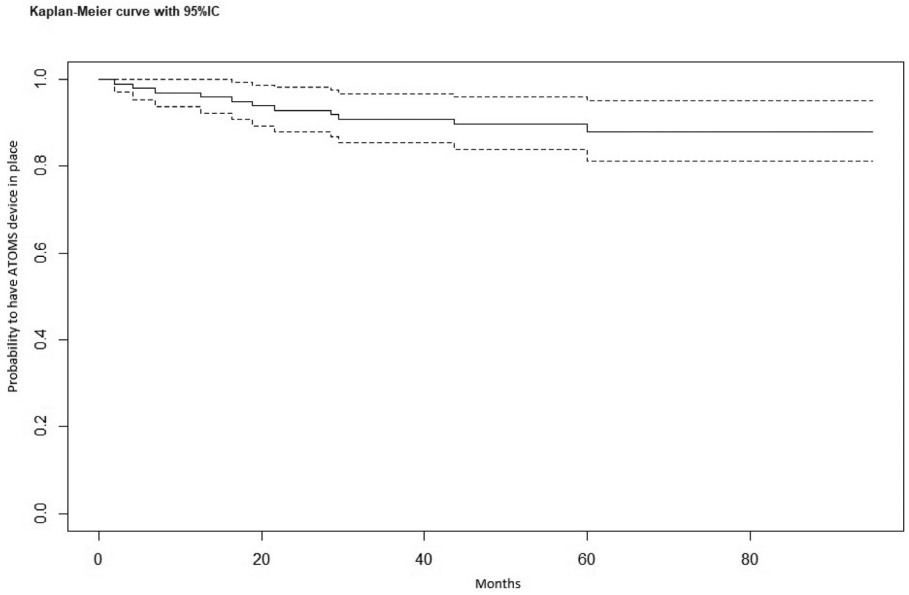

Fig. 1. Kaplan–Meier curve with 95%IC.

Median time from ATOMS implant and reintervention was 16.5 months (IQR 7.1-29.4). The probability to have a working device was 97% at 12 months, 93% at 24 months, 91% at 36 months, 90% at 48 months and 87.9% at 60 months [Fig. 1].

Interpretation of results: With a median follow-up of 62.9 months, we had positive continence results in 74.7% of patients. We had late complications in 28.3% of patients. We estimate that at 60 months of follow-up 87.9% of the devices are still in place.

Conclusions: ATOMS system demonstrated to be a safe and effective treatment for SUI in the long term.

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53 - AMS 800 artificial urinary sphincter with lateral tubing positioning: Data of a high volume center

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Introduction: Aim of the study was to report long term follow-up of a high volume center on AMS 800 artificial urinary sphincter implantation according with lateral tubing positioning technique.

Materials and methods: Data on males implanted with AMS-800 from January 2014 to December 2022 were prospectively collected. Operating data as blood loss, duration of the procedure, complications during/after surgery were recorded. Positioning of cuff and pump were not modified from the standard technique. Our original technique involves placing the tubing (from the reservoir to the pump and from the pump to the cuff) in a well-defined position that is as lateralized as possible. Procedures were performed by two expert surgeons on AMS-800 placement who assessed this novel technique as safety, feasibility and reliability (VAS score: 0 low-10 high). All males had preoperative cystoscopy and urodynamic study. Subjective satisfaction was evaluated by Likert scale (pre- and post-operative), while pain was evaluated by VAS. Complications and failures were evaluated.

Results: We evaluated 71 males. Mean f-up was 30.2 (1–96) months. Mean operating time was 82 min. Mean VAS score for safety, feasibility and reliability was 9.3. VAS showed postoperative pain intensity as none in 78%, and mild in 24%. Urinary retention longer than 48 hours occurred in 5 cases (7%) which required suprapubic tube. This latter placement was easy, fast, and safe with any tubing damage. There was no mechanical failure. Cuff erosion rate was 9.8% (7 males). We had no complications nor infections.

Interpretation of results: To date, there was no standardization on tubing positioning from the reservoir to the pump. Lateral tubing placement was a simple surgical option that did not negatively impact on artificial sphincter efficacy. Moreover, it was not time consuming and did not increase complications, while this technique allowed to standardize the tubing position. The advantage of knowing in advance the tubes location is very relevant in the case of invasive transabdominal maneuvers, or in the case of the need for abdominal surgery, or revision of AMS-800 in other centers than those that performed the initial implantation. Therefore, the standardization we proposed should be recommended as it does not adversely affect the AMS-800, while it helps to preserve tubing device from iatrogenic damage.

Conclusions: Our data confirmed that lateralized tube placement was a safe, easy and efficacy surgical strategy for positioning AMS-800 tubing. This technique standardization increased reproducibility of the procedure lowering the risk of incorrect maneuvers. Moreover, the lateral position reduces the risk of further iatrogenic damages in cases of surgical revisions, abdominal incision, suprapubic catheter placement.

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54 - Real life practice of pelvic floor therapy after radical prostatectomy in Italy: Results of a national survey

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Introduction and aim of the study: Pelvic floor therapy (PFT) may represent a valid treatment for urinary incontinence (UI), erectile dysfunction (ED) and pelvic pain after radical prostatectomy (RP). Related outcomes are controversial, limiting the ability to draw definitive conclusions about the efficacy of this approach. This issue is mostly due to the heterogeneity of methods applied for PFT. The aim of this study is to investigate real life practice of PFT after RP in Italy to highlight the adopted approaches and employed techniques.

Materials and methods: An original questionnaire was designed by PFT experts aimed to evaluate the real-life practice of PFT after RP. The online anonymous questionnaire was administered to members of the Italian Association of Physiotherapy and Italian Society of Urodynamics.

Results: Seventy-four experienced professionals with a median specific experience of 8 years completed the questionnaire (Table 1). Most of them were physiotherapists (94.7%), working in private setting (70.7%). PFT often starts 1–3 months after RP (70.3%). The most used approaches for UI are behavioral treatment (95.9%), patient education (97.3%), and manipulation (87.8%). The most used approaches for DE are behavioral treatment (74%), vacuum erection device [VED] (68.5%), and patient education (63%). Electrostimulation is performed with trans-rectal probes (in 70.5% for UI and in 31.7% for DE) and perineal electrodes placed anteriorly (in 19.7% for UI and in 46.3% for DE) and less frequently laterally. Most rehabilitators perform sessions once a week (61.1%). The majority of patients (77.8%) take phosphodiesterase type 5 inhibitors (PDE5i) during PFT. Up to 95.9% responders use validated tools to assess treatment outcomes.

Table 1
Results of the Italian survey aimed to investigate the state of the art of pelvic floor therapy after radical prostatectomy.

Items	Values
Responders	74
Sex	
- Female	71 (95.9%)
- Male	3 (4.1%)
Age	
- Median	40
- IQR	35–52.25
- Range	24–65
Years of experience in PFPT	
- Median	8
- IQR	5–17
- Range	1–38
Patients treated in a month	
- 1–5	50 (67.6%)
- 6–10	12 (16.2%)
- 11–15	9 (12.2%)
- 16–30	3 (4.1%)
When does the patient start PFPT?	
- Pre-operatively	23 (31.3%)
- <4 weeks after surgery	17 (23%)
- 1–3 months after surgery	52 (70.3%)
- 3–6 months after surgery	21 (28.4%)
- 6–12 months after surgery	17 (23%)
- >1 year after surgery	16 (21.6%)
Approaches used to treat UI	
- Behavioral treatment	71 (95.9%)
- Patient education	72 (97.3%)
- Manipulation	65 (87.8%)
- Biofeedback	49 (66.2%)
- Electrostimulation	39 (52.7%)
- Tibial nerve stimulation	10 (13.5%)
- External magnetic stimulation	5 (6.8%)
Approaches used to treat ED	
- Behavioral treatment	74%
- Vacuum erection device	68.5%
- Patient education	63%
- Manipulation	53.4%
- Biofeedback	34.2%
- Electrostimulation	21.9%
- External magnetic stimulation	8.2%
- Tibial nerve stimulation	6.8%

Acronyms: ED, erectile dysfunction; PFT, pelvic floor therapy; UI, urinary incontinence.

Interpretation of results: PFT is the first-line treatment for post-RP UI. However, the type of electrostimulation (endocavitary of transcutaneous) and the placement of electrodes (on tibial, perineal body or anteriorly on the bulbo-ischiocavernosus) highly varies by experts and may be influenced by the often coexistence of different types of dysfunctions (UI, ED, pelvic pain). Despite the poor evidence a high percentage of professional rehabilitators advises VED in association with PDE5i.

Conclusions: The survey highlighted a high variability in electrostimulation and an agreement in using VED with PDE5i. To increase its consistency and role, the authors advocate the development of an international consensus to deliver PFT after RP.

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55 - Stress incontinence severity and treatment efficacy: A modified Delphi consensus

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Introduction and aim of the study: To develop a modified Delphi consensus statement regarding the correlation between incontinence severity and treatment efficacy in patients with stress urinary incontinence (SUI)

Materials and methods: A Systematic review of Pubmed, Embase and Scopus was performed to evaluate the available evidence on incontinence severity and treatment efficacy in women patients with SUI. Overall, no studies evaluating this specific topic were identified, therefore a consensus statement was performed. Four rounds of Delphi were performed and final statements were submitted anonymously using Survey Monkey. All statements were voted on a 1 to 10 scale. In order to approve the statement consensus should be >80%. In case of a consensus between 60 and 80% the statement was discussed by all the members of the consensus and submitted again in a fourth round.

Table 1

Statement	Agreement Round 3	Agreement Round 4
Patients with severe SUI present better improvements in terms of patients reported ouctomes and pads when compared to patients with mild SUI after rehabilitation/pharmacological treatment.	62%	50%
Patients with mild SUI present higher odds of solving incontinence when compared to patients with severe SUI.		81%
Severity of SUI does not exclude rehabilitation		84%

Results: Overall, no studies were identified evaluating the association between treatment efficacy and SUI severity . In the first round based on four expert opinion four statements were developed. On round two a group of ten experts discussed and modified the statements to avoid redundancy and improve readability before submitting it to the expert panel resulting in three final statements. On round three the statements (Table 1) were submitted to 40 experts which voted the statements. One statement needed a round four and did not reach consensus after discussion. Results of the consensus are written in Table 1.

Interpretation of results: Two statements reached a satisfactory level of consensus:

- Patients with mild SUI present higher odds of solving incontinence when compared to patients with severe SUI.
- Severity of SUI does not exclude rehabilitation.

Otherwise another statement needed a round four and did not reach consensus after discussion:

- Patients with severe SUI present better improvements in terms of patients reported outcomes and pads when compared to patients with mild SUI after rehabilitation/pharmacological treatment.

Conclusions: The present consensus statement answers some unmet needs regarding the association between SUI severity and treatment efficacy. The lack of evidence in this setting warrants well designed clinical trials to answer these questions.

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56 - Robot-assisted sacrocolpopexy versus trans-vaginal multicompartment prolapse repair: Impact on lower bowel tract function

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Introduction and aim of the study: Pelvic organ prolapse (POP) causes heterogeneous symptoms, only few studies analyzed the effect of surgical repair on lower bowel tract function (LBTF).

The aim of this study is to evaluate effects and any changes in LBTF after prolapse surgery using two different surgical approaches: transvaginal mesh surgery with levatorplasty (TVMLP) and robot-assisted sacrocolpopexy (RSC).

Materials and methods: This was a randomized prospective study. All patients were studied preoperatively at time 0 and postoperatively at 6 and 12 months.

All patients underwent a pelvic and rectal examination to assess the severity of POP using POP-Q staging system and to evaluate anal sphincter tone.

The preoperative evaluation included a urodynamic study and pelvic magnetic resonance defecography. All the patients completed Wexner's questionnaire at time 0 and at 12 months.

Results: From March 2018 to November 2021, 73 patients were enrolled and classified into two group: RSC (36 cases) and TVMLP (37 cases). No significant baseline differences were observed.

After surgery, the main POP-Q stage in both group was stage I (RCS 80.5% vs TVMLP 82%). There was a significant difference ($p<0.05$) according to post-operative anal sphincter tone: 35% of TVMLP patients experienced hypertonic sphincter.

The operation time in the TVMLP group was significantly shorter than the RSC group ($p<0.005$), while the bleeding amount was significantly higher in the TVMLP group ($p<0.005$). There were no significant differences regarding hospital stay, complications rate, recurrence of POP between two groups ($p>0.005$). According to BLTF, at the baseline were not significant differences between two groups. At 12 months of follow-up after surgery, both groups exhibited a significant improvement. The main postoperative differences were observed in favor of RSC, especially regarding the domain of pain ($p<0.05$) and the total Wexner Score ($p<0.05$).

Interpretation of results: In RSC surgery the mesh and relative peritoneum fibrosis obliterate the deep Pouch of Douglas and eliminate the potential space of enterocele and rectocele. TVMLP is associated with increased pain during defecation, and this might be due to the stitches suture that could alterate the physiological distensibility of the rectum during stool passage and could determinate a painful hypertonic status of external anal sphincter, as confirmed to follow-up digital rectal examination.

Conclusions: RSC and TVMLP successfully correct multicompartment POP. RSC seems to be less invasive in terms of decreasing blood loss.

In addiction RSC, causes an improvement in total Wexner score, while TVMLP would appear to be associated with increased pain during defecation.

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57 - Bilateral pubococcygeus plication techniques to repair symptomatic cystocele: A comparison between two surgical procedures

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Introduction: To compare surgical outcomes of two bilateral pubococcygeus plication (BPC) techniques to repair symptomatic cystocele.

Materials and methods: This was a multicenter prospective study on women undergoing native tissue repair for symptomatic cystocele. A first technique had BPC with urethra sparing (BPC-US), while the second technique had BPC with bladder neck/proximal urethra suspension (BPC-NUS). Data were retrospectively collected (2012–2021), all cases had at least 12 months f-up. Inclusion criteria were: symptomatic AVWD ≥ 2 associated or not to urinary incontinence. Exclusion criteria were: apical or posterior associated compartment defect. Preoperative evaluation included medical history, physical evaluation, urinalysis. Urodynamics was performed in the cases with associated UI. Surgical data and intra-/peri-/post-operative complications were collected. Catheter was removed 48 hours after surgery and post-operative urinary retention (POUR) was investigated by catheterization (POUR: PVR > 100 ml resolved within 30 days from surgery). Objective success was asymptomatic AVWD $< 2°$ POP-Q stage.

Results: We collected data from 156 women with mean f-up of 74.6 months (range 12–118): 84 in BPC-US, 72 in BPC-NUS. Mean operating time was 53 minutes in BPC-US and 58 in BPC-NUS. In BPC-US 2 women had preoperative stress urinary incontinence (SUI) that persisted after surgery. In BPC-NUS 6 patients had preoperative SUI, and 2/6 still reported SUI after surgery. Transient POUR was 0.5% in BPC-US, while 27.8% in BPC-NUS. None of these POUR required surgery. Complications for BPC-US were 7.1%: intraoperative bladder injury (1), hematoma (2), vaginal sinsynechiae (2), wound dehiscence (1). Complications for BPC-NUS were 4.2%: hematoma (1), bleeding (1), wound dehiscence (1). Transient POUR rate was 1% in BPC-US and 27.8% in BPC-NUS. Objective success rate was 92.9% in BPC-US and 88.9% in BPC-NUS. Reoperation rate for recurrence were 2.4% after BPC-US and 6.9% for BPC-NUS.

Interpretation of results: Our data showed that native tissue repair by BPC was a safe end effective surgical technique for cystocele repair. The main difference between the two procedures was the occurrence of voiding disorders which was relevantly higher after BPC-NUS. This finding can be explained by the stitches placement under bladder neck and proximal portion of the urethra. This surgical phase that characterizes BPC-NUS can improve continence care. Indeed, this latter technique resolved SUI in more women. BPC-US did not resolve SUI, because sutures were placed far to bladder neck/proximal urethra to avoid POUR.

Conclusions: Cure rate of the two BPC techniques was high and comparable. However, females undergoing BPC-NUS should be counseled on the risk of transient POUR and the potential positive impact on SUI cure. Post-operative voiding disorders did not occur in BPC-US procedure, but this technique was not effective for SUI treatment.

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58 - Postpartum pelvic floor dysfunctions: Understimated women conditions more detectable with virtual health care

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Introduction and aim of the study: Postpartum pelvic floor dysfunctions (PPFD) is a major problem. Many women consider this normal and a temporary problem preventing an early identification and correct treatment [1]. A prospective study was performed using PPD (postpartum pelvic dysfunctions card) developed by SIUD (Italian Society of Urodynamics) model to detect women with medium and high risk to develop PPFD [2]. The aim of the study is to quantify the problem using a validated data collection score and implement adherence at preventive and rehabilitative programs for patients who do not spontaneously undergo a regular urogynecological evaluation and follow up through virtual care models.

Materials and methods: From 01/01/2022 to 30/09/2022 on total of 516 deliveries 44 women (8.52%) with intermediate risk at PPD and no antepartum urinary or anal incontinence were analysed. A perineal evaluation was performed after 40 days and planned rehabilitative programs. The evaluation was already planned at postpartum hospital discharge to make the booking easier. At the 6th month a telehealth evaluation was performed and we verified if patients would have spontaneously taken contact with the urogynecological service in absence of a pre-established iter at hospital discharge after delivery.

Results: 11 of 44 patients underwent at urogynecological visit after 40 days. At the 6th month we contacted 34 patients (77.27%) and 14 (41.17%) complained PPFD; 5 of these (35.7%) underwent a visit at 40 days. 9 patients (64.28%) did not show at visit and 33.33% of them declared that they would contact the urogynecology service spontaneously and 100% of them presented PPFD symptoms (75% sexual discomfort with bulging). In the group of 23 women who did not underwent the visit and did not contact the urogynecological service (67.65%) 6 patients (26,08%) complained PPFD symptoms: 33.33% reported dispareunia and 66.67% urinary incontinence.

Interpretation of results: Only 25% of the patients with identified risk of PPFD underwent a planned visit. In contrast more than 77% of patients underwent a telehealth evaluation.

Conclusions: These data remarks that women underestimate the PPFD and tent to minimise hospital access in postpartum. Directly connecting patients to the urogynecologic service and use virtual care as telehealth has demonstrated that this is valid method of providing care, that allows to intercept no-show patients at first visit.

