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1 - Role of Phenolmicin P3, D-mannose and Ibiscus on patients with neurogenic lower urinary tract dysfunctions (nlutd) performing intermittent catheterization and affected by recurrent urinary infections

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Introduction and aim of the study: Neurogenic lower urinary tract dysfunction (NLUTD) is characterized by an abnormal or difficult function of the bladder, urethra (and/or prostate in men) in mature individuals in the context of clinically confirmed relevant neurologic disorder. The aim of this study was to investigate a possible role of a compound containing Phenolmicin P3, D-Mannose and Ibiscus (Mictacis©, Lampugnani®, Italy) in the reduction of recurrent UTIs and of lower urinary tract symptoms (LUTS) in NLUTD patients performing self-intermittent catheterization (IC).

Materials and methods: This is an observational pilot study on patients with NLUTD who had been visited at our center. Inclusion criteria were: presence of NLUTD, use of intermittent self-catheterization and recurrent UTIs defined as then presence of more than >2 UTIs in the last year for the previous three years. The efficacy of MICTACIS© in reducing UTIs was evaluated by counting the UTIs episodes (demonstrated by a positive urinoculture and worsening of LUTS). All patients were evaluated before and after treatment whit validated questionnaires as ACSS (Acute Cystitis Symptom Score), VAS (Visual Analogue Scale), IPSS QoL (International Prostatic Symptoms Score Quality of Life). They completed also a PGI-I (Patient-Global-Impression of Improvement scale - in a 7-grade score) at the end of the treatment. In this observational non controlled pilot study, a number of 15 patients was considered the minimum to produce an initial evaluation of the role of Mictacis©.

Results: 15 patients (5 female and 10 male) were included in the study. Their mean age was 56.6 years (37–76 years). 13 of them (8 male and 5 female) were affected by myelic lesions (of traumatic, ischemic or infectious origin) the other 2 patients were affected by Parkinson's disease and meningoencephalitis. Patients performed a mean of 4,2 intermittent self-catheterizations per day (from 3 to 6). 2 out of 15 patients showed more than 2 UTI episodes and 3 out 15 showed one UTI episode during the treatment. Mean ACSS score was 4,6 in comparison to 10.13 at the end of the treatment (p-value 0.004). An improvement was also recorded in the VAS (going from a mean score of 3.6 to 1.91, p value 0.009) and IPSS QoL (going from a mean score of 4.06 to a score of 2.26, p-value 0.001). PGI-I was at the end of the treatment 2.46. None of the treated patients reported a worsening in the questionnaires.

Interpretation of results: The use of Mictacis© (Phenolmicin P3, D-mannose and Hibiscus) seems able to reduce the incidence of rUTIs in patients with NLUTD performing self-ICs. Furthermore, this compound seems to reduce LUTS during UTIs, this reducing the discomfort of these pathologies for the patients and the consequent possible need to increase the IC frequency. This is an observational pilot study and its findings need to be confirmed by larger and controlled trials.

Conclusions: A compound containing Phenolmicin P3, D-mannose and Hibiscus seems able to reduce the incidence of rUTIs and LUTS bother in patients with NLUTD performing self-ICs.

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2 - Pudendal nerve block, pulsed-radiofrequency and sacral neuromodulation: Description of a diagnostic–therapeutic pathway for chronic pelvic pain associated with pudendal neuralgia

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Introduction and aim of the study: The pudendal nerve block (PNB) is essential for evaluating the effectiveness of peripheral nerve desensitization in treating chronic pelvic pain from pudendal neuralgia. However, its therapeutic adequacy and management of negative or temporary positive tests remain unclear. This study proposes a diagnostic–therapeutic pathway to guide clinicians in these cases.

Materials and methods: We prospectively enrolled patients with pudendal neuralgia refractory to first- and second-line therapies (behavioral strategies, pelvic floor rehabilitation, oral drugs) between 2022–2023. Patients with nerve entrapment syndrome, candidates for surgical decompression, were excluded. All underwent unilateral or bilateral pudendal nerve block (PNB) via trans-perineal approach under neurophysiological monitoring. Injection included Methylprednisolone acetate 40 mg/mL (1 mL) and Ropivacaine 7.5 mg/mL (4 mL). The test was considered positive if a ≥50% VAS score improvement was observed 30 min post-procedure. All patients repeated the test at 30 and 60 days to enhance the desensitizing effect of the PNB and to potentially improve the outcome in terms of pain control. Patients with a positive test who maintained pain relief (long-term responders) were followed up with outpatient visits; patients with a positive test in whom the pain recurred shortly after the procedure (short-term responders) were offered a pulsed radiofrequency (pRF) of the nerve; patients with a negative test were candidate to a Sacral Neuromodulation (SNM) test (two-staged approach). pRF was performed in an outpatient setting using a transperineal and percutaneous approach (TSS Medical®). Patients experiencing symptom recurrence after the pRF repeated the procedure every 4 months, for a maximum of 1 year. In cases of poor long-term pain control, patients were offered a SNM test. Data were analyzed using t-test in XLSTAT®.

Results: 25 patients (10 males, 15 females; mean age 49.7 years) underwent a PNB (68.0% bilateral, 32.0% monolateral). Mean VAS score before treatment was 5.1, with a reduction of 43.7% at 5 min ($p = 0.0001$) and of 50.3% at 30 min ($p = 0.0001$) after the injection. 8 patients (32.0%) were long-term responders; 12 (48.0%) were short-term responders and underwent a pRF; 4 patients did not respond to PNB and underwent a SNM-test. Pain relief after pRF lasted <6 months in 75.0% of cases, 6–12 months in 16.7%, and >12 months in 8.3%. In 75.0% of cases pRF was repeated over time. All the patients who underwent a SNM-test obtained significant results and were implanted with a definitive pulse generator.

Interpretation of results: In our series, patients who did not achieve pain control with the PNB alone still obtained long-term results with repeated sessions of pRF or SNM Therapy.

Conclusions: In patients with pudendal neuralgia refractory to conservative treatments, PNB can serve both diagnostic and therapeutic purposes. It can also identify candidates for pulsed radiofrequency (to strengthen PNB results) or SNM therapy (for non-responders).

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3 - Dysfunctional voiding and non obstructive urinary retention in children and adolescents: Is sacral neuromodulation an option for treatment?

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Introduction and aim of the study: Sacral Neuromodulation (SNM) is a well-established treatment for voiding dysfunction (VD) and non-obstructive urinary retention (NOUR) in adults. These conditions are also prevalent among adolescents leading to significant impairments in quality of life, increased susceptibility to urinary tract infections, and a heightened risk for vesicoureteral reflux and renal failure. Current treatment strategies primarily involve clean intermittent catheterization or the use of indwelling catheters. This study aims to retrospectively analyze the functional and clinical outcomes of SNM in children and adolescents diagnosed with DV and NOUR.

Materials and methods: We conducted a retrospective evaluation of clinical data from patients (pts) who underwent SNM between 2018 and 2023 for DV or NOUR, ensuring a minimum follow-up period of one year. All patients provided written consent prior to treatment. The implantation procedures utilized Medtronic Interstim II devices, employing a two-stage technique with a quadripolar electrode positioned at S3, under fluoroscopic guidance. The study assessed various outcomes, including clinical and urodynamic changes, pts-reported perceptions, complications and conditions that led to device explantation.

Results: 21 pts were included, 11 females(52.3%) and 10 males(47.7%). The average age at the time of implantation was 13.76 years (ranging from 7 to 17 years). Urodynamic assessments revealed improvements in uroflowmetry for 66.6% of pts(14 pts) in terms of changes in post-void residual (PVR). 5 pts(23.8%) showed no improvement, 2 pts(9.5%) experienced an increase in PVR. 95.2% of pts(20 pts) reported satisfaction regarding their social and self-perceptual well-being. One pt(4.7%) required removal of the sacral neuromodulator one-week post-implantation due to a somatoform disorder. Early postoperative complications were observed in 2 pts(9.5%): surgical site infection and implant extrusion. Four pts(19%) opted for explantation: one pt(4.7%) had chronic urinary retention coupled with stress urinary incontinence, which was the more debilitating concern; another(4.7%) could not tolerate the pacemaker; a third(4.7%) had an areflexic bladder with significantly diminished bladder proprioceptive sensitivity; and the final pt(4.7%) reported no benefits from the treatment.

Interpretation of results: Results indicate that the majority of pts(66.6%) experienced significant improvements in uroflowmetry following implantation, highlighting the efficacy of the intervention in enhancing bladder function. Additionally, the high satisfaction rate(95.2%) reflects positive impacts on social and self-perceptual well-being among pts, despite some complications and cases of explantation, which suggest the need for careful patient selection and management post-implantation.

Conclusions: SNM can be a valuable treatment option for VD in pediatric pts, particularly for those who are suitable candidates. Further studies are warranted to evaluate long-term outcomes and refine patient selection criteria for this intervention.

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4 - Development and validation of urodynamic expert: A Chat GPT app

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Introduction and aim of the study: To develop and validate a GPT-based tool to assist young urologists and residents in interpreting and reporting urodynamic studies.

Materials and methods: The Urodynamic Expert App (UEapp) was developed using OpenAI's GPT model, trained with extensive literature, European Association of Urology (EAU) guidelines, International Continence Society (ICS) recommendations, and textbooks on urodynamic interpretation. The model was then further trained using urodynamic cases from multiple centers, with responses corrected by two urodynamic experts (R.L and C.D.N). The app is accessible at: https://chatgpt.com/g/g-b3Ig7USFE-urodynamics-expert. Twenty urodynamic experts were invited to assess the app's accuracy and limitations through a dedicated questionnaire (scored 1–5).

Results: The UEapp was trained over six months on consecutive urodynamic cases. Following training, it successfully interpreted and generated reports, though image interpretation was limited by the quality of graphical data. When provided with clinician descriptions, the app accurately diagnosed conditions. Performance ratings from experts included clinical relevance (3.8 ± 0.3), interpretive accuracy (4.5 ± 0.2), diagnostic utility (3.5 ± 0.5), explanation of urodynamic concepts (5.0 ± 0), clarity and practical guidance (4.2 ± 0.3), and adherence to evidence-based standards (4.8 ± 0.3).

Interpretation of results: After adequate training on consecutive urodynamic cases, UE app successfully interpreted, generated reports and, after providing clinician descriptions, diagnosed conditions. Afterwards, performance of UEapp was rated by urodynamic experts.

Conclusions: This study presents the first GPT-based tool for urodynamic interpretation. The UEapp has the potential to significantly enhance the quality of urodynamic studies, offering valuable support for clinical practice.

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5 - Developing the "MyBladderControl" app: A new tool for patients who perform intermittent catheterizations

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Introduction and aim of the study: The aim of this study was to design and develop an application (MyBladderControl) to support patients in the self-management of clean intermittent catheterization (CIC).

Materials and methods: The app named "MyBladderControl- MBD" was developed by a group of expert functional urologists and biomedical engineers. The app's functionality is to record patients' daily values similar to a bladder diary. Clinical indications for the MBD-App mock-up were to assess number of daily CIC, voided volume per catheterization, additional spontaneous micturitions, adverse events. In case of missing catheterization or voided volume too low (<150 ml) or too large (>500 ml) the app advises the patient. The MBD-App make a sum of the incorrect events (i.e. improper number of catheterization per day, voided volume per catheterization) and adverse events (i.e. urgency incontinence episodes, urinary tract infection, haematuria or urethral bleeding, difficult to catheterization, pain) and notifies the patient to control and correct CIC management by himself or by a medical control. Designed with user-friendliness as a priority, the interface is developed to be accessible even to patients with limited technological expertise.

Results: A first version of the MBD-App was distributed to a group of urologists to test it for correct functionality and usability, in order to collect feedback and implement additional features. These implementations are important to understand how to set up the app to ensure it is beneficial to the patient. This testing phase represents the first step in the app's development process. The next planned step involves testing the app with a study group of patients to assess its clinical impact in real-world-scenario.

Interpretation of results: Patients starting CIC therapy can use the app continuously until they have achieved an adequate CIC regimen. In patients undergoing CIC for a longer period of time, a weekly periodic check-up via the MBD-App may be suggested. The CIC regimen can give excellent results without adverse effects if performed correctly.

Conclusions: Tested by the urologists and biomedical engineers, the MBD-App not only offers a modern, interactive alternative to traditional bladder diaries or handwritten notes but also provides a more structured and comprehensive approach to managing the CIC regimen and to reduce complications.

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6 - Functional outcomes after laparoscopic rectal anterior resection: Urological, intestinal and gynecological quality of life

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Introduction and aim of the study: Surgical intervention is currently a cornerstone in the treatment of rectal cancer. While oncological radicality is a key outcome, it is equally important to assess how the surgery may affect patients' lifestyle. This study was designed to observe, within the experience of a single hospital center, the impact of surgery on patients' lives—not only from a urinary perspective but also in terms of gastrointestinal and sexual function, given the close interconnection of these systems.

Materials and methods: Between January 1, 2020, and December 31, 2024, 39 laparoscopic anterior resection procedures with total mesorectal excision and sphincter preservation were performed at our center. Of these, 19 patients are still alive and participated in the study. Outcomes were evaluated using a questionnaire comprising more than 40 questions.

Results: 4 patients reported a temporary increase in urinary tract infections in the immediate postoperative period. Only one patient developed chronic urinary retention with necessity of indwelling catheter. Conversely, 4 male patients (44% of the male sample) reported improvement in urinary symptoms post-surgery, particularly in urinary stream strength and a reduction in nocturia episodes. 7 patients remain with an ileostomy and report a decreased quality of life solely due to difficulties in managing the ileostomy. 12 patients reported that their quality of life either remained unchanged or improved, thanks to a more regular bowel pattern and increased frequency of evacuations. Only 3 patients reported mild anal incontinence of liquid material, occurring less than twice per month, which did not significantly affect their quality of life. 1 patient reported more frequent anal incontinence episodes, associated with urgency and symptoms consistent with Low Anterior Resection Syndrome (LARS). In this case, the surgical procedure had been complicated by anastomotic dehiscence, necessitating reoperation. No significant changes were noted regarding gynecological or sexual health, with all patients reporting no difference in their quality of life in these areas when compared to their pre-surgery condition.

Interpretation of results: With respect to urinary outcomes, quality of life was either unchanged or improved in most cases.

From a gastrointestinal point of view, only few patients reported a decreased quality of life because of ileostomy.

Conclusions: Although the data from this study are limited, they contribute to confirming the general safety of the necessary surgical intervention and provide reassurance to patients, indicating that their quality of life will ultimately not be worsened from urinary, intestinal and gynecological point of view.

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7 - Sacral neuromodulation for refractory neurogenic bladder and bowel dysfunction in a medulloblastoma survivor: A case report

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Introduction and aim of the study: Medulloblastoma is a malignant tumor of the central nervous system, primarily affecting children but also occurring in adults. Survivors often experience neurological complications due to aggressive treatments, including surgical resection, craniospinal irradiation, and chemotherapy. Among the most debilitating consequences are neurogenic bladder and bowel dysfunction, leading to refractory urinary and fecal incontinence. This study highlights the efficacy of sacral neuromodulation (SNM) in improving bladder and bowel control in a patient with medulloblastoma-related neurogenic dysfunction.

Materials and methods: A 38-year-old female, previously treated for medulloblastoma with surgical resection, chemotherapy, and craniospinal irradiation in 2005, presented with refractory urgency urinary incontinence and fecal incontinence. She had undergone multiple unsuccessful pharmacological treatments.

A comprehensive urodynamic study conducted in February 2024 revealed a bladder with virtual cystometric capacity, hyperactivity, hypersensitivity, and low compliance, with potentially hazardous pressures for the upper urinary tract. The study also identified pelvic floor hyperactivity with detrusor-sphincter dyssynergia, resulting in incomplete voiding and infravesical dynamic obstruction. Sacral neuromodulation was proposed as a viable treatment option.

In June 2024, the patient underwent stage I SNM implantation without complications. Following a successful trial period, a permanent stimulator was implanted. Due to personal reasons, the patient had to leave the country for two months postoperatively while retaining the temporary implant. Daily wound care was maintained, preventing infections or complications.

Results: The patient reported immediate and sustained improvement in bladder and bowel function. Bladder diaries indicated reduced urgency, with 7–8 voids/day (~200 ml each) and an initial morning void of 400 ml, without nocturnal awakenings. Fecal incontinence resolved completely. Adherence to wound care protocols ensured an uneventful recovery, significantly improving quality of life.

Interpretation of results: SNM modulates neural pathways at the sacral nerve roots, restoring neuromuscular coordination of the bladder and bowel. Literature reports success rates of 50%–80% in refractory neurogenic cases. This case aligns with existing evidence, demonstrating durable symptom relief. The patient's experience also supports the feasibility of extended temporary implantation in select cases.

Conclusions: This case underscores the role of SNM in managing refractory urinary and fecal incontinence due to medulloblastoma treatment. SNM offers a minimally invasive, effective alternative for patients unresponsive to conservative treatments. The significant improvement observed highlights its benefits in neurogenic dysfunction. Further research is needed to refine patient selection criteria and assess long-term outcomes.

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8 - Total endoscopic management of vesico-ureteral reflux in neurogenic bladder: When and how?

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Introduction and aim of the study: Treatment of vesicoureteral reflux (VUR) in neurogenic bladder (NB) is challenging. Different options are used: endoscopic subureteral injections of bulking agent, vesicoureteral reimplantation, with or without bladder augmentation. Recently, total endoscopic management (TEM), which consists of combined endoscopic injections of onabotulinum toxin A (BTX-A) and subureteric dextranomer/hyaluronic acid (Deflux), has been suggested as alternative management of VUR in NB. The aim of this retrospective study is to assess the long-term effectiveness of TEM.

Materials and methods: A retrospective analysis was conducted on 23 patients, 12 female (52%) and 11 males (48%), who underwent TEM for VUR in NB in our center. Median follow-up was 3.4 years (range: 1–4.35 years). 7 patients (30%) had bilateral reflux, for a total of 30 ureters. The median age at surgery was 6.9 years. All patients underwent ultrasound, cystography with urodynamic or videourodynamic before and after TEM. VUR's grade was I in 2 ureters (6%), III in 9 (30%), IV in 16 (54%) and V in 3 (10%). Outcomes assessed included: urinary tract infections, resolution of VUR, need for surgery and incidence of iatrogenic ureteral obstruction.

Results: No procedure related complications occurred. TEM was effective in 22 ureters (73%). In 8 ureters (27%) VUR persisted: 4 ureters (13%) downgraded, 4 ureters unchanged (13%). 4 patients (17.4%) (two of them with bilateral VUR) needed surgery: 3 augmentations with ureterovesical reimplantation and 1 unilateral ureterovesical reimplantation. 2 patients with 2 downgraded monolateral ureters, are strictly related to BTX-A injections, regarding VUR solving. To reduce the number of BTX-A injections/year they are successfully managed with antibiotic prophylaxis. Higher failure rate has been observed in severely dilatated ureter (Grade IV–V) or when BTX-A injections showed less effectiveness for increasing bladder capacity, particularly in patients with low compliance bladder with severe bladder wall fibrosis. Specimen obtained in the operated patients (all high-pressure low compliance bladders at urodynamic study, when BTX-A was uneffective) showed very severe fibrosis in the bladder wall.

Interpretation of results: TEM is safe and effective for the treatment of VUR in patients with NB. Treatment is less effective in patients with major VUR and in those with urodynamic low compliant bladder. This may be explained either by the best well known effect of BTX-A in neurogenic overactive bladder respect to low-compliant, either by the major difficulties to obtain a valid injection of Deflux in very fibrotic bladders. Advanced damage to the ureterovesical junction (UVJ) and detrusor may not be completely resolved by treatment.

Conclusions: TEM seems to be safe and effective for VUR management in NB without severe fibrosis and without severe ureteric dilation. An early treatment may be useful to increase TEM success. Videourodynamic seems very useful selecting high and low pressure VUR and addressing patients for a best treatment.

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9 - A minimally invasive technique for percutaneous insertion of button cystostomy

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Introduction and aim of the study: Clean intermittent catheterization (CIC) is a mainstay in the management of neurogenic bladder-sphincter dysfunction (NBSD). CIC may not always be tolerated or feasible and in these cases urinary derivation may be required. We implemented percutaneous button cystostomy (PBC) technique, previously described, to maximize applicability and minimize conversion rate. Aim of this study is to evaluate its feasibility and effectiveness in the pediatric population.

Materials and methods: All patients treated with PBC between 2020–2024 were retrospectively evaluated. Outcomes were evaluated considering conversion and complication rate, patient-reported tolerance to the device, and effectiveness in bladder management. Descriptive statistical analysis was performed.

Results: 50 patients (32 males) with a median age of 7.9 (4.6–13.3) years were included. 5/50 were <1 year-of-age. Indications for PBC placement were spinal dysraphism (N = 36), central neurological impairment (N = 7), posterior urethral valves (PUV, N = 4), severe bilateral reflux (VUR, N = 2) and epispadias (N = 1). No conversion to open surgery nor intraoperative complications were reported. Mean operative time was 45(4.3) minutes. During a mean follow-up period of 22.9(17) months, 9 complications were reported, including device dislocation(1), non-febrile UTI(6), and peristomal leakage(2). No complications occurred in all patients ≤1 year-of-age. 46/50 patients reported optimal device tolerance and clinical effectiveness, while 4 non-responders required a different bladder emptying technique.

Interpretation of results: The results indicate that percutaneous bladder catheter (PBC) placement in pediatric patients is a safe and effective procedure, with no conversions to open surgery or intraoperative complications reported. Over a mean follow-up of 22.9 months, the majority of patients (46 out of 50) exhibited optimal device tolerance and clinical effectiveness, while complications were relatively low, particularly in patients under one year of age. This suggests that PBC placement can be a viable option for managing bladder function in children with various underlying conditions.

Conclusions: Based on these results, our modified PBC technique seems to be feasible and effective throughout all ages and conditions, minimizing the conversion rate. Our PBC technique seems applicable and promising also in newborns and infants with PUV and severe VUR. Further comparative studies are needed to confirm this approach in these patients.

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10 - Intravesical instillation of hyaluronic acid as first line therapy in teenage patients with congenital and acquired neurogenic bladder

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Introduction and aim of the study: Damage to the glycosaminoglycan layer of the urothelium, which is composed of hyaluronic acid (HA) may increased the possibility of bacterial adherence and infections. Patients with congenital or acquired neurogenic bladder, who performed CIC, are under great risk for recurrent urinary tract infections (UTIs). The aim of this study is to investigate the change in symptoms and UTIs recurrence in patients with neurogenic bladder after intravesical instillations of hyaluronic acid (HA) used as a first treatment.

Materials and methods: The sample examined included 40 teenage patients with neurogenic bladder, presenting symptoms of UTIs (at least three UTIs in the previous 12 months). We selected all patients who had performed urinalysis, urine culture. In some cases, diagnostic cystoscopy with biopsy was performed. These patients received intravesical instillation of HA. We used 40 sex and age matched patients who did not use intravesical HA therapy as the control group. The study group was treated with 800 mg/50 ml HA weekly four eight weeks. To consider the treatment valid the patient must hold the drug for at least 1 h. Recurrence of UTIs before and after the treatment was analyzed.

Results: The sample examined was recruited between March 2021 and September 2024. The control group included patients admitted to our Spina bifida Center between March 2018 and December 2022. The mean age of the study group and the controls were 16.7 and 15.8 years respectively. The mean UTIs per patient/month in the study group and control group were 0.54 ± 0.04 and 0.57 ± 0.06. The mean UTIs per patients/month significantly decreased in the study group after the treatment ($p < .001$). When study and control groups were compared, the mean UTIs per patient/month significantly decreased in the study group after HA treatment ($p < .001$).

Interpretation of results: This study evaluated the efficacy of intravesical HA in the UTIs treatment in teenage patients with neurogenic bladder.

Conclusions: Our study demonstrates that intravesical HA treatment as a first line therapy for patients with neurogenic bladder leads to statistically and clinically significant improvements in symptoms. We believe it is necessary to initiate multicenter randomized controlled trials involving larger patients cohorts and extended follow up period.

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11 - The influence of a dedicated environment and postoperative care on urinary diversions in neurogenic lower urinary tract dysfunctions (nlutds)

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Introduction and aim of the study: Urinary diversion surgery is associated with high peri-operative morbidity especially within the patients affected by neurogenic lower urinary tract dysfunctions (NLUTDs). Early recovery after surgery protocols after cystectomy showed several advantages in the oncological setting, however they may be not appropriate for neurological patients. Our aim was to evaluate the outcomes of a series of patients with NLUTDs subjected to surgery managed in a protected setting in the pre- and peri-operative period in a spinal cord unit (SCU).

Materials and methods: We collected all prospective data from NLUTDs patients undergoing either continent or incontinent urinary diversion creation either associated or not to cystectomy. The perioperative management of the patients was conducted in a SCU, where particular attention is reserved to the aspects characterizing the clinical care of patients affected by neurological diseases (Table 1). The outcomes of interest were: length of hospitalization, early complications, late complications, renal function and subjective satisfaction. The reported outcomes were assessed at the last follow up, that exceeded 6 months for every patient.

Results: We included 17 patients between 2022 and 2024. 10 were males, 7 females. 13 patients underwent open cystectomy with ileal conduit creation, the others underwent wither augmentation cystoplasty or continent urinary diversion. The indication for surgery was the increasement of quality of life, the presence of pressure sores, the protection of renal function. Average preoperative serum creatinine was 0.75+−0.25 mg/dl. Average hospital stay was 29.1+−17.6 days. Early complications were observed in 10 patients (58%), however complications >=3 grade (Clavien–Dindo) were only 3 (17.6%), namely one case of ureteral–ileal fistula and two cases of septic shock requiring intensive care. Late complications occurred in 3 patients (17.6%) and consisted in one case of gross self-limiting hematuria and two cases of non-obstructive pyelonephritis. Average follow up was 15.5+−10.3 months. At the last follow up, 13 patients were fully satisfied with surgery, renal function was preserved

Interpretation of results: Literature reports a high incidence of serious complications in the setting urinary derivative surgery. Our case series is characterized by a low incidence of serious complications, which is in contrast with the expectancies relative to our particularly vulnerable cohort of patients.

Conclusions: A specific perioperative care within NLUTDs patients may lower the incidence of complications.

Table 1

Expected complication	Countermesure
Autonomic dysreflexia	Postoperative analgesia Daily checking of rectal ampulla Prompt treatment in case of AD
Slow bowel recovery	Prokinetics Daily checking of rectal ampulla, enemas, trans-anal rectal irrigation
Bedsores	Dedicated bed Precocious mobilization Change of position
Worsening mobility after surgery	Precocious rehabilitation Precocious mobilization
Respiratory problems after anesthesia	Respiratory physiotherapy
General	Availability of nurses and physiotherapists specialized in the management of neurological patients

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12 - Sexual issues in adolescents and young adults with complex uro-genital malformation (cugm): How to improve medical care and psychological support? Results by Mcq survey in Italian pediatric urology Ce

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Introduction and aim of the study: Transitional care of complex uro-genital-malformation (CUGM), as spina bifida, bladder exstrophy-epispadias-complex, cloaca, congenital adrenal hyperplasia and vaginal atresia is an issue worldwide.

Aim of this study was to investigate how pediatric urologists in Italy deal with sexuality and fertility in CUGM.

Materials and methods: A multiple-choice questionnaire, based on analyses of sexuality and transitional care in CUGM patients, was developed by Italian Society of Pediatric Urology and sent to all members.

Results: 95% response rate was obtained. 725 patients were included.

43% of Centers followed 20–50 patients, 12,5% followed 50–100 patients. Two centers followed more than 100 CUGM patients.

A multidisciplinary team was present in 75% of Centers, with a psychologist and sexologist in 62,5% and 25%, respectively.

All patients were sexually active. Sexual issues are investigated: masturbation (56%), sexual intercourse (81%), erectile dysfunction (93%), ejaculation problems (87,5%), vaginal lubrification (81%), dyspareunia (56%), pregnancy (75%).

Only 19% of Centers used validated questionnaires.

31% of Centers discussed sexual issues in presence of relatives.

Regular screening for Pelvic Organ Prolapse is performed in 19%.

Homosexuality/bisexuality is observed in 56% of CUGM patients; transgenders were noted in the 12,5% of Centers.

69% of Centers were confident discussing gender dysphoria with patients, but only 31% had knowledge of GIDYQ-AA questionnaire, 100% of HCPs would be more trained regarding gender identity.

Interpretation of results: Sexuality in CUGM patients is still a challenge in Italy.

Conclusions: Transitional care from pediatric urology Centers to adult ones must be improved. Multidisciplinary team must be more structured to manage complications. Gender dysphoria requires more attention.

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13 - Prospective randomized comparative multicentre study to investigate the role of minimally invasive surgical therapies in benign prostate obstruction for mid volume prostate

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Introduction and aim of the study: Transurethral resection of the prostate (TURP) remains the gold standard treatment for medium-sized prostate glands (30–80 ml), as endorsed by international guidelines. In recent years, several minimally invasive procedures have emerged to reduce the morbidity associated with TURP, including convective water vapor therapy (Rezum) and water-jet ablation (Aquablation). This prospective randomized study aims to compare the perioperative and functional outcomes of TURP, Rezum, and Aquablation.

Materials and methods: The study was conducted in accordance with the Declaration of Helsinki. Ethical approval for this study was obtained from the main institution Ethical Committee (UROLTUNIV_2021/1439LT). All enrolled patients signed informed consent for participating to the study. Men with non-neurogenic lower urinary tract symptoms (LUTS) due to benign prostatic obstruction (BPO) and prostate volumes of 30–80 ml, unresponsive to medical therapy for at least six months, were prospectively randomized to TURP, Rezum, or Aquablation between January 2021 and March 2024. Uroflowmetry (Qmax and Qave), post-void residual (PVR), International Prostate Symptom Score (IPSS), Male Sexual Health Questionnaire (MSHQ), and International Index of Erectile Function (IIEF-5) were assessed preoperatively and at 6 and 9 months postoperatively. Urodynamic study was performed in all patients post-operatively.

Results: A total of 417 patients (mean age: 63.6 years, range 56–74) were randomized: 122 underwent Rezum (Group A), 138 Aquablation (Group B), and 157 TURP (Group C). Postoperative IPSS was significantly lower in the TURP and Aquablation groups (2.5 and 2.7, respectively) compared to the Rezum group (mean: 5; $p < 0.001$). Sexual function and quality of life, measured by MSHQ, improved more in the Rezum and Aquablation groups than in the TURP group. IIEF-5 scores were significantly higher in Groups A and B (26.2 and 25.4) than in Group C (17.3; $p < 0.001$). Antegrade ejaculation was preserved in all Rezum and Aquablation patients, while TURP patients reported universal retrograde ejaculation. All groups demonstrated significant improvements in uroflowmetry and detrusor pressure. TURP patients had superior flowmetry outcomes compared to Rezum and Aquablation (Qmax–Qave: 19.8–10.9 ml/s, 17.7–9.6 ml/s, and 17.1–8.8 ml/s; $p < 0.005$). PVR was significantly reduced across all groups (mean: 12.1 ml, 12.4 ml, and 12.9 ml; $p > 0.05$).

Interpretation of results and conclusions: This study is the first to directly compare TURP with Rezum and Aquablation for treating non-neurogenic LUTS due to BPO in medium-sized prostates (30–80 ml). While TURP remains superior in improving urinary flow, Rezum and Aquablation demonstrated better postoperative sexual function and quality of life, notably preserving antegrade ejaculation. These minimally invasive techniques represent promising alternatives to TURP, warranting further investigation and long-term follow-up.

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14 - Prospective randomized comparative study on vesico-urethral anastomosis technique: Early continence recovery outcomes

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Introduction and aim of the study: Urinary incontinence (UI) is one of the most significant complications following radical prostatectomy, with a substantial impact on patients' quality of life. The adoption of robot-assisted radical prostatectomy (RARP) has led to improved continence rates compared to laparoscopic and open approaches. Consequently, recent research has shifted its focus to achieving earlier continence recovery. Our study aimed to evaluate the correlation between our modified and called "pontine" vesico-urethral anastomosis (P-VA) technique and early urinary continence (UC) recovery compared to the standard Van Velthoven anastomosis (S-VA). The P-VA technique uses a bi-directional, double-needle, barbed 3-0 Stratafix suture, including at the same time with the same suture the posterior musculofascial reconstruction.

Materials and methods: We prospectively enrolled patients who underwent RARP at our institution between January 2021 and December 2023. Early UC recovery outcomes were compared between patients undergoing our modified anastomosis (P-VA) and those undergoing the standard anastomosis (S-VA). Patients with a history of UI, pelvic radiation therapy, or prior prostatic surgery were excluded from the study. UC was evaluated using a urodynamics (UDS) at 1, 3, 6, and 12 months postoperatively. Additional variables assessed included age, BMI, prostate volume, nerve-sparing status, and the extent of lymph node dissection.