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59 - Efficacy of home pelvic floor muscles self training on stress urinary incontinence in women with and without low back pain

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Introduction and aim of the study: Stress urinary incontinence (SUI) represents one of the most common subtypes of urinary incontinence (UI) reported by women with a significant negative impact in the activities of daily life. Pelvic floor muscles training (PFMT) has acquired a fundamental role in the prevention and treatment of female urinary incontinence (UI). Home pelvic floor muscles self training (PFMsT) could be an easy and effective treatment, indicated in women with UI unable to follow supervised rehabilitation sessions because of the hospital distance or too long waiting lists.

Low back pain (LBP) and UI are associated in large epidemiological studies, and the presence of one condition seems to predispose the development of the other. Keizer et al. (Phys Ther, 2019) reported three clinical findings characterized pelvic floor muscles dysfunctions (PFMD) in women with LBP: weakness of the pelvic floor muscles (PFM), lack of coordination of the PFM, and PFM tenderness. These findings could lead to more difficulty in activating PFM in women with LBP rather than in those without LBP and affect the results of home PFMsT in patients with UI: for these women hospital individual treatment may be more appropriate, therefore a selection of patients should be done before starting a home PFMsT.

Our objective was to evaluate demographic and clinical characteristics and compare the effects of home PFMsT in women with SUI with and without LBP.

Materials and methods: We reviewed data from 30 women complaining of SUI aged from 37 to 61 years (mean age 47,50 ± 6,30). 60% of patients (18) had LBP.

We excluded patients reporting neurological or psychiatric illness, inability to correctly contract PFM, genital prolapse ≥ II degree, and previous pelvic surgery. Participants were evaluated before (T0) and after one-month of a specific home PFMsT (T1). The outcome measures were: ICS1-hour pad test, pubo-coccygeus strength assessment (PC test, grading from 0 to 3: F = a single maximum contraction, E1 = a sustained contraction, E2 = some repeated contractions), ICIQ-LUTSqol and ICIQ-FLUTS.

Results: There were no significant differences between women with and without LBP in demographics data at the baseline (T0).

Statistical analysis (using the Paired Samples t test and Wilcoxon Signed Rank test) comparing score changes before and after treatment showed a significant improvement in PC test (F, E1, E2), pad test, ICI-FLUTS incontinence and ICIQ-LUTSqol (all $p < 0,05$).

Even if women with LBP had weaker score in all outcome variables, the between-subject analysis(using Independent Samples t test) showed no significant difference between the two groups, neither at T0 nor at T1.

Interpretation of results and conclusions: Our study shows that a specific home PFMsT is useful in improving PFM performances, urinary losses, SUI symptoms and quality of life and the presence of LBP not affect the results of treatment and consequently a target selection of patients is not required.

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60 - Female sexual dysfunctions in multiple sclerosis patients with lower urinary tract symptoms: An Italian case control study

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Introduction and aim of the study: Sexual dysfunctions (SDs) are common, but often underestimated symptoms in patients with multiple sclerosis (MS). The aim of this observational, case-control study was to assess the prevalence of female sexual dysfunction (FSD) and its relationship with neurological disability, depression, urodynamic findings and lower urinary tract symptoms (LUTS) in these patients.

Materials and methods: 91 women with MS were compared to 84 controls matched for age, marital and socioeconomic status. Patients with MS were evaluated by Female Sexual Function Inventory (FSFI), Sexual Quality of Life Questionnaire-Female version (SQoL-M), International Prostate Symptom Score (I-PSS) and the Beck Depression Inventory-II (BDI-II). Neurological impairment was assessed using the Expanded Disability Status Scale (EDSS). The presence of Detrusor Overactivity (DO), Detrusor Underactivity (DU) and Detrusor Sphincter Dyssynergia (DSD), was defined by International Continence Society (ICS) criteria.

Results: Our results confirmed the high prevalence of sexual dysfunction among patients with multiple sclerosis (75.82%) compared to controls (35.72%) ($P = 0.001$). Sexual desire, arousal and orgasm were the most altered sexual phases in our study. Univariate regression analysis showed that Expanded Disability Status Scale score ($P = 0.001$), Beck Depression Inventory-II score ($P = 0.002$), International Prostate Symptom Score ($P = 0.001$), Detrusor Overactivity ($P = 0.002$), Multiple Sclerosis-Secondary Progressive ($P = 0.002$) and Post void residual (PVR) ($P = 0.002$) were significantly associated with FSD. All significant findings in univariate analysis were then entered into a multiple logistic regression model. The results indicated that the Beck Depression Inventory-II score ($P = 0.011$), Detrusor Overactivity ($P = 0.043$) and Multiple Sclerosis-Secondary Progressive ($P = 0.029$) were the only independent predictive factors of FSD onset in these patients.

Interpretation of results: It is generally known that MS substantially determines a generalized demyelination process that interrupts the continuity of the neural pathways and alters the neural function that is essential for normal sexual activity and urinary function. Therefore, in clinical practice, each patient needs an individualized evaluation of factors that could contribute to her sexual problems.

Conclusions: FSD is highly prevalent but commonly overlooked in women with MS and has a significant impact on their sexual quality of life (SQo-L). Depressive and urinary symptoms are very common and have a great impact on female sexual function. Hence, in order to provide an effective approach and management for Female Sexual Dysfunctions, all the mentioned symptoms and clinical variables should be kept in mind.

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61 - Persistent overactive bladder after midurethral sling surgery: Prevalence, timing and risk factors

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Introduction and aim of the study: Persistent urgency or urgency urinary incontinence (UUI) can occur in patients with MUI who undergo surgery for SUI. The aim was to evaluate the prevalence and the risk factors of persistent urgency and UUI after TOT.

Materials and methods: It was a prospective study on female patients with SUI underwent TOT from 2002 to 2015 Exclusion criteria were as follows: women with pure SUI, diabetes or neurologic disease; POP ≥ stage II. Preoperative evaluation included: history; pelvic examination, urodynamic study and transperineal ultrasound. Urinary symptoms were evaluated using the UDI-6.

Results: A total of 289 patients (56.2 ± 10.7 y) were included in the study. Follow up was 155 ± 85 m. Overall 110 had SUI concurrent OAB dry, and 179 had MUI. Patients in the MUI group were significantly older than those in the SUI with OAB dry group (60.5 ± 10.55 vs 58.97 ± 10.98, p = 0.003). The MUI group had a higher BMI (BMI, 27.3 ± 4.6 vs 25.75 ± 3.4, p = 0.002) and tended to be more overweight (BMI ≥25 kg/m^2, 31.8%) than the patients in the other group (11.8%).In the SUI with urgency group, the success rate was 81%, de novo UUI developed in 23 patients (20.9%), of these 16% after 4 years. Sixty-eight patients (62.3%) had resolved urgency. In those with persistent urgency (38.1%), the subjective severity of urgency was improved in 27, the same in 10, and aggravated in 5. In the MUI group the success rate was 78%, 111 patients (62%) had resolved UUI, with resolved urgency in 75 (41.8%) and remnant urgency in 27. In patients with residual urgency, symptoms were improved in 24 and the same in 3. Sixty-eight patients (37.9%) had persistent UUI. Among them, the degree of urgency was improved in 55, the same in 4, and aggravated in 13. Table 1 showed that the BMI ≥ 25, age > 60 years, DO, previous pelvic surgery and use of anticholinergic, were risk factors for persistent urgency and UUI.

Interpretation of results: Our results are in agreement with the literature. The reported incidence of persistent OAB dry in women with SUI and OAB dry ranged from 2% to 40%. In women with SUI and UUI, 32% had persistent urgency incontinence. A possible explanation might be the result of ageing while the MUI was also associated with higher failure rates for SUI specific outcomes. It is possible that patients with MUI have a higher disease severity or even different pathophysiology than patients with pure SUI.

Table 1
Risk factors for persistent urgency in patients with SUI with urgency and persistent UUI in patients with MUI.

	Univariate HR (95% CI)	*P* value	Multivariate HR (95% CI)	*P* value
Persistent urgency in patients with SUI and urgency				
Age ≤ 60 years	0.75 (0.35–1.54)	$p < 0.0001$	0.93 (0.42–1.81)	0.01
Age > 60 years	1.27(0.91–2.32)	$p < 0.0001$	2.81 (1.12–3.97)	0.02
Previous hysterectomy	0.87 (0.31–2.84)	0.24		
Previous pelvic surgery	1.45 (0.52–2.39)	0.01	1.84 (0.92–1.21)	0.001
Normal 18.5–24.9	0.21 (0.74–1.25)	$p < 0.0001$	0.76 (0.01–1.47)	0.01
Overweight 25–29.9	1.87 (0.69–2.84)	$p < 0.0001$	2.62 (1.12–3.87)	0.02
Obese >30	4.74 (2.29–7.35)	$p < 0.0001$	3.78 (1.21–5.62)	0.001
Detrusor overactivity	1.32 (0.18–2.63)	0.02	2.93 (1.44–3.95)	0.001
Menopause	2.34 (1.23–5.98)	0.001	3.25(1.47–4.37)	0.001
Persistent UUI in patients with MUI				
Age ≤ 60 years	0.87 (0.62–1.74)	0.001	1.23 (0.61–1.86)	0.01
Age > 60 years	1.25 (0.45–2.56)	$p < 0.0001$	2.45 (1.21–3.87)	0.001
Previous hysterectomy	0.74 (0.02–1.93)	0.31		
Previous pelvic surgery	1.59 (0.34–2.73)	0.02	2.36 (1.02–3.98)	0.001
Normal 18.5–24.9	0.22 (0.47–1.89)	0.001	0.76 (0.15–1.74)	0.01
Overweight 25–29.9	1.54 (0.75–2.87)	$p < 0.0001$	2.21 (1.70–4.45)	0.001
Obese >30	3.41 (1.10–8.32)	$p < 0.0001$	4.85 (1.78–5.23)	0.01
Previous treatment by anticholinergic	2.14 (0.12–3.57)	0.001	3.73 (1.41–4.32)	0.01
Detrusor overactivity	1.45 (0.74–2.92)	0.001	3.21 (1.47–3.92)	0.001
Menopause	2.34 (1.23–5.98)	0.001	3.25(1.47–4.37)	0.001

Conclusions: It is important to identify women with SUI and MUI for an appropriate preoperative counselling about postoperative persistent urgency and urgency urinary incontinence.

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62 - De novo overactive bladder after midurethral sling surgery: Prevalence, timing and risk factors

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Introduction and aim of the study: Several kinds of storage symptoms, including frequency, urgency, and urgency urinary incontinence (UUI), can accompany the SUI. The SUI surgery can improve OAB symptoms. De novo urgency and UUI are observed in some patients with no previous evidence of storage symptoms after anti-incontinence surgery. The aim of this study was to evaluate the prevalence and the risk factors of de novo urgency and UUI after TOT.

Materials and methods: It was a prospective study on female patients with SUI underwent TOT from 2002 to 2015 Exclusion criteria were as follows:MUI, diabetes or neurologic disease; POP ≥ stage II. Preoperative evaluation included: history; pelvic examination, urodynamic study and transperineal ultrasound. Urinary symptoms were evaluated using the UDI-6.

Results: A total of 180 pts (58.9 ± 11 y) were included in the study. The follow up was 155 ± 85 m. Overall, 70 patients had pure SUI, 110 had concurrent OAB dry. There was no significant difference in demographics between the pure SUI and the SUI with urgency groups. In the pure SUI group the success rate was 86%, de novo urgency developed in 22 (31.4%) pts. The severity of urgency was tolerable in 16 pts; only 6 pts required medical treatment. Six patients developed urgency 4 years after surgery; six immediately after the surgical procedure; ten pts between 6 months and 2 years. Six pts with early de novo urgency had not voiding symptoms. In the SUI with urgency group, the success rate was 81%, de novo UUI developed in 23 patients (20.9%), of these 16% after 4 years. Sixtyeight pts (62.3%) had resolved urgency. In those with persistent urgency (38.1%), the subjective severity of urgency was improved in 27, the same in 10, and aggravated in 5. Table 1 showed that the BMI ≥ 25, age > 60 years, DO were risk factors for de novo urgency in patients with pure SUI, and for de novo UUI in patients with SUI and OAB dry.

Interpretation of results: In literature the reported incidence of de novo OAB ranged from 1.7% to 42% and the rate increased after surgery to 14.9% at 10 years follow-up. A possible explanation for the late occurrence of OAB symptoms might be formation of fibrosis around the sling. Obviously, these symptoms could also be the result of ageing, since the prevalence of OAB increases with age.

Conclusions: The success rate was higher in patients who have pure SUI. Post-surgery urgency probably occurred for causes not related to the surgical procedure.

Table 1
Risk factors for de novo urgency in pure SUI patients and UUI in SUI with urgency.

	Univariate HR (95% CI)	*P* value	Multivariate HR (95% CI)	P value
	De novo urgency in pure SUI patients			
Age ≤ 60 years	0.86 (0.49–1.60)	$p < 0.0001$	0.95 (0.51–1.67)	0.02
Age > 60 years	1.15 (0.62–2.14)	$p < 0.0001$	2.70 (1.09–3.75)	0.04
Previous hysterectomy	0.96 (0.32–2.90)	0.12		
Previous pelvic surgery	1.30 (0.61–2.78)	0.059		
Normal 18.5–24.9	0.14 (0.49–1.10)	$p < 0.0001$	0.71 (0.03–1.30)	0.02
Overweight 25–29.9	1.07 (0.57–2.01)	$p < 0.0001$	2.91 (1.06–3.57)	0.001
Obese > 30	4.19 (2.19–8.00)	$p < 0.0001$	3.31 (1.23–4.35)	0.001
Detrusor overactivity	1.26 (0.12–2.36)	0.02	2.79 (1.24–3.67)	0.01
	De novo UUI in SUI with urgency patients			
Age ≤ 60 years	0.63 (0.32–1.89)	$p < 0.0001$	0.96 (0.61–1.86)	0.01
Age > 60 years	1.25 (0.45–2.56)	$p < 0.0001$	2.45 (1.01–3.56)	0.02
Previous hysterectomy	0.35 (0.04–1.90)	0.22		
Previous pelvic surgery	1.78 (0.49–2.63)	0.057		
Normal 18.5–24.9	0.19 (0.36–1.23)	$p < 0.0001$	0.81 (0.01–1.57)	0.01
Overweight 25–29.9	1.41 (0.98–2.13)	$p < 0.0001$	2.45 (1.46–4.23)	0.01
Obese > 30	3.27 (1.14–7.23)	$p < 0.0001$	4.31 (1.45–4.23)	0.001
Previous treatment by anticholinergic	2.56 (0.58–3.69)	0.03	3.67 (1.78–4.92)	0.001
Detrusor overactivity	1.45 (0.25–2.89)	0.01	2.93 (1.27–3.65)	0.02

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63 - Female postoperative urinary retention: What do surgeons mean?

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Introduction and aim of the study: To evaluate the most accepted definition in literature of female post-operative urinary retention (POUR) after urogynecological and not urogynecological surgical procedures.

Materials and methods: A systematic review according to PRISMA rules was performed on September 2022 in PubMed, Medline, Embase. Research key-words were: POUR, post-void residual urine (PVR), urogynecology, surgery, female urology, POU/voiding complications. Original papers in English language on adult female populations were included, while reviews and meta-analysis, expert-opinions statements, case reports, pediatric and male populations or with gender not specified were excluded. Manuscripts were stratified in: urogynecological or non urogynecological surgery, papers reporting or not PVR definition, high quality papers (HQP) (randomized/prospective, larger sample) vs low quality papers (LQP) (non-randomized/retrospective, lower sample).

Table 1
POUR definition according to PVR strata in urogynecological and not urogynecological papers and in high quality papers.

	PVR >50	PVR >100	PVR >150	PVR >200	PVR >250	PVR >300	PVR >350	PVR >400	PVR >500	PVR >600
POUR Overall (N. papers)	4 (3%)	54 (40.6%)	22 (16.5%)	16 (12%)	5 (3.8%)	7 (5.3%)	4 (3%)	9 (6.8%)	8 (6%)	4 (3%)
POUR UG	4 (4.1%)	45 (46.4%)	20 (20.6%)	14 (14.4%)	5 (5.2%)	5 (5.2%)	3 (3-1%)	--	1 (1.1%)	--
POUR NON UG	--	9 (26.5%)	2 (5.9%)	2 (5.9%)	1 (2.9%)	2 (5.9%)	1 (2.9%)	8 (23.5%)	6 (17.6%)	3 (8.8%)
POUR HL Overall	1 (1.1%)	37 (38.5%)	20 (20.8%)	12 (12.5%)	3 (3.1%)	5 (5.2%)	2 (2.2%)	8 (8.8%)	7 (7.3%)	1 (1.1%)
POUR HL UG	1 (1.5%)	30 (44.1%)	18 (26.5%)	10 (15%)	3 (4.5%)	3 (4.5.%)	2 (3%)	--	1 (1.5)	--

UG: urogynecology; NON UG: non urogynecology; HL: high quality

Results: We found 1839, of these 413 were included in the analysis. Papers reporting PVR were 133 (32.2%), not reporting PVR 280 (67.8%); HQP were 274 (66.3%), of these 96 (35%) reported PVR definition. LQP were 139 (33.7%). Among 198 (47.9%) papers on urogynecological surgery: 97 (49%) reported PVR definition, HQP were 128 (64.6%), of these latter 68 (53.1%) reported PVR definition, LQP were 70 (35.4%). Among 215 (52.1%) papers in non urogynecological surgery: 34 (15.8%) reported PVR definition, HQP were 146 (67.95), of these latter 28 (19.2%) reported PVR definition, LQP were 69 (32.1%). Table 1 resumes POUR definition according to PVR amount; a volume >100 ml was the most common.

Interpretation of results: Post-operative urinary retention (POUR) is reported after urogynecological and not urogynecological surgical procedures. However, the exact amount of PVR accepted for POUR is not standardized. Our search showed that only a minor part of the papers reported PVR definition, so most of the data on POUR are poorly evaluable because it is not clear what the authors meant by urinary retention. Surprisingly, a low volume of PVR (>100 ml) was most commonly described for POUR in both urogynecological and non-urogynecological surgical procedures. Thus, most of the clinicians believe that even a low PVR volume is a sign of urinary retention after surgery.

Conclusions: A standardized and accepted definition of POUR does not exist, but the most common criterion used is PVR with a low urine amount (>100 ml).

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64 - Female detrusor underactivity: How reduced is strength and duration of the contraction?