Results: A total of 127 patients were enrolled and randomized into two groups: 67 patients underwent P-VA, and 60 underwent S-VA. The P-VA group demonstrated significantly higher UC rates at 1 and 3 months postoperatively than the S-VA group (74.6% vs. 51.7%, $p < 0.005$; 89.5% vs. 61.6%, $p < 0.005$). At the 6-month UDS, UC rates in the V-VA group remained superior (94.1% vs. 78.3%, $p = 0.05$). By 12 months, the UC rates between the two groups converged, with no statistically significant difference (95.5% vs. 85%, $p = 0.09$). Subgroup analysis revealed that patients with higher BMI and larger prostate volumes

experienced slower UC recovery regardless of the anastomosis technique. Postoperative and perioperative complications were comparable, with no statistically significant differences observed.

Interpretation of results: The V-VA technique significantly improves early UC recovery compared to the S-VA, likely due to enhanced anastomotic stability and tension control provided by the bi-directional barbed suture with posterior musculofascial reconstruction. Superior UC rates at 1, 3, and 6 months highlight its effectiveness in accelerating recovery. By 12 months, the convergence of UC rates suggests that long-term recovery is influenced more by patient-specific factors, such as BMI and prostate volume, than by the anastomosis technique.

Conclusions: The V-VA technique significantly improves early UC recovery rates after RARP compared to the standard S-VA, with comparable postoperative and perioperative complication rates. Its ease of implementation and reproducibility make the V-VA technique a promising alternative for vesicourethral anastomosis.

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15 - Trends and incidence of reported events associated with Davinci single-port: 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 2018 and 2024 relating to "Da Vinci SP" Robot within the Manufacturer and User Facility Device Experience (MAUDE) database maintained by The Food and Drug Administration (FDA).

Materials & methods: The MAUDE database was analyzed for all MDRs relating to each FDA-approved "Da Vinci SP" Robot since its first appearance. Event descriptions were reviewed and characterized into specific event types. Outcome measures include specific Da Vinci SP 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, 206 reports were retrieved in 6 years. Between March 2021 and September 2024, a higher number of events were reported. 93/206 (45.1%) of them were reported as malfunction of the Da Vinci SP while 107/206 (51.9%) as injury. 6 (2.9%) cases of death were reported. No clinical signs, symptoms or conditions (64/206: 31.1%) were detected by the patients for the main part of the adverse events (AEs) reported. Haemorrhage/Bleeding (13/206: 6.1%), unspecified tissue injury (10/206: 4.9%), haematoma (8/206: 3.9%) and seroma (6/206: 2.9%) were the most common complications for the patient. In terms of device problem: 77/206 (37.3%) were adverse event without identified device or use problem, 28/206 (13.6%) visual prompts will not clear, 20/206 (9.7%) were output problems and 16/206 (7.7%) were caused by no device output.

Interpretation of results: According to these results, malfunction of the Da Vinci SP is more common than adverse events reported by the patients. Anyway, the most part of the device problems were adverse event without identified device or use problem (37.3%). About patients' events, bleeding and tissue injury are the most frequent, on the same wave of others studies.

Conclusions: Standing to MAUDE database the most frequent complications related to Da Vinci SP are bleeding and tissue injury. Devices have low rate of use problems. As well, the main number of reported AEs do not lead to problems for the patients. Da Vinci SP seems to be safe according to MAUDE database preliminary data reports.

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16 - Clean intermittent self catheterization in male patients with BOO and AUR might reintroduce spontaneous micturition: A prospective study

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Introduction and aim of the study: Acute Urinary Retention (AUR) due to benign prostatic hyperplasia (BPH) is the most common cause in ageing male patients. The main treatment is indwelling catheterization (IDC) associated to α1-blockers to restore spontaneous micturition. The use of clean intermittent self-catheterization (CISC) in AUR has few evidence when compared to patients with neurogenic urinary tract dysfunction, where CISC showed significant advantages. The study aim is to assess if CISC in patients, with de novo AUR due BPH, could be a valid alternative to IDC.

Materials and methods: In this prospective study we enrolled male patients with de novo AUR secondary to bladder outlet obstruction (BOO) and treated with indwelling catheterization (IDC) at the time of emergency admission (Time 0, T0). Subjects were randomized to CISC (group A) or to IDC (group B). All

patients started medical therapy with silodosin 8 mg daily. Patients were re-evaluated at three weeks (T1) with post void residual (PVR) to assess if able to urinate spontaneously. Furthermore, each patient filled the Quality-of-Life (QoL) questionnaire and a 5-items questionnaire to evaluate the overall experience for urinary drainage (the AUR-Cath questionnaire). The patients were re-evaluated at 30 (Time 2, T2) and 45 (Time 3, T3) days from T0, to assess if able to urinate spontaneously, always collecting complications and questionnaires.

Results: Fifty-two male patients with mean age 64.6 y.o. were prospectively enrolled. No statistical difference was observed between group A (25 patients) and B (27 patients) regarding age, Body Mass Index (BMI), prostate size, antiplatelet or anticoagulant therapy. The prevalence of patients that restored spontaneous micturition at each follow-up time and PVR parameter were comparable with no clinical significant differences. All patients in group A performed 4 CISCs daily with a mean volume of 377.8 mL, and this data did not report any significant change through the entire follow-up time. However progressive reduction of PVR was observed in Group A (T1 PVR 98.6 ml, T3 PVR 63.7 ml). Higher quality of life was observed in group A than in group B at T1 (p 0.01), T2 and T3 ($p < 0.01$) follow-up times. The AUR-Cath questionnaire reported a better overall experience in group A ($p < 0.01$) when compared to group B. The analysis of the single 5-items that compose AUR-Cath questionnaire reported a preferable experience in urethral discomfort and in catheter management ($p < 0.02$) for group B (IDC); and a preferable impact in psychological, social and daily experience ($p < 0.01$) for group A (CISC).

Conclusions: Clean intermittent self-catheterization (CISC) resulted as useful as indwelling catheterization (IDC) to reintroduce spontaneous micturition in our patients with AUR: the reported improvement in quality of life and overall experience during the observation period for CISC over IDC has to be balanced with the increased urethral discomfort and the complexity of device management.

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17 - Predicting the success of prostatic artery embolization (PAE) for benign prostatic hyperplasia (BPH): Results from univariate and multivariate analysis

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Introduction and aim of the study: This study aims to identify predictors of clinical success after prostatic artery embolization (PAE) in patients with lower urinary tract symptoms (LUTS) associated with benign prostatic hyperplasia (BPH).

Materials and methods: A prospective data collection was conducted on patients who underwent PAE for BPH at our center between December 2020 and June 2024. Clinical success was evaluated based on improvements in the International Prostate Symptom Score (IPSS) and Quality of Life (QoL) scores. The IPSS and QoL data collected at baseline and at 6, 12, and 24 months of follow-up were reported as means with corresponding standard deviations (SD). Prostate volume was assessed pre-operatively using both magnetic resonance imaging (MRI) and ultrasound (US). Analysis of variance (ANOVA) was employed to compare efficacy outcomes at different follow-up points against baseline values. Both univariate and multivariate analyses were performed to identify potential predictors of clinical success and to assess an accurate predictive model.

Results: We collected data from 72 patients with a mean age of 78 years (SD ± 4) and a median follow-up of 24 months (SD ± 15). Nine patients (12.5%) had indwelling catheter due to urinary retention.

The mean IPSS decreased from a baseline value of 22.69 (SD ± 6.64) to 13.43 (SD ± 7.44) at 6 months post-PAE ($p = 0.0024$). At 12 months and 24 months, the mean IPSS was 12.68 (SD ± 5.85) and 13.50 (SD ± 7.58), respectively.

The mean QoL score decreased from 4.3 (SD ± 1) at baseline to 2.2 (SD ± 1.49) at 6 months post-PAE ($p = 0.048$). The mean QoL at 12 months and 24 months was 2.2 (SD ± 1.15) and 2.3 (SD ± 1.28), respectively.

Predictive factors for improvement in IPSS and QoL included higher preoperative prostate volume as assessed by both ultrasound ($p = 0.011$) and MRI ($p = 0.001$), as well as higher PSA levels ($p = 0.001$), likely reflecting the relationship with increased prostate volume. These factors were significant independent predictors of clinical success following PAE also multivariate analysis ($p < 0.05$). Among the 9 patients with indwelling catheter, six patients (66%) achieved spontaneous micturition after PAE, and functional outcomes were significantly better in this subgroup ($p = 0.001$).

Interpretation of results: Presence of indwelling catheter, larger prostate volume and higher PSA levels were associated with better clinical efficacy following prostatic artery embolization (PAE). Both preoperative prostate volume and PSA levels were identified as independent predictors of clinical success.

Conclusions: These findings highlight the importance of accurately collecting preoperative data to better identify patients who are most likely to benefit from PAE.

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18 - Clinical and urodynamic prognostic factors for predicting success of pelvic floor muscle training in stress urinary incontinence

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Introduction and aim of the study: According to ICS guidelines, pelvic floor muscle training (PFMT) is the primary treatment for pure stress urinary incontinence (SUI) in women; however, the resources required and duration of treatment cycles limit its use. Furthermore, the clinical usefulness of invasive

urodynamic testing prior to non-surgical treatment remains debated. The aim of this study is to identify clinical and urodynamic prognostic factors for predicting PFMT success in SUI, optimizing its effectiveness.

Materials and methods: This retrospective study analyzed data from 68 women with SUI who underwent PFMT in our centre. Exclusion criteria included concomitant irritative symptoms, post-partum urinary incontinence, and previous SUI surgery. Treatment success was evaluated using the Patient Global Impression of Improvement (PGI-I) scale (Much better/Very much better). Patient characteristics, including menopausal status, BMI, daily pad usage, and International Consultation on Incontinence Questionnaire-Short Form (ICI-Q-SF) scores before and after treatment, were assessed. Additionally, results from the PC test and Q-tip test were recorded. For the 47 patients who underwent pre-treatment urodynamic assessment, the severity of incontinence (mild, moderate, severe) and detrusor pressure at maximum urinary flow (PdetQmax) were documented. The treatment protocol involved 10 sessions of pelvic floor exercises and functional electrical stimulation (FES) with vaginal probes. Statistical analysis was conducted using Fisher's exact test, $p < 0.05$ for significance.

Results: PFMT treatment was successful in 73.5% of patients, with an average improvement of 6.56 ± 1.08 on the ICI-Q-SF score. Bivariate analysis showed significant associations with treatment failure for baseline ICI-Q-SF scores ≥19 ($P = 0.005$) and PdetQmax <16 ($P = 0.03$). No significant correlations were observed with menopausal status ($P = 0.27$), BMI ($P = 0.45$), incontinence severity ($P = 0.56$), PC test results ($P = 0.27$), or Q-tip straining angle ($P = 0.71$). A trend for daily pad usage was observed but did not reach statistical significance ($P = 0.052$).

Interpretation of results: Low PdetQmax is considered to reflect the chronic loss of urethral resistance associated with severe SUI and was linked to poorer surgical treatment outcomes. For patients with PdetQmax <16, only 46% showed improvement following PFMT. Similarly, only 36% of patients with a baseline ICI-Q-SF score ≥19 experienced improvement after treatment.

Conclusions: PFMT is an effective treatment for pure SUI. However, a subgroup of patients was identified who are less likely to benefit from conservative management, specifically those with an ICI-Q-UI score ≥19 and a PdetQmax <16. These patients could be considered for surgical intervention, such as urethral bulking agent injections, sub-urethral sling or Burch procedures. Urodynamic assessment, combined with clinical evaluation, is valuable for identifying these patients and making appropriate treatment recommendations.

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19 - Cystoscopic, histopathological, molecular and clinical characterization of interstitial cystitis/bladder pain syndrome: The must trial (multicenter interstitial cystitis/bladder pain syndrome trial)

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Introduction and aim of the study: Lack of standardized diagnostic criteria for IC/BPS hinders research progress in understanding its risk factors, pathogenesis, prognosis, and treatment. Emerging evidence suggests that urinary and serum biomarkers may play a crucial role in the diagnosis and treatment of Interstitial Cystitis/Bladder Pain Syndrome (IC/BPS). The first aim was to evaluate the correlation between cystoscopic, histopathological, molecular, and clinical data in women with IC/BPS. The secondary aim was to compare clinical and diagnostic data between IC/BPS patients and a control group.

Materials and methods: This is an observational multicenter prospective pilot study. Preoperative workup includes medical history, physical exam, urodynamic studies, urine/serum sampling, cystoscopy with hydrodistension and biopsies. Analysis of accuracy of biomarkers was determined using area under the receiver operator characteristics curve (AUC). Statistical significance was set at $p < 0.05$ (95% confidence interval). Statistical analysis was performed using the SPSS Version 26.0 for Windows (SPSS Statistics UK, SPSS Inc, Chicago, IL, USA).

Results: Between January 2022 and June 2024 30 patients were included in the study, 15 in the IC/BPS group and 15 in the control group. IC/BPS women exhibited lower bladder capacity and increased bladder sensitivity compared to controls. IC/BPS patients experienced premature filling sensations and reduced bladder capacity compared to controls. Women with lower urodynamic first desire to void (FD) had a significative higher possibility to have IC/BPS (RR 7.161, $p = 0.007$). No significant differences were found in bladder biopsies between non-HL-IC/BPS and control groups. Four urinary metabolic analytes were identified as potential biomarkers for differentiating IC/BPS from N IC/BPS: Alpha amino butyric acid, histidine, leucine and valine were significantly higher in IC/BPS patients and had individual AUCs greater than 0.8. When combined into a single model, the AUC was 0.917, demonstrating its high sensitivity and specificity.

Interpretation of results: Our preliminary study underlines the importance of urodynamic testing and the significant role of specific questionnaires together with the personal history in the diagnosis of IC/BPS.

Cystoscopic bladder biopsies do not differentiate IC/BPS from other similar diseases. Data from this pilot study strongly suggest urine as a potential resource for clinical screening of women with IC/BPS.

Conclusions: To our knowledge, this is the first Italian study investigating both traditional and experimental diagnostic tools for IC/BPS, including a control cohort. If we also consider the biomarker panel identified in this study, we can imagine how these results, if validated by larger multicenter studies, may have a profound effect on the diagnostic process of IC/BPS.

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20 - Pelvic floor muscle training (PFMT) versus 3 Tesla functional magnetic stimulation in combination with PFMT for stress urinary incontinence in women

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Introduction and aim of the study: Evidence strongly supports that targeted pelvic floor muscle training (PFMT) effectively reduces stress urinary incontinence (SUI). However, the use of functional magnetic stimulation (FMS) as a treatment option remains a topic of ongoing debate. This study aims to evaluate and compare the effects of physiokinesis and functional magnetic stimulation (FMS) on pelvic floor muscle function, urinary incontinence symptoms, and quality of life in women with stress urinary incontinence (SUI).

Materials and methods: A randomized controlled, parallel-group trial was executed in 20 women with SUI > 18 years of age. Group A (10 patients) received treatment with physiokinetic pelvic floor therapy. Group B (10 patients) received pelvic floor physiokinesis therapy plus functional magnetic therapy. These treatments include 10 one-hour sessions. Urinary incontinence symptoms and their impact on quality of life were evaluated using the Qualiveen-SF and the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF) questionnaires. Stress test, pubo-coccygeal (PC) test and the use of pads were assessed during the objective examination. All outcome measures were taken at baseline and after 3 months of treatment. The assessment involves measuring vaginal pressure at rest, along with evaluating the strength and endurance of the pelvic floor muscles (PFM). Cohen's effect size (d) and P valve (p) were calculated.

Results: At 3 months, there were improvements in both group A and B respectively: Qualiveen-SF in (p 0,002; d1,23) (p0,06 d0.9), ICIQ-SF (p 0,02 d2) (p0,03 d1,3), PAD test (p0,04 d1) (p < 0,05 d0.5), PC test fast twitch fibers (p0,1 d 1,23) (p0,009 d0.9) PC test endurance (p0,001; d1,23) (p0,004 d1,1) the stress test negative in 90%(A) and 50% (B), Synergies absent in 66,6%(A) and 50% (B), no respiratory coordination disorders in 77.8% (A) and 42.9% (B).

Interpretation of results: The results showed that both groups significantly improved all these outcomes, with high effect sizes and a slight superiority of PFMT.

Conclusions: FMS and PFMS improve Quality of life, UI symptoms and pelvic floor muscle strength and Endurance in women with SUI in the short-term effect.

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21 - Penile inversion vaginoplasty step-by-step

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Introduction and aim of the study: Gender affirmation surgery is essential for easing gender dysphoria in transgender individuals, particularly transgender women, for whom vaginoplasty is a fundamental procedure to achieve a gender-congruent appearance. In this case-series, we present our standardized penile inversion vaginoplasty technique, emphasizing the critical steps that improve patient outcomes.

Materials and methods: A prospective study was conducted between February 2011 and April 2018, during which 94 transsexual women underwent MtoF gender-affirming surgery. The mean age of the participants was 29.5 years, and the median follow-up was 27.57 months. Our vaginoplasty approach is meticulously delineated through the video, with a particular emphasis on the most critical procedural components. Our approach meticulously preserves glandular tissue by reshaping the neoclitoris and labia minora in an M-shaped configuration, thereby guaranteeing both aesthetic appeal and functionality. Additionally, we offer comprehensive information regarding the use of penile and scrotal skin flaps to construct the neovaginal canal.

Results: A total of 94 patients have been successfully treated with our modified technique for male-to-female (MtoF) gender-affirming surgery. 81 (86.1%) patients reported engaging in vaginal intercourse, while 78 (82.9%) experienced erogenous sensitivity during dilations, intercourse, or masturbation, with a median follow-up of 27.57 months.

Interpretation of results and conclusions: By facilitating the development of a neovagina that optimizes both erogenous sensitivity and cosmetic outcomes, this technique provides a safe and straightforward application for patients undergoing gender-affirming surgery.

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22 - Propensity score matched analysis between two different endoscopic en-bloc prostate enucleation: Greenlep Vs Holep

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Introduction and aim of the study: Greenlight has been used to treat BPH especially for its vaporization effect, which can reduce bleeding. Nevertheless, its role in prostate enucleation (GreenLEP) is not yet routinary, differently from HOLEP. Study aim is to compare GreenLEP vs HOLEP and to see if results from greenlight are comparable

Materials & methods: We recorded data from two Italian prospectively collected databases, one for GreenLEP and one for HOLEP, both from referral centers since 2021. In both cases, enucleation was mostly mechanical, thus allowing the comparison of the groups. Techniques were compared from baseline to last-follow-up both intra- and inter- group and before and after propensity score matching, especially to assess clinical outcomes and complications rate. Propensity score matching was conducted setting match tolerance value at 0.3 based on age, prostate volume, PSA, ongoing anticoagulants and antiaggregant therapy, ongoing BPH therapy, pre-operative hemoglobin values, indwelling catheter presence and IPSS. All patients needed at least 12 months of follow-up for enrollment.

Results: A total of 120 GreenLEP and 115 HOLEP fulfilled inclusion criteria. At prior unmatched comparison we found that PSA (4.2 vs 3.7) and age (66 vs 68) were similar, together with anticoagulants and antiaggregant therapy ($p = 0.244$). Moreover, when we focused on prostate volume, it was comparable with a median 98.5 (IQR 82.0–130.0) ml and 90.0 (IQR 65.0–115.0) ml, while IPSS ($p = 0.013$) and indwelling catheter rate ($p = < 0.001$) were higher in HOLEP group. In addition, functional outcomes and early complications rate were akin, besides at follow-up, HOLEP group showed a lower PSA and IPSS ($p < 0.001$). Indeed, late complications were lower in GreenLEP group (1.7 vs 14.8%), $p < 0,0001$. Using propensity score matching we compared 56 GreenLEP vs 56 HOLEP, comparable for the above-mentioned criteria. When we compared the clinical outcomes, we found that they were similar except for a lower IPSS and PSA at 6- and 12-month follow-up for HOLEP. Conversely late complications and transient stress incontinence, confirmed to be lower in GreenLEP group (1.8 vs 16.1%), $p = 0.008$

Interpretation of results: When we think about Greenlight, we usually think about its coagulative effect and its vaporization technique, that it is not suitable for large prostate. However, various author demonstrated that the GreenLEP is a feasible technique, but due to its high cost, alternative lasers are more broadly used, such as Holmium and Thulium. When we analyzed our data, we found that GreenLEP can obtain similar outcomes compared to HOLEP, plus showing a slightly better safety profile, especially for late complications. Such results were confirmed after propensity score matching, which eliminated biases and provided more reliable data. However, the study has a small sample size and the short follow-up, therefore it does not allow definitive conclusions. Nevertheless, the methods and the use of propensity score matching are the strength of this study.

Conclusions: According to our results, both HOLEP and GreenLEP can be considered effective in treating BPH in large prostates, however further trials are mandatory.

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23 - Transperineal ultrasound: An impactful tool for planning and tracking pelvic rehabilitation in post-prostatectomy incontinence

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Introduction and aim of the study: Stress urinary incontinence (SUI) is a common complication following radical prostatectomy, significantly impacting patients' quality of life. Unlike the extensive literature on pelvic floor ultrasound in women with stress incontinence, studies on transperineal ultrasound (TPUS) in men are limited. This study aims to integrate TPUS in this population, with the goal of providing objective parameters for staging pelvic function during rehabilitation.

Materials and methods: Thirty-five patients, aged 60–75, who developed SUI after robot-assisted prostatectomy without subsequent radiotherapy, were included in the study. The following assessments were performed: (1) TPUS measurements: posterior urethro-vesical angle and bladder neck width at rest (β_R, BN_R), during Valsalva maneuver (β_V, BN_V) and during pelvic floor contraction [PFC] (β_C, BN_C). (2) ICIQ-MLUTS-IS questionnaire about storage lower urinary tract symptoms (sLUTS) in a stress incontinence context. (3) Uroflowmetric parameters (UPs): peak flow rate (Q_{max}) and voided volume (V).

Results: Multiple correlations between TPUS, sLUTS, and UPs were observed, assessed with Spearman's test. β_C showed the strongest correlation with sLUTS severity ($\rho = 0.82$), followed by β_V ($\rho = 0.71$) while β_R showed the weakest correlation ($\rho = 0.57$). The difference between β_R and $\beta_C(\Delta\beta_{RC})$ had a strong inverse correlation with sLUTS severity ($\rho = -0.95$; $p < 0.05$), indicating that a greater angle reduction during the PFC is associated with milder symptoms. Increasement of BN_R (funneling) was observed in all patients but was not correlated with symptoms severity. No correlations were found between BN measurements and sLUTS, except for the difference between BN_V and BN_R, which showed a moderate correlation with symptoms ($\rho = 0.41$).

Q_{max} and V showed a strong correlation with sLUTS ($\rho = 0.97$). It should be noted that subjects with a higher $\Delta\beta_{RC}$ achieved an adequate V and a normal Q_{max} ($\rho = 0.87$) suggesting that high β reduction during PFC could be linked to the ability to retain an adequate bladder volume before voiding, preventing leakage, and enabling a more efficient voiding phase. A strong inverse correlation was also noted between β_v and Q_{max} ($\rho = -0.82$). β_R showed a weaker inverse correlation with UPs ($\rho < -0.7$).

Interpretation of results: Dynamic ultrasound parameters (β_V, β_C, $\Delta\beta_{RC}$), modifiable through rehabilitation, demonstrate stronger correlations with clinical outcomes obtained by questionnaires. In contrast, static parameters (β_R, BN_R), primarily influenced by post-surgical anatomy and less modifiable, show weaker correlations. These findings highlight the role of rehabilitation in treating SUI, with TPUS emerging as an effective tool for monitoring therapeutic progress, overcoming the limitations of questionnaires and uroflowmetry, especially in those with inadequate bladder filling.

Conclusions: The results emphasize the importance of pelvic rehabilitation in treating SUI and the potential of TPUS in monitoring pelvic dysfunction in men. Further research on larger cohorts is needed.

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24 - Surgical and functional outcomes of high-power vs. low-power Holep in the treatment of benign prostatic hyperplasia

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Introduction and aim of the study: Holmium Laser Enucleation of the Prostate (HoLEP) is an effective surgical procedure to resolve obstructive symptoms but may cause post-operative irritative symptoms. The aim of the study is to evaluate if LP use reduces irritative symptoms after HoLEP. Low Power-HoLEP (LP) and High Power-HoLEP (HP) are compared to assess laser energy impact.

Materials and methods: This single-center retrospective study enrolled 156 patients with symptomatic BPH resistant to medical therapy who underwent HoLEP between July 2023 and September 2024. Procedures were performed by experienced surgeons. Patients were divided into two groups based on the laser setting used: Low Power (50 W) and High Power (100–120 W). 2:1 propensity score match was used to reduce and mitigate the impact of confounders. The parameters considered in the match were: age, prostate volume, post-void residual urine (PVR), medical therapy before surgery. Follow-up at 1, 3, and 6 months assessed functional outcomes using validated scores (IPSS with QoL, ICIQ-OAB, ICIQ-UI). Perioperative outcomes and post-operative functional results were analyzed using the following statistical tests: Wilcoxon rank sum test; Fisher's exact test; Pearson's Chi-squared test.

Results: Preoperative data were comparable between the two groups overall (124 patients in HP group and 31 patients in LP group) In particular IPSS score was 18 for HP group vs 19 for LP group, $p = 0.8$, QoL was 5 in HP and 4 in LP, $p = 0.2$. The analysis of the population was also performed with 2:1 propensity score match (62 patients in HP group and 31 patients in LP group) and IPSS score was 19 for HP group vs 19 for LP group, $p = 0.8$, QoL was 4.5 in HP and 4 in LP, $p = 0.2$. Enucleation time showed no differences (Overall: 49 min for HP vs 45 min for LP, $p = 0.5$; Match: 40 min for HP vs 45 min for LP, $p = 0.6$); Days of catheterization and hospitalization were similar (2 days for HP and 2 days for LP, $p = 0.2$). Incontinence at discharge was higher in the LP group (48% vs 35% for HP group, $p = 0.2$) but it was comparable with HP at 3 months (22% for LP and 12% for HP $p = 0.2$) and at 6 months (12% for LP and 14% for HP $p > 0.9$). Functional outcomes were comparable in the two groups (IPSS, QoL, ICIQUI and ICIQ-OAB at 6 months).

Interpretation of results: The results show that the two techniques (LP and HP) have efficacy and enucleation time comparable. Also the postoperative outcomes, in particular irritative symptoms, incontinence and QoL, are comparable between the two techniques.

Conclusions: LP-HoLEP is a safe and effective technique for the treatment of BPH, showing comparable results to HP-HoLEP. Further studies with larger sample sizes will provide more insights into the functional outcomes of using lower energy during the procedure.

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25 - Cases of Pudendal Neuropathy (PN) after Robot-Assisted Radical Prostatectomy (RARP)

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Introduction and aim of the study: Robot-assisted radical prostatectomy is the most frequent strategy used for the surgical treatment of localized prostate cancer. The importance of iatrogenic RARP-associated lesions of pudendal nerve branches is often underestimated in rate and clinical impact (with a reduction of the quality of life). This study aimed to evaluate the impact of pudendal neuropathy after Robot-assisted laparoscopic prostatectomy (RARP).

Materials & methods: We evaluated 260 consecutive patients who underwent RARP due to localized prostate cancer between January 2022 and January 2024 in our department. After the surgical procedure, all Patients were telephonically contacted: we asked them whether complications such as urinary incontinence or pelvic pain had occurred and, in these cases, they were recruited from our Functional Urology Service. Patients were examined by clinical and objective evaluation (according to the Nantes criteria) and, in case of clinical diagnosis of PN, they underwent pelvic floor and pudendal nerve electromyographic study and pelvic MRI with focus on the aforesaid nerve.

Results: A total of 4 patients (64, 67, 72, and 73 years old) were diagnosed with a PN due to potential injury of different branches of the pudendal nerve, confirmed then to the diagnostic tests mentioned above. Patients underwent a multidisciplinary approach with pharmacologic (pregabalin, opioids, paracetamol, and Palmitoylethanolamide — PEA) and physiotherapeutic treatment (manual and with electrostimulation). Two patients underwent also a cycle of 10 radiofrequency sessions. After treatment, 2 patients showed pain relief after 35 and 50 days. In one case, pain relief was observed after the addition of

radiofrequency to pharmacologic therapy. In only one case we observed a modest improvement in symptoms, so the patient was referred for evaluation for sacral neuromodulation.

Interpretation of results: PN and incontinence can result from RARP. The most effective treatment is rehabilitation followed by pharmacological therapy

Conclusions: The RARP-associated neurological injuries of the pudendal nerve with a resulting PN may occur even when performed by highly experienced surgeons. A better understanding of the potential iatrogenic nerve lesions can make an improvement in some steps of surgical technique. An early multidisciplinary approach is mandatory for managing these complications.

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26 - Sling surgery for the treatment of male urinary incontinence after radical prostatectomy: Do virtue® sling and advance® sling provide different results?

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Introduction and aim of the study: Stress urinary incontinence (SUI) is still a frequent complication after radical prostatectomy. Suburethral slings represent one of the less invasive options for postprostatectomy SUI. AdVance® and Virtue® sling are two examples of transobturator slings. At our department we have tested both of them (January 2010–June 2024). The purpose of our study is to compare the efficacy and perioperative complications of Advance and Virtue sling implants.

Materials and methods: We retrospectively enrolled 40 patients with AdVance sling and 15 patients with Virtue sling. They were evaluated by standardized validated questionnaires, pad test, urodinamics and uretrocistoscopy. Patients affected by mild-moderate urinary incontinence were enrolled. Patients who had radiation therapy or affected by urethral strictures were ruled out.

Measurements included age, etiology of SUI, duration of SUI, follow-up and pad use per day (PPD) pre- and postoperatively. Patients were classified as cured if they used no pads or 1 PPD for security reasons. The baseline characteristics and complication rates were analyzed retrospectively. Functional outcome and quality of life were evaluated prospectively.

Results: After follow-up and according to our criteria, the cure rate was 77.5% (31/40) for Advance and 80% (12/15) for Virtue sling. Regarding operation time, there was no significant difference between the slings ($p = 0.146$). The complication rates were comparable in both groups. During follow-up, no differences could be identified regarding ICIQ-SF or number of pad usage.

Interpretation of results: The AdVance and Virtue slings are safe and effective treatment options for male stress urinary incontinence. Our results show favorable cure rates and are comparable to results from larger series.

Conclusions: The most appropriate candidates for the AdVance® and Virtue® sling are patients with mild to moderate postprostatectomy SUI and without additional treatment following prostatectomy, such as radiation therapy or surgery for stricture disease. Virtue sling did not demonstrate a superiority over AdVance sling regarding complication rate and functional outcome.

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27 - Antenatal anovaginal distance, a potential indicator of perineal damage during pregnancy

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Introduction and aim of the study: Perineal injuries, including episiotomies and spontaneous tears, are common complications during childbirth, often leading to significant discomfort and prolonged recovery for women. This retrospective observational cohort study aimed to explore the relationship between antenatal anovaginal distance (AVD) and the incidence of perineal injuries in a cohort of pregnant women evaluated for pelvic floor health at 28 to 32 weeks of gestation.

Materials and methods: Conducted at the University Hospital of Padua over 18 months, the study included 416 women who underwent vaginal delivery at term. Based on AVD, the study participants were divided into two groups: AVD-N group, which included 252 patients with AVD $\geq$ 2 cm, and the AVD-R group, which included 164 with AVD < 2 cm. The results of the pelvic floor assessment and those related to childbirth were then examined in relation to AVD (reduced vs. normal).

Results: The study found that women with reduced AVD were more likely to experience perineal injuries. Specifically, the incidence of episiotomy and severe perineal tears (3rd and 4th degree) was significantly higher in the reduced AVD group ($p < 0.05$). Furthermore, a lower AVD was associated with increased perineal muscle hypertonicity and a higher likelihood of operative delivery with episiotomy. Logistic regression analysis confirmed that reduced AVD was an independent risk factor for perineal injuries, regardless of other maternal or neonatal characteristics.

Conclusions: These results suggest that AVD measurement during pregnancy may help identify women at higher risk of perineal trauma, enabling more personalized obstetric care to mitigate these outcomes.

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28 - Social media as a source of information on painful bladder syndrome/ interstitial cystitis: Support tool or misinformation?

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Introduction and aim of the study: To evaluate the most used social media (SoMe) by women with Painful Bladder Syndrome (PBS)/ Interstitial Cystitis (IC) and their impact on the exchange of information.

Materials and methods: A cross-sectional study was conducted on SoMe, collecting posts from the most used platforms in Italy: Instagram, Facebook (Fb), X, YouTube and TikTok (December 2023–December 2024). The research included terms such as "Painful Bladder Syndrome" and "Interstitial Cystitis": each keyword was entered into the search tool of the SoMes, adding only posts that were in Italian and contained informative text (in image or text format). The interactions of the audience with each post were quantified (likes, comments, and shares) and the posts were evaluated by 2 urogynecologists, who categorized them as "has scientific evidence", "scientific evidence scares" and "does not have scientific evidence". The results were analyzed using the Kappa test and the absolute agreement was also calculated.

Results: The 146 publications collected were: 59 (40.4%) on Instagram, 72 (49.3%) on Fb, 9 (6.1%) on YouTube, 4 (2.7%) on X, 2 (1.3%) on TikTok. On Instagram 62.7% of authors are healthcare professionals, 20.3% patient's associations, 11.8% patients, 5.2% pharmaceutical companies. On Fb 59.7% of authors are patients, 22.2% patient's associations, 14% healthcare professionals, 4.1% pharmaceutical companies. The majority of the authors identified as professionals in both platforms are physiotherapists, psychotherapists, urologists. On Instagram most of the posts are about raising awareness on the disease (54.3%) and diagnosis (10.2%). On Fb most posts are about diagnosis (23.6%) and therapy (16.7%). 49/59 (83.1%) post on Instagram and 60/72 (83.3%) on Fb are posted on "business page". Only 5/59 (8.5%, Instagram) and 14/72 (19.4%, Fb) have scientific evidence, 4/59 (6.8%, Instagram) and 11/72 (15.3%, Fb) have scientific evidence scares. The mean ± SD of likes on Instagram were 126.9 ± 129 and on Fb were 10.8 ± 23.5 ($p < 0.00$). The most viewed videos are those published on Youtube (views: 494.6 ± 742.5). 1/2 video on TikTok have scientific evidence, with both few likes (mean ± SD: 21.5 ± 26.4) There was low agreement (Kappa) among posts authored by healthcare professionals and patients alike. Regarding the analysis by professionals, there was a good agreement in publications about diagnosis and therapy of PBS/IC.

Interpretation of results: SoMe has become increasingly popular in the urology community. Users often turn to SoMe to learn about urological health and share their own experiences, while medical professionals may use it for networking, education, and research purposes. Our results demonstrated that Fb and Instagram are the most used SoMes but despite this, posts with good scientific evidence are a minority.

Conclusions: Healthcare professionals are the majority in publications on Instagram, meanwhile are patients on Fb. In respect to the scenario of each SoMe, we demonstrated that X is used for debates, while Instagram and Fb represent sources of information and promotion of professional image.

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29 - Luts and prostate cancer: Pre-surgical urodynamic study for optimal counseling

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Introduction and aim of the study: Urinary incontinence (UI), necessitating the use of one or more pads per day, is a frequent issue following radical prostatectomy (RP), affecting nearly half of patients at six months post-surgery, whereas only 1% experience it preoperatively(1). Post-RP UI has a profound impact QoL for up to two years compared to active surveillance.

Previous research suggests that 37% to 50% of patients undergoing RP experience moderate to severe lower urinary tract symptoms (LUTS)(2).

This study aims to analyze baseline LUTS and urodynamic parameters to determine potential correlations in a modern cohort of men diagnosed scheduled for RARP.

Materials and methods: Men over 18 years of age, who were clinically deemed eligible for RP and cognitively capable of providing informed consent, were prospectively enrolled.

Baseline oncological and demographic data, along with responses to IPSS, EPIC, and IIEF questionnaires, were collected at baseline and at 2 weeks, 6 weeks, 3-, 6-, 9-, and 12-months post-surgery.

Prior to surgery, patients underwent urodynamic evaluations following ICS guidelines and functional 2D pelvic floor ultrasound. Patients scheduled for surgery within four weeks of initial assessment were excluded from urodynamic testing.

Demographic and clinical characteristics were compared using chi-square and Fisher's exact tests. Mean score differences between patient groups were analyzed using t-tests or Wilcoxon test.

Results: A total of 65 men, with a mean age of 63.6 (range: 44.5–77.8), were prospectively recruited for clinical assessment, urodynamic evaluation, and functional pelvic floor ultrasound before RP.

Among the 60 patients with complete baseline data, LUTS severity was classified as mild (IPSS < 8) in 26 (43%), moderate (IPSS 8–19) in 18 (30%), and severe (IPSS > 20) in 16 (26.6%). Urodynamic abnormalities were identified in 32 of 60 patients (53.3%). Of the 60 patients who completed the voiding phase, 18 (29%) exhibited obstruction (BOOI > 40), while 9 (15%) had impaired contractility (BCI < 100).

Of the 32 patients (53.3%) reporting overactive bladder (OAB), 14 (43.7%) had urodynamic filling abnormalities.

Among the 8 patients (57.1%) diagnosed with DO via urodynamic studies, 6 (80%) reported OAB symptoms. Of the 18 (29%) patients diagnosed with obstruction, 6 (35%) had mild, 10 (59%) had moderate, and 2 (14%) had severe LUTS.

Interpretation of results: OAB, along with moderate and severe LUTS, is more prevalent among men undergoing RP. Nearly half of RP candidates demonstrated moderate to severe LUTS preoperatively.

Baseline urodynamic assessments indicated that 29% of men undergoing RP exhibited obstruction. Less than half of those experiencing OAB symptoms had verifiable urodynamic filling abnormalities. Among patients with DO identify in UDS, 80% reported baseline OAB symptoms.

The 20% of patients with asymptomatic DO may constitute a subgroup at greater risk of experiencing symptom deterioration after RP.

Concluding message: Preoperative identification of significant voiding and storage dysfunction may enhance counseling and facilitate better management of urinary function recovery following RP.

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30 - Evaluation of the learning curve of aquablation treatment for prostatic benign hyperplasia

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Introduction and aim of the study: The aim of the study was to analyze the learning curve (LC) of the Aquablation for the treatment of benign prostatic hyperplasia (PBH)-related lower urinary tract symptoms (LUTS).

Materials and methods: A retrospective analysis of our prospectively maintained Aquablation database was performed. The LC of two surgeons was assessed using pentafecta outcomes. Pentafecta was define as: no 90 day Clavien–Dindo grade $\geq$ 2 complications, 3-months postoperative Qmax > 15 ml/s, 3-months postoperative International Prostate Symptom Score (IPSS) < 8, ejaculation and continence preservation. The LC was depicted using a moving average with polynomial fitting.

Results: 109 patients were analyzed. At enrollment, patients had a mean age of 66 ± 7.4 years, Qmax of 8.4 ± 2.8 ml/s with a post void residue of 83.3 ± 71.1 ml, reported median IPSS Quality of Life (QoL) score of 5 (4–5) and a median urinary symptom IPSS of 22 (17–26). All the Aquablation procedures were uneventful, and no intraoperative complications were observed. Pentafecta achievement surpassed 50% after 20 cases and 80% after 90 cases. Logistic regression analysis demonstrated significant improvements in Qmax improvement, major postoperative complications and ejaculation preservation ($p < 0.05$). The occurrence of incontinence remained unaffected by surgical experience, as did the percentage reduction in IPSS at three months.

Interpretation of results: The study analyzed 109 patients undergoing Aquablation, showing significant improvements in urinary flow (Qmax), reduced major complications, and preserved ejaculation with surgical experience, while incontinence rates remained unchanged. Pentafecta achievement increased with experience, surpassing 80% after 90 cases, indicating a strong learning curve effect

Conclusions: Aquablation exhibits a rapid LC for achieving defined pentafecta outcomes, delivering effective treatment of LUTS and maintaining low rates of incontinence regardless of surgeon experience. Surgeon experience notably influenced postoperative complications, Qmax and ejaculation preservation.

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31 - Sexual life after single incision sling for stress urinary incontinence in women

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Introduction and aim of the study: Stress urinary incontinence (SUI) and lower urinary tract symptoms (LUTS) significantly impact women's quality of life (QoL), including sexual health, with >50% experiencing female sexual dysfunction (FSD). This study aims to evaluate the efficacy and safety of the Altis® single-incision sling (SIS) for SUI. Additionally, it examines changes in sexual function after surgery, identifying clinical and ultrasonographic parameters potentially associated with improvement during follow-up.

Materials and methods: This retrospective, monocentric study includes female patients who underwent SUI correction with the Altis® SIS. We collected data on medical history, LUTS, clinical assessments, urodynamic parameters, and questionnaires (ICIQ-SF, FSFI, FSDS, IFCI-Q, PGI-I). Surgical aspects and intra- or perioperative complications were reported. Follow-up evaluations included clinical and LUTS assessment at 1 month after surgery and pelvic floor ultrasound (US) examinations at 6 months.

Results: A total of 71 patients (mean age 59.9 ± 12.3 years) were included. The mean operative time was 25 ± 7 min without intraoperative complications. 7% experienced acute urinary retention requiring temporary catheterization. At 1-month follow-up, significant improvements in LUTS and QoL were observed,

with a 91.1% reduction in positive stress tests and a high PGI-I score (median 2). At the 6-month follow-up, 35 patients were re-evaluated. Among sexually active patients (n = 23), a significant improvement in FSFI and FSDS scores was noted, despite a persistence of dyspareunia in 9 cases. Clinical and ultrasound parameters did not significantly differ between patients with and without postoperative FSD, except for a higher prevalence of pelvic floor overactivity (PFO) in pre- and postoperative evaluation in those reporting dyspareunia.

Interpretation of results: Our study confirms the efficacy and safety of the Altis® SIS for the surgical treatment of SUI. At short-term follow-up, patients demonstrated significant improvements in LUTS, as evidenced by the reduction in positive stress tests and a high PGI-I score. Regarding sexual function, a significant improvement in FSFI and FSDS scores among sexually active patients were observed, suggesting that SUI correction has a positive impact on female sexual health. However, 17.4% of patients reported dyspareunia postoperatively. Clinical and US evaluations did not reveal significant differences in SIS positioning, except for a higher prevalence of PFO at clinical examination, in those symptomatic. This suggests that pelvic floor dysfunction, present in pre and postoperative evaluation in this group, may play a key role in sexual discomfort.

Conclusions: The Altis® SIS represents a safe and effective surgical approach for SUI, demonstrating high patient satisfaction and improvements in sexual function. The occurrence of postoperative dyspareunia, regardless of the type of surgery, underscores the necessity for further research on patient selection and rehabilitation strategies to optimize sexual outcomes.

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32 - D-mannose, to prevent Uti in vaginal surgery: A single-center prospective randomized pilot study

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Introduction and aim of the study: Patients undergoing vaginal surgery for pelvic organ prolapse (POP) can experience urinary tract infection (UTI) with storage lower urinary tract symptoms (LUTS) in the days following the procedure. This study aimed to assess the efficacy of D-mannose in the prevention of UTIs in patients undergoing urogynaecological surgery.

Materials and methods: A single-center prospective randomized pilot study was conducted between June 2024 and January 2025. Patients undergoing vaginal surgery for pelvic organ prolapse (POP) or urinary incontinence (UI) and negative urine culture were enrolled. Patients were randomized into two groups: D-Mannose (Group A) vs. no treatment (Group B). A urine culture was prescribed regardless of symptoms 7 days before and 7 days after procedure. Antibiotic prophylaxis with cephalosporin 2 g was prescribed before each procedure. Group A took 2 g of D-Mannose in 250 ml of water every 24 h in the evening for 14 days before and 8 days after surgery. The use of other supplements, or antibiotics after surgery was prohibited among all enrolled patients. Demographic data and clinical characteristics were collected for each patient at baseline and after 7 days. The urine culture results were sent by email. NRS was collected by phone interviews. Urine culture before surgery had to be negative to allow patients to be included in the study, while the urine culture result after surgery was chosen as the primary outcome.

Results: A total of 32 (28 POP and 4 UI) patients were enrolled in the study and randomized into the two treatment groups. No statistically significant differences were reported in the baseline characteristics of the patients ($p > 0.05$). No urine culture was positive in Group A 7 days after surgery, while 3 patients (18.8%) in Group B had a positive control urine culture ($p = 0.044$). All patients with positive control urine culture reported the onset or worsening of urinary symptoms, excluding the diagnosis of asymptomatic bacteriuria. At 7 days, the median NRS for local discomfort/pain of Group A was significantly lower than that for Group B (1.5 vs. 4.0 points; $p = 0.021$).

Interpretation of results: D-Mannose seems effective in the prevention and resolution of bladder inflammation and infection, representing a possible option in patients undergoing vaginal surgery. It is important to underline that the studies on D-Mannose in this setting are not available in the literature. Promising findings emerge from Our research, but they should be read and interpretated according to several limitations.

Conclusions: In Our study D-Mannose before and after vaginal surgery seems effective in reducing the incidence of UTI, the severity of LUTS, and the intensity of local discomfort.

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33 - Impact of nerve-sparing techniques and rehabilitation protocols on erectile function recovery after robot-assisted radical prostatectomy

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Introduction and aim of the study: Erectile dysfunction (ED) is a common complication following robot-assisted radical prostatectomy (RARP), despite advancements in nerve-sparing (NS) techniques. This study evaluates the influence of various NS approaches and rehabilitation protocols on erectile function (EF) recovery.

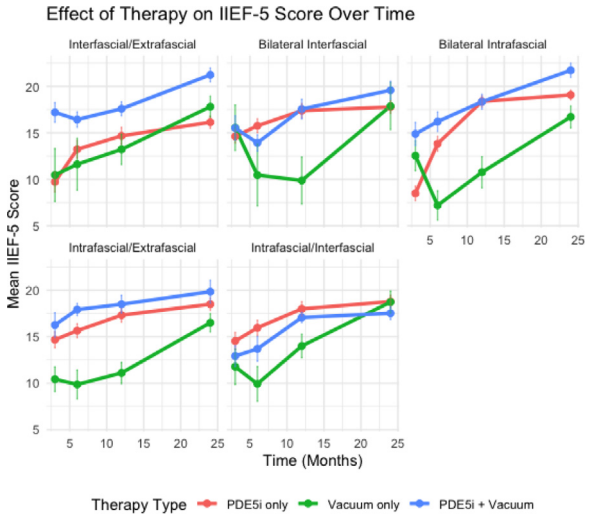
Materials and methods: This retrospective study included 640 patients who underwent RARP with NS techniques from 2020 to 2024 at a single tertiary center. Patients with severe pre-existing ED (IIEF-5 <17) or <24 months of follow-up were excluded. NS approaches were categorized into bilateral intrafascial, bilateral interfascial, interfascial/extrafascial, intrafascial/extrafascial and intrafascial/interfascial. Rehabilitation included tadalafil (20 mg, thrice weekly), vacuum erection devices (VED) and intracavernosal injections (ICI). EF changes was assessed at 3, 6, 12, and 24 months using IIEF-5 scores. Multilevel (mixed-effects) models, Kaplan–Meier analyses and Cox regression were used to evaluate predictors of back to baseline EF recovery and therapy discontinuation.

Results: The median age of the cohort was 65 years (IQR: 59–69). NS techniques were distributed as follows: bilateral intrafascial (15%, n = 95), bilateral interfascial (22%, n = 144), interfascial/extrafascial (17%, n = 111), intrafascial/extrafascial (21%, n = 137), and intrafascial/interfascial (24%, n = 153).

Interpretation of results: Patients receiving bilateral intrafascial NS and PDE5i + VED therapy showed the highest recovery, with 86% of patients <65 years achieving near-baseline IIEF-5 scores by 12 months, compared to 65% for those ≥65. By 24 months, 73% of patients on PDE5i + VED discontinued therapy due to sufficient recovery. Multilevel analysis identified time from surgery, bilateral intrafascial NS (β = 2.0, p = 0.01), and PDE5i + VED (β = 5.8, p < 0.001) as significant recovery predictors, with age independently predictive in Cox analysis (HR 1.56, p < 0.001).

Conclusions: Bilateral intrafascial NS combined with structured rehabilitation, particularly PDE5i + VED, significantly enhances EF recovery post-RARP, especially in younger patients.

Standardizing rehabilitation protocols may optimize long-term outcomes across age groups and increase early therapy discontinuation due to EF recovery.



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34 - Efficacy of a novel prophylactic scheme of Fosfomycin trometamol in patients undergoing endoscopic surgery for benign prostatic hyperplasia: Findings from a prospective monocentric single-arm study

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Introduction and aim of the study: This study aimed to assess the efficacy of a novel prophylactic scheme of Fosfomycin trometamol in patients undergoing elective HoLEP or TURP procedures for treating BPH.

Materials and methods: Patients affected by BPH and undergoing elective HoLEP or TURP procedures during the period February 2022–June 2023 were prospectively enrolled. Two 3 g oral F.t. doses 12 h apart were administered at 8.00 p.m. on day −1 (the day before HoLEP or TURP procedure) and at 8.00 a.m. on day 0 (the day of the surgical procedure). The following outcomes were assessed: prevalence of fever occurring in the first 48 h after surgical procedure; prevalence of urological complications occurring after the surgical procedure; prevalence of proven UTIs and/or BSIs at 14 days post-procedure; and prevalence of emergency department admission for UTI-related sepsis at 14 days post-procedure. Univariate analysis comparing patients with and without proven UTI, BSI, or emergency department admission at 14 days post-procedure was carried out.

Results: Overall, 96 patients (median age 70 years) undergoing HoLEP (82.3%) or TURP (17.7%) were prospectively included. Median (IQR) time of surgical procedure after the morning fosfomycin dose was 226.5 min (range 88.5–393.75 min). Fever in the post-surgical 48 h occurred in 3/96 patients (3.1%). Prevalence of proven UTI at 14 days was as low as 1.0% (1/96), whereas no patient had proven BSI or UTI-related sepsis requiring emergency department admission at 14 days.

Interpretation of results: This study was the first to explore the role of a novel prophylactic scheme based on two oral F.t. doses 12 h apart among patients with BPH undergoing HoLEP or TURP. Defining proper timing for f.t. administration in prostatic interventions may still represent an arguable topic. In regard to the f.t. dosing regimen most frequently adopted in other studies, based on one dose 3 h before and the other 24 h after the intervention. This scheme must be considered as a mixed prophylactic/preemptive strategy. According to a recent population pharmacokinetic model conducted among 26 subjects undergoing

TURP, the optimal timeframe for administering f.t. prophylaxis should range between 1 and 4 h before the intervention. This is due to the fact that the attainment of therapeutic concentrations with f.t. in the prostate gland may be delayed and blunted compared to those in plasma, the authors also found that 12 h after f.t administration, the concentrations in the transitional prostate zone were still above the MIC50 value against E. coli in approximately 80% of cases. These findings may support that administering two prophylactic f.t doses 12 h apart before the intervention may minimize the likelihood of attaining only subtherapeutic prostatic concentrations among patients undergoing intervention early after the morning prophylactic dose.

Conclusions: Our findings support the contention that a prophylactic scheme based on two doses of f.t. 12 h apart before surgical intervention may represent a valuable strategy for preventing infectious complications in urologic patients undergoing HoLEP or TURP.

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35 - Alpha-lipoic acid in the treatment of interstitial cystitis/bladder painful syndrome

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Introduction and aim of the study: Interstitial cystitis/bladder painful syndrome (IC/BPS) is still an "enigma" due to its elusive etiology and lack of curative therapy. An innovative approach in the management of chronic pain is represented by alpha-lipoic acid (ALA), a naturally occurring disulphide compound and antioxidants. This study was designed to evaluate the efficacy of ALA (as add-on therapy) in the management of pain-resistant patients suffering from IC/BPS.

Materials and methods: Female patients suffering from IC/BPS, poorly responsive to conventional pharmacological agents, were included in this exploratory study. Women were randomly assigned to receive conventional therapy alone or associated to a commercially available ALA- 600 mg (Tiolide®; once daily). History, uro-gynaecological examination, the 3-day bladder diary and Visual Analogue Scale (VAS; 0 = worse, 10 = best) to score pain intensity, were collected from patients' clinical charts. Baseline evaluation was repeated at 3 and 6- mos follow-up.

Results: Twenty-five IC/BPS patients were enrolled (mean ± SD age: 39.6 ± 6.7y.o.). Conventional therapy included poly-pharmacotherapies as amytryptiline, nimesulid, pregabalin, tapentadol. At baseline 34.7% of patients had bladder pain/burning (P/B) sensation, 30.4% had urethral P/B, 17.6% had dyspareunia and 13% of them had anal P/B. 20/25 (80%) subjects presented with urgency, 18/25 (72%) with increased day-time and night-time urinary frequency and 10/25 (40%) with urgency urinary incontinence (UUI). At 3 and 6-mos follow-up, urinary symptoms increased in both trial groups, with a greater effect seen with the addition of ALA ($p < 0.01$). The addition of ALA to treatment was also significantly associated with improvements in pain ($p < 0.00$), particularly in dyspareunia and pelvic floor muscle tone. 3 patients stopped assuming ALA due to lack of efficacy. At 6-mos follow-up, pain completely disappeared in 20% of patients (5/25), and substantially decrease in the remaining cases. No side effects have been recorded during ALA administration.

Interpretation of results: The results in the present study show that 86.7% of patients reported a large benefit in pain reduction with ALA as add-on therapy. There are 3 major lines of evidence supporting our results: ALA acts to reduce fractalkine mRNA (CX3CL1) and protein expression, a chemokine markedly increased in chronic cystitis. ALA could reverse the detrimental effects of high levels of oxidative stress in bladder inflamed tissue due to its antioxidant activity. Since bladder inflammation may significantly influence regulation of detrusor activity, we speculate that ALA could prevent bladder hyperreflexia induced by chronic bladder inflammation.

Conclusions: Our study provides preliminary evidence suggesting that ALA as add-on therapy to conventional pharmacological regimens in patients with IC/BPS contributes to a significant pain intensity reduction. Worth of noting, relief in pain was obtained in our patients without any consistent side effect. Future studies should be addressed to investigate the benefits of this pharmacological agent, used alone or in combination, in the treatment of patients with IC/BPS.

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36 - Analysis of the distribution of urologic rehabilitation centers in Lombardy for treatment of post-operative male urinary incontinence

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Introduction and aim of the study: Post-operative urinary incontinence is a common complication following prostate surgery. The prevalence rates range from 2% to 60%, contingent upon the methods used for assessment. It is advisable to initiate therapeutic management promptly, with a preference for conservative approaches. Addressing post-radical prostatectomy urinary incontinence is crucial not only for the patient's quality of life but also due to the economic implications of inadequate management. Despite being one of the wealthiest regions, Lombardy does not allocate sufficient resources to this sector. We conducted a detailed survey to gather data on the geographical distribution, types, and services provided by healthcare professionals in this region. The aim is to determine whether the availability of these services aligns with the increasing demand, thereby ensuring effective management of the condition.

Materials and methods: In December 2024, a questionnaire link was distributed to over 200 urologists across all provinces of Lombardy. The questionnaire was designed using the Google Forms platform and comprised 12 mandatory multiple-choice questions. The estimated compilation time was three minutes. The questions were categorized into four topics: geolocation, numbers, services, and proposals for improvement.

Results: Out of 73 urologists surveyed, 56.2% work in Milan or its district, 13.7% in Monza and Brianza, and 9.6% in Como and its province, with the remaining 20.5% spread across other provinces. Fifty-one respondents are in the Public Health System, where 54.8% perform over 100 prostatectomies annually, and 26% represent high-volume centers with more than 200 prostatectomies per year. Incontinence rates at 3 and 12 months align with literature data. Additionally, 74% of centers provide rehabilitation programs, and 31.5% involve physiotherapists and specialized nurses post-discharge. Most urologists (58.9%) think the offer is inadequate due to insufficient human and economic resources.

Interpretation of results: The geographical distribution of the questionnaire responses mirrors the allocation of urology departments across the Lombardy region, encompassing both public and private healthcare systems. Regarding post-operative urinary incontinence, high-volume centers show better long-term results. Recognizing the issue, all centers start with conservative solutions but few centers offer surgical options, likely due to limited funding from the Lombardy region and insufficient training of healthcare personnel. Emphasizing low-cost rehabilitation and better training for healthcare professionals can reduce healthcare costs and enhance patients' quality of life, boosting productivity and social participation.

Conclusions: Although the numbers are low, the data indicates the need to reevaluate the management of radical prostatectomies and related urinary incontinence.

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37 - Young surgeons' perspectives on surgical anatomy teaching: Insights from a Delphi study

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Introduction and aim of the study: Minimally invasive surgery has changed surgical training in gynecology. Increased focus on new technologies may be impacting anatomy knowledge and new generations of surgeons have been faced with this paradigm shift. This Delphi-like survey explored young surgeons' perspectives on surgical anatomy education, aiming to identify the most effective teaching tools and methods for improving anatomical knowledge and surgical skills within this evolving field.

Materials and methods: A Delphi study was conducted during an international surgical anatomy meeting, involving 120 participants, using an online, self-administered questionnaire of 9 demographic questions and 48 general statements, later rated using a Likert scale. Statements achieving ≥70% consensus were excluded from subsequent rounds, while those with 60%–70% agreement were revised, reanalyzed and rephrased for the second round, which included 7 revised statements. The same analysis process was used in both rounds. Data were analyzed using descriptive and inferential statistics, using SPSS v26.

Results: Consensus was achieved on several key areas of surgical anatomy education. Young surgeons agreed on Cadaveric models (88%) and virtual reality (VR) simulators (88%) were identified as the most effective teaching tools, while plastinated specimens (41%) and anatomical drawings (46%) were deemed less effective. The necessity of standardized anatomical terminology was strongly endorsed (93%), as were foundational principles of open (98%) and vaginal surgery (90%) considered integral to modern surgical education. Hands-on surgical training (91%) was highly supported. A combined approach integrating VR simulators and laparoscopic trainers was preferred (88%), with cadaveric dissection and 3D models favored over operating room observation (78%). Furthermore, 77% emphasized the need to include soft skills like leadership and teamwork in surgical training. Despite advancements in teaching, only 55% of participants were satisfied with surgical anatomy education, with 64% desiring more information on techniques, instruments, costs, and materials.

Interpretation of results: These findings underscore a paradigm shift in surgical anatomy education, where traditional learning methods are being reshaped by technological advancements and evolving educational needs, emphasizing hands-on learning through cadaveric models and virtual reality. Equally significant is the reaffirmation of fundamental surgical principles, demonstrating that the essence of surgery remains rooted in its classical foundations, even in an era dominated by minimally invasive techniques. A structured, holistic approach bridges tradition and innovation in surgical training.

Conclusions: This Delphi study highlights the need for a multimodal approach to surgical anatomy education, combining traditional methods with innovative technologies. Standardized anatomical terminology is crucial. Future frameworks should balance theory, technology, and hands-on experience, ensuring a comprehensive training for modern surgeons.

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38 - Identification and modulation of gut & vaginal microbiome dysbiosis to mitigate risk of uti recurrence

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Introduction and aim of the study: Imbalances (dysbiosis) in the composition and function of the gut and vaginal microbiome can influence the risk of lower urinary tract infections (uti) through the gut–vaginal, gut–bladder and vagina–bladder axis. Antibiotic treatment may resolve acute stages of infection, but not reduce uti risk in the long term, since rates of re-infection can reach up to 50%–60% in 1 year. The aim of the study was to examine women patients with recurrent uti (utir) through gut and vaginal microbiome analysis to identify dysbiosis factors on which to act upon through diet and natural treatments as a preventive strategy to mitigate uti risk.

Materials and methods: 30 women aged between 20 and 60 years with utir visited in the outpatient setting for nutritional assessment and dietary consultation in the past 2 years (2023–2024) underwent gut microbiome and vaginal microbiome analysis through metagenomic methods (ngs, shotgun). Microbiome tests were analyzed for presence of dysbiosis markers that could increase the risk of utir. Anamnesis was conducted on patients to intercept patterns of gut and vaginal symptoms that could signify altered gut and vaginal function associated with utir episodes.

Results: Most women assessed showed high scores on symptoms of altered gut function (e.g. bloating, diarrhoea, constipation) and vaginal function (e.g. discharge, burning, itching, vulvar neuropathy). Majority of them showed presence of dysbiosis markers of gut microbiome such as significantly increased proportions of gram-negative bacteria bacteroidetes and proteobacteria, lower presence of butyrate producing bacteria, lower bacterial diversity and richness. About 50% of the population tested showed signs of vaginal dysbiosis (low presence of lactobacillus, low rates of l. Crispatus, presence of candida or vaginal opportunistic bacteria). Dietary strategies and supplements given to these women to modulate the gut and vaginal microbiome had a positive impact on reduction of utir rates and gut & vaginal symptoms.

Interpretation of results: The results support the existence of gut–vaginal–bladder communication and reciprocal influence of these bacterial ecosystems. This study also identifies a series of gut and vaginal dysbiosis markers that could be used by specialists to recognize and manage risk factors associated with uti recurrence.

Conclusions: This study highlights the importance of the gut and vaginal microbiome ecosystem in influencing urinary tract microbiome (urobiome) and suggests novel tests, such as gut and vaginal microbiome analysis, that could be adopted by urologists or other specialists to identify and manage risk factors associated with utir. It also paves the way for novel strategies based on modulation of the gut and vaginal microbiome through diet and natural treatments (e.g. prebiotics, probiotics, phytotherapies) to prevent and treat uti, reducing rates of antibiotic use in the long-term.

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39 - Ob-gyn residents' interest in urogynecology: A single-center analysis

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Introduction and aim of the study: Pelvic floor dysfunction (PFD) medicine, or urogynecology, is a critical subspecialty within obstetrics and gynecology, given its high prevalence across age groups. Despite its clinical relevance (1), resident training in this area remains underemphasized, with varying levels of interest from trainees (2). This study aims to assess residents' perceptions of urogynecology's role in clinical practice and their interest in specialized training within this field.

Materials and methods: We invited all obstetrics and gynecology (ob-gyn) trainees at a single institution to complete a digital, anonymous questionnaire. The survey included both multiple-choice questions and Likert scale questions (1 = never, 5 = always) to assess residents' perspectives and inclinations.

Results: All 67 residents (100%) in the ob-gyn training program completed the questionnaire. The average age was 28 years and 10 months (range: 25–35). Of the participants, 44.7% (30/67) graduated with an ob-gyn thesis. Table 1 presents the distribution and skills of the residents, while Table 2 shows their propensity toward PFD medicine.

Table 1
Residents' skills and interests.

	Young residents		Senior residents		
	1st year (15)	2nd year (12)	3rd year (12)	4th year (16)	5th year (12)
Training in urogynecology outpatient: yes 71%	0	8 (67%)	12 (100%)	16 (100%)	12 (100%)
Urodynamic Evaluation: yes 73%	0	10 (83%)	11 (100%)	16 (100%)	12 (100%)
Your actual choice					
– Urogynecology (1)	0	0	0	0	1
– Maternal–fetal medicine (31)	6	3	6	7	9
– Gynecology oncology (14)	0	4	3	5	2
– Benign gynecology (12)	3	3	3	3	0
– Don't know yet (9)	6	2	0	1	0

Table 2
Propensity in urogynecology.

	5 (always/best)	4	3	2	1 (never/worst)
Urogynecology: relevant for your future	22 (33%)	32 (48%)	13 (19%)	0	0
Will you decide to be an urogynecologist?	1 (1,4%)	5 (7,2%)	19 (28,4%)	26 (39%)	16 (24%)
Relevance of urogynecology in					
– Sexual dysfunction	46	18	3	0	0
– Preventive medicine	16	25	21	5	0
– Surgery	28	32	7	0	0
– Obstetrics	26	28	12	1	6
– Oncology	1	16	29	15	2

Interpretation of results: Residents were equally distributed between maternal–fetal medicine and gynecology, with undecided residents being predominantly younger (8/9). Overall, residents showed limited interest in urogynecology, although they recognized the relevance of PFD medicine across most specialties (except obstetrics and oncology) and reported adequate training in the field, with 100% of senior residents receiving proper instruction.

Conclusions: Urogynecology seems less appealing to residents unless properly trained and highlighted due to the high prevalence of pelvic floor dysfunction, possibly because maternal–fetal medicine and gynecologic oncology are seen as more attractive subspecialties.

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40 - Residents and pelvic floor dysfunction surgery: A single-institution analysis

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Introduction and aim of the study: Surgical approaches to pelvic floor dysfunctions (PFD) are crucial, requiring specialized skills to restore anatomy and function. Functional surgery can be difficult to master, making a comprehensive core curriculum essential during residency, as outlined by relevant institutions (1). Expertise in PFD surgery depends on both training and personal interest. Our study aimed to explore the willingness and knowledge of residents at a single institution regarding PFD surgery.