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Introduction: To assess strength, duration and main characteristics of detrusor contraction (DC) in DUA women.

Materials and methods: This was a comparative prospective study (2021–2022) on DC characteristics in females with DUA (DUA-G) compared with those of women without DUA (Control Group-CG) underwent urodynamics (UD) for LUTD. DUA was defined when at least one of the following UD criteria was met: (1) Jeong; (2) Abarbanel and Marcus; (3) BVE criteria; (4) PIP1. Statistical analysis tests were: T-Test, Youden, AUC and sensibility/specificity calculation.

Table 1
Main detrusor contraction characteristics.

Parameter	Groups	Average	P-Value	Youden cut-off	AUC	Sensibility	Specificity
Time of detrusor contraction (s)	CG DUA-G	78,3 68,16	0,022	<45	0,59	27,9	90,2
Voiding time (s)	CG DUA-G	41,88 54,24	<0,001	>45	0,682	62,5	73,5
Age (year)	CG DUA-G	56,76 60,85	0,048	>70	0,599	34,6	85,3
Pdet Max (cmH20)	CG DUA-G	29,41 20,15	<0,001	<18	0,693	57,7	73,5
Pdet Qmax (cmH20)	CG DUA-G	23,22 14,98	<0,001	<14	0,72	60,6	75,2
Q max (ml/s)	CG DUA-G	18,47 12,15	<0,001	<14	0,75	74	71,3
Post Void Residual Volume (ml)	CG DUA-G	41,86 86,97	0,002	>30	0,615	48,1	75,5
Post Void Residual Volume Ratio (%)	CG DUA-G	8,94 18,53	0,001	>0,1091	0,619	47,1	80,4
Time of detrusor contraction/Voiding time (s/s)	CG DUA-G	2,39 1,32	0,005	<1,375	0,772	58,7	83,3
Voiding time/Time of detrusor contraction (s/s)	CG DUA-G	0,57 0,91	<0,001	0,7143	0,772	58,7	83,3
Tdet/Voided Volume (s/ml)	CG DUA-G	0,287 0,262	0,524	<0,1711	0,558	45,2	68,6
Voiding Time/Voided Volume (s/ml)	CG DUA-G	0,145 0,207	0,023	>0,0891	0,647	88,5	41,2
Voided Volume (ml)	CG DUA-G	366,27 354,83	0,602	<345	0,521	47,1	61,8

Results: Data were completed on 206 women: 104 DUA (50.5%), 102 CG (49.5%). Data on main DC characteristics of the 2 groups are reported in Table 1. Median DC duration was 61.5 s in DUA-G and 73 s in CG, median voiding duration 50 s in DUA-G and 38 s in CG. Median Pdet/Qmax was 12.5 cmH2O in DUA-G and 20 cmH20 in CG. Thresholds of Ratio DC duration/voiding time <1.375, Pdet/Qmax <14 cmH2O, Qmax <14ml/s had the higher AUC and good both sensibility and specificity. Combining these parameters, in CG 49% had none of the markers below these cut-off, 41.2% with at least 1, 8.8% 2, 0.9% 3. In DUA-G the rate of women with none parameter with lower cut-off was 3.9%, at least 1 31.4%, 2 48%, all 18.6%. DC duration lower than 45 s showed the higher specificity for DUA (90%) but with a very low sensibility (28%).

Interpretation of results: As expected and according to ICS definition, duration (1 min) and strength (12 cmH20) of DC were significantly reduced in DUA-G, with prolonged voiding time and larger post-void residual of urine. In the average, DUA DC lasted 10 s less than normal DC, and was 9 cmH20 weaker than in no DUA DC. Ratio DC duration/voiding time, Pdet/Qmax, Qmax were the parameters most related to DUA and we found thresholds with high AUC and good sensibility and specificity. Interestingly, the majority of women with normal DC showed none or at least 1 of these parameters under reported cut-off (91%),

while only 9% had concomitancy of 2 or 3 markers below thresholds. In DUA-G 66% of the women had 2 or 3 concurrent parameters with lower thresholds. Therefore, the coexisting occurrence of 2 or 3 of these parameters with lower cut-off could be a warning for detrusor impairment.

Conclusions: Our study defined how the duration and strength of the DUA DC were reduced compared to normal DC also reporting parameters that could be *red flags* for detrusor impairment.

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65 - Vaginal Erbium Laser as a non-hormonal therapeutical procedure for managing urinary symptoms in breast and gynecological cancer survivors

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Introduction and aim of the study: Genitourinary Syndrome of Menopause (GSM) is an umbrella term covering various symptoms of reduced estrogen levels following menopause, often treated via a combination of hormones. However, systemic hormone administration is unsuitable in women with breast and gynecological cancers. Hence, in those circumstances, non-hormonal regimens such as Vaginal Erbium Laser (VEL) are their first-line therapy in treating GSM symptoms.

This study aims twofold: first, to examine the prevalence of Lower Urinary Tract Symptoms (LUTS) in hormone-depending cancer survivors. Second, to analyze the role of VEL as a non-hormonal therapeutical procedure to treat GSM, particularly LUTS.

Materials and methods: The study was performed using a VEL crystal Yttrium-Aluminum-Garnet (YAG, XS Fotona Smooth, Ljubljana, Slovenia) with a wavelength of 2,940 nm. Seventy-six cancer survivors were enrolled, and 51 patients completed the treatment and evaluation.

Patients had three laser applications (1 every 30 days). Symptoms were assessed before the first and after the third application. The evaluation included the subjective Visual Analog Scale (VAS), the Female Sexual Function Index (FSFI), the International Consultation on Incontinence Questionnaire-Female Lower Urinary Tract Symptoms (ICIQ-FLUTS), and a three-day bladder diary.

Results:

	N° patients	Baseline	3rd Application	*p*-value
VAS scale (0–10)				
Itchiness	12	4.50 ± 2.68	0.42 ± 0.66	=0.002 **
Vaginal dryness	51	7.65 ± 1.80	4.67 ± 1.92	<0.001 ***
Superficial dyspareunia	39	8.38 ± 1.72	5.56 ± 2.45	<0.001 ***
Deep dyspareunia	33	6.73 ± 2.09	4.48 ± 2.25	<0.001 ***
FSFI Questionary				
Score tot (2–95)	51	24.2 ± 20.4	44.7 ± 25.8	<0.001 ***
Desire (2–10)	51	3.45 ± 1.47	4.80 ± 1.80	<0.001 ***
Arousal (0–20)	51	7.68 ± 3.80	10.79 ± 4.25	<0.001 ***
Lubrication (0–20)	51	7.45 ± 3.96	11.16 ± 4.15	<0.001 ***
Orgasm (0–15)	51	7.28 ± 3.41	9.90 ± 3.54	<0.001 ***
Satisfaction (0–15)	51	4.61 ± 4.40	8.43 ± 5.08	<0.001 ***
Pain (0-15)	51	4.04 ± 1.79	7.54 ± 3.20	<0.001 ***
ICIQ-FLUTS				
Score tot (0–48)	51	8.31 ± 5.09	6.80 ± 5.22	<0.001 ***
F score (0–16)	51	4.35 ± 2.76	3.90 ± 2.76	=0.041 *
V score (0–12)	51	1.66 ± 1.73	1.12 ± 1.50	=0.005 **
I score (0–20)	51	2.32 ± 2.52	1.82 ± 2.32	=0.009 **
Three-Day Bladder Diary				
Episodes of urgency	12	0.32 ± 0.74	0.36 ± 0.81	>0.999 ns
Episodes of UI	8	1.50 ± 0.76	0.50 ± 0.53	=0.031 *
Episodes of SUI	31	1.03 ± 0.41	0.64 ± 0.55	=0.002 **
ICIQ-FLUTS *in patients with ≥ 2 Cycle of Laser and ≤ 3 years of Diagnostic*				
Score tot (0-48)	11	7.73 ± 3.82	5.63 ± 3.50	=0.008 **
F score (0-16)	11	4.31 ± 2.32	3.15 ± 1.40	=0.027 *
V score (0-12)	11	1.81 ± 1.60	1.27 ± 1.60	=0.437 ns
I score (0-20)	11	2.31 ± 2.29	1.54 ± 1.61	=0.031 *

Interpretation of results: 61% of patients referred Stress Urinary Incontinence (SUI), 24% emergency episodes, and 16% Urgency Urinary Incontinence (UUI). VEL showed significant improvement in most GSM symptoms. Relieves vaginal dryness, itchiness, and superficial dyspareunia, due to reorganizing the vaginal mucosa, as already known. Significantly improves sexual function as analyzed by FSFI. In addition, it reduces most of the urinary symptoms. Primarily (UI), mainly stress episodes SUI. In addition, results suggest greater benefits when the time lag between VEL administration and the oncological diagnosis is fewer and with an increasing number of cycles.

The study recorded no adverse effects. Nevertheless, the main limitations are the subjective analysis by self-questionnaire and the lack of data on the long-term impact on managing GSM symptoms.

Conclusions: This study suggests that VEL effectively and safely treats GSM in breast and gynecological cancer survivors. In addition, exciting results on relieving urinary symptoms have been collected. However, we need more literature data to establish the efficacy of VEL.

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66 - Arabic translation and validation of the International Female Coital Incontinence Questionnaire (IFCI-Q)

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Introduction and aim of the study: Aim of the study was to translate the International Female Coital Incontinence Questionnaire (IFCI-Q) into Arabic (Egyptian) and validate it into among the Arabic population complaining of coital incontinence (CI).

Materials and methods: The original questionnaire has been translated and back-translated by an expert panel, and then developed the Arabic version of IFCI-Q. A small pilot study was performed on five females who complain of CI, for make sure that the questionnaire was understandable. Patients included in the study were divided in two groups: Group A comprised patients with almost three months history of CI, Group B comprised females who attended the urology clinic for other complaints, without CI. Test–retest reliability was determined by administering the questionnaire twice to patients belonging to Group A.

Results: 60 patients completed the IFCI-Q Arabic version. All patients considered it easy to understand and to complete. 83.3% of all patients complained of urinary symptoms: 83.3% reported OAB symptoms, 73.3% of them had stress urinary incontinence and 46.7% reported mixed urinary incontinence. Regarding the Group A, 10 patients had CI during penetration, 12 during orgasm and 8 had the combined form of CI. The Cronbach's alpha coefficients for the total score were high, indicating high internal consistency. The 8 questions have a high correlation and test–retest showed a k-values of each question very good. The comparison of the answers between the two groups demonstrated a significant difference.

Interpretation of results: Currently, only an Italian version of IFCI-Q is available. This study translated in Arabic — speak the questionnaire to allow its use in a large population. Main characteristics of this tool are the capability to ensure the occurrence of CI with clear and direct questions, and to differentiate the type of CI. The questionnaire investigates also the severity of CI and the relationship with LUTS. Moreover, the emotional condition of the women is also explored with two questions on the quality of life and depression.

Conclusions: The Arabic version of IFCI-Q is the first validated questionnaire on CI, that will allow to better assess this condition in a large population. The questionnaire demonstrates strong validity and reliability among the Arabic population with CI (see Fig. 1).

١-هل يحدث تسريب للبول أثناء الجماع ؟ نعم ١ لا ٠

٢-يحدث تسريب للبول اثناء الجماع: (برجاء اختيار إجابة واحدة فقط)

أثناء الأيلاج : ١

أثناء النشوة الجنسية : ١

كلتا الحالتين: ٢

٣-هل انت متاكدة ان هذا تسريب بول حقيقي؟ نعم ١ لا ٠

٤-خلال الشهر الماضي، كم مرة تعرضتي لحدوث تسريب للبول اثناء الجماع؟ (برجاء اختيار إجابة واحدة فقط)

ابدا،لم يحدث ٠

في بعض الاحيان ١

في كثير من الأحيان ٢

دائما ٣

٥- بعيدا عن الجماع، هل تعانين من أي اعراض بولية اخري؟ نعم ١ لا ٠

إذا كانت الإجابة بنعم، أي من الاعراض الاتية تعانين منه؟ (ممكن اختيار أكثر من إجابة)

زيادة عدد مرات التبول اثناء اليوم

زيادة عدد مرات التبول اثناء فترة النوم

احساس قوي للتبول دون سابق انذار (شعور ملح للتبول)

سلس بولي منذر (تسريب للبول مع شعور قوي مفاجئ ملح للتبول)

سلس بولي اجهادي (تسريب للبول مع المجهود مثل الكحة، العطس، الضحك، حمل أشياء ثقيلة)

سلس بولي مختلط (منذر واجهادي)

٦- هل يؤثر التسريب البولى اثناء الجماع على حياتك الجنسية؟ نعم ١ لا ٠

نعم يؤثر مما يجعلني اتجنب العلاقة الجنسية

نعم يؤثر مما يجعل الطرف الاخر يتجنب العلاقة الجنسية

نعم يؤثر مما يجعلنا نحن الاثنين نتجنب العلاقة الجنسية

٧-هل حدوث التسريب البولي اثناء الجماع يسبب اكتئابا لكي؟ (برجاء اختيار إجابة واحدة فقط)

ابدا،لم يحدث ٠

في بعض الاحيان ١

في كثير من الأحيان ٢

دائما ٣

٨-هل حدوث التسريب البولي اثناء الجماع يؤثرعلي قدرتك للوصول الي النشوة الجنسية؟ نعم ١ لا ٠

Fig. 1. Arabic version of IFCI Questionnaire.

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67 - The first 60 cases of robotic sacrocolpopexy with the novel Hugo RAS system: Feasibility, setting and perioperative outcomes

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Introduction and aim of the study: Robot-assisted surgery (RAS) is nowadays well established for major surgery across the world. The da Vinci robotic system (Intuitive) is up to today the most widely available platform. In recent years, other robotic platforms have emerged, and attention has now turned to define their potential advantages as well as their limits in comparison to pre-existing techniques and systems.

One of the newest systems on the market is Hugo RAS (MEDTRONIC Inc, USA), consisting of a remote open surgical console, independent manipulator arms and a connection node. Some of its features include remote HD–3D display with an eyetracking camera control system, integrated haptic interaction, and high configuration versatility.

We present the preliminary report of the first 60 cases of robotic sacrocolpopexy (RSCP) performed with the new HUGO RAS system with the aim of assessing its feasibility, safety and efficacy.

Materials and methods: We hereby present the results regarding the first 60 patients that underwent RSCP using the new Hugo RAS system. During surgery, intraoperative data as well as specific time parameters were measured, such as docking time, operative time and console time.

Results: Median operative time was 185 minutes (range 95–305). Median docking time was 4 minutes (range 2–12). Median estimated blood loss was 15 mL (range 10–100). For all procedures performed, no conversion to laparotomy was recorded. Four patients had adhesions requiring laparoscopic adhesiolysis before robotic docking. Fifty-six patients had associated procedures,

One minor intraoperative complication was reported, specifically a small opening of the anterior vaginal wall repaired intraoperatively with no postoperative consequences.

Table 1
Peri-operative data and outcomes.

Variables			
No. of patients		60	
Associated surgical procedures, *N* (%)		56 (93.3)	
Ventral rectopexy, *N* (%)		4 (6.7)	
Subtotal hysterectomy, *N* (%)		49 (81.7)	
Total hysterectomy, *N* (%)		1 (1.7)	
Salpingo-oophorectomy, *N* (%)		49 (81.7)	
Others, *N* (%)		6 (10)	
Docking time (min), median (range)		4 (2–12)	
Console time (min), median (range)		134 (49–235)	
Operative time (min), median (range)		185 (95–305)	
Laparoscopic adhesiolysis, *N*(%)		4 (6.7)	
EBL (mL), median (range)		15 (10–100)	
Time to discharge (days), median (range)		3 (2–4)	
Conversion, *N* (%)			
LPS		0	
LPT		0	
Intraoperative complications, *N (%)*		1 (1.7)	
Postoperative complications, *N (%)*		4 (6.7)	
Grade 1		1 (1.7)	
Grade 2		3 (5)	
VAS score, median (range)			
2 h		2 (1–3)	
4 h		2 (1–3)	
12 h		4 (1–8)	
24 h		3 (1–5)	
POP-Q stage, median (range)	Preoperative	Postoperative	*P* value
Anterior	3 (1–4)	0 (0–3)	**0.001**
Apical	3 (2–4)	0 (0–1)	**0.001**
Posterior	1 (0–4)	0 (0–1)	**0.001**
Stress urinary incontinence, *N* (%)	23 (38.3)	15 (25)	0.248
Urgency	29 (48.3)	10 (16,7)	**0.001**
Nicturia	11 (18.3)	5 (8,3)	0.210
Urge urinary incontinence	16 (26.7)	5 (8.3)	**0.001**
Hesitancy	44 (73.3)	3 (5)	**0.001**
Feeling of incomplete emptying	38 (63.3)	3 (5)	**0.001**
Constipation	19 (31.7)	13 (21.7)	0.238
Vaginal bulging	60 (100)	1 (1.7)	**0.000**
PGI-I, median (range)		1 (1–3)	

Median follow up was 4-months (3–6). Peri and postoperative data are shown in Table 1.

Interpretation of results: Urogynecological assessment at three months follow up showed surgical anatomic success in 96.7% of patients (<2 POP-Q stage), while subjective cure rate was 98.3%.

Our findings demonstrated that surgery did not differ from laparoscopic procedure in terms of intra and postoperative complications, hospital stay, and blood loss. The only differing aspect was OT, that was inevitably longer compared to standard laparoscopy, but similar to timings described for RSCP.

Conclusions: This is the first series analysing RSCP outcomes for POP using the new Hugo RAS system. Our results suggest effectiveness both in objective and subjective outcomes, with minimal intra and post operative complications. Larger series as well as longer follow-up are needed to better define advantages and possible disadvantages of this novel system.

Our work may represent the basis of future studies to confirm its safety, efficacy and feasibility, and may provide technical notes for other centres that wish to perform RSCP through this innovative system.

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68 - Recurrent pelvic prolapse after Pelvic Organ Prolapse Suspension: Analysis and treatment of an emerging clinical issue

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Introduction and aim of the study: Minimally invasive sacral colpopexy (SCP) is considered the gold standard treatment for apical prolapse, although technically challenging. Recently, Pelvic Organ Prolapse Suspension (POPS), a coloproctology-derived surgery similar to Dubuisson's lateral suspension (LLS), has become widespread in surgical practice and is increasingly used by surgeons as a simpler and more reproducible alternative to SCP, although there are no RCT studies comparing them in literature.