Materials and methods: We invited all obstetrics and gynecology (ob-gyn) trainees at a single institution to complete a digital, anonymous questionnaire. The survey included both multiple-choice questions and Likert scale questions (1 = never, 5 = always) designed to assess residents' perspectives and skills.

Results: All 67 residents (100%) in the ob-gyn training program completed the questionnaire. The survey data are summarized in Table 1. Table 2 shows propensity towards fascial native reconstructive surgery.

Table 1
Skills and propensiveness of residents in PFD surgery.

	Young residents		Senior residents		
	1st year (15)	2nd year (12)	3rd year (12)	4th year (16)	5th year (12)
Mean age (28 y 10 mo)	26 y 7 mo	27y 6 mo	29 y 3 mo	30 y	31 y 4 mo
Equipe in vaginal hysterectomy: yes 52 (78%)	0	12 (100%)	12 (100%)	16 (100%)	12 (100%)
1st surgeon in vaginal hysterectomy (or part of it): yes 5 (7,4%)	0	0	0	2 (12,5%)	3 (25%)
1st surgeon in laparoscopic hysterectomy (or part of it): yes 6 (8,9%)	1 (6,7%)	0	0	3 (18,7%)	2 (16,7%)
Equipe in anti-incontinence procedure: yes 45 (67%)	0	7 (58%)	10 (83%)	16 (100%)	12 (100%)
Can perform a III/IV degree perineal tear as 1st surgeon: yes 12 (18%)	0	0	0	5 (31%)	7 (58%)
If you think about minimally-invasive surgery:					
– Laparoscopy (22)	3	5	3	6	5
– Vaginal (30)	9	2	5	8	6
– Robotical (7)	2	2	2	1	1
– None of these (8)	1	3	2	1	0
– Do not know yet (0)	0	0	0	0	0

Table 2
Propensity towards fascial native reconstructive surgery.

Do you think that learning fascial native tissue reconstructive surgery will be useful for you?	Young residents		Senior residents		
	1st year (15)	2nd year (12)	3rd year (12)	4th year (16)	5th year (12)
5 (always, best) = 15 (22%)	3 (20%)	4 (33%)	1 (8%)	3 (19%)	4 (33%)
4 = 20 (29,8%)	5 (33%)	4 (33%)	5 (42%)	3 (19%)	3 (25%)
3 (mild) = 26 (39%)	7 (47%)	4 (33%)	6 (50%)	9 (56%)	1 8%)
2 = 4 (6%)	0	0	0	0	4 (33%)
1 (never, worst) = 2 (3%)	0	0	0	2 (12,5%)	0

Interpretation of results: Most senior residents participated in surgeries for prolapse or incontinence, with few older residents performing vaginal hysterectomy as the primary surgeon. Younger residents slightly preferred laparoscopic or robotic procedures, though all recognized minimally invasive techniques are mainly linked to vaginal or laparoscopic surgery. Overall, residents showed mild interest in learning vaginal native tissue repair surgery.

Conclusions: Endoscopic surgical techniques may, in some cases, diminish the appeal of vaginal native tissue repair, possibly due to the limited field and complexity of PFD procedures.

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41 - Surgical technique to treat female urethral diverticula preserving continence

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Introduction and aim of the study: Urethral diverticula (UD) are a relatively rare condition. Despite various treatment techniques, no universally accepted standard exists. This study proposes a surgical technique for UD preserving continence.

Materials and methods: Between 2018 and 2024, 30 pts with symptomatic UD were treated. Asymptomatic UD and paraurethral masses not connected to the urethra were excluded. Diagnostic workups included clinical history, physical examination, abdominal ultrasound, urine analysis and culture, and contrast-enhanced MRI.

Surgical technique: A urethrocystoscopy is made to confirm the location of the diverticulum based on MRI. The vaginal wall is opened, and the periurethral fascia is incised to create two flaps. A lateral urethrotomy is made from the urethral meatus to the diverticulum for complete resection. The UD is carefully detached from surrounding tissues, with only the external area of the diverticulum removed. Urethroplasty is performed. The medial area of the UD is sutured to the periurethral flap on the opposite side. A 16Fr silicone Foley catheter is placed for 4 weeks. Histological examination is performed for all specimens. Follow-up includes physical examination and urine culture every 4 weeks during the first year, followed by annual check-up.

Results: The mean age of pts was 41.2 ± 10 yrs. The diverticula were located: 4 (13.3%) in the distal, 24 (73.4%) in the middle, and 4 (13.3%) in the proximal urethra. The mean UD length was 27.1 ± 10.7 mm, width 21.8 ± 8.6 mm, and anterior-posterior diameter 17.1 ± 5.9 mm. Of the cases, 24 (80%) were simple diverticula, and 6 (20%) were horseshoe-shaped. Histological findings included chronic inflammation in 27 (90%) cases, squamous metaplasia in 22 (73.3%), and fibrosis in 6 (20%). No periop or postop complications occurred. At a mean follow-up of 65.3 mo, all pts had normal voiding patterns, and none developed incontinence.

Interpretation of results: The primary goal of this technique is to preserve as much urethral, periurethral fascia, and urethral sphincter as possible, minimizing dissection while ensuring complete UD removal, preserving continence, and avoiding fistula. Histological features showed chronic inflammation, squamous metaplasia, and fibrosis, demonstrating that they are not related to periurethral secreting glands.

In literature many paper described the necessity of a pubovaginal sling for risk of incontinence and the use of Martius flap to avoid fistula. However, we believe that by preserving the periurethral fascia and maintaining urethral integrity, these additional procedures are unnecessary as showed in our series of pts.

Conclusions: Our technique offers a minimally invasive treatment for UD, preserving continence and avoid fistula. The procedure demonstrated a high success rate, no complications, and no cases of incontinence or recurrent infections in the follow-up period. Further studies with longer-term follow-up are needed to validate the long-term outcomes of this approach.

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42 - Efficacy of pre-partum pelvic-floor muscle rehabilitation to prevent urinary incontinence after delivery: A systematic review and meta-analysis

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Introduction and aim of the study: Aim of the systematic review and meta-analysis was to evaluate the efficacy of prepartum pelvic floor muscle exercises (PFME) to prevent urinary incontinence (UI) after delivery.

Materials and methods: After PROSPERO registration (n°CRD42023406815), we performed a comprehensive literature search on Pubmed, Embase, Medline and Cochrane CENTRAL including studies evaluating pre-partum PFME. Only randomized clinical trials were included in the analysis. No limits on time or type of study were applied.

Results: Overall, 4 studies were included in the analysis. A total of 1433 women were enrolled overall with a mean age range of 29–31. Overall all the studies showed a superiority of PFME over control in terms of post-partum UI incidence. More specifically UI in treatment group ranged from 5 to 32% vs 35%–40% in the control groups. According to our meta-analysis the risk of UI is decreased by 41% in women performing pre-partum PFME when compared to women not performing any type of exercises (OR = 0,59 95%CI: 0,46–0,75). Heterogeneity was high and risk of bias as well due to the heterogeneity of PFME protocols.

Interpretation of results: Considering the results, it was highlighted that a good percentage of women who performed pelvic floor exercises in the preoperative period had a better outcome and therefore a reduction in the risk of UI. Since these are exercises that can be easily performed, it would therefore seem advisable to prescribe them in the pre-partum period.

Conclusions: Women should be advised to perform pelvic floor exercises before delivery to reduce the incidence of post partum UI.

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43 - Urinary and anal incontinence after vaginal delivery: Risk factors and women's adherence to pelvic floor follow up

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Introduction and aim of the study: Pregnancy and childbirth increase the risk for pelvic floor dysfunction (PFDs), specifically urinary incontinence (UI), anal incontinence (AI) and pelvic organ prolapse (POP). PFDs after delivery are estimated to occur in up to 46% of puerperal women.

Pelvic floor muscle treatment (PFMT) has shown to be effective in the treatment of UI and it is also proposed for treatment of POP, AI, pain and dyspareunia.

The identification of strategies for selecting women who are at risk for PFDs after delivery and who most need PFMT is controversial and the costs benefit should be considered.

Aim of this study was to assess the prevalence and the evolution of postpartum UI and AI in primiparous women and define the role of their related risk factors. We also tried to test patient adherence to an offer for a pelvic floor assessment 2 months after delivery to select who most need PFMT.

Materials and methods: Among women who gave birth by spontaneous or operative vaginal delivery between June and December 2023 in our Labour Centre, we selected a sample (=265) through some inclusion criteria: caucasian race, primiparity, single pregnancy at term, delivery after the 37th gestational week. During hospitalisation we collected data regarding maternal, labour, delivery characteristics and PFDs. The postnatal pelvic floor examination was held 2 months after delivery used the SIUD post partum screening card in women with UI and/or AI at hospital discharge.

Results: The mean age of women at delivery was 31 years (range 19–47).

A second stage of labour than 1 h, the use of vacuum extractor, the Kristeller maneuver and episiotomy were significantly associated with vagino-perineal tears ≥ second degree (all p value < 0.0001).

Obstetric anal sphincter injury (OASI) was associated with increased Odds for UI (RR 2.48, 95%CI 0.67–9.19).

In the univariate analyses the presence of bronchitis and dyspareunia in pregnancy, Kristeller maneuver and neonatal weight ≥ 3,5 kg were significantly associated with post partum UI (p value respectively 0.013,0.03 e 0.002).

39 (14,7%) and 5 (1,9%) women complained respectively UI e AI after 3 days since delivery.

The postnatal pelvic floor examination after 2 months since delivery was held in 22 of 44 women (50%) with UI and or AI because the others refused the assessment: of these, UI was present in 6, AI in 2, pelvic prolapse in 1, dyspareunia in 6; perineal testing ≤ 2 in 15.

Interpretation of results and conclusions: In conclusion, the prevalence of UI and AI after delivery in our study can be estimated at 14,7% and 1,9% respectively. A history of bronchitis and dyspareunia in pregnancy, Kristeller maneuver, neonatal weight ≥ 3,5 kg, OASI were significantly associated with post partum UI.

Women should be routinely evaluated in post partum follow up in order to select who most need PFMT, but in agreement with other studies, when postnatal assessment is offered, a low adherence rate should be considered: in our sample 50% of women attended the consultation at 2 months after delivery.

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44 - Add-on treatment with a Nuciferin–protopin solution For BPS/IC

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Introduction and aim of the study: Bladder pain syndrome (BPS/IC) is a complex pathology and the treatment usually involves the combination of multiple approaches. Treatments are aimed at managing pain, tension and anxiety. The aim of the study is to evaluate the efficacy of a combination of two alkaloids derived from Nelumbo nucifera (Nuciferin) and Escolzia californica (Protopin) with dopaminergic action (blockade of D2 and D5 receptors) and anticholinergic + GABAergic action respectively.

Materials and methods: We included all consecutive patients with symptomatic BPS/IC treated at our Institution with a combination therapy of oral drugs (amitriptyline, PEA and pregabalin) and bladder instillations with a hyaluronic acid protocol. We prescribed ad add-on treatment with a daily 20 ml Nuciferin–Protopin solution (1000 mg + 4.8 mg/10 ml). At baseline and after 3 month we evaluated each patient with ICIQ-LUTSqol, PUF (pain urgency frequency) and VAS score (bladder pain 0–10). Subjective satisfaction was evaluated with the PGI-I score. We defined a clinical success a reduction in the ICIQ-LUTSqol and PUF score.

Results: We treated 18 female patients with median age 56 years (26–75). We had a significant reduction of the ICIQ-LUTSqol from a median of 56.5 (24–76) to 42 (22–75) and of the PUF score from a median of 20.5 [13–29; symptom score 11.5 (7–17); bother score 9 (6–12)] to 16 [9–27; symptom score 8 (4–15); bother score 8 (5–12)], all $p < 0.05$. VAS score reduced from a median value of 6 (4–8) to 4.5 (2–8). 55.6% of patients stated to be satisfied with the treatment (5/18 very much better, 5/18 much better), 27.8% stated to feel a little better and 16.7% found no change. Any patient referred adverse events.

Interpretation of results: An add-on treatment with Nuciferin and Protopin determined a subjective benefit on the quality of life of the patients, although the reduction of pain was not clinically significant. Observing the response of the patients, it is possible that the greater state of relaxation with less tension and anxiety and the better night's rest contributed to the patient's well-being. Although a slight reduction of the VAS score was observed, the reduction of urinary frequency (often high due to the frequent occurrence of episodes of bladder pain), seems to be correlated to a lower frequency of painful episodes.

Conclusions: When considering patients with BPS/IC treated with a combination treatment with oral drugs and bladder instillations with hyaluronic acid, the addiction of a Nuciferin and Protopin solution (1000mg+4.8mg/10 ml) may result in a reduction of the subjective symptoms.

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45 - The management of recurrent female urethral stricture generally treated conservatively

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Introduction and aim of the study: Female urethral stricture (FUS), is a rare condition in urology. It affects 3%–8% of women with bladder outlet obstruction (BOO). Diagnosing FUS is challenging due to nonspecific symptoms, such as frequency, urgency, poor urinary flow, dribbling, incomplete emptying, recurrent

infections, and dyspareunia. Treatment options, include conservative treatments as urethral dilatation, or urethral surgery. Urethroplasty has emerged as a high resolution for FUS.

Materials and methods: We reviewed 73 pts with FUS who underwent buccal mucosa graft urethroplasty (BMGU) between 2017 and 2023: 58 by a ventral BMG and 15 by a dorsal. Inclusion criteria was FUS. Exclusion criteria was complete obstructive stricture and concurrent urethral pathologies. Diagnosis was made through clinical history, physical examination, urethral evaluation (<14F), urethroscopy, uroflowmetry, abdominal ultrasound, and urine culture. After surgery a catheter was left in place for 3/4 weeks. Follow-up included postop symptom evaluation, uroflowmetry, and urethral evaluation for one year. Success was defined by restored urinary flow and urinary and sexual symptom resolution.

Results: 73 pts were included, with a mean age of 50.2 yrs. The preop mean Qmax was 7.74 ml/s and mean post-void residual (PVR) was 120.5 ml. Median follow-up was 43 mo. Median surgical times was 50 min. Postoperatively, all pts voided spontaneously, with a mean Qmax of 24.6 ml/s and a mean negligible PVR. No cases of urinary incontinence occurred, and all sexually active pts regained the sexual function. Success rate was 93.3% (68 pts). 5 pts (5.4%) develop recurrent FUS and 1(1.3%) pt develop urethral fistula: all pts were treated with re-do urethroplasty with resolution.

Interpretation of results: FUS remains a rare pathology. Diagnosis is challenging, and there is no consensus on the optimal treatment approach. Despite the etiology, 72 (98,6%) pts had previously undergone numerous urethral dilations and patients reports, discomfort, pain and urethrorragy related to this procedure. This study demonstrates that BMGU can effectively treat FUS, with excellent long-term outcomes in terms of symptom resolution compared to repeated urethral dilations. Our cohort, 98.6% of pts reported low quality of life, discomfort, pain, and sometimes urethral bleeding, all of which worsened to prolonged and repeated urethral dilations. After surgery all pts stated that ‘‘they returned to living’’.

Conclusions: FUS cause significant symptoms and low quality of life due to discomfort, pain, BOO, and dyspareunia. Despite the etiology a lot of o pts were treated with urethral dilations and pts reported worsening of symptoms and no resolution. In our series, 98.6% of patients had previously undergone conservative urethral dilations. BMGU resulted an effective and safe technique for treating FUS, providing excellent long-term outcomes in both urinary and sexual function. Further research is needed to determine long-term success rates and optimal treatment practices.

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46 - Lateral suspension versus sacral colpopexy in treatment of pelvic organ prolapse: A systematic review and meta-analysis

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Introduction and aim of the study: Despite being the gold standard for apical prolapse correction, sacral colpopexy is associated with prolonged operative time, risks of vascular and nerve damage during access to the presacral region and remarkable surgical expertise. As an alternative technique to laparoscopic sacral colpopexy (LSCP), laparoscopic lateral suspension (LLS) has been gaining in importance in recent years. The aim of the study was to summarize and compare available data between LSCP and LLS according to Dubuisson technique.

Materials & methods: PubMed (MEDLINE), Web of Science and Google Scholar were systematically searched from the inception of each database until December 2024. Studies including a comparison of at least one efficacy outcome (objective or subjective success rate) between LSCP and LLS were selected. Surgery-related data and follow-up data were also extracted. Results were pooled using random-effects meta-analysis.

Results: Six studies were included counting 632 patients. Meta-analysis did not report statistical differences between LSCP and LLS in terms of objective success of apical prolapse [OR = 1.24; CI 95% (0.61, 2.52); I^2 = 0%; P = 0.55] and anterior prolapse [OR = 0.78; CI 95% (0.45, 1.37); I^2 = 0%; P = 0.39] correction. Subjective success rate was similar (p = 0.72). LLS required shorter operative time [43.1 min, CI 95% (16.75, 69.45); I^2 = 97%; P = 0.001], however, no major differences were found regarding intraoperative and early post-operative complications. Re-operation and recurrence rates of apical prolapse rate were equivalent between groups (p = 0.97 and p = 0.79). Follow-up data regarding quality of life showed no significant differences in about de novo stress urinary incontinence, intestinal impairment, sexual function, and pain after surgery.

Interpretation of results: This meta-analysis found that LLS offers comparable anatomical success rates for anterior and apical prolapse and subjective success rate, while significantly reducing operative time. Although the rate of new onset of posterior prolapse is comparable between the two techniques, the presence of a posterior vaginal prolapse prior to surgery would likely expose the LLS group to higher rates of posterior recurrence. At present, it is not possible to consider these techniques as alternatives, but they should be considered for a specific group of patients. The recurrence rates of apical prolapse are comparable between the two techniques, which is consistent with data in literature. On the other hand, recent literature suggests that laparoscopic sacral colpopexy remains the more effective treatment for recurrent pelvic organ prolapse.

Conclusions: LLS has demonstrated comparable results in the treatment of apical prolapse in selected patients compared to LSCP. No significant differences were observed in terms of complications, recurrences, or re-interventions. LLS also exhibited a reduced operative time.

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47 - Postponing POP surgery results in more severe prolapse? The special case of Covid-19 pandemia

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Introduction and aim of the study: Natural history of Pelvic Organ Prolapse (POP) is still poorly understood and RF for progression and eventual recurrence are still under scrutiny.

During COVID a dramatic restriction of non-life-saving surgical procedures was observed. This has been the case for POP surgeries, especially in 2020.

When starting POP surgery again, facing more severe POP cases was a diffuse clinical opinion.

Aim of the study is to compare the severity of pelvic organ descent between women selected for surgery before and after COVID pandemic.

Materials and methods: Retrospective observational study: women selected for POP surgery in 2 Italian Hospitals (same area, different periods): Group A (2019) - Group B (2021–22). Identical selection criteria for surgery: symptomatic severe POP (>80% ≥ IIIrd stage).

In 2020, the outbreak of COVID pandemia, in Group B hospital a reduction to <1/4 of usual cases of POP surgeries was observed.

Demographic characteristics, symptoms and POPQ system were compared between Group A and B.

Sum rank test & Fisher exact test were adopted (p values < .05 for significance).

Results: 121 patients included. The 2 groups were demographically comparable (Table 1).

Table 1
Demography of selected patients.

	Group A (2019) N° = 51	Group B (2021–2022) N° = 70	*p*
Age			
Median	67	71	*0.054*
(IQ Range)	59–75	65–77	
Parity			
0	0	4 (5.8%)	*0.093*
1	11 (22.0%)	25 (36.2%)	
2	23 (46.0%)	26 (37.7%)	
3	13 (26.0%)	11 (15.9%)	
>4	3 (6.0%)	3 (4.4%)	
Missing data	1	2	
Menopause	45 (88.2%)	67 (95.7%)	*0.116*
BMI			
Median	21.8	23.0	*0.849*
(IQ Range)	24.1–26.2	21.0–28.0	

All women were symptomatic for prolapse; 45% of them complained of voiding symptoms. SUI in 21% of cases, Urgency and Urgency incontinence in 35% and 20% of cases respectively. No statistically significant differences were observed.

In group B stage of vaginal prolapse was significantly higher; no difference was observed for the central compartment (Table 2).

Table 2
POPQ parameter-based preoperative evaluation.

	Group A (2019) N° = 51	Group B (2021–2022) N° = 70	*p*
Aa			
Median	−1	−1	*0.288*
(IQ Range)	−1 ; −0.5	−1 ; 0.2	
Ba			
Median	2	3	*0.0001*
(IQ Range)	1.5 ; 2.3	2 ; 4	
C			
Median	0.7	2	*0.575*
(IQ Range)	0 ; 2.4	−2 ; 4	
Ap			
Median	−2.5	−2.5	*0.668*
(IQ Range)	−2.5 ; −2	−3 ; −2	
Bp			
Median	−3	−2	*0.038*
(IQ Range)	−3 ; 0	−3 ; −1	
D			
Median	−6	−6	*0.064*
(IQ Range)	−7 ; −5	−6 ; −4-	

Interpretation of results: Our anatomical comparison confirms the clinical impression of facing at surgery more severe POPs in 2021–2022 in comparison to our previous experience (2019). Patients with an average 1 cm greater anterior and posterior vaginal descent were observed.

Some confounders could be considered, however a role of the delay in POP surgery seems to be plausible.

Conclusions: Postponing surgery results in significant anatomical deterioration. The severity of descent is one of the few confirmed risk factors for POP recurrence after surgery. Availability of timely surgery is recommended for women selected for POP surgical treatment.

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48 - Translabial ultrasound: A non-invasive technique to evaluate "technical problems" after bulking agent failure

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Introduction and aim of the study: Bulking agent is used in the treatment of female stress urinary incontinence. There has been wide variability in reported success rates, ranging from 29.8% to 89.7% in the short term and from 42% to about 70% in the long term. Failure of the procedure may be related to the patient and the severity of urinary incontinence, or to technical problems. The aim of our study is to evaluate by trans labial ultrasonography whether there are factors that can explain bulking agent failure.

Materials and methods: Our prospective study was conducted in a level III urogynecologic center on women undergoing transurethral infiltration of bulking agent (Bulkamid®, PAHG). It was accepted by the bioethics committee and all patients signed an informed consent. We included:women between 18 and 80 years of age with mild to moderate stress urinary incontinence. We excluded: women undergoing previous anti incontinence surgery, POP stage >II, neurogenic bladder. Preoperative evaluation included: urogynecological examination, dynamic translabial ultrasound, and urodynamic test. Patients were evaluated at 1, 3, 6, 12 months after surgery and then annually. Ultrasound was repeated at 6 months. It was performed at rest and after Valsalva manoeuvre. We used a 3.5–5 MHz curved array probe that was placed between the labia. The position of the PAHG along the urethra was determined with respect to the length of the urethra. A bulking agent was considered "proximal" if it was located along the first 0%–40% of the urethra, measured from the bladder neck. The bulking agent was "mid-urethral" if it was located along the second 40%–60% of the urethra and "distal" if it was located along the last 60%–100%.

Statistical analysis: Chi-square test, Fisher's exact test; Logistic regression model and odds ratios (with 95% confidence intervals); $p < 0.05$ was statistically significant.

Results: 50 consecutive patients underwent PAHG were analyzed. The mean follow-up was 15 ± 2.4 months. The objective cure rate was 84% (42 patients) one month after surgery, 56% (28 patients) at 6 months and 36% (18 patients) at the last visit. Incontinent women had PAHG in a more distal position (70% vs 4.2%, $p < 0.0001$; OR 65.10 (10.12–376.49)) and with an oblong shape (65% vs 3.4%, $p < 0.0001$OR: 93 (13.16–524.11)) compared with continent women who had a spherical shape and proximal position. Incontinent women had persistent open bladder neck (78% vs 10.2%, $p < 0.0001$, OR: 5.88 (1.51–17.89). Multivariate logistic regression analysis showed that a distal PAHG position (2.42 (0.02–0.54)$p = 0.03$) and open bladder neck (5.23 (0.11–0.37)$p<0.0001$) were risk factors for PAHG failure. The shape of PAHG was not confirmed as a risk factor (1.86 (0.15–0.0008)$p = 0.07$).

Interpretation of results: Probably the location of PAHG facilitates the mechanism of action, improving urethral coaptation and restoring continence. The bladder neck closure assists in achieving the goal.

Conclusions: This study shows that a PAHG performed close to the bladder neck such that it is closed results in a better long-term outcome.

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49 - Hysteropexy and cystopexy for the treatment of anterior and central compartment prolapse: A single-center experience

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Introduction and aim of the study: Pelvic organ prolapse (POP) has a prevalence varying based on study methodology, reaching up to 41%. Vaginal hysterectomy (VH) remains the most frequently performed surgical procedure for POP, although recent studies challenge its role as the first-line surgical approach. Our study aims to evaluate the success rate, assessed using the Pelvic Organ Prolapse Quantification System (POP-Q), and recurrence risk following a minimally invasive vaginal surgery for anterior compartment prolapse: hysteropexy and cystopexy.

Materials and methods: This retrospective, single-center study was conducted on a selected cohort of 15 patients treated in an italian Gynecological Surgery Unit between 2021 and 2024. Prolapse severity was quantified using the POP-Q system. All patients underwent vaginal surgery involving hysteropexy and cystopexy with uterine preservation. Postoperative follow-up included a clinical reassessment using POP-Q and an anamnestic evaluation of residual symptoms.

Results: A total of 15 patients were included, with a mean age of 66.93 years and a mean BMI of 26.12 kg/m^2. The primary preoperative symptom was a sensation of pelvic heaviness (93.3% of patients). Baseline POP-Q values are reported in Table 1. All patients underwent hysteropexy and cystopexy. The mean follow-up period was 8.53 months. Postoperative POP-Q values showed improvement (values reported in table n°1). The cystocele recurrence rate was 13.3% (2/15) with no prolapse symptoms reported, and no patient required reoperation. The overall success rate was 86.6%.

Interpretation of results: POP significantly affects quality of life. While VH is the most commonly performed surgical procedure, it carries inherent surgical risks and morbidity, and it is not always accepted by patients. Recent studies suggest that uterine preservation may reduce surgical risks and improve clinical

outcomes; it might be a reasonable option for women with severe anterior descent but mild-to moderate hysterocele. Our study demonstrates that hysteropexy and cystopexy provides significant clinical improvement, as measured by the POP-Q system and prolapse symptoms, while allowing uterine preservation in the treatment of anterior compartment prolapse.

Conclusions: Hysteropexy and cystopexy can be considered a highly successful surgical approach for the treatment of anterior and central compartment prolapse, offering a high success rate and preserving the uterus.

Table 1

POP-Q system	Pre-operative Assessment	Post-operative Assessment
Aa	−0.27	−1.73
Ba	2.47	−1.57
C	−3.73	−5.4
GH	3.77	3.93
PB	2.77	2.83
TVL	7.93	8
Ap	−2.63	−2.87
Bp	−2.5	−2.73
D	−4.68	−5.79

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50 - Update from a randomized clinical trial of laparoscopic versus abdominal approach: 14 years of follow-up of colposacropexy

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Introduction and aim of the study: Laparoscopy and abdominal approach are both good for prolapse correction. However, there are no data in the literature beyond 10 years. This study was an update of our previous randomized trial that compared the anatomical and functional outcomes of open and laparoscopic colposacropexy.

Materials and methods: This was an update of a noninferiority prospective randomized trial conducted in a tertiary Urology unit, comparing open and laparoscopic sacrocolpopexy in patients with symptomatic prolapse stage III and IV, according to the Pelvic Organ Prolapse quantification. Patients included in the previous study were evaluated at 1, 3, 6, 12 months and then annually after surgery. The follow-up visit was always conducted by the same urologist, who was different from the surgeon. All data were collected in a database during follow-up. Anatomical and functional, and subjective outcomes at the last follow-up visit were compared. Cure was defined as prolapse stage 1 or less, point C/D −5 or less at the apex and at least 7 cm total vaginal length. The Mann–Whitney and Wilcoxon tests for unpaired and paired data, respectively, were used to compare ordinal and nonnormally distributed continuous variables. Categorical data were analyzed by the McNemar, chi-square or Fisher exact test. Two-tailed $P < .05$ was considered significant.

Results: A total of 121 patients were eligible for study. 12 and 14 patients were lost during follow-up in the open and laparoscopic group respectively. We compared 48 and 47 patients treated with open and laparoscopic sacrocolpopexy, respectively. The mean follow up was of 177.6 months . At a mean follow up of 41.7 months the cure rate was of 100% for both approaches. At last visit the cure rate was 82% and 89% in laparoscopic and open approaches respectively. The persistence of prolapse in both groups were II stage and all asymptomatic. One and two patients in the open and laparoscopic groups respectively had de novo prolapse, occurrence after the first study, however they are always asymptomatic and untreated. Table 1 showed that at the last visit there were no differences between the two approaches for both functional and anatomical outcomes, with a good patients' satisfaction.

Interpretation of results: Anatomic and functional success rate was high in both groups. Both techniques are valid even after 14 years, probably because they both allow good correction regardless of the perioperative and postoperative advantages of laparoscopy.

Conclusions: After 14 years of follow-up, the anatomical and functional outcomes are excellent with both approaches, which can then be used according to the clinical case.

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51 - Long-term follow-up after lateral suspension for anterior and apical prolapse: A prospective study

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Introduction and aim of the study: Lateral suspension (LS) is an abdominal prosthetic procedure for apical and anterior prolapse repair, avoiding sacral promontory dissection. LS outcomes are comparable to traditional open sacral colpopexy. However, long-term data remain limited. This study aims to provide long-term outcomes of LS to address this gap.

Materials and methods: This prospective longitudinal study included patients undergoing robotic or laparoscopic LS for anterior and apical prolapse between 2014 and 2018, followed until December 2024. Follow-up assessments included anatomical evaluation (Pelvic Organ Prolapse Quantification System, POP-Q), quality of life (Prolapse Quality of Life Questionnaire, P-QoL; scores from 0 = best to 100 = worst), and patient satisfaction (Patient Global Impression of Improvement, PGI-I; 1 = very much better, 7 = very much worse). Mesh-related complications and de novo stress urinary incontinence (SUI) were also recorded.

A subgroup analysis was performed on patients with a minimum follow-up of 60 months who remained recurrence-free, providing additional insight into the long-term durability of LS.

Results: A total of 102 women underwent LS, with a median follow-up of 84 months (40.75–96.75). The apical cure rate was 86.3%, the anterior cure rate was 82.4%. *De novo* posterior defect occurred in 18.6% (19) of cases. Mesh erosion was observed in one patient (0.98%) at six months post-surgery. De novo SUI occurred in another patient (0.98%) after 114 months. The mean PGI-I score was 2.5 ± 1.7, with 57.9% reporting scores of 1–2.

In the long-term subgroup (≥60 months, n = 63), the median follow-up was 96.0 months (87.0–109.0). The overall cure rate was 85.7%, with higher apical (93.7%) and anterior (92.1%) cure rates. *De novo* posterior defect occurred in 9.52% (6) of cases. The mean PGI-I score was 1.9 ± 1.4, with 71.4% reporting scores of 1–2. Long-term P-QoL scores showed a median of 0.0 (0.0–0.0) across all domains.

Regarding recurrences notably, 47.8% (11 out of 23) occurred within the first 24 months. Concerning the 23 recurrences, 11 required surgery (8 before 60 months and 3 after), and 5 patients are awaiting intervention. One patient has used a pessary as conservative therapy since the 24 months after surgery. Five patients declined further surgery.

Interpretation of results: Extended follow-up confirms LS as an effective, durable procedure. While recurrence persists in the long term (≥60 months), rates remain low. The incidence of *de novo* posterior defect suggests that LS may not be suitable for the treatment of multicompartmental prolapse. Patient-reported outcomes indicate high satisfaction and improved QoL.

Conclusions: LS is a safe, effective, and well-tolerated procedure. Satisfaction rate remains high after 10 years.

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52 - Solving female incontinence after major complications

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Introduction and aim of the study: Bladder or urethral perforation is a rare complication of incontinence meshes, the incidence of which is not well known, estimated at less than 1%. When one of these complications occurs, the removal of the mesh and reconstructive surgery of the urethra, bladder or vagina is mandatory.

After the resolution of this complication, continence is often compromised. The use of native tissue as autologous fascia may be a good option for solving recurrent stress urinary incontinence (SUI) in these patients.

We describe our experience with the autologous fascia suburethral sling coupled to the female Remeex device for the treatment of recurrent SUI in complex cases.

Materials and methods: A retrospective, multicentre analysis was conducted. Sixteen patients were operated on at the Functional Urology Unit of two hospitals between October 2020 and January 2025. One patient was excluded due to poor follow-up. Preoperatively, cystoscopy and urodynamics were performed. Patients were assessed at 1, 6, 12 and 24 months postoperatively, evaluating continence and complications.

The mean age was 57, 6 years, and the median follow-up was 2 years.

We defined success as the absence of leakage in the stress cough test.

Results: From the 15 patients analysed, 12 had received at least one surgical treatment (synthetic suburethral sling). In one case, incontinence was due to transurethral neck resection; other case had an hipocontractile detrusor and the other case was a fixed urethra (scleroatrophic lichen). All twelve patients with previous mesh suffered severe previous complications, including urethral or bladder perforation and pain.

One patient had a simultaneous repair of an urethrovaginal fistula (intraoperative finding) and two patients had a removal of remnants of the previous meshes.

During the follow-up, 86.7% of patients were continent and 4 patients presented leaks again. As the device was adjustable, 3 patients required postoperative adjustment. The fourth patient could not be adjusted due to possible fascial rupture after an accidental fall, carrying out surgery at another centre with Remeex mesh.

One patient presented acute urinary retention and suprapubic urinary fistula the day after surgery, needing surgical revision. Two patients presented postoperative suprapubic seroma, and a surgical cleaning was necessary in one of them, due to suprapubic wound dehiscence. There were no medium-term complications to date.

Patient satisfaction is very high, even in those patients who required reoperation due to complications or adjustment of the device.

Interpretation of results: This technique combines the use of native tissue with technology to provide an alternative treatment for patients who have had severe complications following mesh surgery. Its complications do not differ from those described with autologous fascia sling.

Conclusions: The association of autologous fascia sling with Remeex device offers new perspectives in the treatment of relapsed SUI in complex patients after severe complications with meshes.

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53 - Solving female incontinence after major complications: Step-by-step

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Introduction and aim of the study: Bladder or urethral perforation is a rare complication of incontinence meshes, the incidence of which is not well known, estimated at less than 1%. When one of these complications occurs, the removal of the mesh and reconstructive surgery of the urethra, bladder or vagina is mandatory.

After the resolution of this complication, continence is often compromised. The use of native tissue as autologous fascia may be a good option for solving recurrent stress urinary incontinence (SUI) in these patients.

We describe our technique with the autologous fascia suburethral sling coupled to the female Remeex device for the treatment of recurrent SUI after the mesh incontinence removal for urethral perforation.

Materials and methods: Woman 70 years old presented urethral perforation and calcification after two incontinence meshes. Both meshes were removed and urethroplasty was performed, using Martius flap.

After that, SUI reappeared and an autologous fascia sling was performed, coupled to the female Remeex device.

Results: Video explains the surgery, step-by-step

Interpretation of results: Adjustment 24 h after surgery was enough to achieve continence.

After 8 months of follow-up, the patient is continent, and no complications have occurred.

Conclusions: Our results in fourteen patients show that this technique is safe and successful for those patients who have had major complications with incontinence meshes and SUI has relapsed.

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54 - Hanging the prolapse!

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Introduction and aim of the study: Pelvic organs prolapse (POP) affects 30% of women. Historically, multiple surgical approaches and techniques, with or without the use of mesh, have been used for correction.

Novel approaches like uterine-sparing proceedings are being used to treat apical POP currently.

The aim of this study is to evaluate outcomes and quality of life, using a novel uterine sparing transvaginal mesh for treatment of anterior and apical POP and to evaluate efficacy and safety as well.

Materials and methods: Retrospective, nonrandomized and multicentre study.

From July 2015 to February 2024, 53 patients underwent apical POP correction with this technique. Polypropylene mesh with U-shaped was implanted, anchored anteriorly to cervix and posteriorly to both sacrospinous ligaments (BSC mesh®, AMI GmbH, Austria). For anterior POP repair, we used simultaneous anterior colporrhaphy.

Data collection of clinical chart and clinical interview were performed. Preoperative evaluation: cough stress test with physical exploration and urodynamics (flowmetry or complete study). When necessary, dynamic MRI was performed. During follow-up, outcomes, complications and evolution were registered at 1, 6, 12 and 24 months.

We define outcomes as:

- Cure: absence of POP.
- Improvement: presence of asymptomatic POP.
- Failure: presence of symptomatic POP.

Results: 50 patients were included. Median age was 64.3 years and median follow-up was 23.2 months. Thirteen patients (26%) had previous pelvic surgery.

In physical examination, all the patients had anterior POP (stage III or IV POP-Q), and apical POP (stage II or more) and 12% posterior POP (stage II or less).

Simultaneous placement of a single-incision sling (SIS) for the stress urinary incontinence (SUI) treatment was performed in 8 patients.

Objective cure at overall compartments was 68%. 13 patients presented anatomical POP recurrence (26%) and 3 patients presented clinical POP recurrence, with 2 reoperations for POP (laparoscopic hysteropexy).

Low rate of complications was observed: 2 hematomas, and 2 transient voiding dysfunctions. During follow-up, 1 vaginal TOT granuloma and 1 cervix fixation suture were removed. 1 asymptomatic vaginal erosion was detected. 4 patients developed permanent voiding dysfunction.

Continence and UTI was assessed preoperative and postoperative, solving in majority of patients (41% and 58.8%, respectively).

Interpretation of results: Uterine-sparing surgery is safe and effective in high-grade POP and our outcomes demonstrate we can solve it and their symptoms, diminishing complications and blood loss.

Different guidelines recommend simultaneous treatment when SUI is demonstrated preoperative, but our results show another way. Counseling patient in delaying SUI treatment helps avoid a high number of SUI surgeries. Large series and longer follow-up are needed to confirm these results.

Conclusions: Uterine-sparing surgery is an effective and safe procedure. This technique offers good anatomical correction with significant improvement in symptoms and high patient satisfaction.

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55 - Fetal head circumference as a risk factor for postpartum urinary retention: A two-year analysis

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Introduction and aim of the study: Risk factors for perineal tears and pelvic floor dysfunction are numerous and include antenatal factors as well as those related to labor, such as abnormal fetal position, prolonged second stage of labor, and neonatal head circumference (HC). Identifying women at risk of developing pelvic floor dysfunction over their lifetime is crucial in order to prevent or, when necessary, treat these conditions. One available tool for this identification is the Pelvic Floor Dysfunction Card (PPD). A rare but significant occurrence after delivery is postpartum urinary retention (PPUR), which affects 0.7%–4% of vaginal deliveries. PPUR can contribute to ongoing voiding dysfunction and may result from hormonal changes, pain, or mechanical causes. The aim of our study was to confirm the relationship between PPUR and HC as a risk factor through a two-year analysis.

Materials and methods: We retrospectively analyzed all cases of PPUR that occurred between 2023 and 2024 in a single institution. We collected data on all conditions associated with PPUR as identified from our PPD card.

Results: Between January 2023 and December 2024, a total of 1,376 women delivered at our institution, and the PPD card was completed for 100% of them. PPUR occurred in 20 women (1.4%). Of these, 14 were Caucasian (70%), with 7 from Italy and 7 from Eastern Europe, while 6 were from Asia or Africa (30%). Head circumference (HC) was >350 mm in 14 of the cases (70%), of which 10 (71%) were Caucasian, with 6 out of these 10 (60%) from Eastern Europe. Other relevant findings from the PPD analysis included that 7 out of 20 women (35%) had an operative vaginal delivery, 5 out of 20 (25%) had a prolonged second stage of labor (>2 h), and 5 out of 20 (25%) had a BMI >28 at admission.

Interpretation of results: In our two-year data series, neonatal head circumference shows a strong correlation with PPUR, and this correlation appears to be particularly pronounced in Caucasian women.

Conclusions: According to the literature, PPUR has been confirmed as a rare event in this two-year analysis, and HC appears to be associated with this event, primarily due to tissue stretching or edema related to the passage of the fetus.

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56 - Laparoscopic Lateral Suspension of pelvic organ prolapse and Lower Urinary Tract Symptoms: A prospective observational study

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Introduction and aim of the study: Pelvic organ prolapse (POP) is a common condition in the female population over the age of 50. The diagnostic tools, as transperineal ultrasound (TP-US) and urodynamic study (UDS) are an important support to the clinic, with a role in characterizing and quantifying the symptoms related to POP.

Laparoscopic sacrocolpopexy is the gold standard for treatment of advanced multi-compartment prolapse, but alternative prosthetic suspension techniques are emerging, among these, Laparoscopic Lateral Suspension (LLS).

The aim of the study is to evaluate bladder function before and after LLS, analyzing the results in anatomical, clinical, US and UDS terms.

Materials and methods: This is a prospective observational study of 20 patients with anterior and apical prolapse ≥ II grade, recruited from October 2023 to September 2024.

All patients underwent a pre- and post-operative examination with TP-US and UDS and answered to 2 questionnaires: ICIQ-FLUTS (International Consultation on. Incontinence - Female Lower Urinary Tract Symptoms) and POP-QoL (Prolapse Quality of Life Questionnaire).

All 20 patients underwent LLS and clinical, TP-US and UDS follow-up at 90 days after surgery.

Results: The correction rate of apical and anterior prolapse was 95% and 90%, respectively, with 2 cases of recurrence of anterior prolapse.

Prevalence of LUTS was at baseline 45% stress urinary incontinence, 80% urge, 45% urge urinary incontinence, 20% mixed urinary incontinence and at 90 days after surgery 30%, 25%, 25% and 5%, respectively. There were 2 cases of de novo SUI postoperatively.

The UDS parameters are shown in Table 1.

Table 1
UDS parameters.

	Baseline	90 days after surgery	*P*-value
Qave (mL/sec)	6.2 ± 3.2	9.7 ± 5.4	**
RPM (mL)	97 ± 105.7	32.9 ± 54.2	*
CC (mL/cm3H2O)	140 ± 105.6	101.4 ± 96.6	*
PIP	38.7 ± 8.1	46.6 ± 10.5	*
PdetQmax (cm3H2O)	28.3 ± 9	25.3 ± 9.6	Ns

The values of US assessment, at baseline and 90 days after surgery are shown in Table 2.

The degree of variation of the RVA correlates with the extent of urinary symptoms associated with bladder prolapse.

The distance of the distal portion of the mesh from the bladder neck was evaluated, with an average of 2.48 ± 3.81 cm, but in both patients who presented recurrence was 4.7 cm and 3.6 cm.

The scores of the questionnaires showed a statistically significant variation between pre- and post-operative for both POP-QoL and ICIQ-FLUTS.

Interpretation of results: Our clinical data demonstrate the high prevalence of LUTS in the population with advanced prolapse and the role of reconstructive surgery in improving POP-related symptoms.

Table 2
RVA at rest and during Valsalva.

	Baseline	90 days after surgery	*P*-value
RVA rest°	75.3 ± 22.8	79.1 ± 28.9	Ns
RVA Valsalva°	58.5 ± 28.9	83.4 ± 32.6	***
Degree of variation of RVA°	16.3 ± 24.2	−5.3 ± 11.3	****

In addition, the association between UDS and TP-US data suggests the centrality of the correct positioning of the mesh in the vesicovaginal space in stabilizing the vesicourethral junction and reducing the risk of recurrence in the anterior compartment.

Conclusions: Our results show that LLS corrects not only anatomical defects, but improves LUTS and UDS parameters.

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57 - The outcomes of urethral bulking with polycaprolactone (PCL) microspheres suspended in a carboxymethylcellulose (CMC) gel carrier: Preliminary results

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Introduction and aim of the study: Urethral bulking has gained increasing popularity in recent years due to rising concerns regarding the long-term safety of mid-urethral slings (MUS). Despite the availability of multiple bulking agents, none has demonstrated clear superiority over the others. Although the overall effectiveness of these agents may be suboptimal, their safety profile and subjective perception of improvement are generally satisfactory. Therefore, the search of new and more effective bulking agents is ongoing. In this pilot study, we report preliminary outcomes from a cohort of female patients undergoing urethral bulking with polycaprolactone (PCL) microspheres suspended in a carboxymethylcellulose (CMC) gel carrier (Urolon™).

Materials and methods: We prospectively collected data from a cohort of consecutive female patients affected by genuine urodynamic stress urinary incontinence (SUI) subjected to urethral bulking with PCL microspheres over 6 months. Clinical results were evaluated after 3 months and then at the last follow up. Urinary incontinence was evaluated objectively counting the number of pads used per day and the 24 h pad test. ICIQ-UI SF questionnaires and PGI-I were administered before and after the procedure. Preoperative evaluation included a full urodynamic study. Extensive counselling between urethral bulking and MUS implantation was performed in all cases.

Results: 12 patients were included in the analysis. Mean age was 63+-9 years. 58% (7) patients had comorbidities including hypertension and diabetes. Urethral hypermobility was identified in 67% patients (8). Two patients had prior pelvic surgery (one prolapse repair and one failed MUS implantation). Pre-operative mean number of pads used per day was 2.5 +-1; mean pad test/24 h was 102+-51 ml. Mean ICIQ-UI SF was 13+-2. We recorded 2 cases of self-limiting urinary retention after surgery. After the procedure, 4 patients declared themselves improved (PGI-I 1–2), 6 patients were slightly improved (PGI-I 3), 1 patient declared herself not improved (PGI-I 4) and 1 declared herself slightly worsened (PGI-I 5). Mean ICIQ-UI SF was 8.5+-3 ($p < 0.05$), mean number of pads per day was 2+-1 ($p > 0.05$), mean pad test/24 h was 63ml+-48 ml ($p < 0.05$). Median follow was 6.6 (3–9.3) months.

Interpretation of results: Our preliminary data suggest that urethral bulking with PCL microspheres may be a viable option for performing urethral bulking in the setting of female SUI treatment. The observed efficacy data are comparable to those of commonly used bulking agents. The procedure demonstrated a favourable safety profile and positive patient-reported outcomes.

Conclusions: Our preliminary data with urethral bulking with PCL microspheres are encouraging. Nevertheless, further data are needed to validate our preliminary positive impression.

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58 - Multicenter prospective comparative study to evaluate the safety and efficiency of same day catheter removal after en block holmium laser enucleation of prostate

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Introduction and aim of the study: The popularity of Holmium laser enucleation of the prostate (HoLEP) is continuously increasing for management of bladder outlet obstruction (BOO) due to benign prostatic hyperplasia (BPH). Advances in holmium laser technology have enhanced haemostatic properties, resulting in improved efficiency and outcomes.

The literature supports the feasibility of same-day catheter removal after HoLEP. The study aims to evaluate the safety and efficacy of this approach, performed using the "En-Bloc" technique, comparing same day versus 72 h after HoLEP catheter removal.

Materials and methods: Patients undergoing HoLEP between March 2021 and July 2024, were prospectively enrolled, and categorized into two groups based on catheter removal timing: Group A (same-day removal) and Group B (catheter removal 72 h. postoperatively). Evaluated parameters included age, ASA score, BMI, hypertension, diabetes mellitus, PSA, prostate size, post-void residual (PVR), pre and postoperative hemoglobin, presence of an indwelling catheter, enucleation and morcellation time, and pre and postoperative IPSS. Univariate and multivariate analyses were conducted to identify factors predicting failure of same-day catheter removal. Patients with prior prostatic surgery were excluded.

Results: A total of 388 patients (194 per group) were included. Mean age, prostate volume, PSA, PVR, and IPSS were 68.6 years, 104.7 mL, 4.01 ng/mL, 104 mL, and 27.19 in Group A, and 67.9 years, 105.1 mL, 3.98 ng/mL, 103.2 mL, and 26.9 in Group B, respectively. Mean enucleation times were 62.4 and 61.9 min, and mean morcellation times were 12.3 and 12.7 min for Groups A and B, respectively. Indwelling catheter rates were 26.8% (Group A) and 28.3% (Group B), while antiplatelet/anticoagulant therapy rates were 13.4% (Group A) and 12.9% (Group B).

In Group A, 180 patients (92.8%) successfully voided after same-day catheter removal, while the remaining 14 achieved catheter-free status within 72–168 h. In Group B, 186 patients (95.9%) successfully voided after catheter removal at 72 h, with the remaining 8 patients becoming catheter-free within 110-168 h. At the 90-day follow-up, mean PVR, IPSS, and PSA values were 16.8 mL, 10.2, and 1.72 ng/mL and 18.4 mL, 10.4, and 1.64 ng/mL in groups A and B respectively. Multivariate analysis identified advanced age and an indwelling catheter for over six months as same-day catheter removal failure predictors.

Interpretation of results: Same-day catheter removal following "En-Bloc" HoLEP is highly feasible, achieving a success rate of over 90%. Factors such as advanced age and prolonged preoperative catheterization are associated with a higher likelihood of voiding failure. Despite these limitations, the procedure significantly reduces PVR and IPSS at 90-day follow-up, with comparable safety and efficacy across patient groups.

Conclusions: This study supports the implementation of same-day catheter removal after "En-Bloc" HoLEP as an effective and patient-preferred management strategy, regardless of prostate size, comorbidities, or previous history of urinary retention.

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59 - De novo lower urinary tract symptoms after Robot Assisted Radical Prostatectomy: Evaluation Of incidence, pathophysiology and risk factors

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Introduction and aim of the study: Prostate cancer (PCa) can often be detected in patients with a history of LUTS related to Benign Prostatic Enlargement (BPE). A significant number of patients undergoing Robot-Assisted Radical Prostatectomy (RARP) develop de novo LUTS postoperatively, further affecting their QOL. The mechanisms and predictors of de novo LUTS remain poorly understood. This study aims to evaluate the incidence, risk factors, and urodynamics characteristics of de novo LUTS following RARP to better understand the pathophysiology and to guide its clinical management.

Materials and methods: This prospective study enrolled patients from January 2021 to December 2023. Inclusion criteria included clinically localized PCa patients undergoing RARP with IPSS ≤7. Exclusion criteria were preoperative LUTS, prostatic surgery, and neurogenic bladder. De novo LUTS were assessed using IPSS and urodynamics (UDS) at 1, 6, and 12 months postoperatively. UDS parameters included bladder compliance, detrusor overactivity (DO), maximum cystometric capacity, and post-void residual (PVR). Data on demographics, prostate volume, nerve-sparing (NS), lymph node dissection, estimated blood loss (EBL), smoking habit (SH), BMI, metabolic syndrome (MS), diabetes (DM), and surgical parameters were collected and analyzed. Multivariable logistic regression was investigated to identify predictors of de novo LUTS.

Results: Among the 98 patients who developed de novo LUTS, UDS revealed DO in 62.04%, reduced bladder compliance in 44.9%, and significant PVR in 10.2%. Storage symptoms were predominant, with urgency and urge incontinence observed in 37.24%, mixed incontinence in 15.3%, and stress incontinence in 10.2%. Voiding symptoms, including hesitancy and weak stream, were most associated with urethral strictures (4.08%). At 12 months postoperatively, 20.41% reported persistent LUTS (IPSS > 15). MS was present in 28.57%, DM in 21.43%, SH in 28.57%, and obesity (BMI > 30 kg/m^2) in 26.53%. Multivariable logistic regression identified significant predictors of de novo LUTS, including age ≥69 ($p = 0.03$), prostate volume ≥60 mL ($p = 0.02$), absence of NS ($p = 0.01$), lymph node dissection ($p = 0.02$), EBL > 400 mL ($p = 0.03$), MS ($p = 0.04$), DM ($p = 0.03$), elevated BMI ($p = 0.01$), and SH ($p = 0.04$).

Interpretation of results: De novo LUTS are a common complication following RARP, predominantly presenting as storage symptoms such as urgency and urge incontinence, with urodynamic findings of detrusor overactivity and reduced bladder compliance. Voiding symptoms were linked to cases of urethral strictures. Significant predictors include advanced age, larger prostate volume, lack of NS, lymph node dissection, MS, diabetes, SH, and elevated BMI.

Conclusions: De novo LUTS significantly impact postoperative QOL after RARP. Key predictors such as age, prostate volume, NS, and metabolic factors highlight the need for tailored surgical and postoperative management to mitigate symptoms and improve outcomes.

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60 - External validation of the clinical nomogram to predict prostatic inflammation in men with lower urinary tract symptoms

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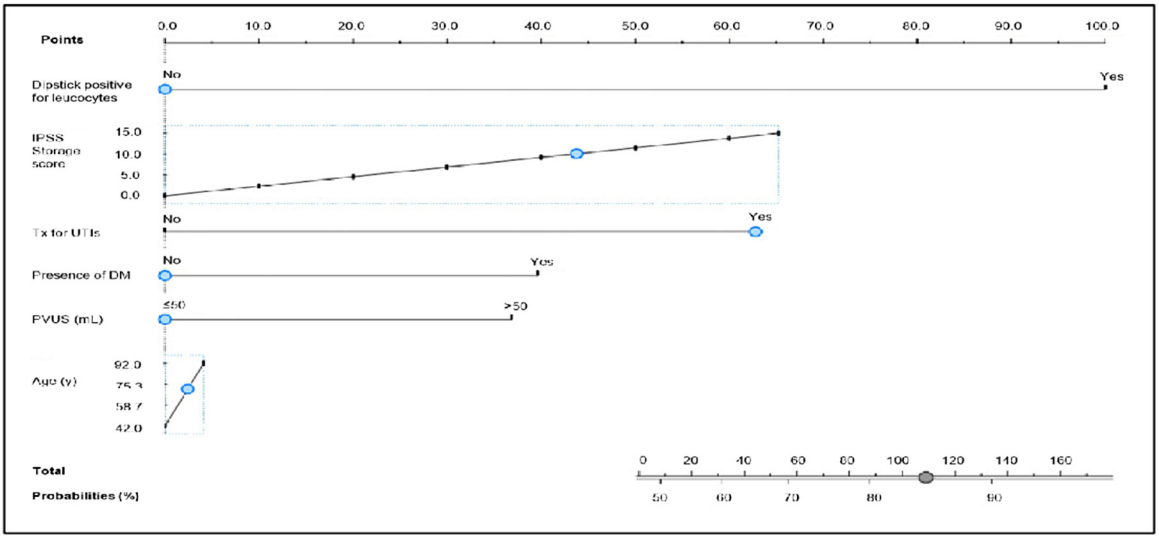
Introduction and aim of the study: To validate the Prostatic Inflammation Nomogram (PIN) for predicting the presence of prostatic inflammation in men with lower urinary tract symptoms (LUTS).

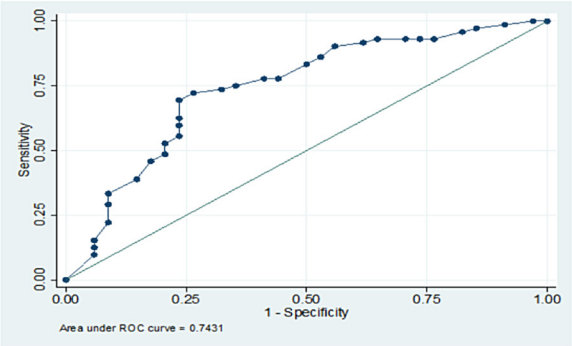
Materials and methods: A consecutive series of men (≥40 years) with benign prostatic hyperplasia (BPH)/LUTS scheduled for prostatic surgery or transrectal ultrasound-guided (TRUS) prostate biopsy were enrolled. The presence of inflammation in the prostatic tissue samples, assessed according to the Irani score, was determined. Inflammation was classified using the Irani score into two categories: 0–2 (no/minimal inflammation) and 3–6 (moderate/severe inflammation). The discrimination, calibration, and net benefit of the nomogram were evaluated.

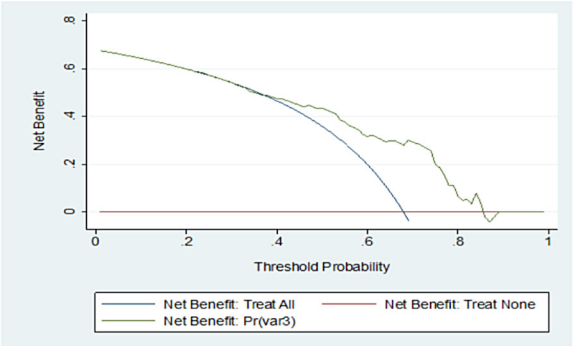
Results: A total of 106 patients (mean age 70 years) were recruited. Overall, 72 of 106 (67%) presented with prostatic inflammation. In multivariate analysis, prostate volume >50 cc (OR = 3.71; p = 0.005), positive dipstick (OR = 2.97; p = 0.047), and history of UTIs (OR = 3.62; p = 0.023) were independent predictors of prostatic inflammation. Receiver operating characteristic analysis showed the nomogram with an AUC of 0.74 (95% CI: 0.64–0.85). Calibration was fair, and the nomogram demonstrated clinical net benefit within a probability range of 45% to 85% (Figure).

Interpretation of results: According to these results, the nomogram has provided a good accuracy in predicting the presence of prostatic inflammation in men with LUTS. This could be an important step towards a target-therapy for LUTS treatment. Moreover, the presence of the three independent predictors of prostatic inflammation (prostate volume >50 cc, positive dipstick and history of UTIs) could indicate the right therapy since the very beginning.

Conclusions: The nomogram developed from PIN showed good predictive ability and net benefit. Its use may help individualize treatment for LUTS by identifying candidates for therapies targeting prostatic inflammation.







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61 - Introduction of pentafecta in BPH surgery including patient reported outcomes: The role of nocturia

Antonio Maria Cicione [i], Daniele Fiasconaro [i], Beatrice Turchi [i], Matteo Romagnoli [i], Giuseppe Santoro [i], Giorgia Tema [i], Antonio Nacchia [i], Riccardo Lombardo [i], Alessandro Guercio [i], Giorgio Guarnotta [i], Giorgio Franco [ii], Antonio Pastore [iii], Andrea Fuschi [iii], Francesco Maria Valenzi [iii], Giuseppe Candita [iii], Antonio Carbone [ii], Alessandro Sciarra [ii], Andrea Tubaro [i], Cosimo De Nunzio [i]

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Introduction and aim of the study: Aim of our study was to introduce the pentafecta in BPH surgery and identify possible predictors of pentafecta.

Materials e methods: We performed an analysis of prospectively collected data of consecutive patients undergoing LUTS/BPH surgery in 5 primary care Italian urology centers. Decision regret and satisfaction was evaluated with validated questionnaires. Pentafecta was defined as improvements in IPSS (≪3), improvements in Qmax (<3 ml/S), no complications, right choice and no regret. Predictors of pentafecta were evaluated with binary logistic regression analysis.

Results: Overall, 519 patients were enrolled. 436/519 (83%) reached the pentafecta. Median Qmax improvement was 14 (10/17), median IPSS improvement was 21 (17/26) and 41/526 (8%) presented a complication. In terms of patient reported outcomes 504/519 (95%) reported they did the right choice and only 19/519 (3%) regretted their choice. On multivariate analysis preoperative symptoms, nocturia episodes, preoperative Urodinamics and surgical technique were independent predictors of pentafecta.

Interpretation of results: Analyzing the data it is possible to note that the majority of our patients reached pentafecta with a markable improvement of Qmax and IPSS score as well. The majority of the patients did not regret their surgical choice.

Conclusions: Pentafecta represents a composite tool which includes objective and subjective outcomes. Preoperative characteristics and TURP intervention are predictors of successful pentafecta.

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62 - Impact of number of injections and treatment of third prostatic lobe on ejaculation function after Rezum procedure

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Introduction and aim of the study: To assess the influence on ejaculatory function of the number of injections and treatment of third lobe after Rezum procedure for benign prostate hyperplasia (BPH).

Materials and methods: This was a prospective study held in our Department in 2024, involving sexually active men with preserved ejaculation who underwent Rezum procedure for BPH. Prostate volume, number of injections in prostatic lobes and in the third lobe, MSHQ-A and MSHQ-BH, IPSS questionnaires were assessed preoperatively, at 1 and 3- months after surgery. Data were divided in 2 Groups: Group 1 (G1) males without third lobe to treat, Group 2 (G2) patients with third lobe to treat.

Results: Data were available on 46 males (mean age 63 ±10.39 y.o.): 34 (73.9%) in G1, 12 (26.1%) in G2. In G1, mean prostatic volume was 48.41 ml, mean injections 6.95 with a ratio of 6.9 ml of prostate per injection. In G2, mean prostatic volume was 49.81 ml, mean injections 7.95 with a 6.2 ml ratio of prostate per injection; excluding injections in the third lobe, mean number of injections was 6.27 with a prostate ratio per injection of 7.9. in the latter group, mean number of injections in the third lobe was 1.68. In G1, mean preoperative MSHQ-A was 4.85, at 1mos f-up 3.85 (p:0.02), at 3 mos f-up 4.84 (p:0.67), mean preoperative MSHQ-BH 2.39, at 1 mos f-up 1.22 (p:0.0000004), at 3 mos 1.88 (p:0.01). In G2, mean preoperative MSHQ-A was 7.5, at 1mos f-up 7.67 (p:0.87), at 3 mos f-up 7.53 (p:0.33), mean preoperative MSHQ-BH 3.33, at 1 mos f-up 2.42 (p:0.07), at 3 mos 3.08 (p:0.47). In multiple regression analysis, neither the number of injections, nor the treatment of the third lobe, nor age influenced MSHQ-A at 1 and 3 months of f-up, while MSHQ-BH was positively influenced by a greater number of injections at 1 mos (p:0.0006) and at 3 mos f-up (p:0.01), but not by third lobe injection and age. No patients claimed loss of ejaculation. All patient significantly improved at IPSS.

Interpretation of results: The number of injections and the third lobe treatment did not significantly impact on ejaculation function at 3 mos f-up, when inflammation and discomfort related to the procedure are very limited. Interestingly, the quality of ejaculation function worsened in the first month only in G1, but recovered at 3 mos f-up. In this Group, ejaculation bother was reduced during all the f-up. In males with third lobe treated, no significant changes in ejaculation function were observed. Therefore, even when performing a number of injections with a ratio of less than 1 per 10 ml and treating the third lobe, no significant negative consequences on ejaculation function are observed.

Conclusions: Outcomes of ejaculation function were independent from the number of injections and treatment of third prostatic lobe after Rezum procedure.

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63 - Comparing single-port and multi-port robot-assisted approaches in simple prostatectomy: A preliminary study

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Introduction and aim of the study: The introduction of the DaVinci Single Port (Intuitive Surgical Inc., Sunnyvale, CA, USA) was intended to reduce surgical invasiveness while ensuring efficacy and safety. This article aims to evaluate the initial experience with robotic surgery for benign prostatic hyperplasia (BPH).

Materials and methods: This analysis included all patients who underwent robot-assisted simple prostatectomy (RASP) using the modified Millin technique, performed either via single-port (SP) or multi-port (MP) surgery. For MP surgery, a transperitoneal approach was used, while an extraperitoneal approach was maintained for SP surgery. We utilized data from our institutional, monocentric, prospectively maintained, database, comparing our first experiences with the SP platform. Patients undergoing MP surgery were enrolled starting in 2017, while those undergoing SP surgery were enrolled from June 2024 onward.

Results: A total of 171 patients met the study criteria: 162 who underwent MP-RASP and 9 who underwent SP-RASP. No significant differences in demographic and baseline characteristics were observed. Additionally, preoperative measures, including International Prostate Symptoms Score, maximum flow rate, indwelling catheter rate, PSA, prostate volume, and presence of a median lobe, were comparable across groups (all p-values > 0.05).

Intraoperative data indicated no significant increase in operative time (OT), even for the initial SP cases [MP: 105.0 min (90.0–120.0); SP: 118.0 min (110.0–120.0); $p = 0.2$]. However, the SP extraperitoneal approach led to a reduced length of stay (LOS) [MP: 5.0 days (5.0–6.0); SP: 3.0 days (2.0–3.0); $p < 0.001$]. No statistically significant differences were found in hemoglobin decrease, incidence of major complications, or length of catheterization (LOC).

Regarding complications, no intraoperative or postoperative complications were recorded for SP surgery, whereas 3 short-term major postoperative complications occurred in the MP group. Specifically, three patients required rehospitalization following MP surgery: one case of retrovesical hematoma, one case of hematuria, and one case of severe urinary tract infection.

Interpretation of results: This study evaluates the initial experience with single-port (SP) versus multi-port (MP) robot-assisted simple prostatectomy (RASP) using the modified Millin technique for BPH treatment. Early results suggest that SP-RASP, while maintaining similar operative times and safety profiles, offers a shorter hospital stay without increasing complications compared to MP-RASP

Conclusions: SP surgery is a safe and effective alternative for robotic BPH surgery, demonstrating similar operative times to MP surgery, even at the beginning of the SP learning curve. This technology, using an extraperitoneal approach, facilitates a shorter LOS. Further studies with larger populations and long-term functional data are needed to confirm these preliminary observations.