Starting from our clinical experience, patients subjected to this type of surgery experience a recurrence with certain characteristics involving the posterior compartment and the rectum. Our study aims to prospectively investigate and describe the anatomical characteristics of descensus in patients with prolapse recurrence after POPS and to analyze perioperative outcomes of women undergoing revision surgery.

Materials and methods: We prospectively enrolled 25 patients with symptomatic POP recurrence. Our primary objective was to characterize anatomical and functional data of patients with POP relapse after POPS. Our secondary objective was to analyze anatomical, subjective, and functional outcomes, after revision surgical treatment.

Results: Twentyfive women were enrolled and underwent surgery after POPS failure. Previous POPS surgery was performed in 64% of cases by a coloproctologist, and in 32% by gynecologist; 8 (30%) patients received a STARR procedure additionally. At baseline all patients showed a symptomatic high grade of posterior prolapse, 64% and 20% had a clinically relevant apical and anterior vaginal wall prolapse respectively. Defecography showed the presence of rectocele in all cases while in 84% an enterocele was found. Internal recto-rectal prolapse was found in 6 (24%) of women, while 17 (68%) showed a recto-anal intussusception.

All patients were symptomatic for bulge and ODS symptoms. Fifteen (60%) patients underwent total removing of POPS mesh and 8 (32%) patients underwent subtotal hysterectomy. For the reconstructive phase, 25 (100%) ventral rectopexy (VR) were performed, while 17 (64%) SCP were needed to resuspend vaginal apex after POPS mesh excision. Intra and post operative results are exposed in Table 1. After a median follow up of 12 months (3–18) no recurrence were found.

Table 1
Intra and postoperative results.

Items	Variables
All cases, n	25
Time to POPS relapse surgery (months), median (range)	24 (12-36)
Procedures, n (%)	
Total Mesh excision	15 (60)
Sacral Colpopexy with mesh	16 (64)
Ventral Rectopexy with mesh	25 (100)
Subtotal Hysterectomy	8 (32)
Adnexetomy	17 (68)
Operative time (minutes), median (range)	196 (100-302)
Estimated blood loss (ml), median (range)	20 (10-100)
Hospital stay (day), median (range)	3 (2-3)
Anatomical cure rate*, n (%)	25 (100)
Intraoperative complications, n (%)	0 (0)
Post-operative complications**, n (%)	1 (4)
I	0 (0)
II	1 (4)
>=III	0 (0)
Mesh-related complications, n (%)	1 (4)

(*continued on next page*)

Table 1 (*continued*).

Postoperative outcomes			
POP Q points*	Preoperative	Postoperative	P value
C point (cm), median (range)	2 (−8 to +4)	−7 (−8 to −6)	**0,000**
Ba point (cm), median (range)	−2 (−3 to +2)	−3 (−2 to −3)	**0,000**
Bp point (cm), median (range)	4 (2 to 8)	−3 (−3 to −2)	**0,000**
TVL (cm), median (range)	10 (8-12)	10 (7-12)	0,439

Interpretation of results: Our series reveals a pattern of recurrences after POPS with specific features often involving the posterior compartment. The development of subsequential entero-rectocele, especially in patients with a posterior vaginal prolapse, is due to the huge modification of the vaginal axes that lateral suspension gives, with an opening of recto-vaginal space in which bowel and rectum can easily get in. In patients with isolated entero-rectocele we performed VR to correct the ODS symptoms and the posterior anatomical defect. In patients with multicompartmental prolapse we decided to resuspend the vaginal apex with SCP with concomitant removal of the POPS mesh.

Conclusions: POPS relapses are usually represented by huge entero-rectocele with severe defecatory symptoms. The management of these patients must be referred to a high-volume center, because of the complexity of the surgery and the need of multidisciplinary approach. VR and SCP show encouraging outcomes in this setting of patients while further study with longer follow up are required to confirm these data.

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69 - Telerehabilitation in the treatment of female urinary incontinence

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Introduction and aim of the study: First experiences with telehealth in the treatment of female urinary incontinence (UI) look promising. According to guidelines, pelvic floor rehabilitation should be one of the first line treatments in case of UI.

The aim of this study is to evaluate the feasibility and the efficacy of pelvic floor rehabilitation performed with a telemedicine approach, in women affected by UI.

Materials and methods: Patients with vaginal delivery occurred in the last two years who joined the urodynamic ambulatory due to UI between October and December 2022, were consecutively enrolled in the study. Women underwent a pelvic floor examination according to ICS POPQ Classification and 3D transperineal ultrasound (3DUS) when recruited. PC test, endurance and ICIQ-UI short form questionnaire were recorded. Patients, organized into groups of 6–7 women, participated to two televisits performed on Maia Connected Care platform using the app "Maia Televisita". During the televisit a gynaecologist and a nurse trained in pelvic floor rehabilitation illustrated some exercises aimed at contract and mobilize pelvic floor muscles. All the patients performed the exercises under medical vision. After each lesson, twice a week for two weeks, patients had to independently perform a series of exercises selected by the doctor through the app "Maia Connected Care" in asynchronous mode. This application allows to visualize the videos of the assigned exercises and send a feedback when the activity was over. Pelvic floor examination, 3DUS and ICIQ-UI short form questionnaire were repeated at the end of the rehabilitative cycle, when also PGI-I questionnaire was compiled.

Results: 19 patients were included in the study. Mean age was 33 years (8 DS), mean BMI 20,7 (DS2), neonatal mean weight was 3612 g (DS 792); 9 had more than 1 vaginal delivery. 4 patients underwent episiotomy, 6 a II and 1 a IIIA grade obstetrical tear. 5 patients complained mixed urinary incontinence, mean initial ICIQ-UI short form score was 12 (DS 3). Mean initial Aa POPQ point was -1,1 (DS 0,9) with a mean PC test 1 (DS 0,6) and mean endurance 3,8 (DS 0,4). After completed the rehabilitative sessions, mean Aa POPQ point was -1,7 (DS 0,8) with a mean PC test 2,2 (DS 0,4) and mean endurance 7(DS 1). Patients reported significant improvement of urinary incontinence with a mean ICIQ-UI score of 5,4 (DS 3,4, p 0,02). Mean PGI-I was 1 (DS 1,2). The mean area of the hiatus in the axial plane under maximum contraction by transperineal ultrasound, was 16 (DS 4,6) cm2 before the treatment and 14,7 (DS 3,1) after the cycle.

Interpretation of results: Telerehabilitation promoted a significant improvement in urinary symptoms and quality of life.

Clinical evaluation and 3DUS demonstrated an enhancement in pelvic floor muscles function.

Conclusions: Telerehabilitation is an effective and promising tool in the treatment of urinary incontinence.

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70 - Italian national big data on urodynamics: Relationship between clinical and urodynamics diagnosis

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Introduction: To assess the use relationship between clinical and urodynamics (UD) diagnosis.

Materials and methods: This was a national multicenter study on correspondence between clinical indications and UD results in Italy in the pre-Covid era 2018–19. Additional UD diagnoses were also recorded. This period has been chosen to have a real UD management scenario, because access to hospitals and UD offices has been reduced in the last 2 years due to the Covid-Sars limitations. Urological and gynecological centers were involved. Data on men and women were retrospectively collected between January and December 2022.

Results: Centers involved were 13: 11 urological, 2 gynecological. Data were collected on 2358 patients, 1329 (56.4%) women with median age 62 y.o and 1029 men (43.6%) with median age 68 y.o. The relationship between the main females indications and UD outcomes, with additional UD diagnoses, are reported in Table 1. In males, correspondences were as follows: bladder outlet obstruction (BOO) in 79.1%, urinary retention (UR) in 81.9%, iatrogenic urinary incontinence (UI) in 81%, overactive bladder syndrome (OAB) in 81.7%, voiding dysfunctions (VD) in 86.9%, concomitant BOO and OAB in 87.2%.

Table 1
Relationship between the main females indications and UD outcomes, with additional UD diagnoses.

Indications	Correspondence	SUI UD	UUI UD	MUI UD	DO UD	DUA UD	VD UD
SUI	74%	74%	2.3%	4.2%	10.3%	11.5%	10.3%
UUI	37.5%	11.7%	37.5%	5.4%	60.8%	11.7%	21.2%
MUI	19%	46.5%	26.4%	19%	49.3%	15%	15.3%
VD	53.1%	5.2%	5.2%	1%	23.7%	36.1%	53.1%
POP	–	18.6%	11.9%	3.7%	35.8%	14.9%	53.7%

UD: urodynamics; SUI: stress urinary incontinence; UUI: urgency urinary incontinence; MUI: mixed urinary incontinence; DO: detrusor overactivity; DUA: detrusor underactivity; VD: voiding dysfunction, POP: pelvic organ prolapse.

Interpretation of results: The correlation between clinical indications and UD outcomes was high in males, so outpatient evaluation was highly reliable. In females, the match rate was >50% in SUI and VD conditions only. The most misleading clinical diagnoses were those related to urgency (UUI and MUI); in the latter, UD demonstrated different diagnoses in many patients. This finding highlights the relevance of UD investigation in female UI to obtain a correct diagnosis and avoid further unnecessary treatment. Among women with SUI, approximately 10% had detrusor overactivity (DO) or voiding disorders. In patients with symptomatic POP, UD demonstrated that VD and DO were often associated, while DUA occurred only in a smaller proportion of women.

Conclusions: A high relationship between clinical indications and UD results was found in men, while in females only in case of SUI and VD. UD was still useful in helping to reach a correct diagnosis avoiding potential further unnecessary treatments.

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71 - Onabotulinum toxin A (BTX-A) intradetrusor injections in children with neurogenic bladder dysfunction: Long-term histological effects on bladder wall

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Introduction and aim of the study: In the last years BTX-A has gained increasing popularity for neurogenic bladder dysfunction (NBD). To maintain its efficacy, repeated BTX-A intradetrusor injections (BTX-AI) are required over time, with unknown effects on bladder wall in children. We analyzed histological bladder modification in children treated with repeated BTX-AI.

Materials and methods: Children with NBD not responsive to I line therapy have been treated with BTX-A, according to protocol approved by our Ethical Committee (200602R001820). To evaluate edema, inflammation and fibrosis and any other histological change, protocol included bladder wall surveillance with endoscopic cold cup biopsy. Edema, inflammation and fibrosis were classified as 0: none, 1: mild, 2: moderate, 3: severe. Patients who underwent ≥ 5 BTX-AI were

considered. Results of biopsies at T0 (baseline, no previous BTX-AI) were statistically compared with those at T4 (4 previous BTX-AI), T5 (5 previous BTX-AI) and T6 (6 previous BTX-AI). Moreover, data were statistically compared between patients with congenital and acquired neurologic lesion. Fisher exact test, Wilcoxon matched pairs test and nonparametric Mann–Whitney U test were used for statistical analysis. A p-value ≤0.05 was considered statistically significant.

Results: From 1997 to 2022, 70 patients received ≥ 5 BTX-AI: 36/70 children were included, having all biopsy's specimen eligible for histological examination. NBD was due to congenital anomalies in 25 patients and to acquired disorders in 11 cases. 27 patients showed detrusor overactivity; the remaining 9 children had high-pressure low compliant bladder. Mean age at T0 was 5.6 (range:1.8–18.5) years; mean number of BTX-AI was 7.4 (range: 5–16). BTX-AI were repeated every 12.3 months (range: 3.6–33.4 months).

Histological findings are shown in Table. No statistical differences were found between congenital and acquired lesions.

Interpretation of results: Although not statistically significant, progressive reduction of fibrosis with increasing number of treatments was found. This data seem to confirm that repeated BTX-AI can prevent fibrosis, reducing risk of evolution towards low compliant bladder. Slight increase in edema and inflammation is difficult to explain: it might be due to recurrent urinary tract infections in some patients.

Conclusions: As in adult population, repeated BTX-AI are not correlated to significant histological alterations in children.

	T0	T4	T5	T6
Patients (number)	36	36	25	17
EDEMA: No of pts (%)	20 (56%)	24 (67%)	19 (76%)	13 (76%)
Mild	15 (75%)	19 (79%)	19 (100%)	12 (92%)
Moderate	3 (15%)	4 (17%)	0	1 (8%)
Severe	2 (10%)	1 (4%)	0	0
P value (vs T0)*		0.47	0.12	0.23
INFLAMMATION: No of pts (%)	27 (75%)	32 (89%)	19 (76%)	15 (88%)
Mild	20 (74%)	22 (69%)	17 (89%)	13 (87%)
Moderate	5 (19%)	9 (28%)	2 (11%)	2 (13%)
Severe	2 (7%)	1 (3%)	0	0
P value (vs T0)*		0.22	1	0.47
FIBROSIS: No of pts (%)	12 (33%)	8 (22%)	8 (32%)	5 (29%)
Mild	10 (83%)	8 (100%)	8 (100%)	5 (100%)
Moderate	2 (17%)	0	0	0
Severe	0	0	0	0
P value (vs T0)*		0.43	1	1

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72 - Intraneural pudendal nerve recording and stimulation in animal models for the closed-loop control of lower urinary tract dysfunction

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Introduction and aim of the study: Pudendal neuromodulation has been proposed as an alternative in patients suffering from lower urinary tract dysfunction unresponsive to sacral neuromodulation. However, continuous stimulation may cause neuronal adaptation. Adaptive pudendal neuromodulation showed increased bladder capacity and voiding effectiveness, hence a closed-loop (CL) system for stimulation based on bladder fullness may improve long-term efficacy. We present a preliminary study on pig pudendal nerve (PN) recording to predict bladder distension and selective stimulation for bladder-control regulating muscle activation.

Materials and methods: Three farm pigs under general anesthesia underwent transgluteal surgery for monolateral pudendal nerve access. Two subjects were implanted with only one TIME electrode; the third was implanted with two TIMEs and a cuff electrode. PN activity was recorded at empty and full bladder condition. k-NN classifier based on feature extraction with Nested Crossed Validation algorithm was built to decode bladder filling. Hook electrodes were placed on the external urethral sphincter (EUS), external anal sphincter (EAS), and perineal muscles. Electromyography (EMG) activity was recorded while the PN was stimulated. Cuff stimulation was used to assess maximal muscle contraction injecting 2 mA current. TIMEs were used for single active sites (AS) stimulation with current pulses ranging within 10-600 μA at 3 Hz. EMG data were filtered within 10–250 Hz. Recruitment curves (RCs) for each muscle and AS were derived by normalizing the EMG values with the one obtained with cuff. Selectivity index (SI) was computed as ratio of the recruitment of a muscle to the sum of all muscles recruitment. An AS was considered muscle-selective if both normalized EMG activity and the SI were greater than 0.3.

Results: On the first and second subjects empty and full bladder states were classified, with an accuracy of 87 ± 3% and 82 ± 1% respectively. Required stimulation current to achieve at least 30% muscular activation with respect to the normalization curve was 50 μA for perineal muscle and EAS while 110 μA for the EUS, with EMG value of 0.13 mV. SI was higher than the 0.3 threshold in 2 of 19 ASs for EUS and 6 of 19 ASs for perineum while higher than 0.4 for 4 of 19 ASs for EAS.

Interpretation of results: PN signals proved to carry information regarding the bladder fullness. Intraneural electrodes proved to selectively activate innervated muscle. EUS activation required greater stimulation current than for EAS, and few fascicles have been selectively activated. These findings support the need of EUS selective stimulation avoiding EAS side activation. Long-term impact of this method remains to be examined.

Conclusions: Results show the ability to predict bladder fullness through PN signals and selectively control the innervated muscles. Our outcomes may lead to intraneural pudendal nerve CL device implementation for bladder function restoration.

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73 - Does post-voided residual ratio predict trifecta outcome after transurethral resection of prostate

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Introduction and aim of the study: Recently, PVR-ratio has been suggested as a possible predictor of bladder outlet obstruction. Aim of our study was to evaluate the role of PVR-ratio for favourable trifecta outcome in patients with lower urinary tract symptoms and benign prostatic enlargement (LUTS-BPE) undergoing transurethral resection of prostate (TURP).

Materials and methods: From 2015 onward, a consecutive series of patients with LUTS-BPE undergoing transurethral resection of prostate were prospectively enrolled. Patients were evaluated using the International Prostate Symptom Score (IPSS), uroflowmetry and transrectal ultrasound prostate volume assessment (TRUS). PVR urine and the percentage of PVR to bladder volume (voided volume+PVR) (PVR-R) were evaluated. Outcomes were evaluated considering the trifecta favourable outcome which was defined as a combination of the following items: (1) no perioperative complications, (2) postoperative IPSS < 8, and (3) postoperative Qmax > 15 ml/s.

Results: 143 patients were enrolled with a median age of 70 years (IQR 65/73), a median BMI of 25 kg/m2 (IQR: 24/28) and a median PSA of 4 ng/ml (IQR 3/8). Preoperatively, median Qmax was 8 (6/10) ml/s, median IPSS was 17 (IQR 13/23) and median TRUS was 60 ml (IQR: 49/82). Overall 83/143 (58%) presented a positive trifecta outcome.

Interpretation of results: On multivariate analysis, IPSS and Qmax were predictors of a positive trifecta outcomes. PVR-ratio did not reach the level of an independent predictor of a positive trifecta outcome.

Conclusions: Preoperative IPSS and preoperative Qmax predict trifecta outcome after TURP. The post voided residual ratio does not predict trifecta outcome after TURP (see Table 1).

Table 1
Univariate and multivariate binary logistic regression to predict trifecta outcome TURP.

	Univariate		Multivariate	
	Odds Ratio	p	Odds Ratio	p
Age	0,97 (0.92-1.02)	0.258		
Preop IPSS	0,94 (0,89-0,99)	0.025	0,94 (0.88-0.99)	0.046
Prostate Volume	0.99 (0.98-1.01)	0.528		
Qmax	1.21 (1.07-1.36)	0.002	1.26 (1.10-1.44)	0.001
PVR-Ratio	1.11 (0.10-11,9	0.930		

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74 - Invasive urodynamics in patients with refractory overactive bladder: A modified Delphi consensus

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Introduction and aim of the study: To develop a modified Delphi consensus statement regarding the use of urodynamics in refractory OAB in women.