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64 - Efficacy of optilume system in treatment of bladder neck sclerosis post TURP: A preliminary study

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Introduction and aim of the study: Bladder neck sclerosis (BNS) is a recurrent and challenging complication following transurethral resection of the prostate (TURP), with recurrence rates reaching 30%–50%. Standard treatments, such as transurethral bladder neck incision or resection, often fail to provide durable outcomes. Optilume, a drug-coated balloon approved for anterior urethral strictures, offers a novel approach by combining mechanical dilation with localized delivery of paclitaxel, an antiproliferative agent that reduces fibrosis and stricture recurrence . While its use in BNS remains off-label, limited evidence suggests potential efficacy. The aim of our study was to evaluate the efficacy of this treatment in BNS. The primary endpoint was improvement in maximum urinary flow rate (Qmax) at 6 and 12 months, and the secondary endpoints were recurrence-free rate and IPSS QoL at 12 months.

Materials and methods: A consecutive series of 10 patients were treated with Optilume for recurrent BNS post-TURP between January 2023 and January 2024. All patients were treated with visual internal urethrotomy before Optilume. Median Qmax preoperative was 6.5 ml/s (4.2–9.5). Median IPSS QoL preoperative was 30+4 (15+2-35+6).

Results: Median Qmax postoperative was 16.5 ml/s (10.3–22.5) at 6 months and 14.3 (6.2–25.3) at 12 months. Median IPSS QoL 10+2 (3+0 – 28+4). 80% (8/10) of patients were recurrence-free at 12 months. No significant complications were observed.

Interpretation of results: The results highlight a notable improvement in Qmax of 10 ml/s at 6 months after treatment and in IPSS QoL score at 12 months with an absolute decrease of 22 points and a relative score reduction of 64%.

Conclusions: Optilume system seems to be a potential safe and effective treatment for recurrent BNS. Larger studies with extended follow-up are needed to validate these preliminary findings and assess long-term durability.

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65 - Two-year follow-up of second-generation iTIND For BPH-related LUTS: Age-stratified subanalysis of the MT-06 multicenter prospective study

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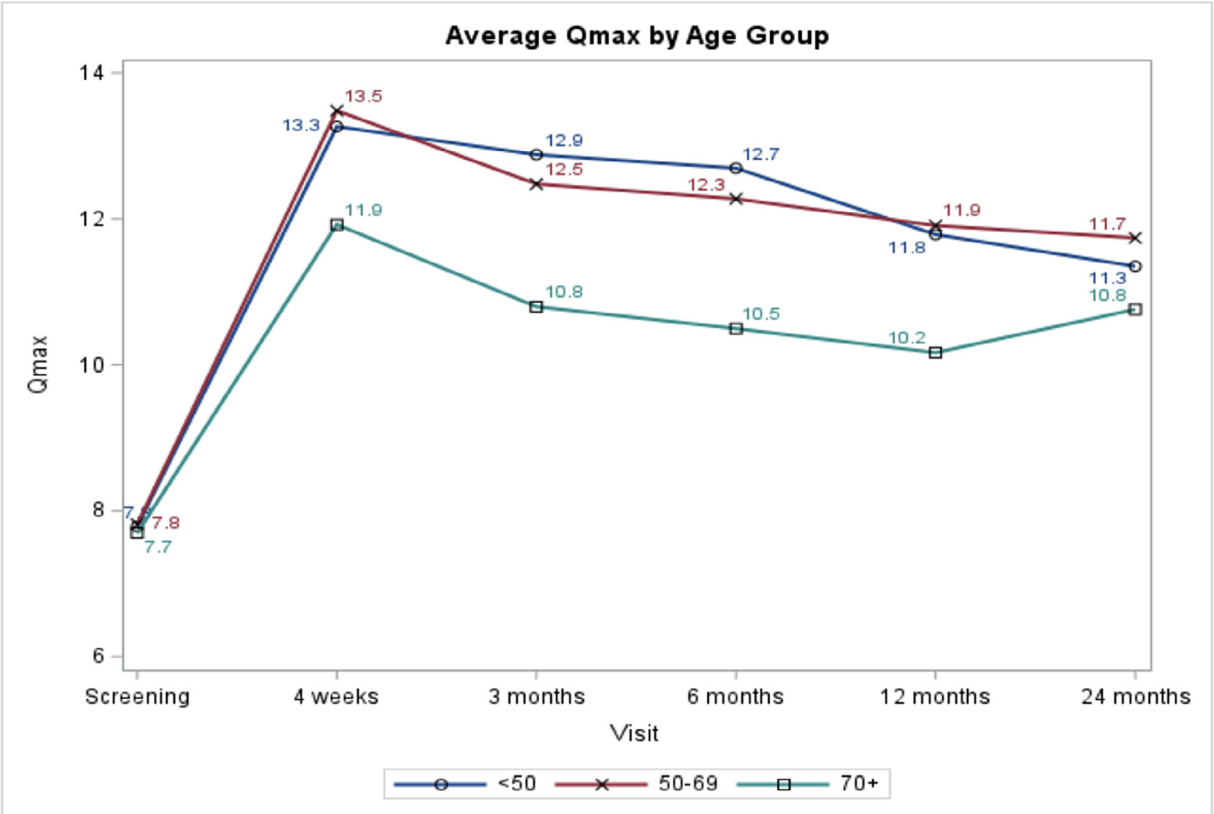
Introduction and aim of the study: The objective of this study was to evaluate the impact of age on micturition outcomes following 24 months of treatment with a second-generation temporary implantable nitinol device (iTIND) for Benign Prostatic Hyperplasia (BPH)-related lower urinary tract symptoms (LUTS).

Materials and methods: From 6/2018 to 9/2019 men with symptomatic BPH (International Prostate Symptoms Score (IPSS) ≥10, maximum flow rate (Qmax) <12 ml/s and prostate volume <120 ml) were enrolled in this single-arm, prospective multicenter study and underwent iTIND implantation. Demographics and baseline IPSS, QoL, Qmax and post voiding residue (PVR) were recorded. Follow-up was conducted via IPSS, QoL, Qmax and PVR assessed at 1, 3, 6, 12 and 24 months post-operatively. For the purpose of the study patients were stratified into 3 age groups (group 1 < 50 yrs; group 2 50–69 yrs; group 3 70+ yrs) and the postoperative functional outcomes evaluated accordingly.



Endpoint	Age Group	Metric Description	Screening	4 weeks Visit	3 months Visit	6 months Visit	12 months Visit	24 months FU
Qmax	<50	n	20	20	20	20	20	20
		Endpoint	7.8 (2.3)	13.3 (6.6)	12.9 (6.9)	12.7 (6.5)	11.8 (6.7)	11.4 (6.7)
		Change		5.5 (6.1)	5.1 (6.4)	4.9 (5.8)	4.0 (6.0)	3.6 (5.9)
	50 - 69	n	86	86	86	86	86	86
		Endpoint	7.8 (2.2)	13.5 (6.6)	12.5 (5.7)	12.3 (5.3)	11.9 (5.0)	11.7 (5.3)
		Change		5.7 (6.2)	4.7 (5.8)	4.5 (5.6)	4.1 (5.4)	3.9 (5.6)
	70+	n	27	27	27	27	27	27
		Endpoint	7.7 (2.1)	11.9 (4.5)	10.8 (4.8)	10.5 (4.1)	10.2 (4.3)	10.8 (4.2)
		Change		4.2 (5.3)	3.1 (4.8)	2.8 (4.1)	2.5 (4.4)	3.1 (3.9)

Fig. 1.

Results: 133 patients who reached the 24 months follow up were included in this analysis. Overall baseline mean (SD) IPSS, IPSS-QoL, Qmax and PVR were 21.2 (5.4), 4.1 (1.0), 7.8 (2.2) and 77.4 (89.5), respectively. At 24 months follow-up a statistically significant ($p < 0.001$) improvement of micturition variables was recorded, reaching values of 11.2 (7.5) points for IPSS, 2.1 (1.6) for IPSS QoL, 11.5 (5.3) ml/s for Qmax and 62.0 (109.9) ml for PVR. After stratification based on age 20, 86 and 27 patients were included in group 1, group 2 and group 3. Demographics and baseline characteristics were comparable between the groups. Post implantation functional outcomes were found to be significantly ameliorated from baseline in all the groups at each follow-up timepoint ($p < 0.001$). No statistically significant difference was encountered between groups in terms of IPSS, IPSS-QoL and PVR at each follow-up ($p>0.05$). Postoperative Qmax values of group 3 were lower than those reported by groups 1 and 2 at all time intervals (Fig. 1) ($p > 0.05$).

Interpretation of results: Results demonstrated significant symptom improvement across all age groups, though patients over 70 exhibited lower postoperative Qmax values compared to younger groups, while other functional outcomes remained comparable.

Conclusions: Implantation of iTind is an effective treatment for BPH-related LUTS in patients of all age groups. Although significantly improved compared to baseline, lower Qmax values should be expected in patients aged > 70 years compared to their younger counterparts.

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66 - Single Port Italian Network (SPIN) RARP: Feasibility, safety and early functional outcomes with different reconstructive techniques

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Introduction and aim of the study: The da Vinci Single Port (SP) robotic platform has recently been introduced in Europe, and high-volume centers are gaining experience with its use. This study presents preliminary data on SP-RARP using various reconstructive techniques from Italian centers with extensive multiport robotic experience, evaluating feasibility, surgical safety, and early functional outcomes.

Materials and methods: A multi-institutional database including patients underwent SP-RARP at seven centers from May 2024 was set. Patients were stratified into four groups based on the vesico-urethral anastomosis associated reconstructive technique used (none, posterior, retzius-sparing, anterior+posterior). For each group demographic, disease-specific, perioperative and pathological characteristics were collected. For the purpose of the study, early (1 month) continence recovery, graded as full (no pads use) and social (max 1 safety PAD/die), together with potency recovery (presence of valid erections +/- pharmacological therapy) were assessed.

Results: A total of 79 patients underwent SP-RARP, with 51 achieving a minimum follow-up of one month. Among these last, in 14 patients vesico-urethral anastomosis was performed without any additional reconstruction technique, in 16 with posterior reconstruction, in 10 using the Retzius-sparing approach, while in 10 with both anterior and posterior reconstruction. (Table 1). A higher rate of extraperitoneal approaches was observed across reconstruction techniques ($p=0.024$). No differences were observed in intra- and postoperative complications among the techniques, with a length of stay ranging from 2 to 3 days ($p=0.19$). The anterior + posterior reconstruction technique showed shorter catheterization time (4 vs. 7 days, $p < 0.01$). Social continence at one month did not differ significantly among the techniques ($p=0.38$), ranging from 64.3% to 90.9%. Full continence rates were also similar ($p=0.41$), ranging from 25% to 45.5%, as were potency recovery rates ($p=0.62$), ranging from 20% to 45.5%.

Interpretation of results: Preliminary results indicate no significant differences in continence or potency recovery at one month among the techniques, though anterior + posterior reconstruction was associated with a shorter catheterization time.

Conclusions: In centers with established multiport robotic programs, adopting the SP robotic platform appears to be a safe and feasible approach regardless of the reconstructive technique adopted during RARP since the beginning of the learning curve, offering quick postoperative recovery and favorable early functional outcomes.

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67 - AMS800 artificial urinary sphincter: Our experience with a modified approach to component placement

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Introduction and aim of the study: The artificial urinary sphincter (AUS) is considered the gold standard for the treatment of moderate-to-severe male stress urinary incontinence (SUI). AUS placement is an invasive procedure that can result in adverse events, such as intraoperative urethral lesions, postoperative infections, urethral erosions, mechanical failure, scrotal hematomas. The AMS 800™ (Boston Scientific) system is the device with the longest follow-up and the greatest level of evidence regarding its efficacy and safety. The aim of our study is to describe our experience in a novel implantation technique of all the AUS components minimizing its impact and making the procedure safer and faster.

Materials and methods: A retrospective, double-center, single-arm study was conducted. We performed a first perineal median incision for cuff placement and a second minimal incision at the root of the scrotum for the placement of the other sphincter components. The external inguinal ring is identified and the floor of the inguinal canal is opened and penetrated in order to positioning the pressure regulating balloon in the retropubic space. Through the same incision the control pump is positioned into the anterior scrotum. All components' connections are made at the level of scrotum incision reducing the length of the blind passage of the connection tubes and the risk of injury to the surrounding structures. Complication rate, efficacy and degree of satisfaction were analyzed.

Results: 71 patients were treated between 2017 and 2023. The average age was 72 (± 5.1). All patients had previously undergone robot-assisted radical prostatectomy, 19 also underwent adjuvant radiotherapy. 5 patients have previously undergone AdVance sling placement and 6 had proACT sphincter placement. Mean preoperative daily number of pads was 4.9 (± 2.1), median preoperative pad test and IPSS score were 470 g (IQR 300–900) and 5 (IQR 4–5), respectively. The average operating time was 43 min and the average hospital stay was 2 days (IQR 2–4). We did not report any cases of wound infection, hematomas, fever, urethral lesions, hemorrhages or need for surgical revision. No post-operative scrotal pain was observed. At 12 months of follow-up, 96% of patients were social continent. Median postoperative pad test and IPSS score were 15 (0–30) g and 2 (IQR 1–3). Using the Patient Global Impression of Improvement questionnaire, 92% of patients reported improvement.

Interpretation of results: The placement of the AMS800 artificial urinary sphincter is a procedure that can be associated with complications, even in the hands of experienced surgeons. The data reported highlight how the described surgical approach allows for maintaining treatment efficacy while reducing the risk of intra- and post-operative complications.

Conclusions: The study conducted shows that our technique is safe, effective and well tolerated. This approach allows for easier component positioning, reducing the risk of adverse events.

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68 - A comparative analysis of penile prosthesis implantation techniques and outcomes in neophalloplasty in gender-affirming surgery

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Introduction and aim of the study: The ideal device to be implanted into a neophallus has yet to be identified. Since 2016 ZSI FTM (Zephyr, Switzerland) series penile prosthesis (PP) were proposed as "ad hoc" device. Aim of the study is to compare the outcomes of cis-gender modified PP with single cylinder transgender PP.

Materials and methods: A single-center prospective study was performed between March 2011 and April 2024. Patients received either the implantation of a cis-male modified or ZSI 475 FTM PP. The primary endpoint was the comparison of the surgical outcomes. Secondary endpoint was the evaluation of device survival.

Results: 47 AFAB patients were included in: 29 underwent a cis-male modified PP, 18 received ZSI 475 FTM PP. The median follow-up was 36 months (IQR 13–70). A significantly shorter operative time was observed in ZSI FTM PP group when compared to cis-male modified PP group (mean value of 85 VS 105 min, p 0.001). No statistically significant differences emerged concerning the rate of postoperative complications, although it would appear that cis-male PP may be more prone to infection (24.1 VS 5.6%) and mechanical failure (31 VS 22.2%) compared with the single cylinder transgender PP. EFS at 12 months was higher in the single cylinder transgender PP group (100 VS 79.3%, *p*-value 0.039). However, at 24 months, this advantage was lost (94.4% VS 72.4%, p value 0.062).

Interpretation of results: Both cis-gender modified and single cylinder transgender PP may guarantee satisfactory surgical outcomes.

Conclusions: High powered prospective trials are warranted to clearly determinate the possible advantage of using a dedicated single cylinder transgender PP.

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69 - Chronic urinary retention in men with benign prostatic hyperplasia: Intermittent catheterization can improve Sexual Dysfunction?

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Introduction and aim of the study: Lower urinary tract symptoms (LUTS) occur in men increasingly with age, LUTS is often concurrent with benign prostatic hyperplasia (BPH). Men with LUTS/BPH tend to seek medical attention when symptoms become disabling and worsen quality of life especially for the reduction of sexual activity.

Approximately 70% of men with LUTS/BPH have co-existing Sexual Dysfunction (SD).

LUTS/BPH is generally classified as a storing and/or voiding symptoms, among the complications of voiding disorders urinary retention represents the worst aspect as it inevitably affects sexual activity due to the consequent discomfort.

Urinary retention is the acute or chronic inability to voluntarily pass an adequate amount of urine, benign prostatic hyperplasia accounting for 53% cases.

The aim of the study is to evaluate SD in patients suffering from severe bladder emptying disorders who perform bladder management with intermittent catheterization (IC).

Materials and methods: From February to November 2024, 39 consecutive patients suffering from LUTS/BPH complicated by Urinary Retention Chronic (URC) or Acute on chronic (URAc) were enrolled, advised and trained to perform bladder management with IC.

The patients were divided into two groups, group A included patients affects by URC in management with urinations due to physiological patterns, group B included patients affects by URAc management with indwelling urinary catheter (IUC).

SD was investigated with the International Index of Erectile Function (IIEF-5) questionnaire before intermittent catheterization training (T0) and after one month (T1).

Results: 30 patients decided to join the study and completed the study, 15 in group A (URC) and 15 patients in group B (URAc).

The average age of the patients was 70 years. The median number of urinations per day in group A before CI training was 4.6 and after training was 2.6. The median number of urinations per day in group B after CI training 1.4.

The average IIEF-5 at T0 of group A was equal to 0 and at T1 it was equal to 5, 4 patients recorded a notable improvement in sexual activity (Table 1).

The average IIEF-5 at T0 of group B was equal to 0 and at T1 it was equal to 13, 8 patients recorded a notable improvement in sexual activity (Table 2).

Interpretation of results: Patients benefited from bladder management with IC as 40% recovered normal sexual activity (Group A 13% Group B 27%), they represent in Group A 27% (4/15) in Group B 53% (8/15); adherence to the medical indication regarding the number of catheterizations to be performed daily did not influence the resumption of sexual activity therefore.

IC represents an alternative to IUC to the bladder management of patients suffering from chronic or acute-on-chronic urinary retention related to BPH; this therapeutic option allows patients to be able to resume their sexual activity.

Conclusions: IC may be considered an indirect means of resuming sexual activity in patients suffering from urinary retention caused by BPH.

Table 1

ID paziente	Punteggio totale IIEF 5, T0	Punteggio totale IIEF 5, T1
S. L. 31/10/1954	0	16
T. S. 23/04/1940	0	0
T. G. 27/11/1936	0	1
T. M. 14/07/1955	0	18
C. V. 01/04/1942	0	0
L. P. 03/12/1951	0	15
P. C. 23/10/1948	0	0
O. M. 15/04/1959	0	0
V. F. 16/01/1944	0	0
V. P. 25/03/1948	0	0
M. C. 14/07/1967	0	0
C. G. 10/11/1963	0	0
S. M. V. 03/02/1946	0	0
F. M. 13/10/1970	0	25
O. L. 17/07/1948	0	0

Table 2

ID paziente	Punteggio totale IIEF 5, T0	Punteggio totale IIEF 5, T1
M. G. 06/08/1949	0	25
G. F. 17/06/1964	0	25
L. G. 25/07/1940	0	22
R. M. 31/12/1952	0	23
C. A. 04/02/1948	0	9
N. T. 05/03/1945	0	1
A. S. 20/12/1956	0	22
S. A. 22/02/1950	0	0
F. F. 08/06/1973	0	25
L. L. 02/08/1971	0	0
A. M. 12/03/1956	0	0
R. A. 07/01/1961	0	0
T. L. 13/07/1955	0	0
P. M. 03/03/1960	0	25
P. R. 27/11/1947	4	22

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70 - Nocturnal Bladder Capacity Index assessment to improve nocturia management in patients with lower urinary tract symptoms related to benign prostatic hyperplasia

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Introduction and aim of the study: Nocturia is a prevalent and disruptive symptom in men with benign prostatic hyperplasia (BPH). The Nocturnal Bladder Capacity Index (NBCI) is a diagnostic tool that helps differentiate between nocturia subtypes, such as nocturnal polyuria (NP) and reduced nocturnal bladder capacity (NBC), guiding targeted treatments. This study compares the clinical outcomes of NBCI-guided management versus non-stratified standard treatment approaches in men with BPH-associated nocturia.

Materials and methods: This prospective study included men between 45 and 65 years old with significant nocturia (≥3 voids per night) and LUTS related to BPH. Participants were divided into the NBCI guided and non NBCI groups. The NBCI-guided group underwent differential diagnosis based on NBCI values. Patients with NBCI > 1.3, indicating reduced NBC, were treated with a combination of tamsulosin (0.4 mg/day) and solifenacin (5 mg/day). Patients with NBCI ≤ 1.3 underwent further evaluation, including frequency–volume charts and nocturnal urine volume (NUV) assessment, to determine the presence of NP or other bladder dysfunctions. Those diagnosed with NP were treated with desmopressin (0.2 mg/day), while those without NP were treated according to their specific diagnosis. The non-NBCI group received treatment with tamsulosin (0.4 mg/day). Outcomes were assessed at six months, including nocturnal void frequency (NVF) and International Prostate Symptom Score (IPSS).

Results: A total of 150 men were included (75 in the NBCI-guided group, and 75 in the non-NBCI group). The NBCI-guided group achieved a 55% reduction in NVF (from 3.6 to 1.6, $p < 0.001$), compared to a 30% reduction in the non-NBCI group (from 3.5 to 2.5, $p < 0.001$). IPSS scores improved in the NBCI-guided group, decreasing from 22.6 to 13.7 ($p < 0.001$). The non-NBCI group showed a smaller improvement from 22.4 to 17.2 ($p < 0.09$). In patients with NBCI ≤ 1.3, 73% were diagnosed with NP and experienced a 58% reduction in NVF (from 3.5 to 1.5, $p < 0.001$) when treated with desmopressin (0.2 mg/day). The remaining 27% without NP achieved a 48% reduction in NVF (from 3.4 to 1.8, $p < 0.01$) when treated according to the diagnosis made. Patients with NBCI>1.3 treated with tamsulosin (0.4 mg/day) and solifenacin (5mg/day) showed a 41% reduction in NVF (from 3.8 to 2.2, $p < 0.01$).

Interpretation of results: The results demonstrate that NBCI-guided management is significantly more effective than non-stratified approaches in reducing NVF and improving IPSS. By differentiating between NP and other bladder dysfunctions, NBCI-guided treatment allowed for targeted interventions. For instance, desmopressin was highly effective for NP. These findings highlight the clinical value of NBCI in optimizing treatment for nocturia and reducing symptom burden in men with BPH.

Conclusions: NBCI-guided management significantly outperformed non-stratified treatment approaches in reducing NVF, improving IPSS scores, and enhancing patient quality of life. This study underscores the importance of NBCI as a diagnostic tool for tailored treatment in BPH-associated nocturia.

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71 - Female bladder outlet obstruction: Do we have the same diagnosis with Blaivas–Groutz and Solomon–Greenweel nomograms?

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Introduction and aim of the study: To assess the correspondence in female bladder outlet obstruction (BOO) diagnosis between Blaivas–Groutz (BG) and Solomon–Greenwell (SE) nomograms.

Materials and methods: This was a multicentric study (6 centers) with data retrospectively collected in 2024 on neurological and non-neurological females with suggested clinical BOO underwent videourodynamics (VUD). BOO diagnosis was assessed by VUD criteria. We compared the BOO diagnosis of the two nomograms with each other and with the VUD diagnosis. We compared BG classes (no BOO:0; mild BOO: 1, Moderate BOO:2, Severe BOO:3) to SG criteria (<1 no BOO; 6–18 risk BOO >50%, >18 risk BOO >90%), considering also SG score 1–5 for a further sub analysis.

Results: Data on 125 women (mean age 59.9 y.o.) were available: 63.2% (79) non neurological, 36.8% (46) neurological. At BG, 4.8% (6) females were obstructed (mild BOO) but unobstructed at VUD. At SG, 1 patient (0.8%) was obstructed but unobstructed at VUD, 9.6% (12) women were unobstructed at SG but at VUD BOO was found. Overall, BOO diagnosis was coexistent in the two nomograms in 84.8% (106). Women with BG 0 were 29 (23.2%), with a correspondent diagnosis at SG (SG <1) in 96.6% (28/29); all these patients were unobstructed at VUD. In the 67 females with BG 1, BOO at SG was in 70.7% (49/67): SG 1–5 28.6% (14), SG 6–18 36.7% (18), SG >18 34.7% (17), intermediate SG class (1–18) 65.3% (32). Among 18 patients with BOO at BG and unobstructed at SG, 12 (66.7%) were obstructed at VUD, 6 (33.3%) were not. Women of BG classes 2 and 3 were all obstructed at VUD and at SG. Of the 18 females with BG 2, 11.1% (2) had a SG score 6–18 and 88.9% >18. All 11 women who showed BG 3 corresponded to a SG score >18. Median SG score in BG 0 was −13.8, in BG 1 8.1, in BG 2 33.6, in BG 3 96.6.

Interpretation of results: An overall correspondence in BOO diagnosis between the two nomograms was found, but with relevant differences regarding BOO severity. High relation was obtained in case of lack of BOO, and in severe BOO. The greatest disagreement was found in case of mild BOO at BG, because more than a quarter of these females were unobstructed at SG. In this group, a greater concordance with BOO diagnosis at VUD was obtained by BG, while SG overestimated the unobstruction. For these challenging patients, great care must be taken and VUD results remain guides. The vast majority of patients with moderate BOO on BG showed very high scores on SG with very increased likelihood of BOO (>90%, >18). It is like that in case of moderate/intermediate BOO, the BG nomogram might underestimate the severity of obstruction. Regarding the diagnosis of VUD, BG tends to overestimate BOO diagnosis, while SG to underestimate BOO.

Conclusions: A high correspondence was found between CG and SG nomograms in the BOO diagnosis. However, in mild BOO a relevant disagreement was found. Respect to VUD, BG tends to overestimate BOO diagnosis, while SG to underestimate BOO. VUD diagnosis is still the guide in BOO diagnosis.

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72 - Transvesical vs retropubic single port robot-assisted simple prostatectomy: Preliminary bicentric comparative analysis of surgical outcomes

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Introduction and aim of the study: The introduction of single-port (SP) surgery has reignited the debate over the optimal surgical approach for performing robot-assisted simple prostatectomy (RASP). This study aims to compare the perioperative outcomes of patients undergoing retropubic (RP) versus transvesical (TV) SP-RASP.

Materials and methods: Patients who underwent SP-RASP for the surgical treatment of symptomatic BPH between April 2023 and October 2024 were eligible for inclusion in this study. Two different approaches were used based on surgeon's preference, either a transvesical approach or a retropubic (extraperitoneal) approach.

Results: A total of 23 patients were included in the analysis: 9 underwent RP-SP-RASP and 14 underwent TV-SP-RASP (Table 1). Baseline characteristics as well as prostate volume, PSA level and presence of a median lobe were similar between the two groups. Indwelling catheter rates were higher among patients prior to undergoing the TV approach [RP: 22%; TV: 77%; p = 0.012].

Median operative time (OT) was significantly longer for the TV procedure [RP: 118.0 min; TV: 284 min; p < 0.001]. No differences were observed in the percentage of tissue removed, estimated blood loss or hemoglobin drop between the groups. Patients in the RP group had a longer median length of stay (LOS) [RP: 3.0 days; TV: 1.3 days;p = 0.009], while patients in the TV group had a longer median length of catheterization (LOC) [RP: 4.0 days; TV: 7.0 days; p < 0.001]. No significant differences were found in readmission rates or perioperative complications. No major complications were recorded.

Table 1

	RP-SP-RASP N = 9	TV-SP-RASP N = 22	p-value
Indwelling catheter, n (%)	2 (22%)	17 (77%)	**0.012**
PSA [ng/mL], Median (IQR)	10.8 (9.6-12.8)	9.2 (5.1-13.5)	0.3
Prostate volume [mL], Median (IQR)	130.0 (112.0-163.0)	104.5 (91.0-152.0)	0.2
Median lobe, n (%)	6 (67%)	13 (59%)	>0.9
Operative time [min], Median (IQR)	118.0 (110.0-120.0)	285.5 (241.0-346.0)	<**0.001**
Percentage of tissue removed, Median (IQR)	65.0 (53.0-75.0)	47.5 (36.0-64.0)	0.071
EBL [mL], Median (IQR)	250.0 (200.0-300.0)	300.0 (150.0-500.0)	0.5
Hb decrease [g/dL], Median (IQR)	2.7 (2.8- 1.9)	2.3 (3.3- 1.2)	0.9
Length of stay [days], Median (IQR)	3.0 (2.0-3.0)	1.3 (1.2-2.3)	**0.009**
Catheterization [days], Median (IQR)	4.0 (4.0-4.0)	7.0 (6.0-13.0)	<**0.001**
Readmission, n (%)	0 (0%)	1 (4.5%)	>0.9
Major complications, n (%)	0 (0%)	0 (0%)	>0.9

Interpretation of results: This study compares the perioperative outcomes of retropubic (RP) versus transvesical (TV) single-port robot-assisted simple prostatectomy (SP-RASP) for symptomatic BPH. While the TV approach was associated with significantly longer operative times and catheterization durations, it resulted in a shorter hospital stay, with no significant differences in complication or readmission rates between the two approaches.

Conclusions: Both RP and TV-SP-RASP are safe procedures for treating large prostate adenomas, showing low complication rates. Differences in OT, LOS and LOC may be attributed to variations in hospital settings and protocols. Further studies are warranted.

Continence 14S (2025) 101839
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73 - Development and validation of Urodoc review GPT: A tool to evaluate urological consultations

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Introduction and aim of the study: To create and validate a GPT-based tool, Urodoc review, to assist residents in performing a complete and detailed urological consultation.

Materials & methods: The Urodoc review chatbot was developed using OpenAI's software and trained with the latest EAU guidelines (April 2024). Two expert urologists were involved in training and fine-tuning the chatbot responses. The app corrected the consultations and rated the consultation evaluating: medical relevance, completeness, accuracy, formatting and structure, clarity and detail and an overall rating (1 to 10). All the answers were reviewed by two experts urologists. In the validation phase, a consecutive series of urological consultations from residents were evaluated. The GPT app can be found at : https://chatgpt.com/g/g-ctxkZ3SkG-urodoc-review.

Results: The training phase required 24 h to address and correct chatbot responses. Five hundred consultations were evaluated by Urodoc review. Overall, medical relevance received a median rate of 8 (8/9), completeness: 8 (8/9), accuracy: 9 (8/9), formatting and structure: 8 (7/8), clarity and detail: 8 (8/8) and an overall rating 80% (74/84%). In 13/500 (2,6%) Urodoc review rated the consultation below 7 highlighting important missing data in the consultation.

Interpretation of results: The Urodoc review has provided satisfactory responses to questions related to EAU guidelines. This software could represent an important help for urologist residents in their professional training and daily work. Furthermore, continuing with a targeted training, Urodoc review could provide responses with more quality and appropriateness.

Conclusions: Urodoc review appears to be a valuable tool for assisting young residents in performing a correct consultation. Its implementation in clinical practice has the potential to improve the accuracy of medical consultations.

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74 - Urodynamic effect of prostatic urethral lift

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Introduction and aim of the study: Aim of our study is to evaluate the possible urodynamic effect role of prostatic urethral lift (PUL) in patients with lower urinary tract symptoms due to benign prostatic hyperplasia.

Materials & methods: A consecutive series of patients undergoing PUL placement were consecutively enrolled in two centers. Inclusion criteria included: ≥50 years of age, benign prostatic obstruction (BPO), international prostate symptom score (IPSS) ≥13, prostate volume ≤60 mL, and no middle prostate lobe. All patients were evaluated with detailed clinical history, validated questionnaire, flexible cystoscopy and pressure flow studies (PFS) at baseline. PFS were performed at 6 months to evaluate the urodynamic effect of PUL.

Results: Overall 20 patients with a median age of 66 were enrolled. At baseline median PV was 43 (33/51)cc, median IPSS was 16 (14/18) and median Shaffer score was III (II/IV). In terms of sexual function median IIEF was 22 (20/24) and median MSHQ was 13 (12/15). All patients completed successfully the procedure and no major complications were recorded. 7/20 patients needed catheterization perioperatively. At six months statistically significant improvements in terms for Qmax (13,9 vs 10,4; p<0,05) and IPSS (16 vs 8; p<0,05) were recorded and sexual function was maintained. On urodynamic study at three months there was a statistically significant improvement in PdetQmax (55 vs 80; p<0,05) and Qmax values (12 vs 9,5; p<0,05). Finally, Shaffer class improved from a median III to a median of II. More specifically; 14/18 presented an improvement in Shaffer class.

Interpretation of results: The data show improvements of Qmax, IPSS, Schaffer class, PdetQmax after surgery.

Conclusions: PUL represents and effective treatment in patients with LUTS due to BPH and improves bladder outlet obstruction. As well sexual function is maintained.