Materials and methods: A Systematic review of Pubmed, Embase and Scopus was performed to evaluate the available evidence on the use of urodynamics in refractory OAB in women. Overall, only 5 studies with poor evidence were identified, therefore a consensus statement was performed. Four rounds of Delphi were performed and final statements were submitted anonymously using Survey Monkey. All statements were voted on a 1 to 10 scale. In order to approve the statement consensus should be >80%. In case of a consensus between 60 and 80% the statement was discussed by all the members of the consensus and submitted again in a fourth round.

Table 1

Statement	Agreement
Patients with refractory OAB candidates for Botox treatment need invasive urodynamics if voiding dysfunction is suspected.	87%
Patients wit. refractory OAB n candidates for Sacral Neuromodulation need invasive urodynamics to better understand physiopathology	88%
Patients with refractory OAB candidates for augmentation cystoplasty need video-urodynamics before treatment.	92%

Results: Overall, five studies were identified evaluating the role of urodynamics after medical treatment for OAB in women. No randomized clinical trials were retrieved, and the level of evidence was low. In the first round based on four expert opinion and on the evidence retrieved five statements were developed. On round two a group of ten experts discussed and modified the statements to avoid redundancy and improve readability before submitting it to the expert panel resulting in three final statements. On round three the statements (Table 1) were submitted to 40 experts which voted the statements. Results of the consensus are written in Table 1.

Interpretation of results: The following statements reached a valid agreement on Round 3:

Patients with refractory OAB candidates for Botox treatment need invasive urodynamics if voiding dysfunction is suspected (87%).

Patients wit. refractory OAB n candidates for Sacral Neuromodulation need invasive urodynamics to better understand physiopathology (88%).

Patients with refractory OAB candidates for augmentation cystoplasty need video-urodynamics before treatment (92%).

Conclusions: The present consensus statement answers some unmet needs in patients with OAB not responder to medical treatment. The lack of evidence in this setting warrants well designed clinical trials to answer these questions.

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75 - Impact of diet and physical activity on urinary symptoms and sexual dysfunction in young healthy adults

Cosimo De Nunzio [i], Riccardo Lombardo [i], Antonio Cicione [i], Giorgia Tema [i], Nicola Ghezzo [i], Alessio Guidotti [i], Luca Sarcinelli [i], Daniele Fiasconaro [i], Filippo Zammitti [i], Antonio Franco [i], Sara Riolo [i], Francesco Del Giudice [ii], Stefano Salciccia [ii], Antonio Carbone [iii], Antonio Pastore [ii], Costantino Leonardo [ii], Alessandro Sciarra [ii], Giorgio Franco [ii], Andrea Tubaro [i]

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Introduction and aim of the study: To evaluate the impact of diet and physical activity on urinary symptoms and sexual dysfunction in young healthy adults.

Materials and methods: A population of healthy young adults (<30 years old) were prospectively enrolled. All the young adults were evaluated with clinical and pharmacological history. Young adults with comorbidities or taking drugs were excluded from the analysis. Diet and physical activity habits were evaluated using dedicated questionnaires (GPAQ and mini-ECCA respectively) Urinary symptoms were evaluated with IPSS and OAB scores and sexual function was evaluated with IIEF. Correlations were evaluated using Pearson coefficient. Univariate and multivariate logistic regression were used to evaluate risk factors for urinary and sexual dysfunction.

Results: Overall, 284 young adults (142 males and 142 women) with a median age of 26 (24/28) years were prospectively enrolled. Median IPSS was 4 (2/8), median OAB score was 22 (20/25) and median IIEF was 15 (15/15). On physical activity questionnaire 71/284 (25%) reported mild physical activity, 61/284 (22%) reported moderate physical activity and 150/284 (53%) reported a high physical activity. Median mini-ECCA score was 43 (40/46). Overall, 169/284 (60%) presented an IPSS $\geq$ 3. Patients with performing moderate physical activity presented similar rates of urinary symptoms when compared to patients performing mild physical activity. Heavy physical activity was associated with a higher risk of urinary symptoms when compared to moderate/mild physical activity (age adjusted OR: 2.11, $p = 0,022$).

Interpretation of results: Patients with performing moderate physical activity presented similar rates of urinary symptoms when compared to patients performing mild physical activity. Heavy physical activity was associated with a higher risk of urinary symptoms when compared to moderate/mild physical activity (age adjusted OR: 2.11, $p = 0,022$).

Conclusions: In young adults, heavy physical activity is associated with an increased risk of urinary symptoms. Diet has no impact on urinary symptoms.

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76 - Do serum inflammatory indexes predict prostatic inflammation after prostate surgery?

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Introduction and aim of the study: Aim of our study was to evaluate the role of inflammatory indexes in predicting inflammation in patients undergoing prostate surgery.

Materials and methods: From 2015 onward, a consecutive series of patients undergoing prostate surgery (Radical prostatectomy, TURP, HoLep, Simple Prostatectomy) were prospectively enrolled. Patients were evaluated using the International Prostate Symptom Score (IPSS), uroflowmetry and transrectal ultrasound prostate volume assessment (TRUS). The day before surgery serum samples were drawn and the following indexes were calculated: neutrophil to lymphocyte ratio (NLR), platelet to lymphocyte ratio (PLR) and monocyte to lymphocyte ratio (MLR). All surgical specimens were evaluated for the presence of inflammation using the IRANI score. Sub-analysis were performed for inflammation and aggressiveness sub-scores . Correlations and logistic regression analysis were used for analysis.

Results: 220 patients were enrolled with a median age of 70 years (IQR 65/73), a median BMI of 25 kg/m2 (IQR: 24/28) and a median PSA of 4 ng/ml (IQR 3/8). A total of 140/220 (63%) presented a severe inflammation according to the IRANI score. On sub-scores analysis, patients with severe inflammation (>1) presented lower median NLR (4,22 vs 16,55, $p < 0,05$), lower median PLR (137 vs 402; $p < 0,05$) and lower median MLR (43% vs 84%; $p < 0,05$).

Interpretation of results: In terms of overall IRANI score no correlation was found between IRANI score and inflammatory indexes.

Conclusions: A simple blood count may suggest prostatic inflammation before prostate surgery. Future studies should evaluate its impact on adverse surgical outcomes.

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77 - Invasive urodynamics in patients with complicated urinary incontinence: A modified Delphi consensus

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Introduction and aim of the study: To develop a modified Delphi consensus statement regarding the use of urodynamics in complicated urinary incontinence (UI).

Materials and methods: A Systematic review of Pubmed, Embase and Scopus was performed to evaluate the available evidence on the use of urodynamics in complicated UI in women. Overall, only 3 studies with poor evidence were identified, therefore a consensus statement was performed. Four rounds of Delphi were performed and final statements were submitted anonymously using Survey Monkey. All statements were voted on a 1 to 10 scale. In order to approve the statement consensus should be >80%. In case of a consensus between 60 and 80% the statement was discussed by all the members of the consensus and submitted again in a fourth round.

Results: Overall, three studies were identified evaluating the role of urodynamics in complicated urinary incontinence in women. No randomized clinical trials were retrieved, and the level of evidence was low. In the first round based on four expert opinion and on the evidence retrieved five statements were developed. On round two a group of ten experts discussed and modified the statements to avoid redundancy and improve readability before submitting it to the expert panel resulting in three final statements. On round three the statements (Table 1) were submitted to 40 experts which voted the statements. Two statements needed a round four and did not reach consensus after discussion. Results of the consensus are written in Table 1.

Table 1

Statement	Agreement Round 3	Agreement Round 4
Patients with complicated UI and upper urinary tract dilation need Video-urodynamics	83%	
Patients with SUI and radiotherapy need to perform invasive urodynamics	73%	60%
Patients with SUI and pelvic pain need to perform invasive urodynamics	65%	55%
Patients with SUI and voiding dysfunction need to perform invasive urodynamics	85%	
Patients with recurrent SUI need to perform invasive urodynamics	83%	

Interpretation of results: The following statements reached a valid agreement on Round 3:

- Patients with complicated UI and upper urinary tract dilation need Video-urodynamics (83%)
- Patients with SUI and voiding dysfunction need to perform invasive urodynamics (85%)
- Patients with recurrent SUI need to perform invasive urodynamics (83%)

Two statements needed a round four and did not reach consensus after discussion:

- Patients with SUI and radiotherapy need to perform invasive urodynamics (60%)
- Patients with SUI and pelvic pain need to perform invasive urodynamics (55%)

Conclusions: The present consensus statement answers some unmet needs in patients with complicated UI. The lack of evidence in this setting warrants well designed clinical trials to answer these questions.

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78 - Urodynamics predictive value of postoperative urinary retention after female stress urinary incontinence surgery

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Introduction and aim of the study: To assess whether preoperative urodynamics (UD) may be predictive of post-operative urinary retention (POUR) after surgery for female stress urinary incontinence (SUI).

Materials and methods: A systematic review according to PRISMA rules was performed on September 2022 in PubMed, Medline, Embase. Research key-words were: POUR, post-void residual urine (PVR), urodynamics (UD), pressure-flow-study, urodynamic testing, SUI, SUI surgery, female surgery, sling, middle urethral sling (MUS), pubo-vaginal sling (PVS), Burch, mini-sling, POU/voiding complications. Original papers in English language on adult female populations were included, while reviews and meta-analysis, expert-opinions statements, case reports, pediatric were excluded. Some papers could describe results of various surgical procedures and sometimes multiple UD parameters were reported as predictive of POUR in the same paper.

Results: Among 1589 papers found, only 18 could be included in the analysis, with data on 3598 women treated with all type of SUI surgical procedures, mostly MUS (66.7%), PVS (33.3%), others (11.1%). Mean POUR rate was 14.9%. POUR definition was a PVR > 100 ml in 27.8%, PVR > 150 ml in 16.7%, PVR > 200 ml in 16.7%, no definition or simply need to catheterization in 38.9%. UD was reported as predictive of POUR in 11 papers (61.1%), while not in the remaining (38.9%). Main UD parameters predictive of POUR were: detrusor underactivity in 6 papers (33.3%), Valsalva voids in 6 (33.3%), preoperative Qmax in 4 (22.2%), Pdet 12 cmH20 in 2 (11.1%).

Interpretation of results: Our study documented that the UD predictive value of POUR is still uncertain. Limited data are available on this topic and most of them reported that UD was effective in predicting the possibility of POUR occurrence. However, in nearly 40% of papers UD failed as a predictor. The UD parameters predictive of POUR were poorly uniform, although the most represented were detrusor underactivity and Valsalva voids, both of which could be signs of voiding dysfunction. Concomitant use of several UD parameters could increase the predictive value of this preoperative investigation.

Conclusions: The UD predictive value of POUR is under researched and still debated. Most of the data showed that UD could be a potential predictor and parameters representing voiding dysfunction were the most involved.

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79 - Italian national big data on urodynamics: How the investigation is performed

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Introduction: To assess how urodynamics (UD) is performed in most of the main Centers of Italy.

Materials and methods: This was a multicenter study evaluating which UD tests were performed in urological and gynecological centers of Italy in the pre-Covid era 2018–2019. This period has been chosen to have a real UD management scenario, because access to hospitals and UD offices has been reduced in the last 2 years due to the Covid-Sars limitations. Data on men and women were retrospectively collected between January and December 2022.

Results: Centers involved were 13: 11 urological, 2 gynecological. Data were collected on 2358 patients, 1329 (56.4%) women (median age 62 y.o),1029 men (43.6%) (median age 68 y.o.). In Table 1 are reported the main UD tests.

Table 1
UD tests performed overall and according to specif conditions on males and females.

%	Cystometry		P-F study		VLPP		UPP		UF		EMG	
	F	M	F	M	F	M	F	M	F	M	F	M
Overall	79.9	79.0	80.9	91.5	52.6	12.4	46.4	17.5	88.4	65.8	12.6	11.1
SUI n 261	89.7	–	60.2	–	63.6	–	62.8	–	95.8	–	9.6	–
UUI n 240	81.3	–	85.0	–	51.3	–	39.2	–	85.0	–	7.5	–
MUI n 274	84.7	–	77.4	–	60.2	–	46.4	–	88.3	–	6.6	–
POP n 134	81.3	–	93.3	–	66.4	–	38.8	–	95.5	–	9.7	–
Iatrogenic UI n 106	–	61.3	–	97.2	–	30.2	–	41.5	–	75.5	–	3.8
BOO n 307	–	88.6	–	95.1	–	7.2	–	7.8	–	67.4	–	9.5
OAB n 168	–	60.7	–	96.4	–	1.8	–	19.6	–	79.2	–	7.7
UR M n 140 UR F n 68	82.4	93.6	97.1	75.0	47.1	7.1	23.5	8.6	80.9	41.4	30.9	3.6
NB M n 109 NB F n 46	84.8	87.2	82.6	89.9	43.5	11.0	23.9	12.8	73.9	59.6	69.6	42.2

P-F: pressure-flow; VLPP: Valsalva Leak Point Pressure; UPP: Urethral Pressure Profile; UF: uroflowmetry; EMG: electromiìography; SUI: stress urinary incontinence; UUI: urgency urinary incontinence; MUI: mixed urinary incontinence; POP: pelvic organ prolapse; BOO: bladder outlet obstruction; OAB: overactive bladder syndrome; UR: urinary retention; NB: neurogenic bladder.

Interpretation of results: Overall, in both sexes only about 80% of UD included both cystometry and Pressure-Flow study (P-F S). This was surprising because both of these studies should always be performed to obtain a functional assessment. As expected, urethral functional test (UFT) were mainly used in women. Interestingly, the use of two UFTs in female stress urinary incontinence (SUI) has been reported at the same rates (63%). Therefore, VLPP and UPP were both performed in these patients and neither was preferred. Noteworthy, no UFT was performed in approximately 40% of these patients. A striking finding was the higher overall rate of UF in females than men, although voiding LUTS/ BOO was a more common indication to UD in males. In women with symptomatic pelvic organ prolapse (POP) and in males with BOO, P-F S was the main UD test, likely because voiding obstruction was the most researched finding. Surprisingly, even in OAB males, the most commonly used UD exam was P-FS and was performed more commonly than cystometry, although in these cases, in addition to BOO, detrusor overactivity should also be investigated by cystometry. EMG has been widely used in cases of neurogenic bladder in both sexes, and also in women with urinary retention probably because this test can help in the diagnosis of dysfunctional voiding and dyssynergia.

Conclusions: This study showed that not all UD investigations included both cystometry and P-F S as would be recommended. UFTs were both performed in women with SUI with same rates. In females with symptomatic POP and in men with BOO, P-F S was the preferred test as voiding obstruction research tool. EMG was mainly used in conditions with potential underlying dysfunctional voiding.

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80 - Italian national big data on urodynamics: Do we use nomograms?

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Introduction: To assess the use of nomograms for the analysis of urodynamics (UD) results in Italy.

Materials and methods: This was a national multicenter study on the use of nomograms in UD in the pre-Covid era 2018–19. This period has been chosen to have a real UD management scenario, because access to hospitals and UD offices has been reduced in the last 2 years due to the Covid-Sars limits. In some cases, multiple nomograms were used for the assessment of the same condition in the same patient. Urological and gynecological centers were involved. Data on men and women were retrospectively collected (Jan–Dec 2022).

Results: Centers involved were 13: 11 urological, 2 gynecological. Data were collected on 2358 patients, 1329 (56.4%) women with median age 62 y.o and 1029 men (43.6%) with median age 68 y.o. In females, nomograms were used as follows: detrusor underactivity (DUA) in 47.2%, bladder outlet obstruction (BOO) in 63.8%, uroflowmetry (UF) in 45.8%. In males, nomograms evaluation was reported as follows: DUA in 59.6%, BOO in 84.2%, UF in 66.5%. The main nomograms used are reported in Table 1.

Table 1
Main nomograms used in females and males.

Nomograms	Females %	Males %
SCHAEFER BOO	–	55.1
SCHAEFER DUA	11.6	55.1
ABRAMS–GRIFFITHS	–	20.9
BOOI	–	69.4
BCI	0.15	42.4
PIP-1	46.1	–
BVE	49.5	–
JEONG	42.6	–
ARBABANEL	42.6	–
BLAIVAS–GROUTZ	34.5	–
ABRAMS	3.5	–
ICS FEMALE BOO	6.4	–
GREENWALL SOLOMON	1.5	–
SIROKY–KRANE	43.6	34.5
LIVERPOOL	51	36.6

BOO: bladder outlet obstruction; DUA: detrusor underactivity; BOOI: Bladder Outlet Obstruction index; BCI: bladder Contractility Index.

Interpretation of results: Nomograms were largely used in both sexes, with higher rates in males. Most of the nomograms were developed on men and, so, can be used only in males. This issue may explain the higher prevalence of nomogram assessment in men than in women. The lack of worldwide accepted and standardized nomograms for female DUA could be the reason for the incorrect use of some male DUA nomograms (Schaefer's contractility and BCI) for females. UF tracing were analyzed with nomograms more frequently in males than in females. In the latter, the Siroky–Krane nomogram, which was developed on men, was used in many cases. Blaivas–Groutz nomograms was still the most used in the female BOO assessment, while Solomon–Greenwell was poorly used, although it was reported to have the same sensibility of Blaivas–Groutz, with a very higher specificity. In males, BOO was mainly analyzed with BOOI nomograms, the newer ICS tool than Schaefer's nomograms. However, the latter was still used in more than half of the cases for both the assessment of BOO and detrusor contractility. Surprisingly, BCI was poorly used in men, less than in half of the cases.

Conclusions: Nomograms have been used extensively in both genders, showing that they are tools considered to aid in the assessment of UD. In females, careful use should avoid inappropriate UD analyzes with male-developed nomograms.

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81 - Italian national big data on urodynamics: Epidemiology and indications

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Introduction: To assess epidemiological data and indications to urodynamics (UD) in most of the main Centers of Italy.

Materials and methods: This was a national multicenter study collecting the epidemiological data and indications to UD in Italy in the pre-Covid era 2018–2019. This period has been chosen to have a real UD management scenario, because access to hospitals and UD offices has been reduced in the last 2 years due to the Covid–Sars limitations. Urological and gynecological centers were involved. Data on men and women were retrospectively collected between January and December 2022.

Results: Centers involved were 13:11 urological and 2 gynecological. Data were collected on 2358 patients, 1329 (56.4%) women with median age 62 y.o and 1029 men (43.6%) with median age 68 y.o. In 13.7% of the women multiple indications (up to 78 different combined indications) to UD were recorded, while in men in 12% (up to 31 different combined indications). In females, main indications to UD were mixed urinary incontinence (MUI) 19.8%, stress UI (SUI) 18.9%, urgency UI (UUI) 17.4%, symptomatic pelvic organ prolapse (POP) 9,7%, voiding dysfunction (VD) 7%. Overactive bladder syndrome (OAB) was an indication to UD in only 1.4%, neurogenic bladder (NB) in 3.3%, urinary retention (UR) in 4.9%. In males, leading indications to UD were voiding LUTS/bladder outlet obstruction 30.1%, OAB 16.5%, UR 13.7%, NB 10.9%, iatrogenic UI 10.4%, post-operative complications 4.4%.

Interpretation of results: As expected, women were the majority of patients undergoing UD; however, a large part of UD was reserved for men (over 40%). Thus, UD can still be considered an investigative tool for both genders.
In most cases, only one leading indication was reported, demonstrating that a response from UD to a major issue was usually required. In females, UI was the main cause of UD choice (overall 56.1%); UD was poorly used to investigate voiding disorders such VD, UR (overall 11.9%) and symptomatic POP, while OAB was almost lacking. In males, voiding dysfunctions such presumed BOO and UR represented the main indication to UD (overall 43.8%), as expected. However, a not negligible rate of UD were reserved to men affected by OAB, and interestingly this latter part (16.5%) was greater than the percentage reported in women (1.4%). In males, also NB issues were investigated more often with UD than in women (10.9% vs 3.3%). Post-operative disorders were often investigated in men (overall 14.8%).

Conclusions: Urodynamics was performed in both sexes with high rates, but mainly in females. Major indications were UI in women and voiding disorders in men.

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82 - A randomized controlled trial on the efficacy of binaural beats in reducing anxiety and pain levels in patients undergoing conventional urodynamic study. Preliminary data and perspectives

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Introduction and aim of the study: To investigate the effects of binaural beats (BB) on anxiety and pain scores in patients undergoing conventional urodynamic study (UDS).

Materials and methods: Multi-center, prospective, single-blinded, randomized controlled trial. Exclusion criteria: wear a hearing aid, history of epilepsy, psychiatric disorder or chronic pelvic pain, the use of antidepressants, anxiolytic and/or analgesic drugs, history of previous UDS. Eligible patients scheduled to undergo UDS were randomly allocated in three groups: Classic Music (CM) who listened by headphones to Samuel Barber's *Adagio for Strings,* Binaural Music (BM) who listened by headphones *Adagio for Strings* embedded with a BB frequency of 6 Hz and No Music group (NM) who did not listen to music during UDS. *State-Trait Anxiety Inventory* form Y (STAI-Y) and *Visual Analog Scale* (VAS) were used for measuring anxiety and pain scores, respectively. Blood pressure and heart rates were measured for pain and anxiety-related physiological outcomes before and after the UDS. The main outcome was to assess differences between groups in post-procedure improvement of the state STAI-Y (Y1) score from baseline and in VAS scores. Kruskal–Wallis rank test and Pearson's chi-square were used to compare differences in continuous and categorical factors between groups. Differences in pre- vs. post-UDS psychometric scores were analyzed with paired t-test. Statistical analysis were performed using STATA 14.0 (StataCorp, College Station, TX, USA), with a two-sided significance level set at $p < 0.05$.

Results: A total of 90 patients were enrolled until January 2023. Demographics, comorbidities, baseline STAI-Y levels and procedure time were comparable between groups (Table 1). Post UDS STAI-Y1 levels decreased significantly in NM and CM groups ($p = 0.0002$, $p = 0.0001$ respectively). No statistically significant differences were detected between groups for VAS score.

Interpretation of results: According to these preliminary data, binaural beat does not seem to reduce anxiety and pain levels in patients undergoing UDS. In contrast with previous studies published on this topic, classic music seems to reduce anxiety in patients performing UDS.

Conclusions: Classic music could be a non-harmful, non-pharmacological and inexpensive tool to alleviate anxiety in patients undergoing UDS. Further data are needed to understand the effects of binaural beats on anxiety and pain due to UDS (see Table 1).

Table 1
IC = Indwelling catheter; ISC = intermittent self catheterization; SUI = stress urinary incontinence; UUI = urge urinary incontinence, MUI = mixed urinary incontinence. $p < 0.05$.

	Binaural music (N = 35; 39%)	Classic music (N = 25; 28%)	No music (N = 30; 33%)	
AGE Median (IQR)	67.0 (56.0, 70.0)	67.0 (52.0, 74.0)	63.5 (54.0, 72.0)	0.9
BMI Median (IQR)	26.0 (23.0, 32.0)	25.0 (23.0, 26.0)	24.0 (23.0, 27.0)	0.2
GENDER Male	18 (51%)	14 (56%)	13 (43%)	0.6
Procedure time Median (IQR)	35.0 (24.0, 50.0)	40.0 (30.0, 50.0)	38.5 (23.0, 60.0)	0.6
STAY tot baseline	80.0 (70.0, 96.0)	78.0 (71.0, 92.0)	87.5 (72.0, 101.0)	0.3
STAY Y1 baseline	43.0 (38.0, 51.0)	42.0 (33.0, 47.0)	45.0 (35.0, 54.0)	0.5
STAY Y2 baseline	37.0 (31.0, 44.0)	36.0 (31.0, 44.0)	41.5 (35.0, 46.0)	0.12
VAS Median (IQR)	0.0 (0.0, 2.0)	0.0 (0.0, 2.0)	0.0 (0.0, 2.0)	1
Delta (STAY Y1 post - baseline)	−6.0 (−13.0, −1.0)	−3.0 (−9.0, 0.0)	−5.0 (−11.0, −1.0)	0.4
STAY Y1 post	36.0 (31.0, 48.0)	38.0 (31.0, 47.0)	37.5 (34.0, 44.0)	0.7
Neurological disease				
Multiple Sclerosis	7 (20%)	1 (4.0%)	6 (20%)	0.2
IC/ISC	7 (20%)	3 (12%)	5 (17%)	0.7
Incontinence (overall)	9 (26%)	7 (28%)	4 (13%)	0.4
SUI	1	3	1	0.3
UUI	7	2	2	0.3
MUI	1	2	1	0.7

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83 - Does detrusor overactivity cause detrusor underactivity through muscle exhaustion? Results from a urodynamic database

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Introduction and aim of the study: The International Consultation on Incontinence Research Society recently proposed the definition of coexisting overactive–underactive bladder (COUB)as a possible new syndrome. This is characterized by coexisting storage and emptying symptoms in the same patient without implying any specific urodynamic/functional findings. In COUB detrusor is abnormally activated during the filling phase without a complete rest, thus wasting energy required for the next voiding phase, which is then impaired due to muscle asthenia and exhaustion. Aim of this retrospective study was to verify this hypothesis.

Materials and methods: We included male patients undergoing urodynamic study at our centre between 2011–2022. All patients were affected by lower urinary tract symptoms (LUTS). Neurologic disease and patients with previous urinary tract surgery were excluded.

Patients were divided in two groups:normal detrusor function (NDF, Group A) and with detrusor overactivity (DO, Group B) during the filling phase. Number of patients with bladder outlet obstruction (BOO, defined for a bladder outlet obstruction index BOOI>40), number of patients with detrusor underactivity (DU, defined for a bladder contractility index, BCI<100), BCI, post-voiding residual (PVR) and voiding efficiency (bladder capacity-PVR/bladder capacity) were compared in the two groups. DO patients were divided according to the phasic or pre-voiding DU and mean BCI was calculated.

Results: We analysed 499 male patients with LUTS (mean age 62,6 years). Fifty-nine(11,8%)patients had long-term urinary catheters and 4(0,8%) performed clean intermittent catheterization (CIC). 25 patients (45,1%, Group A) showed NDF and 274 patients (54,9% Group B) DO, 194 of them (70,8%) have phasic detrusor contractions and 80(29,2%) have pre-voiding detrusor overactivity.

In Group A and B respectively, bladder capacity was 420, 3 mL and 298, 4 mL ($p<0,05$), PVR was 90,0 mL and 57,0 mL($p<0,05$) and voiding efficiency was 78,6% and 81,6% respectively.

During the voiding phase, 177 patients(40,7%) were obstructed(BOOI>40), 100(23,0%) were equivocal (20<BOOI>40) and 154 (35,4%) were not obstructed (BOOI<20).

Fifty-nine(26,2%) and 119(43,3%) patients showed BOO in Group A and B, respectively ($p<0,05$).

Ninety-three(41,3%) and 94(34,3%) patients showed DU in Group A and B, respectively.

During the filling phase, 179(65,3%) patients of the group B showed a phasic DO, while 95(34,7%) patients showed a pre-filling DO;their mean BCI was 116,8 and 117,0 respectively.

Interpretation of results: To our knowledge, this is the first study trying to assess possible differences in terms of detrusor contractility in patients with DO or NDF in the filling phase. Further data against this hypothesis come from the observation that BCI is similar in patients with early and late appearance of DO. Limits of this study are the retrospective design and the absence of a control group.

Conclusions: Our study seems to contradict the hypothesis that in the COUB, DU could be caused by the wasting of energy used during bladder filling, determining impaired voiding due to muscle asthenia and exhaustion.

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84 - Pseudoaneurysm management after radical prostatectomy: Can they affect the functional outcome?

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Introduction and aim of the study: Pseudoaneurysms are rare complications of radical prostatectomy (RP). Neither guidelines nor consensus statements have been published regarding their management. The aim of this study is to evaluate the described final functional findings after a secondary procedure to control bleeding due to a post-prostatectomy pseudoaneurysm.

Materials and methods: We searched Scopus and PubMed published works using the terms "prostatectomy" and "pseudoaneurysm", then we included manuscript concerning RP to collect functional outcome data.

Table 1
Collected data of the reviewed works. Legend: *SI= stress incontinence; ND= not described; ED= erectile dysfunction. SE= surgical exploration; SE= selective embolization; PE= percutaneous embolization.*.

N.	Author/Year	Arteries Involved	Therapy Applied	Continence – Follow Up Timing	Erectile Function – Follow Up Timing
1	Beckeley et al. 2007	Left accessory internal pudendal artery	SE	SI – 6 Moths	Normal – ND
2	Lopes et al. 2009	Left internal pudendal artery Right internal pudendal artery	SE	No – 1 Year	Normal – 1 Year

(*continued on next page*)

Table 1 (*continued*).

N.	Author/Year	Arteries Involved	Therapy Applied	Continence – Follow Up Timing	Erectile Function – Follow Up Timing
3	Feng et al. 2013	Accessory pudendal vessel, branch of the left iliac artery	Transrectal ultrasound guided thrombin injection	ND	Normal – 2 Years
4	Bazan et al. 2014	Distal branch of the right internal pudendal artery		ND	ND
5	Bonne et al. 2017 [10]	Branch of the left internal pudendal artery	SE	SI – ND	ED – ND
		Prostatic branch of the left inferior gluteal artery		SI - ND	Normal - ND
		Proximal side branch of the anterior division of the right internal iliac artery		SI – ND	Normal – ND
		Right superior vesical artery + inferior vesical artery, left superior vesical artery		None – ND	Normal – ND
		No contrast extravasation identified		None – ND	Normal – ND
		Left inferior vesical artery		None – ND	Normal – ND
		Side branch of the left internal pudendal artery		None – ND	Normal – ND
		Side branch of the right internal pudendal artery		None – ND	ED - ND
		Side branch of the right internal pudendal artery		SI – ND	Normal – ND
		Right external iliac artery		None – ND	ED - ND
6	Gonzalez-Araiza et al. 2019	Prostatic resection bed-branch of the right internal iliac artery	PE	ND	ND
7	Suzuki et al. 2019	Pudendal branch of the left internal iliac artery	SE	ND	ND
8	Han et al. 2020	Left corona mortis artery	PE	ND	ND
9	Castelo et al. 2020	Internal iliac artery	SE	ND	ND
10	Fujisaki et al. 2020	Right inferior epigastric artery	Laparotomy	None - ND	ND
11	Pisano et al. 2021	Left external iliac – left corona mortis artery	PE	ND	ND

Results: 11 works published from 2007 to 2021 were reviewed (Table 1).

A total of 23 patients who developed pseudoaneurysms after RP has been treated as follow: 16 selective embolizations, 3 percutaneous embolizations, 1 transrectal ultrasound thrombin guided injection, 1 surgical management. The management of 2 patients has not been described.

Erectile function was not described in 10 patients (43.4%). In the remaining 13, it was defined "good" for 2 patients after 2 years, 7 patients with after 44.7 months mean time, 1 patient after 1 year follow-up. Erectile function was compromised in 3 patients with a mean time follow-up of 44.7 months.

Continence was not reported for 9 patients (39.1%). In the remaining 14 cases: 6 patients developed stress incontinence, whose: 1 during a follow up period of 6 months, 4 patients at 44.7 months mean time follow-up, in 1 patient timing was not defined. Continence was good in 6 patients during a 44.7 mean time follow-up and in 2 patients with no follow-up time reported.

Interpretation of results: Functional outcome after pseudoaneurysm management is reported incompletely and only in some works hampering a statistical analysis performing.

Conclusions: Functional outcome is not predictable basing on the few data reported so far. Data found are described qualitatively and bereft of countability.

More attention must be paid to the functional outcome deriving from the management of complications after RP. Quantifying the risk of functional alterations might guide the choice of the most appropriate treatment, ensuring functional efficacy as the surgical treatment itself.

Future studies must focus on functional outcomes, standardizing baseline, terminal evaluation and the follow-up intervals. The secondary procedure relative risk to develop functional alterations should be assessed as well as the RP operation-related one.

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85 - Major Adverse Cardiovascular Events (MACE) related to phosphodiesterase 5 inhibitors (PDE5I): Analysis of real-life data from Eudra-Vigilance (EV) database

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Introduction and aim of the study: Phosphodiesterase 5 inhibitors (PDE5i) are one of the mainstay for erectile dysfunction (DE). The cardiovascular safety is of utmost importance and registry studies suggest these drugs are safe in these terms. Aim of our study was to evaluate real-life data on major adverse cardiovascular events associated with PDE5i based on Eudra-Vigilance (EV) database.

Materials and methods: Eudra-Vigilance database is the system for managing and analyzing information on suspected adverse reactions to medicines which have been authorized or being studied in clinical trials in the European Economic Area (EEA). Major Adverse Cardiovascular Events (MACE) are defined as myocardial infarction, stroke, revascularization after coronary artery bypass graft (CABG) and heart failure. We recorded the number of MACE for sildenafil, tadalafil, vardenafil, avanafil per age and severity until September 2021. Pooled Relative Risk (PRR) was used to compare data between drugs.

Results: Overall, the number of MACE reported were for PDE5i 642 events. MACE were less than 3% of total AEs in all classes of drugs. Most reported MACE were for Sildenafil and Tadalafil (respectively 296 events and 173 events of Myocardial Infarction, 11 events and 17 events for Stroke, both 4 for revascularization after CABG and 60 events and 27 events for heart failure). No MACE were reported for Avanafil. Most of the reported MACE for drugs were present in the range of age between 65 and 85 years old with a total of 308 events (48%). No significative differences were reported comparing myocardial infarction, stroke, revascularization after CABG and heart failure between drugs (PRR 0,99 0,83-1,20, $p > 0,05$). No significative differences were reported comparing groups for age (PRR: 0.80-1.30, $p > 0,05$).

Interpretation of results: MACE related to PDE5i are reported in EV database. Real-life data suggest PDE5i are poorly associated with MACE.

Conclusions: According to real life data PDE5i are safe regarding major and serious cardiovascular events (see Table 1).

Table 1
Major Adverse Cardiac Events (MACE) for PDE5I.

	Sildenafil	%	Tadalafil	%	Vardenafil	%	Avanafil
Total AEs	8939		5213		1029		87
Myocardial Infarction	296 (56)	3	173 (34)	3	35 (10)	3	0 (0)
Stroke	11 (0)	<1	17 (0)	<1	6 (0)	<1	0 (0)
Revascularization after CABG	4 (0)	<1	4 (1)	<1	3 (0)	<1	0 (0)
Heart failure	60 (14)	<1	27 (7)	<1	6 (3)	<1	0 (0)

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86 - Correlation between urinary continence recovery and length of spared urethra after robotic radical prostatectomy: A prospective multi centre study

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Introduction and aim of the study: Urinary incontinence (UI) is considered one of the main complications of radical prostatectomy and can significantly affects patients' quality of life. Different characteristics of the urethra have been proved to be significant to obtain an early urinary continence following radical prostatectomy. The aim of the study was to correlate the length of the spared urethra in patients undergoing robotic radical prostatectomy (RALP) with the rates of urinary continence.

Materials and methods: This was a prospective study that enrolled 97 patients affected by adenocarcinoma of the prostate undergoing Nerve-sparing RALP. None of the patients had preoperative UI. Before surgery, the length of the urethra was calculated with the mpMRI, in the sagittal plane, as between the distal portion of the external urethral sphincter and the bladder neck. During the histological exam, the length of the removed urethra was measured in order to relate it to the urethral length previously calculated by the mpMRI. 3 months after surgery patients were divided into two groups based on the presence (Group B, 49 pts) or absence (Group A, 48 pts) of UI evaluated through UDM.

Results: At 3 months follow-up a statistically significant difference ($p < 0.0001$) in mean recovery time of UI has been reported (Group A - 12.35 days SD: 3.09 vs Group B 93.86 days SD: 34.8). The ROC curve was statistically significant with an estimated cut-off value of 16.5% ($p < 0.0001$) and a mean sensitivity of 87.5% and specificity of 91.8%. In both groups a statistically significant negative correlation was found between the percentage of spared urethra and the mean recovery time from UI (GroupA: r-0.655; $p < 0.0001$;Group B:r-0.340; p:0.017). Patients of Group A showed an average of 21.52% of spared urethra (SD: 4.34) while group B showed an average value of 13.86% (SD: 2.16; $p < 0.0001$). At one year of follow-up,90 pts (92.8%),44 in group A and 46 in group B, reported urinary continence with no need for pads.

Conclusions: Our study highlighted how the rate of spared urethra after performing RALP correlates with an early recovery of urinary continence. We can therefore conclude that the amount of urethra saved after RALP positively correlates with an earlier recovery of urinary continence.