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75 - Survey among Italian centres performing urodynamic study in patients with orthotopic neobladders and implication for a possible standardization

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Introduction and aim of the study: Radical cystectomy (RC) is a treatment for patients with advanced or high-risk non-muscle invasive bladder cancer (NMIBC). Although orthotopic neobladder (ONB) following RC formation generally improves quality of life (QoL), voiding dysfunctions and lower urinary tract symptoms (LUTS) may significantly affect post-operative outcomes. Despite the importance of urodynamic studies (UDS) in assessing the functionality of ONB, there is limited evidence on standardized protocols for their execution, terminology, and interpretation. The primary objective is to assess how and when major Italian oncological centres perform UDS on patients with ONB.

Materials and methods: A survey consisting of 32 items was developed to investigate on the terminology and procedures used in conducting UDS. This survey was distributed via email to Italian oncological centres between March 2024 and January 2025. The responses were collected using Google Forms® platform. Centres performing <10 RCs/year or those not using ileum for bladder reconstruction were excluded.

Results: Approximately 25% of the contacted centres, mostly general hospitals (63.6%), responded to the survey. Among these, 36.6% used the Padua ileal neobladder technique and 27.2% the Studer technique. Only 13.6% conducted UDS on all patients. The timing of UDS varied, with 31.8% performing it 6 months post-surgery, 13.6% at 3 months, and 4.5% at 12 months. 40.9% of centres reported did not administer antibiotic prophylaxis. Uroflowmetry was performed in 63.6% of cases. The filling phase was predominantly conducted in the seated position (68.2%), with infusion rates ranging from 20–50 mL/s, and water-filled catheters used in 59%. There was significant variation in responses regarding normal neobladder pressure values and thresholds to stop filling. Peristaltic contractions were reported in 63.6% of cases. All centres performed Valsalva manoeuvres and/or coughing during the filling phase. During the voiding phase, obstruction was evaluated in 36.4% of cases using native bladder nomograms. Post-void residual (PVR) was assessed via ultrasound (49.5%) or catheterization (49.5%), with 45.4% of centres considering a PVR of ≤150 mL acceptable.

Interpretation of results: A significant variation was observed in the timing of UDS assessments, which ranged from 3 to 12 months post-surgery, despite evidence in the literature suggesting that 1 year post-surgery is the optimal timeframe for obtain a fully functional reservoir. There was no consensus regarding the definition of normal neobladder pressure values or the thresholds for stopping the filling phase. Of particular importance is the observation that parameters designed for the intact native bladder are frequently applied to orthotopic.

Conclusions: While UDS is a critical tool for assessing ONB function, the heterogeneity in UDS practices underscores the urgent need for standardized protocols and guidelines for patients with ONB. Such efforts would not only improve the quality and comparability of follow-up data but also enhance the clinical management and quality of life for ONB patients.

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76 - Onabotulinumtoxin a intradetrusor injection procedure: An observational study of the learning curve of nurse team

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Introduction and aim of the study: Nurses are involved in different preoperative, perioperative and postoperative phases of treatment with intradetrusor injections of OnabotulinumtoxinA (Onabot/A). Little is known about the nursing expertise needed to perform the procedure safely. Aim of the study was to assess the learning curve of a nurse team for the Onabot/A procedure in out-patient setting.

Materials and methods: After approval by our Institutional Review Board, we performed a pilot, prospective study. Nursing team of our center was recruited. We recorded nurse's demographic, the number of procedures performed, the nurse team's preoperative, perioperative, and postoperative surgical time at baseline and at 6- months of the procedures performed. Nurses filled out the Nurse Competence Scale questionnaire (NCS-q) for the self-evaluation of clinical competence and underwent also to the VAS scale to evaluate the difficulty of learning the procedure (0: worst, 10: best). Additionally, we compared the surgical times of the Nurse Team under study with one Onabot/A injections expert nurse.

Results: Seven nurses were enrolled (mean age [±SD]: 49.5 ± 8.4). The mean(±SD) procedures performed for each nurse was: 8.4 ± 4.7. One experienced surgeon on Onabot/A injections completed all the 58 Onabot/A injections in out-patient clinical setting. Data on the time required for pre- and peri-operative preparation are reported in Table 1. The timelines show that work pattern stabilized after 7 Onabot/A injections but with a continued decrease in procedure time. VAS score: 3.2 ± 2.1. The NCS-q domain category "Managing Situation" (8 items) showed a mean (± SD) of 8.1 ± 0.3. The comparison of the time of the patient's preparation between the expert nurse and the 6- month experience of the nurse team was: 11 ± 1.9 vs 12 ± 2.2 ($p< 0.5$).

Interpretation of results: To date, this is the first study assessing duration and efficacy of the nurses learning curve for Onabot/A injections in out-patient clinic. The threshold of procedures required to complete the learning curve was low and nurses achieved a high level of expertise within 7 procedures. After achieving this proficiency, a continuous decrease in times in all phases of treatment related to nurses was demonstrated. The strength of this study was to demonstrate for the first time, from a nursing perspective, how the learning curve for Onabot/A injections is simple and short for nurses.

Conclusions: The nurse's expertise in the Onabot/A procedure is important for a better performance in the treatment and proper support to the patient. For this reason, the training of the nurses who assist the procedure is an area to be followed with care.

Table 1
The nurse team's pre-operative, peri-operative and post-operative surgical time at baseline and at 6- months of the procedures performed.

	Baseline	6- mos of procedures	p
Setting up the operating trolley (min; mean ± SD)	24 ± 8.2	10 ± 3.5	0.00
Administration of local anesthesia (min; mean ± SD)	12.4 ± 3.7	8 ± 3.4	0.00
Preparation of the patient (min; mean ± SD)	18.4 ± 2.9	12 ± 2.2	0.00
Post-operative phase (min; mean ± SD)	13.6 ± 1.8	9.7 ± 2.9	0.00

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77 - Mini-invasive approach for bladder derivation: Long-term results of percutaneous button cystostomy

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Introduction and aim of the study: Clean intermittent catheterization (CIC) is a mainstay in the management of neurogenic bladder-sphincter dysfunction (NBSD). CIC may not always be tolerated or feasible and in these cases urinary derivation may be required. We implemented percutaneous button cystostomy (PBC) technique, previously described, to maximize applicability and minimize conversion rate. Aim of this study is to evaluate its feasibility and effectiveness in the pediatric population.

Materials & methods: All patients treated with PBC between 2020–2024 were retrospectively evaluated. Outcomes were evaluated considering conversion and complication rate, patient-reported tolerance to the device, and effectiveness in bladder management. statistical analysis with SPSS Microsoft.

Results: 50 patients (32 males) with a median age of 7.9(4.6–13.3) years were included. 5/50 were <1year-of-age. Indications for PBC placement were spinal dysraphism (N = 36), central neurological impairment (N = 7), posterior urethral valves (PUV, N = 4), severe bilateral reflux (VUR, N=2) and epispadias (N = 1). No conversion to open surgery nor intraoperative complications were reported. Mean operative time was 45(4.3) minutes. During a mean follow-up period of 22.9(17) months, 9 complications were reported, including device dislocation(1), non-febrile UTI(6), and peristomal leakage(2). No complications occurred in all patients ≤1year-of-age. 46/50 patients reported optimal device tolerance and clinical effectiveness, while 4 non-responders required a different bladder drainage (Mitrofanoff).

Interpretation of results: The study analyzed 50 predominantly male patients with a median age of 7.9 years undergoing percutaneous bladder catheter (PBC) placement. It highlights the complexity of conditions like spinal dysraphism and reassures that PBC can be safely performed in children under one year old. The absence of conversions to open surgery and intraoperative complications indicates the procedure's safety, with a mean operative time of 45 min. During an average follow-up of 23 months, 9 complications were noted, mainly device dislocation and UTIs, but none in very young patients, suggesting careful management. Overall, 46 out of 50 patients tolerated the device well, though 4 required alternative methods, emphasizing the need for personalized care. The study supports PBC use in pediatric urology, particularly for younger patients.

Conclusions: Based on these results, our modified PBC technique seems to be feasible and effective throughout all ages and conditions, minimizing the conversion rate. Our PBC technique seems applicable and promising also in newborns and infants with PUV and severe VUR. Further comparative studies are needed to confirm this approach in these patients.

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78 - Learning curve of robot-assisted radical cystectomy: Evaluation of perioperative outcomes using the Pasadena Consensus Panel criteria

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Introduction and aim of the study: Radical cystectomy remains the gold standard for the treatment of muscle-invasive bladder cancer. In recent years, the robotic-assisted approach has gained increasing prominence due to its minimally invasive nature, while maintaining functional and oncologic outcomes comparable to the open technique. The aim of this study is to evaluate the impact of prior robotic surgical experience (RARP, RAPN, pyeloplasty) on the peri-operative outcomes of robotic-assisted radical cystectomy (RARC) and to assess the time required to meet the performance criteria established by the Pasadena Consensus Panel.

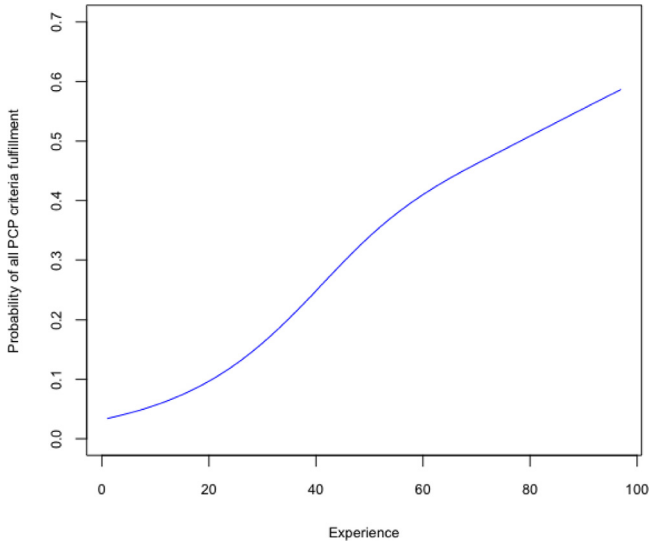

Fig. 1. RARC learning curve: the effect of surgical experience on the probability of meeting all PCP criteria.

Materials and methods: The peri-operative data of 97 patients who underwent RARC from January 2018 to December 2023 were retrospectively analyzed. All procedures were performed by two experienced robotic surgeons. Multivariate logistic regression models were used to assess the impact of surgical experience on various peri-operative parameters, and the LOWESS function was employed to graph and analyze the relationship between experience and outcomes.

Results: Overall, the reintervention rate and incidence of major complications decreased as surgeon experience increased, with a plateau observed after 50 cases. Regarding the Pasadena Consensus Panel performance criteria, blood loss ≤ 300 ml, extensive lymphadenectomy and a neovesical rate of 25%–50% were achieved from the first case. Criteria related to major postoperative complications, operative time and length of stay improved progressively with increasing surgical experience. A statistically significant association ($p \leq 0.001$) was found between the probability of meeting all criteria and surgeon experience, reaching 60% after 97 cases, while a plateau was reached after approximately 40 procedures [Fig. 1].

Interpretation of results: RARC outcomes improve with increasing surgeon experience, particularly when prior robotic experience is considered. A positive correlation exists between the learning curve and peri-operative outcomes. Specifically, the Pasadena Consensus Panel criteria serve as objective benchmarks for

evaluating surgical efficiency acquisition, with a plateau reached after approximately 40 surgeries. This demonstrates the importance of mentorship, structured training, and substantial prior robotic experience before performing RARCs in optimizing surgical performance.

Conclusions: Robotic surgical experience significantly impacts the achievement of Pasadena Consensus Panel criteria and the optimization of peri-operative outcomes, underscoring the complexity of the procedure, given the steep learning curve.

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79 - Safety and efficacy of endoscopic treatment of detrusor overactivity and vesicoureteral reflux in a 11-month-old female child

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Introduction and aim of the study: We report a case of a female child born with myelomeningocele and anorectal malformation who underwent an endoscopic treatment for detrusor overactivity (DO) and vesicoureteral reflux (VUR) on the 11th month of life (MOL). The aim of our study is to demonstrate the safety and the efficacy of the use of onabotulinum toxin A in a child with <1 year.

Materials & methods: A polymalformed (rectovestibular fistula, monolateral corneal leukoma, and bilateral hip dislocation) female child born with lumbosacral (T12-L1) myelomeningocele (MMC) associated with type II Chiari syndrome underwent some surgical procedures.

On the 3rd MOL due to urinary tract infection (UTI), a videourodynamics (VUD)was diagnosticated a IV grade right vescico-ureteral reflux (VUR) treated with an endoscopic procedure.

Bladder management was based on intermittent catheterizations and oxybutynin.

At 6 months since VUR treatment, due to three episodes of symptomatic UTI, VUD was performed showing detrusor overactivity, detrusor sphincter dyssynergia (DSD), resolution of right VUR and diagnosis of IV grade left VUR.

On the 11th MOL, the child underwent detrusorial infiltration of onabotulinum toxin A (50 IU), left perimeatal injection of dextranomer/hyaluronic acid copolymer and laparoscopic correction of inguinal hernia.

Results: The patient was discharged on the 1st post-operative day. Neither intra- nor early post-operative complications occurred.

After 2 months, VUD confirmed significant control of detrusor overactivity and absence of bilateral VUR.

Interpretation of results: Onabotulinum toxin A is largely applied to treat detrusor overactivity (DO) in adults as third line treatment after pharmacotherapy failure. In pediatric population there is a lack of experience in small children (<1 year) in published literature, in particular there is no consensus about the optimal dose to administer, and about its efficacy and safety. Some studies report the safety and the efficiency of infiltration of onabotulinum toxin A in children <1 year for other indications (e.g. skeletal muscles).

Endoscopic treatment proved to be particularly challenging, considering the limited dimensions of the bladder and the necessity of small caliber cystoscope and needle and require an experienced surgeon.

Conclusions: This study reports the first case of DO treated with onabotulinum toxin A under the first year of life. Although challenging, our case demonstrates that combined endoscopic treatment of DO and VUR is a feasible also in child with <1 year.

We suggest to perform this procedure always in tertiary referral centers, where there is also an appropriate anesthesiologic support considering the common frailty of these patients. Therefore, the authors advocate this approach as first line in small children in experienced centers.

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80 - The effectiveness of short form urodynamic study in the evaluation of Pelvic Organ Prolapse before surgery: A monocentric retrospective observational study

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Introduction and aim of the study: Urodynamic evaluation is usually performed in women with Pelvic Organ Prolapse (POP) before surgery. During an urodynamic exam, an advanced stage of POP can result both in technical difficulties and higher risk of artifacts and more discomfort for the patient.

The aim of this study is to evaluate the effectiveness of a "short form" of urodynamic study (SFU), less invasive, consisting in uroflowmetry and stress test for preoperatory management of women with uterovaginal prolapse.

Materials & methods: This is a monocentric retrospective observational study, involving women who underwent surgery for POP in our Hospital in the year 2022.

As preoperative evaluation, patients underwent SFU; first, patients with full bladder underwent stress test and uroflowmetry with control of post-void residue (PVR), then bladder was filled with 300 ml of sterile physiological solution and stress test was repeated in cline and orthostasis also with digital repositioning of prolapsed viscera. The examination ended with a second uroflowmetry with PVR control.

Patients' characteristics, medical history and vaginal examination according to POP-Q classification were collected. Postoperative follow up visit was registered at 6 months.

Results: In our Institution, the women who underwent surgery for POP in the year 2022 were 107. Above all the women, just 70 (65%) patients completed the follow up within our Hospital and were included in the study.

About preoperatively results, the patients in whom uroshort did not find any clinical problem were 25 (35%); among these patients, in 24 women (96%) we did not find any clinical problem after surgery; just in a woman (4%) we found voiding dysfunction after surgery.

We identify 28 patients (40%) with voiding dysfunction before surgery; among these, 20 women (72%) did not have problems after surgery, 6 patients (21%) had voiding dysfunction and 2 patients (7%) had a positive stress test. Before surgery, the patients with a positive stress test were 9 (13%); among these patients, 7 women (78%) did not have any clinical problem after surgery, a patient (11%) was diagnosed with voiding dysfunction and in a woman (11%) was found urgency. Finally, we diagnosed urgency in 22 patients (31%) before surgery; among these women, 17 patients (77%) did not have any clinical problem after surgery, 3 patients (14%) had difficulty in bladder emptying and 2 patients (9%) had urgency.

Interpretation of results: Our study shows that a positive stress test permits to modulate surgery, cystopexy in particular. Among women with a preoperative positive stress test, none had a positive test after surgery.

Moreover, preoperative cistomanometry is not necessary; in fact according to our study we can assume that preoperative urgency is often corrected by surgery.

Conclusions: According to the results of our study, SFU can be considered as an alternative to complete urodynamic test, preventing women from discomfort in preoperative evaluation.

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82 - Intravesical hyaluronic acid instillation in treating recurrent cystitits in women

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Introduction: Recurrent urinary tract infections (RUTIs) are defined in literature as 3 episodes of urinary tract infections in the last 12 month or as 2 episodes in the last 6 months. RUTIs risk factors are genetic and behavioural. In Italy there are around 6 million UTI per year.

Among the main causes of chronical or relapsing cystitis there might be an alteration of the transitional epithelium which is a real protective barrier. Normal bladder epithelium (urothelium) is covered by a protective film formed by glycosaminoglycans (GAG).

Hyaluronic acid is a defence tool for the bladder wall attacked by bacteria who adhere to its walls.

Different clinical studies demonstrate that hyaluronic acid is capable of restoring the protective function of the transitional epithelium, contributing significantly in reducing inflammatory state, in reducing UTI's.

Materials: INSTYLAN is composed of Hyaluronic acid, sterile solution for intravesical irrigation 0,16%, containing in 50 ml, Hyaluronated Sodium 80 mg (high molecular weight 2 Mda).

In our work we want to evaluate the ability of INSTYLAN in reducing rUTIs and their symptoms without collateral effects. We enrolled 20 women, median age 54 years (range 35–78). They had irritative vesical symptoms since at least 8 months and were treated initially with attack therapy and after with cycles of nitrofurantoin or phosphomicin without results. All the patients had symptoms ongoing, with a micturition frequency of at least 8 times/24 h. We evaluated the same parameters in the control group, composed of 14 women, median age 48 (range 37–75) treated with fosfomycin 3 gr once a week during 2 months. Primary endpoint: reducing UTIs frequency within 3 months Secondary endpoints: variation of the micturition frequency's episodes, adverse events, post-void residual (PVR) reduction.

Methods: We administered one instillation/week of INSTYLAN for 8 weeks. The patients were informed regarding the aims and the characteristics of the procedure. They signed an informed consent.

Urinoculture was executed at the beginning and at the end of the therapy.

Results and conclusion: At the end of the treatment 16 patient referred satisfaction and clinical improvement, their urinoculture was negative at 3 months. 4 patients underwent UTI relapse (klebsiella and E. coli).

No haematuria or other systemic effects were observed. No collateral effects were reported. A significative improvement of bladder capacity was reported. GCI was positive in 70% of the cases. In the control group no adverse event, 55% of positive uroculture at 3 months

Intravesical instillation of hyaluronic acid repairs the GAG layer on the urothelial surface and prevents therefore bacterial adhesion. A small metanalysis (4 studies, 143 patients) on the efficacy of intravesical hyaluronic acid as possible treatment of UTI's relapse showed promising results.

Authors of a review published on BMJ conclude that, given the evidences, anti-biotical prophylaxis remains the gold standard in preventing UTIs' recurrence in women

Albeit on a limited number of patients, our experience with the use of intravesical INSYLAN has been positive, the patients have been satisfied. However there is the need of a multicentric study versus placebo to get statistically significant data.

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83 - Prevalence of pelvic floor disorders in women with endometriosis: An online survey

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Introduction and aim of the study: Endometriosis and pelvic floor disorders (PFDs) share common pathogenetic mechanisms. The prevalence of PFD in women with endometriosis may be underestimated. The aim of the study was to measure the prevalence of PFDs in women with endometriosis.

Materials & methods: In this multicentre, observational, cross-sectional study, women were recruited through web link or at our clinics. The web link to the survey have been disseminated through social media, through the main Italian endometriosis organizations of volunteers, and through QR code posters in endometriosis clinics in Italy. The web survey gathers personal history, endometriosis history and symptoms. Subjective symptoms of PFD were studied with: Urinary Distress Inventory 6 (UDI6), Colorectal-Anal Distress Inventory 8 (CRADI8), Wexner Scale for Fecal Incontinence, Wexner Constipation Scoring System, and Female Sexual Function Index (FSFI). Endometriosis related quality of life was studied with the Endometriosis Health Profile-30 (EHP-30) questionnaire. Results are expressed as mean ± standard deviations or percentages.

Results: A total of 1,149 women signed the electronic consent, 329 were excluded due to inclusion/exclusion criteria; hence, 525 completed all the questionnaires (response rate of 64.02%). The mean age was 36.58 ± 6.93 years, BMI 22.38 ± 3.68 kg/m2. 79.4% had never given birth. UDI6 was 46.8 ± 23.90 (severe symptoms: 20%), CRADI8 42.2 ± 20.2 (severe symptoms: 11.4%). 83.6% had sexual dysfunction (FSFI < 26.55). 77% had symptoms of fecal incontinence; 68% had moderate, severe, or very severe constipation symptoms. For all aspects related to pelvic floor dysfunction, a direct correlation emerged between the severity of symptoms and a low quality of life. This correlation was generally stronger for the parameters describing urinary and defecatory dysfunction (CRADI-8 and UDI-6, Pearson correlation coefficients, $r > 0.3$) than for those related to sexual function.

Interpretation of results: Women with endometriosis showed a relevant prevalence of symptoms of PFD, in particular sexual dysfunction and constipation. When examining single questions of the UDI-6, the worst symptoms emerged in questions investigating bladder sensitivity symptoms (frequent urination and tenesmus). When examining single questions of the CRADI8 the worst symptoms emerged in questions investigating constipation.

Conclusions: This study highlights the high prevalence of PFD in women with endometriosis. The identification and treatment of this underestimated problem could be a strategy to improve the quality of life for women with endometriosis.

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84 - The colpocleisis, the old and the new in a surgical intervention for selected patients affected by pelvic organ prolapse: Report of a complicated case

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Introduction and aim of the study: Colpocleisis is a minimally invasive, obliterative procedure commonly used for treating pelvic organ prolapse (POP). While it typically demonstrates a high anatomical success rate and patient satisfaction, potential adverse outcomes may occur, as with any surgical intervention. The aim of this study is to describe a complicated case of colpocleisis.

Materials and methods: A 73-year-old female patient was referred for symptomatic pelvic organ prolapse. Her medical history included a hysterectomy for abnormal uterine bleeding, monoclonal gammopathy (MGUS), and rheumatoid arthritis. She was initially planned for surgical treatment of POP, but preoperative imaging revealed undiagnosed stage 4 lung cancer. After undergoing chemotherapy, the patient declined conservative treatment for POP due to symptoms related to a pessary. She continued to request a surgical solution. The patient was not sexually active and had no intention of becoming sexually active in the future, so colpocleisis was proposed as a treatment option. Comprehensive preoperative counseling was performed, thoroughly discussing potential complications, especially considering the patient's frailty and the risk of recurrence.

Results: Surgical intervention was performed using the LeFort technique, which involved denuding the middle portion of the anterior and posterior vaginal wall mucosa and suturing them together, creating minimal lateral drainage channels. A perineorrhaphy was then performed to reduce the size of the genital hiatus and minimize the risk of POP recurrence. Due to the patient's comorbidities, she was classified as high-risk for deep vein thrombosis, so low-molecular-weight heparin therapy was initiated. Several days after hospital discharge, the patient was referred for increasing vaginal bleeding and anemia. Imaging (ultrasound and Computed Tomography) revealed active bleeding from a deep vaginal hematoma, 4 cm in width. A second surgical intervention was required, as medical therapy was ineffective in controlling the hemorrhage. The hematoma was evacuated, and additional sutures were placed to control bleeding and reconstruct the obliterative procedure. Blood tests revealed an undiagnosed type 2 Von Willebrand disease, prompting the initiation of postoperative treatment with tranexamic acid. Postoperative results were free of further complications, and a two-year follow-up showed no recurrence, with the patient reporting satisfaction with the outcome.

Interpretation of results: Although colpocleisis is generally a straightforward procedure, in the case of a patient with stage 4 cancer who declined pessary use and requested surgery to improve her quality of life, it is crucial to ensure the patient is fully informed of the increased risks. Hemorrhagic complications can be serious and require prompt diagnosis and management.

Conclusions: As the incidence of POP is expected to increase with advancing age, obliterative procedures like colpocleisis may be considered a viable option in selected cases. Colpocleisis can be a valuable surgical solution; however, thorough preoperative counseling, a detailed discussion of risks and benefits, and consideration of alternative options should always be part of the decision-making process.

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85 - Sharing a Best Practice for the use of intermittent catheterization in management of Urinary Retention due to benign prostatic hyperplasia

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Introduction and aim of the study: Urinary Retention (UR) is one of the main complications of benign prostatic hyperplasia (BPH). The UR in the Italian Urology departments is traditionally managed with the indwelling bladder catheter (CVP), intermittent catheterization (IC) can be an alternative to the CVP and to medical therapy alone both as conservative-rehabilitative treatment or waiting for a surgical intervention.

In a regional referral center almost all patients suffering from UR/BPH are referred to the IC.

The aim of the study is to extend the "Best Practice" (BP) by a regional reference center to other regional centers and to evaluate the safety profile of CI compared to CVP in patients suffering from UR/BPH, the incidence of urinary tract infections (UTIs), the adherence to treatment, the sexual activity.

Materials and methods: From November 2022 to November 2024, six centers in addition to the regional reference center enrolled patients (pts) suffering from UR/BPH.

The pts were divided in two groups, Group A pts treated with IC and Group B pts treated with CVP. The incidence of UTIs and complications was evaluated at 6 and 12 months (T1–T2), were also assessed rates and reasons for abandonment of IC.

Group A patients participated in three visits:

(1) Training (baseline-T0): Theoretical/practical education, delivery bladder diary.

(2) Re-evaluation (7 days): Check learning of IC, evaluation bladder diary.

(3) Follow-up (30 days): Monitoring patient's condition and compliance; notation of changes to the therapeutic plan and any complications or abandonments.

Furthermore, pts completed the IIEF-5 questionnaire at baseline and follow-up.

Results: 183 pts were enrolled

1st phase: adoption of BP and analysis of complications.

• Patients: Compared to the situation prior to the adoption of the BP, which almost entirely included treatment with CVP, one year after the start of the study 90% of pts are treated with IC

• UTIs: 12% Group A, 37% Group B.

• Suspensions: 20% Group A abandoned the IC (24%Complications, 24%Limited compliance, 40% Surgery, 12%Resumption of spontaneous urination).

2nd phase: analysis of improvement relating to sexuality.

The change in the IIEF5 average value shows a clear increase in scores after the adoption of the BP. Starting from a baseline condition of severe erectile dysfunction (with an average IIEF score of 2), a significant change is observed 30 days after treatment (the average score rises to 10).

Interpretation of results: The results highlight a significant improvement in UR management with the adoption of IC-BP. In the 1st phase, the IC mainly replaced the use of the CVP, significantly reducing complications such as UTIs. Treatment suspensions were mainly due to positive events confirming the effectiveness of the IC. In the 2nd phase, IC had a positive impact on sexuality documented by the significant increase in the mean IIEF5 score.

Conclusions: The project highlighted the effectiveness of IC in the management of UR. IC significantly reduces symptomatic UTIs compared to CVP and determines a notable improvement in sexual activity.

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86 - Comparative analysis of urodynamic parameters and continence in robotic vs. open neobladder reconstruction

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Introduction and aim of the study: Radical cystectomy with neobladder reconstruction is the standard treatment for muscle-invasive bladder cancer. The choice between robotic and open surgical approaches remains a topic of debate, particularly regarding postoperative urodynamic outcomes. This study aims to compare urodynamic parameters between robotic and open neobladder reconstruction.

Materials and methods: A retrospective analysis was conducted on patients who underwent neobladder reconstruction between 2018 and 2024. Patients were divided into two groups based on surgical approach: robotic with Y-pouch technique reconstruction (n=15) and open with Studer technique reconstruction n=20). Urodynamic parameters assessed included maximum bladder capacity (MCC), compliance, post-void residual volume (PVR), maximum flow rate (Qmax) and vesical pressure at MCC (Pves@MCC). Data were collected at 6 and 12 months postoperatively. Statistical analysis was performed using t-tests and chi-square tests. Patient demographics, including age, gender, length of the ileal segment used, and hospital stay (HS), were also analyzed.

Results: At 6 months postoperatively, the robotic group demonstrated a higher maximum bladder capacity (MCC) (452 ± 45 mL vs. 420 ± 50 mL) and better compliance (41 ± 5 mL/cmH2O vs. 35 ± 6 mL/cmH2O) compared to the open group. The Pves@MCC was higher in the robotic group but not reach statistical significance (35 ± 18 cmH_2O vs. 22 ± 15 cmH_2O, $p = 0.1$). Qmax was higher in the robot group (18 ± 3 mL/s vs. 14 ± 4 mL/s, $p = 0.04$). No significant differences were observed in detrusor pressure at maximum flow (PdetQmax) between the two groups (28 ± 5 cmH_2O vs. 30 ± 6 cmH_2O,$p = 0.45$).

At 12 months, these differences persisted, with the robotic group maintaining superior Pves@MCC and Qmax and better compliance.

Additionally, continence outcomes at 12 months showed a higher proportion of daytime continence in the robotic group, with fewer patients requiring pads/day compared to the open group ($p < 0.05$). Nighttime continence was also improved in the robotic group, with a lower number of pads/night required ($p < 0.05$). The need for self-catheterization was slightly lower in the robotic group but did not reach statistical significance (robotic = 2; open = 4).

Interpretation of results: At 6 and 12 months, urodynamic values between the two approaches do not show a statistically significant difference. The evaluation of the urodynamic study in the robotic group demonstrated that some patients had better compliance, lower post-void residual volume and higher Qmax, while others increased Pves@MCC. This outcome is probably due to the reduced sample size of the study.

Conclusions: Evaluating the urodynamic parameters of the two groups (robotic vs. open), no statistically significant differences were found and the two approaches appear to be comparable. Further prospective studies are warranted to validate these results and explore the impact on patient quality of life.

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87 - Multicentre retrospective study on pelvic floor muscle rehabilitation for lifelong and acquired premature ejaculation: 10 years follow-up outcomes

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Introduction and aim of the study: The aim of the study was to evaluate 10 years follow-up outcomes of pelvic floor muscle (PFM) rehabilitation in subjects suffering from lifelong and acquired premature ejaculation. To evaluate PE, patients were investigated with intravaginal ejaculatory latency time (IELT) and the self-report Premature Ejaculation Diagnostic Tool (PEDT). The primary outcomes endpoints were the IELT change, and the PEDT score.

Materials and methods: This retrospective study evaluated 213 subjects with PE diagnosis (lifelong no.133, mean age 26.1 y.o.; acquired no. 80, mean age 36.6 y.o.), A total of 207 pts out of 213 (97%) completed the rehabilitative protocol, and 205 on 207 pts attended the 10 years follow-up. At baseline evaluation, all included subjects reported a latency time ≤60 s and PEDT score >11.

All participants completed a 12-week program of PFM rehabilitation, including physio-kinesiotherapy treatment, biofeedback, and only in selected cases (101 out of 207, 49%) electrostimulation. The program comprised 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 120 months postintervention, using a paired sample 2-tailed t-test, including the associated 95% confidence intervals.

Results 191 out of 193 enrolled subjects completed the PFM rehabilitation protocol with 36 sessions of PFM under a physiotherapist control. All patients reported a significant improvement of the ejaculatory time with a mean IELT of 188.7 s and PEDT score of 2.4 at the 12-week endpoint of the intervention ($p < 0.0001$). Of the 191 participants who completed the 10-years follow-up, 83%, 79%, 78%, 71%, and 68%maintained satisfactory and significant results (ejaculatory latency time and PEDT score) through the follow-up times at 24, 36, 48, 60 months and final 10 years follow-up after the PFM training, respectively.

Interpretation of results: In the current study, the improvement in IELT and PEDT when compared to baseline were found to be significantly improved among those patients who completed the follow-up to 5 (70.9%) and 10 (68.3%) years postintervention.

These results represent another important achievement obtained by way of an easily learned technique that can be mastered using pelvic floor biofeedback. Moreover, no adverse effects of the PFM rehabilitation protocol were identified, compared to other medical therapies such as gastrointestinal symptoms (nausea and diarrhea) and dizziness and headaches, that have been associated with the use of dapoxetine. In addition, some recent data demonstrated negative impact of dapoxetine on fertility.