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87 - Robot assisted laparoscopic augmentation ileocystoplasty and continent heterotopic urinary diversion in a patient with neurogenic bladder and partial amputation of the penis

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Introduction & objectives: Augmentation ileocystoplasty is a common treatment in adults with low capacity bladders due to neurogenic bladder dysfunction. We describe a case of robotic assisted laparoscopic augmentation ileocystoplasty and concomitant heterotopic urinary diversion in an adult with neurogenic bladder and partial amputation of the penis.

Materials & methods: A 47 years-old man with complete paraplegia, left leg amputation and neurogenic bladder due to a T7–T10 spinal cord injury in 2008, with complete bladder and bowel areflexia. He manages his bladder with intermittent catheterization and experiences multiple episodes of incontinence between catheterizations. In May 2020 he was admitted to our center with sacral pressure ulcers and urethral erosion due to catheter decubitus that involved meatus, glans and urethra with a partial amputation of the penis. Firstly, patient underwent an epicystostomy with an extended penile curettage and, secondly, underwent a robotic bladder augmentation ileocystoplasty and concomitant heterotopic continent urinary diversion. Our surgical technique utilizes 6 trocars including 4 robotic and two 5 and 12 mm laparoscopic. Surgical steps include the development of the space of Retzius/dropping the bladder; opening of the bladder; excision of a segment of ileum; enteric anastomosis; detubularizing the ilea segment; suturing the ileal segment to the incised bladder edge; intussusception of the ileal segment. The ileal conduit cutaneous stoma was connected to the umbilicus and a 18 Ch Foley catheter was inserted.

Results: The surgery had no intraoperative complications. Operative time was 360 min (6 h). Estimated blood loss was 50cc. Drain tube was removed at day 2. Length of hospital stay was 4 days. No needed blood transfusion. No postoperative complications occurred. The Foley 18 Ch catheter was removed after two weeks and patient started with intermittent catheterization four times a day with 12 Ch and 33.5 cm length catheter. No post-void residual was identified during the follow-up. At 3 months of follow up a flexible cystoscopy was performed. Operative success was defined by imaging and symptom resolution.

Conclusions: As surgeon comfort and experience with robotic assisted surgery grows, robotic surgery can successfully be applied to less frequently performed procedures. Augmentation ileocystoplasty with continent urinary diversion represents a possible valid treatment option for patient with neurogenic bladder and severe penis injury.

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88 - Robot-assisted laparoscopic Madigan seminal sparing simple prostatectomy: Technique description and video presentation

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Introduction & aim of the study: Different approaches to treat high volume prostate (volume> 80 g)might lay on Holmium Laser Enucleation Prostate, Thulium laser Enucleation Prostate, and Laparoscopic or Robotic-Assisted Simple Prostatectomy (RASP).This last approach may be performed with three different techniques: trans-vesical (Freyer), trans-capsular (Millin) and the latest urethra-sparing (Madigan). The Madigan approach is characterized by the enucleation of the prostatic lobes sparing the urethra. In terms of sexual function quality, this technique results in higher rate of antegrade ejaculation sparing. In this video we present a case of RASP as described by Madigan and the evaluation of the patient 6 months after surgery.

Materials & methods: A 70 y.o. patient presented with acute episode of urinary retention treated with indwelling catheter positioning. The further attempts to remove the catheter were unsuccessful, refractory to medical combination therapy (5ARIs + Alpha litic). The PSA level was 4.5 ng/ml. The mp-RM of the prostate highlighted a prostate volume of 182.1 cc. No median lobe was present as well as no suspicious aspects of prostate cancer (PIRADS 2/5). Because the high value of the PSA, a standard biopsy of the prostate was performed, and the final histology resulted negative for prostate cancer. Urodynamic study confirmed a detrusor overactivity due to bladder outlet obstruction.

Results: Hospital length stay was 3 days, no complications occurred. Removal of the catheter was scheduled 3 days after the surgical treatment and the patient voided spontaneously. After 3 months PSA level decreased to 1,2 ng/ml and the patient referred neither storage nor voiding symptoms and the preservation of erectile function as well as ejaculation. At 6 months follow up uroflowmetry values were: Qmax: 24,7 ml/s; Qave: 12,8 ml/s; Total Voided Volume: 195 ml; Post-void residual:0 ml. Suprapubic echotomography confirmed decreased prostatic volume.

Conclusions: Robot assisted simple prostatectomy Madigan is a safety and feasible option for patient with large volume prostate undergoing surgery. This technique is associated with fast recovery of the urinary function and with excellent outcomes in terms of sexual function and preserved ejaculation.

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89 - Two years after Aquablation for BPH-related LUTS: Functional and endoscopic results of a single center first clinical experience

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Introduction & objectives: To report our first clinical experience with Aquablation with perioperative, endoscopic and functional results up to two years follow-up.

Materials & methods: In this prospective study patients undergoing Aquablation at our center with BPH-related LUTS, International Prostate Symptom Score (IPSS) ≥ 10, prostate volume <80 mL and maximum urination rate (Qmax) ≤ 12 mL/s were enrolled. Patients underwent to surgery from 10/2018 to 10/2020. Exclusion criteria were: prostatic calcifications, prostate cancer diagnosis, previous prostate surgery, indwelling catheter, urethral stenosis and bladder stones. Demographics, perioperative data and complications (according to Clavien–Dindo system) were collected. Functional outcomes were assessed at 1, 3, 6, 12 and 24 months with, uroflowmetry, evaluation of post void residue (PVR), IPSS, Sexual Health Inventory for Men (SHIM) and Male Sexual Health Questionnaire for ejaculatory dysfunction (MSHQ-EjD). In addition, the patients underwent cystoscopy at 3 and 12 months after the surgical procedure. During the cystoscopy the quality of the ablation at cystoscopy was rated according to a Likert scale (1-poor; 5-excellent). Moreover, the preservation of the veru montanum, the presence of residual fluffy tissue or mucous faps and the ureteral orifices as well as the presence of scar tissue at the level of the bladder trigone were evaluated.

Results: 56 patients were enrolled in the study. Preoperative median Qmax, IPSS, QoL score and mean PVR were respectively 8 (2,4) ml/s, 22 (16-28), 4 (3-5) and 76 (9,8) ml. The median ablation time was 5.12 (2.13) min. The median catheterization time and hospital stay were 3 (3-4) and 4 (4-5) days, respectively. We recorded 10 postoperative complications (17.8%), of which 3 were classified as Clavien–Dindo grade > 2 (5.3%), namely 1 (1.7%) acute urinary retention after catheter removal and 2 (3.5%) anemia requiring transfusion. At 3-month follow-up cystoscopy in 15/56 (26.7%) patients non-obstruent mucosal flap was shown, but no damage to the verumontanum as well as no residual fluffy tissue, ureteral orifices or bladder trigone were recorded. The median quality of the ablation was 3 (3-4). All these findings were confirmed at 12-months cystoscopy. The median IPSS urinary symptom score was 4 (2-6) after 1 month and further improved to 2 (1-4) two year after surgery. Concurrently, the median IPSS QoL score and mean PVR reached 0 (0-1) and 18,9 ml (22,7) at 24 months. The mean Qmax was 19.7 (9.3), 18.1 (3.1), 18.2 (6.2), 17.5 (6.1) and 18.1 (6.6) ml/s at 1, 3, 6, 12 and 24 months, respectively. No patients developed postoperative erectile dysfunction, while 3 (5,4%) reported loss of antegrade ejaculation.

Conclusions: Endoscopic and functional results demonstrate that Aquablation is a safe, feasible and effective procedure for the treatment of BPH-related LUTS up to 2 years follow up.

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90 - Preliminary results on Onabotulinum Toxin A injections associated to surgery for pelvic organ prolapse and urinary incontinence

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Introduction: To assess outcomes of concomitant Onabotulinum Toxin A detrusor injections (OBA-DI) for refractory overactive bladder syndrome (OAB) and pelvic organ prolapse (POP) and/or stress urinary incontinence (SUI) surgery.

Materials and methods: This was a pilot prospective study on women with refractory OAB undergoing OBA-DI associated to others female urology surgeries (2018–2022): urethral sling (US) for SUI, colpoisterectomy or sacrocolpopexy for apical POP, native tissue anterior or posterior vaginal wall repair. After counseling, candidates could chose to undergo OBA-DI concurrently with other procedures or subsequently. All women had urodynamics. Pre- post-operative evaluation included medical history, physical evaluation, urinalysis, 3-days bladder diary (controls each 4 months). Catheter was removed 24–48 h after surgery and post-operative urinary retention (POUR) was investigated by catheterization (POUR: PVR >100 ml resolved within 30 days from surgery).

Results: Data were completed on 22 women: 16 POP surgery, 6 US placement. Mean overall follow up was 36 months. Data on daily micturition are reported in Table 1. In POP, 43.7% women do not need further OBA-DI, in US 16.7%. One patients undergone US and OBA-DI developed transient POUR treated by CIC for 2 months and, after urodynamics showing obstruction, with tape incision. No major complications related to OBA-DI occurred.

Interpretation of results: Concomitant OBA-DI and procedures for POP/urinary incontinence was safe end effective. No major complications related to OBA-DI treatment were recorded. A great reduction in micturition episodes was found. OBA-DI efficacy was higher in women treated for SUI than in POP as demonstrated by the greater *delta* difference in micturition episodes reduction in US. Interestingly, approximately half of the women in POP group were cured for OAB not needing further treatments. In US group, the rate of OAB cure was relevantly lower. This finding may be explained by the correction of the obstructive condition due to POP. In these women the true effect of OBA-DI is questionable. However, the potential positive effect on OAB by POP correction needs some months to be achieved, and during this time a treatment should have been administered.

Conclusions: This pilot study showed that after adequate counseling and patient shared decision, OBA-DI associated to POP/US treatments was safe and effective.

Table 1
Data on daily micturition before and after Onabotulinum Toxin A detrusor injections (OBA-DI) associated to POP repair and urethral sling.

		Before OBA-DI	After OBA-DI	delta
Overall procedures, n 22	***Daytime***	10.3	6.3	4
	Nightime	3.4	1.5	1.9
POP surgery, n 16	***Daytime***	10	6.9	3.1
	Nightime	3.7	1.9	1.8
- *Anterior repair, n 7* - *Apical POP repair, n 6* - *Posterior repair, n 3*				
SUI surgery, n 6	***Daytime***	11	2.3	8.7
	Nightime	4.8	0.5	4.3
- *TVT, n 2* - *TOT, n 3* - *Rectus fascia sling, n 1*				

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91 - Pelvic floor exercises in preparation for Transanal Irrigation

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Introduction and aim of the study: Transanal Irrigation (TAI) it is a valid treatment option in patients with either functional or organic bowel dysfunction, with an important positive impact on quality of life. This practice is approved in children too, but it is not always well accepted. Aim of our study has been to evaluate the role of pelvic floor (PF) exercises in TAI practice.

Materials and methods: We report a case of an 11-year-old girl, affected by Anorectal Malformation (MAR), surgical treated in newborn age as usual, performing bowel management with enema until 9 years old; because of pain and poor results. Patient has been evaluated by our multidisciplinary team and transanal irrigation proposed as an alternative to classical bowel management. The treatment has been refused by the patient due to referred difficulties to catheter insertion in absence of real anal stenosis. After multidisciplinary discussion, a new management protocol has been proposed associating TAI training with 3 sessions (one/15 days, 1 h for session) of PF re-education, using a fitball. During first session anatomy, function of PF and mechanism of TAI were explained, and a PF evaluation was performed using an external PC test. During second and third session, PF exercises to improve perception have been practiced using a fitball. In addition, child simulated a self-administration of TAI, with the aims of nurses and independently. At the end of treatment, an external evaluation of PF was repeated.

Results: During the first session, the young girl was scared and rejected treatment. Evaluation of pelvic floor highlighted a failure to selectivity recruit of pelvic floor muscles, with the use of abdominal and adductors muscles. PC test was 1/5 (flicker contraction) and a difficult to relax pelvic floor was present. During third evaluation selectivity of pelvic floor had improved, with the only accessory use of abdominal muscles, PC test was 2/5 (weak contraction) and she was able to maintain PF contraction between 2 and 5 s; relaxation of PF was improved, too. During the last session, she successfully tried to self-administrate TAI and the mother referred the execution of the practice at home.

Interpretation of results: Consciousness is the most important thing to research for each practice on PF. The association of PF exercises and TAI training has been fundamental for our patient. The understanding of anatomy, function and recruitment of PF helped her to accept TAI as a non-invasive practice. Improved PF relaxation ability also enabled her to reduce the possibility of feeling pain during TAI. Further studies are needed to demonstrate the importance of practicing TAI training in conjunction with PF re-education.

Conclusions: Taking care of patients with bowel dysfunction is complex, particularly in adolescent age. The possibility of embarking on a pathway aimed at getting to know one's own body is essential to be able to embark on the most suitable therapeutic pathway.

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92 - Impact of alcohol, smoking and weed use on urinary symptoms and sexual dysfunction in young healthy adults

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Introduction and aim of the study: To evaluate the impact of alcohol and smoking on urinary symptoms and sexual dysfunction in young healthy adults.

Materials and methods: A population of healthy young adults (<30 years old) were prospectively enrolled. All the young adults were evaluated with clinical and pharmacological history. Young adults with comorbidities or taking drugs were excluded from the analysis. Alcohol and smoking habits (tobacco and weed) were evaluated using dedicated questionnaires evaluating frequency and quantity. Urinary symptoms were evaluated with IPSS and OAB scores and sexual function was evaluated with IIEF. Correlations were evaluated using Pearson coefficient. Univariate and multivariate logistic regression were used to evaluate risk factors for urinary and sexual dysfunction.

Results: Overall, 284 young adults (142 males and 142 women) with a median age of 26 (24/28) years were prospectively enrolled. Overall, 164/284 (58%) smoked, 111/284 smoked weed and 230/284 (81%) drank alcohol. Median IPSS was 4 (2/8), median OAB score was 22 (20/25) and median IIEF was 15 (15/15). Overall, 169/284 (60%) presented an IPSS ≥3.

Interpretation of results: Smokers presented more frequently urinary symptoms when compared to non-smokers (73% vs 58%; p<0,05). On age adjusted logistic regression analysis smokers presented a two-fold risk of urinary symptoms when compared to non-smokers (OR: 1,97; p= 0,017). No significant correlations between urinary symptoms and smoking weed or alcohol were recorded.

Conclusions: In young adults, smoking is a risk factor for urinary symptoms. Smoking and alcohol were not associated with sexual dysfunction.

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93 - Results from a multicenter prospective study (MT-06-study) on PSA serum level after treatment of BPH-related LUTS with second generation temporary implantable nitinol device (ITIND)

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Introduction and aim of the study: The aim of this report was to demonstrate the impact of the second-generation temporary implantable nitinol device – iTIND; Medi-Tate Ltd, Israel – on serum PSA in the MT-06 study population.

Materials and methods: From 06/2018 to 09/2019 patients with IPSS ≥ 10, Qmax < 12 ml/s, and prostate volume (PV) < 120 ml were enrolled in this single-arm, prospective multicenter study (MT-06) and underwent iTIND implantation for the treatment of BPH-related LUTS. Patients included into the study had previously passed prostate cancer screening and none of them had a history of prostate cancer. Moreover, they were not washed out of BPH medication. PSA was assessed at baseline and at 1, 3, and 12 months postoperatively. The means of continuous variables were compared to the baseline by using the paired Student's t-test. Pearson correlation coefficient was used to examine the association between the baseline PSA and the PSA at 3 months follow-up. A P value < 0.05 was considered statistical significant.

Results: 140 MT-06 study patients who had baseline serum PSA assessed were included in this analysis. The mean age was 61.16 years (IQR 54.33–68.89), with mean prostate volume of 37.27 ml (IQR 26.00–45.00 ml) and mean baseline serum PSA of 1.81 ng/ml (IQR 0.72–2.40 ng/ml). Post implantation PSA showed a peak at 4 weeks, reaching a mean of 3.00 ng/ml (IQR 1.03–3.46 ng/ml). This result is consistent with the iTIND mechanism of action, which by producing remodeling of the prostatic urethra, produces local inflammation from ischemic necrosis. Subsequently, the serum PSA decreased to a mean of 2.09 ng/ml (IQR 0.87–2.47 ng/ml), 1.90 ng/ml (IQR 0.64–2.81 ng/ml) at 3, and 12 months, respectively, (p values were all >0.05, respectively compared to baseline). Change in PSA levels from baseline showed a linear correlation throughout the follow up, with a Pearson correlation coefficient at 3 months follow up of $R = 0.944$ ($p > 0.0001$) (Figure 1b).

Conclusions: The implantation of iTIND for the treatment of BPH-related symptoms showed to have only a transient impact on serum PSA levels. This data suggests that the iTIND procedure is likely to not affect PSA monitoring in patients undergoing screening for prostate cancer or be on active surveillance protocols who would receive treatment for symptomatic BPH.

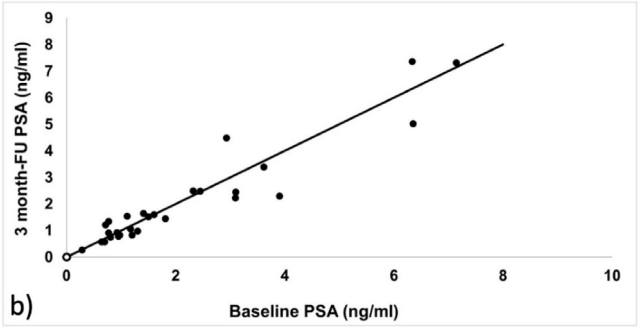

Fig. 1.

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94 - Antithrobotic medications: An obstacle to clean intermittent bladder catheterization in older men

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Introduction and aim of the study: Among older adults use of antithrombotic medications (AM) was significantly associated with higher rates of gross hematuria (GH) and related complications [1]. GH affects about 20% of subjects undergoing intermittent bladder catheterization (IC) [2] and depends on the urethral traumatism caused by the manoeuvre, especially in males due to the greater length of the urethra and prostatic hypertrophy. We report on some recent cases in which the use of AM has made IC impossible.

Materials and methods: We searched subjects on AM therapy who had relapsed GH on IC in 2022, requiring discontinuation of IC.

Results: Four males were identified, mean age 67 years (range 48–82), whose urinary retention depends on spinal cord injury (SCI) [2], multiple sclerosis [1] and stroke outcomes [1]. The indications for AM were atrial fibrillation (AF) in 2 subjects, AF with a history of transient ischemic attacks in 1 case and stroke outcomes in 1. The AM were Edoxaban 60 mg and Acenocoumarol in 1 case each and Clopidogrel 75 mg in 2 cases. There was significant prostatic enlargement in 2 subjects (136 and 45 cc prostate volume on ultrasound). There were at least 3 episodes of GH before discontinuing IC – which was performed with olivary-tipped hydrophilic catheters and/or Thieman catheters – and in 2 cases they were accompanied by clot formation. All patients have had a permanent bladder catheter for more than 6 months.

Interpretation of results: Age of individuals with SCI, or other conditions of urinary retention that cannot be resolved surgically, is increasing. IC – sometimes not feasible due to classic limiting conditions as reduced manual, visual, cognitive ability, etc – is problematic also in AM users if causes recurrent GH. Clinicians should choose an appropriate AM in such patients considering the risk profile of each AM [3]. Transcatheter left atrial appendage occlusion, an evolving technology with proven benefits in terms of AF-related stroke prevention, should be considered in some cases as it is a valid alternative to anticoagulation for high-risk patients with contraindications for long-term oral anticoagulation. [4].

Conclusions: AM was significantly associated with higher rates of GH in older men undergoing IC, making often IC impossible. This condition represents a new challenge for the neuro-urologist.

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95 - Add-on therapy with PEA, D-mannose, propolis and cramberry to hyaluronic acid for the treatment of BPS/IC

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Introduction and aim of the study: The treatment of BPS is challenging. The aim of this study is to evaluate the efficacy of the association of PEA, D-mannose, propolis and cranberry to hyaluronic acid bladder instillations for the treatment of BPS/IC.

Materials and methods: We selected consecutive female patients with diagnosis of BPS/IC undergoing a standard treatment with monthly hyaluronic acid bladder instillations. We proposed to the patient an add-on treatment with an oral association of PEA (300 mg), D-mannose (1 g), propolis (100 mg) and cranberry (53 mg) daily for two weeks every month. We considered patients refusing the oral add-on treatment as controls. We evaluated the results of the PUF questionnaire at baseline and at 12 weeks. We defined a clinical success a reduction in the PUF score.

Results: We enrolled 14 patients in the treatment group with median age 63.5 years (IQR 53/74.4) and 15 patients in the control group with median age 59 years (IQR 49.1/70.1). All patients were female. Median PUF score at baseline was 22.5 (IQR 17.5/24.5) for the treatment group, 20 (IQR 17.5/23) for the control group, without statistical differences in the two groups ($p = 0.28$). At 12 weeks, 10 patients (71%) in the treatment group and 3 patients (20%) in the control group experienced a reduction in the PUF score; median PUF score at 12 weeks was 20.5 (IQR 20/22) in the treatment group, 20 (IQR 17/23) in the control group. There was a higher reduction in the PUF score in the treatment group (median variation of PUF score −1, IQR −3/−0.25) than in the control group (median variation of PUF score +0, IQR −0.5/1) ($p = 0.024$).

Interpretation of results: The association of PEA, D-mannose, propolis and cranberry may increase the reduction of the PUF score in patients with BPS/IC undergoing hyaluronic acid instillations.

Conclusions: When considering patients with BPS/IC treated with bladder instillations with hyaluronic acid, the addiction of an oral association of PEA (300 mg), D-mannose (1 g), propolis (100 mg) and cranberry (53 mg) may result in a reduction of the subjective symptoms.

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96 - Sling or bulking agent: What do women choose?

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Introduction and aim of the study: Following FDA warming for the treatment of IUS are used alternative techniques such as bulking agents (BU), sometimes even in I-line. The aim of our study is to evaluate, in women with naïve IUS, after careful counselling, the treatment preference between sling implantation and BU (Bulkamid®) infiltration.

Materials and methods: It is a prospective study conducted from July 2021 to July 2022. Women with naïve IUS for surgical treatment regardless of the degree of urethral hypermobility were included; women with POP, previous anti incontinence surgery, with neurological diseases were excluded. Preoperative evaluation included: history, urogynaecological examination, urodynamic test, dynamic urological ultrasound.

At the time of diagnosis, careful counselling was conducted by providing the patient with the following information:

• "The BU involves the infiltration by cystoscopy of a volumizing agent at the level of the continence muscle; while sling implantation involves the placement of a prosthesis at the urethral level by vaginal access".

• "At our hospital the hospitalization is one day for both procedures".

• "The BU, unlike the sling, allows you to resume daily activity from the next day".

• "Long-term outcomes are better with sling than with BU".

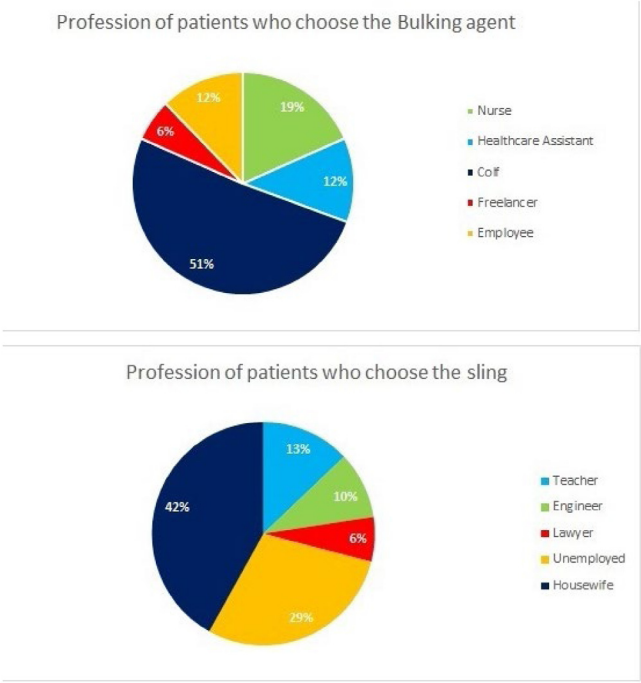
• "In case of failure BU can be repeated and does not compromise subsequent sling implantation, while more complicated is the treatment of persistence/recurrence after sling"

• "BU has urinary retention as a complication; while a sling can result in extrusions/ exposures, urinary retention, UTI, dyspareunia" The patient was left free to choose between the two types of treatment.

Results: 80 patients with mean age 50 ± 7.07 years were included. Most women choose to perform BU (61.3% vs 38.8%, p<0.0001) and compared to those who choose sling are older (52.5 ± 6.8 vs 48.3 ± 6.7, p=0.009), and have no help at home living alone (30% vs 12.5%, p=0.001), and may have comorbidities (35.5% vs 18.3%, p=0.02). Most women who choose BU were nurse and colf (Graph 1). These women have justified their choice with the type of work, physically tiring and with the fact that they cannot be absent for so long. While women who choose sling were housewives or unemployed (Graph 1).

Interpretation of results: Our results showed that after careful counselling, patients choose the treatment that best meets their current needs in these moment.

Conclusions: It is possible to offer a tailored surgery, only after careful counselling.



Graph 1. Profession of the population.

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1F - Pelvic floor dysfunction card: A single-centre analysis

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Introduction and aim of the study: Pregnancy and vaginal delivery are two of the most important risk factors for pelvic floor disease and consistent data shows that these events are crucial in genital prolapse and urinary incontinence pathogenesis. Pelvic floor diseases are common amongst the female population: 50% of childbearing women will develop a genital prolapse during lifetime and 1/3 of these will receive surgical treatment. Cornerstone of prevention is the identification of risk factors and behaviour and lifestyle interventions. Pelvic floor dysfunction card (PPD card) is a useful tool which is capable of identifying women with increased risk related to pregnancy, delivery and postpartum period. The Italian urodynamic society has greatly contributed to the development of standardized tools [1]. Main objective of this study was to verify that PPD card was completed in 100% of women who delivered in our unit in 2022. Secondary analysis was to stratify risk in our population.

Materials and methods: From Jan 1st 2022 we introduced an internal guideline related to prevention and treatment of pelvic floor disease and was administered to all patients who delivered in our unit. We have created two informative leaflets for patients (lifestyle interventions, pelvic floor rehabilitation) and a PPD card. Our PPD card consist of 3 different domains (pregnancy, delivery, post-partum period) and from the sum we divided patients into three groups of risk: low, intermediate, high risk. All data recorded has been analysed by 2 of the midwives who attend pelvic floor rehabilitation.

Results: 688 women gave birth in year 2022 in our unit. PPD card was completed in 683 women (99,2%). 71% of women (485) delivered vaginally, 42 of them by vacuum-assisted operative (1%) and 126 patients (26%) received epidural analgesia; we had 6 (1%) severe perineal tears. In our population 78,04% (533) was low risk, 21,52% (147) was intermediate and 0,44% (3) high risk.

Interpretation of results: We completed 99,2% of PPD cards in year 2022. All the 5 patient missed (0.8%) delivered in January, therefore we introduced a regular record of data in a database. This simple remedy has allowed us to complete all the subsequent PPD card and offer the proper caregiving to our patients. We all know that both prompt support in high risk patients and education of low risk patients are crucial for female health. According to literature our population has a higher prevalence of low risk women: this strengthens the role of information, education and lifestyle interventions. Crucial impact is the possibility of a careful allocation of resources to be used in future female pelvic floor programme.

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2 F - The use of mobile applications for pelvic floor training in the home treatment of female urinary incontinence

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Introduction and aim of the study studio: There are about 5 billion mobile phone subscribers worldwide and smartphones are regular companions for many individuals. The development of mobile devices and the increase of wireless networks allow for the provision of medical support, when and where people need it. Mobile health apps could facilitate self-management and adherence to home treatment. Recent reviews have examined the effectiveness of apps for several urological conditions, including urinary incontinence, and have found that they represent an effective therapeutic option that can be successfully implemented. In urinary incontinence, app-based interventions have been associated with improved home self-management of the rehabilitation pathway involving greater therapeutic adherence and a better quality of life for patients.

This paper seeks to evaluate whether this type of technology can actually be effective and increase the adherence to home therapy of users with female urinary incontinence and be considered a treatment aid in the therapeutic-rehabilitative path.

Materials and methods: A research strategy focused mainly on the use of two primary electronic databases, Medline (PubMed) and CINAHL and 3 secondary databases, Cochrane, PsycInfo and Scopus, using keywords such as: mobile health, digital technologies, mHealth, pelvic floor muscle training, self-management, mixed urinary incontinence, women. Primary, secondary and qualitative studies were considered. Only literature written in English, Spanish, French and Italian has been considered in the last 10 years.

Subsequently, at this stage, we proceeded with the selection of the articles, after reading the titles and the abstract of the publications. Articles that met the inclusion and exclusion criteria were found to be eligible. The full texts were read and the PRISMA-ScR flowchart was created, highlighting the criteria that led to the inclusion or exclusion of the studies corresponding to the research process.

Results and interpretation of results: From the research in the literature, 28 studies were found that were relevant to the research question.

The results of the qualitative studies provided insights into what women perceive as facilitators and/or barriers in the adoption of mobile technologies (apps).

Whereas, patients who had been recommended to undergo pelvic rehabilitation therapy and who had opted for self-treatment using applications, in order to meet the costs of treatment and/or for unspecified personal reasons, despite noticing some improvement in health, did not continue the path beyond three months. They showed little involvement in rehabilitation therapy, and little confidence given that they had no feedback from the professional.

Conclusions: According to the literature, the mobile technologies examined seem to follow training parameters that are in agreement with the current evidence on PFMT for the treatment of urinary incontinence. Mobile applications can be a valuable aid in the home treatment of urinary incontinence, in terms of cost reduction, improvement of daily life, therapeutic adherence and user satisfaction. It is, however, important for the professional to supervise even remotely and interact with the latter.

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3F - Impact of a training programme on the well being of operators

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Introduction and aim of the study studio: Health education is oriented towards the promotion of behaviors in support of individual/collective health and well-being but must foster skills and motivations to be monitored over time in the effects produced. At the A.O. a training course is active for employee well-being also for the health of the pelvic floor (PP), lower urinary tract (BTU) and intestinal (I). The study quantifies the presence of urinary, intestinal and pelvic static symptoms of the participants at the beginning of the courses (T0) and 3 months after the end (T1).

Materials and methods: Pre–post descriptive study on women enrolled in employee well-being courses (Nov 2020 Dec 2022), with completion of Questionnaires: UDI, Wexner score, ODS score. In addition to the urinary (US), intestinal (I) and pelvic static (PS) symptoms, the effectiveness of the information received on lifestyle habits was measured at T1.

Results: T0: 157 women (35–65 years), 75% had given birth; 12% had already received medication/rehab. T1: 58 (27%): Items chosen for the filling phase (B, C, D, I): in calculating the prevalence of "YES" responses, UUI and enuresis improved but not URGE and SUI; Items for the filling phase (J, K, M): improved sense of incomplete bladder emptying and pain but no difficulty in emptying; Items for PS (N, P, Q) improved on all three symptoms (lower abdominal pain, feeling of weight/POP, observation of POP). In relation to the Wexner score (FI solid/liquid, Gas incontinence) calculated with prevalence compared to the maximum score of the worst symptom: symptomatological reduction in all three items; not detected, however, in the ODS score (time to evacuate, feeling of incomplete emptying). Table 1. Items on effectiveness of information and modification of habits/symptoms (Likert 0–10), scores between 6 and 10: high validity (68%–91%).

Interpretation of results: Despite the low response (27%), detected (10/16 items selected) improvement of QoL and symptoms without specific therapeutic/rehabilitative path; receiving information, advice, practical exercises for correcting bad habits of LUT, I and PS is considered positive and effective. To evaluate and analyze the lack of improvement SUI and ODS.

Conclusions: PF disorders (UUI-SUI-POP-FI-ODS) are common conditions. The aim of the study was to evaluate to what extent the attendance of company training courses contributes to female pelvic, urinary and intestinal well-being. The lack of information leads many women with these symptoms to keep silent, ashamed and considering them "normal". The knowledge of possible strategies of behavior and conservative treatments represents a first and, albeit variable, effective step. The results obtained have oriented and will orient the training proposal which will also be implemented with a FAD course, intended as a refresher for those who have already attended the courses and a stimulus for new learners.

		T0 prevalence YES T0		T1 prevalence YES T1	delta
UDI SCORE: *higher score = more symptoms*	**T0**	**%**	**T1**	**%**	
B) Do you sometimes feel a strong need to empty your bladder urgently?	76	48,41%	31	53%	-5,04%
C)Do you ever leak urine when you feel an urgent need to urinate?	64	40,76%	18	31%	9,73%
D) Do you ever leak urine when you exercise, cough or sneeze?	85	54,14%	38	66%	-11,38%
I) Do you get wet in bed?	4	2,55%	1	2%	0,82%
J) Do you ever have difficulty emptying your bladder?	21	13,38%	9	16%	-2,14%
K)Do you ever feel like you haven't completely emptied your bladder?	55	35,03%	16	28%	7,45%
M) Do you ever feel pain when urinating?	5	3,18%	1	2%	1,46%
N) Do you ever experience pain in the lower abdomen or in the genital area?	25	15,92%	4	7%	9,03%
P)Do you ever get a feeling of swelling or prolapse in the vaginal area?	34	21,66%	6	10%	11,31%
Q) Do you ever see a bulge or prolapse in the vaginal area?	19	12,10%	5	9%	3,48%

		Symptom level		Symptom level
WEXNER SCORE: *0 perfect continence - 20 total incontinence*	**T0**	**628**	**T1**	**232**
SOLID FECES INCONTINENCE	13	2,1	2	1
INCONTINENCE LIQUID FECES	38	6,1	6	3
AIR FROM THE ANUS	178	28,3	60	26
ODS SCORE: *0 perfect function - 24 complete obstruction*	**T0**		**T1**	
TIME REQUIRED TO EVACUATE	80	13	36	16
SENSE OF INCOMPLETE EMPTYING	131	21	74	32

symptoms of the filling phase
voiding phase symptoms
symptoms of pelvic static

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4F - Bowel management in amyotrophic lateral sclerosis: A simple way to change patients' quality of life

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Introduction and aim of the study: Amyotrophic lateral sclerosis (ALS) is a progressive neurodegenerative disease associated with neurogenic bowel dysfunction (NBD), resulting in constipation and fecal incontinence. Gastrointestinal symptoms in ALS patients were largely underestimated in the past. Moreover, there are no specific indications on bowel management for those patients.

The aim of this study is to report a simple and effective solution for bowel management in a patient with ALS spreading a successful strategy and easing its adoption by other centers.

Materials and methods: We report a case of a 54-year-old woman affected by ALS, bulbar variant, since 2019. She is tetraparetic and completely dependent on activities of daily living since 2020. She reported severe constipation since 2021, evacuating once a week only using hydrocolontherapy sessions in a private clinic. She referred stools according to type 1-2 Bristol Stool Scale (BSS) and was completely dependent on hydrocolontherapy. She tried many laxative drugs (polyethylene glycol [PEG], bisacodyl, senna derivatives) without benefit.

Results: To start with, we evaluated the bowel function by performing plain abdominal X-ray highlighting severe fecal impaction with dilatation of the colic loops. We decided to perform a deep bowel cleanse using low-volume colonoscopy preparation (high dosage PEG). After the chemical intestinal toilette, we started oral laxative therapy with PEG 4000 1 sachet per day and probiotics one sachet per day (VSL#3) and we set up scheduled evacuations every two days with an enema. With this scheme the patient evacuated every two days but reported the presence of incomplete evacuations (BSS 4) and severe bloating. Therefore, we decided to perform transanal irrigation (TAI) with a high-volume system (Qufora Irrisedo Cone), after ruling out colic diseases with colonoscopy. We started using TAI initially once a day and after 15 days we switched to every two days. The referral nurse trained the patient's caregiver to use TAI. We maintained PEG once a day and probiotics once a day (VSL#3). With this scheme the patient evacuated every two days with the sensation of complete evacuation (BSS 4). After 40 days we performed a plain abdominal X-ray confirming absent fecal impaction and reduced dilatation of colic loops. At the end, both patient and caregiver reported high satisfaction.

Interpretation of results: The above-described intestinal management allowed the patient to be able to program evacuations at home without hydrocolon-therapy with the following highlights: (1) the caregiver is autonomous; (2) the adopted strategy improves the quality of life; (3) the procedure is cost-effective; (4) both patient and caregiver highly appreciate the approach.

Conclusions: This case highlights the importance of considering and managing NBD in ALS with a simple patient-tailored approach that can be adopted successfully by other centers empowered by multidisciplinary teams.

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