Conclusions: This study is the first on PE treatment with a large number of patients recruited, that completed the 10 years follow-up. The outcomes observed are significant and the results were maintained through the entire follow-up time. PFM rehabilitation in premature ejaculation represents an effective and safe therapy with lasting results.

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88 - Safety and efficacy of CO2 non-ablative laser treatment in postmenopausal women with urinary incontinence

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Introduction and aim of the study: Urinary incontinence is a condition affecting up to 30%–40% of adult women, with a significant impact on their quality of life. According to NICE guidelines, the first approach should be conservative. Medical therapy and surgery are valid treatment options but can cause adverse e vents. In recent years, laser treatment has been considered a new non-invasive therapeutic alternative. The principle is to apply the device at the vaginal and periurethral level to strengthen the connective tissue, improving symptoms and the severity of urinary incontinence. The aim of our study was to evaluate the efficacy and safety of a new type of energy-based device, the non-ablative CO_2 laser, on urinary incontinence symptoms in menopausal women.

Materials & methods: We enrolled women with urinary incontinence attending our Urogynecology clinic. The study protocol consisted of 3 laser sessions performed 4–6 weeks apart, followed by a follow-up visit approximately one month after the last session. Before each laser session (T0, T1, T2) and one month after the last session (T3), all women underwent a gynecological examination to exclude the presence of infections and vaginal bleeding, then completed self-administered questionnaires to assess urinary symptoms and their impact on quality of life. We recorded any adverse events that occurred.

Urinary symptoms and quality of life were measured using the following validated questionnaires: Incontinence Quality of Life Instrument (I-QOL), Overactive Bladder Symptom Score (OAB-SS), Urogenital Distress Inventory-6 (UDI-6), and International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF).

Results: We included 43 women, with a mean age of 59.9 years (SD 8.86). Most patients (90%) were menopausal, with an average menopause duration of 9 years at the time of inclusion (range 0–29 years). Five women had isolated urge incontinence (11.6%), 18 had isolated stress incontinence (41.8%), and 19 had mixed urinary incontinence (44.1%). 13.9% of the patients had a history of breast cancer, 30% had hypertension, and only 2.3% had type I/II diabetes.

The administered questionnaires showed a significant improvement in quality of life and discomfort caused by urinary incontinence at T3. We found a significant increase in I-QOL scores ($P = 0.01$) and a significant reduction in UDI-6 ($P = 0.0005$), ICIQ-SF ($P = 0.0025$), and OAB-SS ($P = 0.02$) scores after treatment. No adverse events were recorded during the treatment.

Interpretation of results: The results of our study showed that CO_2 non-ablative laser therapy can contribute to reduce subjective symptoms of discomfort related to urinary leakages and improve the quality of life of women with urinary incontinence, without any adverse reaction. Therefore, this therapeutic option seems to be effective and safe.

Conclusions: Non-ablative CO_2 laser therapy appears to be an effective and safe non-invasive treatment option for managing urinary incontinence and can be recommended for women with comorbidities or poor efficacy of traditional therapies.

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89 - A pilot study on a new compound containing purified colostrum and chondroitin sulfate sodium (Controcyst®) in the treatment of bladder pain syndrome

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Introduction and aim of the study: Treatment of lower urinary tract symptoms (LUTS) and pain in bladder pain syndrome (BPS) after recurrent urinary tract infections or chemical or radiation chronic cystitis is challenging. Aim of this study was to evaluate a new compound containing purified colostrum and chondroitin sulfate sodium (Controcyst®) with a hyaluronic acid/chondroitin sulfate compound (Ialuril Prefill®) in the treatment of lower urinary tract symptoms and pain in chronic BPS patients.

Materials & methods: This is a prospective interventional medical pilot study of non-inferiority in patients treated with Controcyst® and hyaluronic acid/chondroitin sulfate compound (Ialuril Prefill®). A total of 24 female patients had to be included and divided through 1:1 randomization into two groups: Group A (undergoing instillation with Controcyst®); Group B (undergoing instillation with Ialuril Prefill®).

All patients were evaluated before and after treatment (8 intravesical administrations) with IPSS (International Prostatic Symptoms Score), IPSS QoL (International Prostatic Symptoms Score Quality of Life), VAS (Visual Analogue Scale) score for pain. They completed also a PGI-I (Patient-Global-Impression of Improvement scale — in a 7-grade score) at the end of the treatment. Non inferiority of Controcyst® in comparison to the hyaluronic acid/chondroitin sulfate compound was obtained if patients treated with Controcyst® had shown a reduction in IPSS was greater than or equal to 80% compared to the control group (Group B). T-test was used to examine differences in the evaluated parameters before/after the treatment and between groups.

Results: A total of 24 female patients (age range 33–75 years; average age 56,73 years) were included in the study. Patients with comparable baseline characteristics composed the two groups.

In Group A, the value of IPSS showed a reduction from mean 15,69 to 11,92 (reduction of 24,02%, P value 0.04); IPSS QoL from mean 4 to 2,53 (reduction of 36,54%, P Value 0.02); VAS from mean 3,84 to 1,84 (reduction 52%%, P value 0.04) and PGI-I was 2,23.

In Group B, the value of IPSS showed a reduction from mean 18,30 to 14 (reduction of 23,52%, P value 0.03); IPSS QoL from mean from 4,54 to 2,92 (reduction of 35,60%, P value 0.01); VAS score from mean 4,77 to 3 (reduction of 37%%, P value 0.05) and PGI-I was 2,92.

Non inferiority was demonstrated due to a comparable reduction of IPSS in the two groups, actually higher in the group treated with Controcyst® (−24,02% vs. −23,52%).

Interpretation of results: Although this pilot study shows only preliminary data on the efficacy of a new compound containing purified colostrum and chondroitin sulfate sodium (Controcyst®) in the treatment of chronic BPS, our results seem promising. Actually, the reduction of IPSS was even higher in the group treated with the new compound.

Conclusions: This preliminary data seems to indicate the possible role of a new compound containing purified colostrum/chondroitin sulfate sodium in the treatment of chronic BPS.

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90 - Treatment regret in patients undergoing minimally invasive treatments for benign prostatic hyperplasia

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Introduction and aim of the study: The purpose of this study was to assess, treatment satisfaction and treatment regret in patients undergoing minimally invasive techniques for LUTS/BPH.

Materials and methods: We performed an analysis of prospectively collected data of consecutive patients undergoing MIST in 5 primary care Italian urology centers. All patients underwent detailed clinical history and physical examination, preoperative, perioperative and postoperative characteristics were recorded. Decision regret was evaluated with validated questionnaires and significant regret was defined as >40%.

Results: Overall, 175 patients were enrolled with a median age of 64 (58–66) and median IPSS of 23 (18–26). Overall, 90 (51%) patients underwent acquablation, 21 (12%) patients positioned a temporary implanted nitinol device (Tind), 26 (15%) patients underwent a water vapor thermal ablation (WVTA) and 37 (21%) a prostatic urethral lift (PUL) procedure. Overall median treatment regret was 0 (0/15) and 23/155 (15%) presented a significant regret (>40%). Overall treatment regret was higher for PUL and WVTA when compared to Tind and Aquablation. Overall neither age, BMI, prostate volume, preoperative Qmax or preoperative IPSS predicted treatment regret. Although not statistically significant, in patients undergoing WVTA (OR=3,33) and PUL (OR=4,2) a prostate volume higher than 60 cc was a predictor of treatment regret.

Interpretation of results: In view of the results obtained, the urologist at the time of the indication for MIST surgery must first select the patient with the most suitable characteristics and then clearly inform him of the advantages and disadvantages of this type of treatment.

Conclusions: In patients undergoing MIST treatment regret is high particularly if patients are not accurately selected. Future studies with larger sample size should identify possible predictors of treatment regret in these patients.

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91 - Videourodynamic study as predictive tool in chronic urinary retention

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Introduction and aim of the study: Patients with lower-urinary-tract-symptoms and obstructive patterns are evaluated using abdominal scans to assess post-voiding residual (PVR). A significant PVR defines a chronic urinary retention (CUR), and patients often need a urinary diversion. Videourodynamic-study (VUDS) is employed to assess the functionality of the detrusor muscle, evaluating its ability to maintain normal activity, and confirm the outlet obstruction. VUDS gives information on appropriate approaches for prostate obstruction, enabling predictions regarding potential adverse surgical outcomes and the need for postoperative catheterization. This study aims to analyze the impact of VUDS findings on surgical outcomes and identify the most reliable criteria for selecting patients suitable for surgery.

Materials & methods: We retrospectively enrolled 60 patients with CUR who performed VUDS between September 2019 and February 2024.

We collect data about patients' characteristics, VUDS parameters, surgical outcomes, and follow-up. We use descriptive statistics and univariate and bivariate methods.

Results: 45 (75%) patients had temporary urinary diversion, (41 bladder catheter, 1 suprapubic epicisostomy, 3 intermittent catheterisms (CIC)). In patients without urinary diversion the validated questionnaires IPSS and QoL were utilized to evaluate voiding sensations, results show median score of 16 (IQR 10–24) and 4 (IQR 1–5) each. Median prostate volume was 52cc (IQR 36–75cc). VUDS revealed 35 (58.3%) samples of detrusor overactivity, and a detrusor median voiding pressure achieved of 64 cmH_2O (IQR 34–98). Bladder-outlet-obstruction-index (BOOI) and bladder-contractility-index (BCI) were calculated. 45 (75%) patients were classified as obstructed, 7 (11.4%) mildly obstructed; median BOOI was 76.5 (IQR 40–107). 31 (51.7%) patients were identified as hypocontractile, 21 (35%) indeterminate results, median BCI was 92.5 (IQR 43–120). Surgical interventions included 45 (75%) transurethral resections, 2 (5%) robotic-assisted adenomectomy and 1 (3.3%) Holmium laser enucleation. At a median FU of 6 months (IQR 6–15) 11 patients (18%) required urinary diversion: 8 with indwelling catheter, 3 performing CIC. When available flow rate demonstrated general improvement in 90% of samples.

Interpretation of results: Where BCI was <150, catheterization was observed in 20% of patients after surgery, attributable risk (AR) and attributable risk percentage was 8% and 40%, and the number needed to harm (NNH) was 12. The odds ratio and relative risk were both 1.6. Statistical analysis did not reveal a significant bivariate correlation. However, a trend was observed in which all patients requiring catheterization exhibited weak detrusor contractions. Sensitivity and negative predictive value were 80% to detect catheter dependency.

Conclusions: Even in cases of CUR, surgery may be safely offered. VUDS provide valuable insights into patient risk profiles and thanks to his sensibility it should be used to counsel patients regarding the likelihood of postoperative catheterization.

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92 - Women undergoing mid-urethral sling for stress urinary incontinence: Does AI agree?

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Introduction and aim of the study: To compare Artificial Intelligence (AI) suggestions for women undergone to middle urethral sling (MUS) for stress urinary incontinence (SUI).

Materials and methods: Data of women undergone MUS for SUI without associated procedure in the last two years were collected and supplied to the available to patients open AI system ChatGPT. Patient's history, overall office evaluation, main symptoms, stress test, pelvic organ prolapse (POP) assessment, 3-days bladder diary, invasive urodynamics (UD) with Valsalva Leak Point Pressure (VLPP) were included. AI suggestions for management of these patients were compared to our clinical choices. Inclusion criteria included having previously undergone conservative treatment for SUI or having decided to avoid it prior to surgery, SUI as main symptom. Exclusion criteria was previous treatment for POP, neurogenic bladder, previous or active treatments for overactive bladder (OAB). Women could have associated POP or OAB with mixed urinary incontinence (MUI). We asked AI what surgical treatments would be suggested for these patients after the conservative ones.

Results: SUI was urodynamically confirmed in all 70 women (mean age 67.1 y.o.): pure SUI in 31 (44.3%), MUI in 39 (55.7%). POP was associated to SUI in 10/31 (32.6%), to MUI in 9/39 (23.1%). Overall, 27.1% (19) women had POP, 39 (55.7%) OAB. AI suggested conservative treatment as the first step in all cases of SUI and OAB. At the question of the further surgical approach, AI proposed for pure SUI in 95.2% (20) MUS, colposuspension Burch in 4.8% (1). In SUI with POP, AI suggested Burch in 9/10 and MUS in 1/10, due to the lower VLPP values, urethral hypermobility and associated POP. In women with MUI, AI advised MUS in 90% (27/30), Burch in 10% (3/30), while in MUI with POP suggested MUS in 66.7% (6/9), Burch in 33.3% (3/9). Overall, MUS was proposed by AI in 55 (78.6%) and Burch in 15 (21.4%). AI advised in 26/39 patients (66.7%) sacral neuromodulation (NMS) and in 33.3% (13/39) onabotulin toxin A injections as invasive treatment for OAB.

Interpretation of results: In the future, AI could be a resource for clinicians to resume data quickly. However, the confounding information that patients may obtain could be problematic. Overall, AI confirmed our surgical indication for SUI in most of the cases, although in 21% proposed Burch instead of MUS, not supporting this choice on the basis of solid scientific data, not considering that Burch is more invasive, less effective and currently little used. AI always proposed POP repair, although this was not the main patients complain and not according to POP stage or severity. In case of MUI, MUS was the main suggested SUI treatment in association to conservative management of urgency. Interestingly, in the case of invasive procedures for OAB, NMS was significantly more advised.

Conclusions: AI could be a resource for clinicians to better and quickly resume data and indications, but it can be also a controversial tool whether used without adequate clinical experience, and in case of uncontrolled use by patients.

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93 - Overactive bladder syndrome management: Physicians versus artificial intelligence

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Introduction and aim of the study: To compare medical and artificial intelligence (AI)-based agreement in the management of overactive bladder (OAB) syndrome.

Materials and methods: In 2024, we prospectively compared how 3 expert urologists managed women referring OAB versus the suggestions of AI. OAB had to be the patient's main complaint. All medical evaluations were blind to AI advises. Other physicians reported to ChatGPT Web 3.0 Navigator all the patient's data evaluated by clinicians and physical examination. Women included could be naïve for OAB, non-responder to first-line treatment, control in responder to therapy, complex cases.

Results: Data of 70 women (mean age 58.7 y.o.) were available: first outpatient visits were 87.1% (61), controls 12.9% (9). Overall, the agreement between physicians and AI was 72.9% (51). At first visits, concordance was found in 70.5% (43/61), disagreement in 18/61 (29.5%). Among controls, 8/9 (88.9%) showed same management. Women with medical indication to pharmacological therapy were 31/70 (44.3%) with agreement in management in 24/31 (77.4%), no concordance in 7/31 (22.6%). In this group, 25/31 (80.6%) were first visits, with disagreement of 24% (6/25) due to different drug class chosen; among the 6/31(19.4%) controls 1 (16.7%) had a different management. Among the 17/70 (24.3%) women with medical indication to OnabotulinToxinA (OBTA), 14/17

(82.4%) were naïve to this treatment and non-responders to previous first-line therapy; of these, 50% (7/14) achieved agreement between medical and IA. In all the 3 women who had a previous OBTA, with good response, there was a complete agreement to continue the same management. Complex cases and women with medical indications to conservative treatment were all first visits. Complex cases were 11/70 (15.7%) with a similar management in 72.7% (8). Conservative management were 15.7% with agreement in 9/11 (81.8%).

Interpretation of results: Among the first visits, conservative management achieved the highest concordance, while OBTA indication as second-line therapy the lowest (50%). This finding can be explained by the possibility of managing these patients in different ways. There was disagreement between physicians and AI In a relevant rate of women undergoing medical indication to pharmacological therapy. This was mainly due to a different type of drug chosen (antimuscarinic vs beta-3), not to a non-pharmacological strategy suggested by AI. A surprisingly higher than expected concordance rate was found in the management of complex cases, which could have numerous variables to consider.

Conclusions: There was fair agreement between medical and AI management for OAB, especially in controls. The lowest concordance was found in the choice of second-line therapy and in complex cases, which may have more variables and multiple managements. AI can help clinicians to quickly summarize the main available managements, but clinical experience still allows for appropriate and tailored indications for patients with OAB.

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94 - Peak Rezum results: Three months after the procedure or later?

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Introduction and aim of the study: To evaluate whether patients undergoing Rezum procedure for benign prostatic hyperplasia (BPH) achieve the best results at 3 or 12 months after surgery and what further functional and voiding improvements can be reached up to one year.

Materials & methods: This was a prospective study including males undergoing Rezum for BPH in 2023 in our Department reaching 1-year follow-up. The preoperative and f-up schedule at 3 and 12-months included: uroflowmetry with post-void residual urine (PVR), VAS for pain/discomfort, PGII, IPPS, QoL, OAB screener, IIEF-5, MSHQ questionnaires.

Results: Data were completed in 44 males (mean age 62.7 y.o.). All patients were improved from the baseline at 3 mos. Comparing results at 3 to 12 mos, significant increase at 12 mos was found in Qmax, PVR, VAS discomfort/pain, p:0.03, p:0.01, p:0.007 respectively. Mean Qmax increased from 16ml/s to 16.8ml/s, PVR from 23.6 ml to 21.4, VAS from 2 to 1.7. The other parameters did not significantly change: PGII 1.7 vs 1.6, p:0.5, IPSS 10.6 vs 9.5, p:0.8, QoL 2.7 vs 2.5, p:0.058, OAB screener 18.5 vs 16.8, p:0.3, IIEF-5 21.8 vs 22.2, p:0.3, MSHQ 11.7 vs 12.5, p:0.4, MSHQ Bother 2.5 vs 2.37.

Interpretation of results: Rezum technology provides cell necrosis that continues for about three months after the procedure. Therefore, optimal results are usually achieved no earlier than this period. Since the main effect of Rezum in reducing obstruction ends approximately three months after treatment, one might expect that this maximum peak is reached at this stage and then only a stabilization occurs without further significant improvements until a potential long-term reduction. Our study demonstrated that the voiding phase continues to significantly improve in the first year after treatment, even after the first 3 months, as the main factors of voiding dynamics, Qmax and PVR, continue to recover. Together with the voiding phase, VAS discomfort/pain also improves significantly during the first year and even after the first 3 months, as the procedure-related discomfort and inflammation continue to decrease. Surprisingly, urinary symptoms did not change significantly, as shown by IPPS and OAB screener not significant variation. Therefore, further improvement of the micturition phase does not have a significant impact on urinary symptoms. Sexual function also does not change significantly between 3 and 12 months. However, all the parameters have a slight improvement, although non statistically relevant, up to one year, showing a continuous functional and voiding amelioration up to one year.

Conclusions: Significant improvement can be expected even up to 1 year after the Rezum procedure in the voiding phase and discomfort, but not in urinary and sexual symptoms, although the latter may show a slight and continuous progression.

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95 - Long-term efficacy of anterior-only colposacropexy for pelvic organ prolapse: A monocentric retrospective study

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Introduction and aim of the study: Pelvic organ prolapse (POP) is a prevalent condition, affecting 6% of women under 50 and up to 50% of those over 50, with a significant impact on quality of life (QOL). Colposacropexy is the gold standard surgical approach for POP correction and typically employs a polypropylene mesh to suspend the anterior and posterior vaginal walls to the anterior longitudinal ligament. This study evaluates the long-term outcomes of anterior-only colposacropexy in terms of functional and anatomical improvements.

Materials and methods: Between 2008 and 2023, 200 patients underwent anterior-only colposacropexy at our center. A retrospective monocentric analysis included 127 patients after excluding 73 due to death or predefined exclusion criteria. Patients presented with grade ≥2 cystocele. Data were collected using a validated QOL questionnaire preoperatively and at a median follow-up of 10 years (2024). Clinical parameters (e.g., urinary symptoms, abdominal pressure) and

anatomical outcomes (e.g., cystocele grading, stress test) were systematically evaluated. Statistical analyses were performed using the Wilcoxon Signed Rank Test and McNemar test for paired continuous and categorical variables, respectively, with significance set at $p < 0.05$.

Results: The median age of the cohort was 64 years (IQR 59.5–72), BMI 24 (IQR 22.1–27), and vaginal deliveries 2 (IQR 1–2.5). Laparoscopic surgery was performed in 100 cases (78.74%) with a median operative time of 70 min (IQR 55–90), compared to 90 min (IQR 80–120) for open surgery in 27 cases (21.26%). Hospitalization lasted a median of 4 days for both approaches. At follow-up, QOL scores improved significantly, decreasing from 58.93 preoperatively to 4.53 postoperatively ($p < 0.001$).

Urinary symptoms showed significant reductions: urgency incontinence (53.54% to 18.11%; $p < 0.001$), stress incontinence (45.67% to 12.60%; $p < 0.001$), nocturia (69.29% to 20.47%; $p < 0.001$), pollakiuria (47.24% to 4.72%; $p < 0.001$), and burning urination (42.52% to 18.90%; $p < 0.001$). Anatomical outcomes demonstrated significant improvements: cystocele presence (100% to 12.60%; $p < 0.001$), stress test positivity (19.68% to 7.87%; $p = 0.01$), and Valsalva maneuver positivity (100% to 7.08%; $p < 0.001$). After a median follow-up of approximately 10 years, anterior-only correction proved effective in preventing cystocele recurrence in 88% of cases. Recurrences were limited to grade I cystoceles only.

Interpretation of the results: Anterior-only colposacropexy provided durable improvements in urinary symptoms and anatomical correction over a 10-year follow-up. Significant reductions in clinical symptoms and prolapse recurrence, combined with minimal complications, support the efficacy of this approach. The laparoscopic technique demonstrated shorter operative times with comparable outcomes to open surgery.

Conclusions: Anterior-only colposacropexy is a safe, effective, and durable surgical option for POP correction. It offers significant functional and anatomical benefits with low recurrence rates and minimal complications, making it a viable alternative to dual-compartment techniques.

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96 - Development and validation of uroguide GPT chatbot: An informed consent tool

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Introduction and aim of the study: To create and validate a GPT-based chatbot, UroGuide, to assist patients in understanding the informed consent process before undergoing urological interventions.

Materials & methods: The UroGuide chatbot was developed using OpenAI's software and trained with the latest EAU guidelines (April 2024) along with locally-used informed consent documents provided to patients. Two expert urologists were involved in training and fine-tuning the chatbot responses. In the validation phase, a consecutive series of patients scheduled for urological surgeries were recruited. Each patient received an informed consent sheet and access to UroGuide via a mobile phone to inquire about the procedure: https://chatgpt.com/g/g-hAZIckPtm-uroguide. Following this, expert urologists reviewed the informed consent in person. A validated satisfaction questionnaire was distributed to patients to evaluate the chatbot.

Results: The training phase required 24 h to address and correct chatbot responses. Sixty patients participated in the study. Common concerns included anesthesia type (>80%), procedure duration (>80%), postoperative pain (>70%), and urinary incontinence (>50%). Clinicians found the chatbot's answers to be accurate. Patients rated the quality of care as 4.3 (±0.4), communication with clinicians as 4.5 (±0.2), and chatbot satisfaction as 4.7 (±0.2). Additionally, more than 90% of patients supported implementing the chatbot for all patients undergoing urological surgery.

Interpretation of results: The primary concerns of patients undergoing urological procedures included anesthesia type, procedure duration, postoperative pain, and urinary incontinence. Clinicians confirmed the chatbot's responses were accurate. Patients expressed satisfaction with both their interactions with clinicians and the chatbot, and they supported the implementation of UroGuide for future use.

Conclusions: UroGuide appears to be a valuable tool for providing preoperative information to urology patients.

Its implementation in clinical practice has the potential to enhance patient education and support clinicians during the decision-making process.

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97 - Does size matter? Functional and sexual outcomes in patients treated with Trans Perineal Laser Ablation (TPLA) with large prostate (>80 ml)

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Introduction and aim of the study: Currently, several ultra-minimally invasive surgical techniques are available for the treatment of male LUTS due to benign prostatic obstruction (BPO). However, evidence supporting the efficacy of these techniques, specifically for prostates larger than 80 ml remains limited. Herein, we report our experience with SoracteLiteTM Trans Perineal Laser Ablation (TPLA) in treating symptomatic men with large-volume prostates.

Materials & methods: Data from patients undergoing TPLA at our institution between April 2021 and January 2024 were prospectively collected in a specific database. Patients with a prostate volume >80 ml were selected for these analyses. Data regarding functional and sexual outcomes were evaluated by validated questionnaires (IPSS, MSHQ 3 items), and uroflowmetry was collected preoperatively and 3, 6 months and last follow up (median 11 (IQR 4–15)) after the procedure. All the procedures were performed in an outpatient setting, under local anesthesia, using EchoLaserTM system.

Results: Overall, 41 patients matched inclusion criteria during the study period. The median (IQR) prostate volume was 97 ml (86–12). The median energy delivered was 6000 J (IQR 3250–7750) at 5 Watts. All patients were discharged within a few hours after the procedure. No perioperative Clavien–Dindo grade > 2 complications were recorded. All patients suspended their oral therapy for LUTS 3 weeks after the procedure.

Interpretation of results: Median Qmax improved from 8.65 mL/s (IQR 6.8–10.0) to 14.0 mL/s (9.0–17.0), 14 (8.75–17.5) and 13 (9.5–15) ($p = <0.008$, $p = 0.003$ and $p = 0.009$ respectively), while IPSS decreased from 21 (14–26) to 5 (3–10.25), 8 (4–16) and 6 (4–16.25) ($p < 0.001$ each). On the other hand, MSHQ 3 item median values improved from 5 (2–8) to 1 (5–15), 13 (4–15) and 10 (7–15) ($p < 0.001$ each). Of the 5 (12.2%) patients with an indwelling catheter before the procedure, two of them did not achieve spontaneous micturition after the procedure and were switched to other treatment (HoLEP). Another patient (0.4%) did not experience an improvement of their LUTS and shifted to other surgical treatment (Green-LEP).

Conclusions: TPLA was confirmed as a feasible and safe treatment modality for men presenting with enlarged prostates. However, to comprehensively evaluate its efficacy over the mid- and long-term, further investigations coupled with extended follow-up periods are needed. Such endeavors are essential for establishing a nuanced understanding of TPLA's sustained benefits in managing this population.

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98 - Transperineal Laser Ablation (TPLA) of the prostate: Comparative analysis in patients with 30–80 and >80 ml prostate volumes

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Introduction and aim of the study: Transperineal Laser Ablation (TPLA) of the prostate has demonstrated efficacy and safety in preliminary studies, but standardized guidelines for patient selection and optimal prostate volume range remain undefined. This study aims to compare functional outcomes in patients with 30–80 and > 80 ml prostate volumes undergoing TPLA.

Materials & methods: After ethical committee approval, data were prospectively collected from consecutive patients undergoing TPLA at a single center between April 2021 and July 2024. Patients were divided into two groups based on preoperative prostate volume, with an 80 ml cutoff (Group 1: 30–80 ml; Group 2: >80 ml). International Prostatic Symptoms Score (IPSS), Male Sexual Health Questionnaire (MSHQ-3 items), Quality of Life (QoL), maximum flow rate (Qmax), and Post Void Residual (PVR) were recorded at baseline and at scheduled follow-up visits. Comparative analyses were performed using the Kruskal–Wallis test.

Results: Overall, 214 patients were enrolled, comprising 173 patients in Group 1 and 41 patients in Group 2. The groups were comparable in terms of preoperative characteristics, including the number of patients with an indwelling catheter (15 [8.7%] and 5 [12.2%] in Group 1 and 2 respectively; $p > 0.05$) except for prostate-related features. As regards intraoperative characteristics, a higher amount of median energy was employed in Group 2 (3200 J in Group 1 vs. 6000 J in Group 2; $p < 0.001$). A statistically significant difference emerged in terms of the median duration of postoperative catheterization (7 days [IQR 7–7] and 7 days [IQR 7–10] in Group 1 and 2 respectively; $p = 0.002$). Significant improvements were observed in all analyzed outcomes for both groups at all time points. No differences were observed in functional outcomes, except for QoL and IPSS at the 3-month follow-up, which were higher in Group 2 ($p < 0.001$ and 0.009, respectively). Among patients with an indwelling catheter before the procedure, 10/15 (66.6%) in Group 1 and 3/5 (60%) in Group 2 achieved spontaneous micturition after ablation. Additionally, 3 (2.9%) and 5 (7.3%) patients in Groups 1 and 2, respectively, switched to other treatments at the last follow-up.

Interpretation of results: The differences in urinary symptoms and QoL in the short-term follow-up may be attributable to the higher energy used and the subsequent post-ablation tissue remodeling process in larger prostates.

Conclusions: Our preliminary experience suggests that TPLA is a feasible and effective minimally invasive option for managing LUTS due to BPO in both 30–80 and >80 ml prostate volumes. Further analyses are needed to confirm these findings.

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99 - Prostatic Artery Embolization (PAE) for minimally invasive BPO management: Results from a single center, prospective registry

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Introduction and aim of the study: Prostatic artery embolization (PAE) is a minimally invasive endovascular treatment for benign prostatic hyperplasia (BPH) by inducing necrosis of hyperplastic prostate tissue. The objective of this study was to evaluate the efficacy and safety of PAE in improving Low Urinary

Tract Symptoms (LUTS), promoting the removal of indwelling bladder catheters, reducing the need for pharmacological therapy for BPH, and preventing the need for more invasive surgical interventions.

Materials & methods: Data from consecutive patients undergoing PAE at our center between December 2020 and June 2024 were prospectively collected. The procedure was performed in the interventional radiology suite under local anesthesia, using polyvinyl alcohol particles or cyanoacrylate glue. Prostate volume, post-void residual volume (PVR), pharmacological therapy, International Prostate Symptom Score (IPSS), Quality of Life (QoL) and uroflowmetry parameters were assessed preoperatively. These parameters were then compared to baseline values at 6, 12, and 24 months of follow-up.

Results: A total of 72 patients were included, of which 9 (12.5%) had an indwelling catheter prior to PAE. The median age was 79 years (IQR 77–81), and the median follow-up period was 24 months (IQR 10–39). Two patients (2.7%) had undergone prior transurethral resection of the prostate (TURP). Thirty-seven patients (51.4%) were on antiplatelet or anticoagulant therapy. Preoperative median prostate volume (PV) on magnetic resonance imaging (MRI) was 60 cc (IQR 44–76) and median PVR was 70 ml (IQR 30–100).

Median preoperative IPSS and QoL were 22 (IQR 19–27) and 4 (IQR 4–5), respectively. All patients were discharged the day after the procedure. Complications were recorded in 6 patients, all classified as Clavien–Dindo grade < 2.

Median catheterization time was 30 days and median PVR at catheter removal was 50 ml (IQR 0–80).

At 6 months, the median reduction in prostate volume on MRI was 18.5 cc (IQR 6.75–28.75).

Median IPSS reduction at 6, 12, and 24 months was 10 points (IQR 5–14), 8 points (IQR 5–11), and 8 points (IQR 4–11), respectively. Median QoL improvement at 6, 12, and 24 months was 2 points (IQR 1–3), 2 points (IQR 1–3), and 2 points (IQR 1–2), respectively. Median Qmax improvement at 6 months was 3.5 ml/sec (IQR 2.05–8.1). Among the 9 patients with an indwelling catheter, 6 (66.6%) gained spontaneous micturition after catheter removal.

At 6 months, 30 patents (41.6%) had stopped all BPH medications, 12 (16.7%) had stopped one of the two medications, and 30 (41.6%) continued their medical therapy without changes.

The surgical treatment-free rate at last follow-up was 93%, with only 5 (7%) patients requiring an additional procedure, specifically TURP.

Interpretation of results: Prostate volume, Qmax, PVR, IPSS and QoL showed significant improvement after PAE.

Conclusions: PAE is a safe and effective procedure for symptomatic BPH and LUTS, showing important results in reducing the need for BPH medications and allowing the removal of indwelling catheters in a significant proportion of patients.

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100 - Rezum procedure for benign prostatic hyperplasia: Timing of postoperative catheterization

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Introduction and aim of the study: To assess safety and reliability of catheter removal 5 days after Rezum procedure for benign prostatic hyperplasia (BPH).

Materials and methods: This was a prospective randomized trial held in our Department (Sept 2022–Sept 2024). Males undergoing Rezum procedure for BPH were randomized into Group A (GA), catheter removal 5 days after surgery, Group B (GB), catheter removal ≥7 days after surgery. Urinary retention (UR) episodes, discomfort/pain at micturition and at bladder in the first week after catheter removal were recorded with VAS, PGII, post-void urine residual (PVR). The 1 and 3-mos follow-up included uroflowmetry with PVR, VAS for pain/discomfort, PGII, IPPS, QoL, OAB screener, IIEF-5, MSHQ questionnaires. The reason for a short f-up was that main adverse events related to shorter postoperative catheterization usually occur in the first few months.

Results: Data were available on 124 males: 52 GA and 72 GB (mean age 66.4 y.o). In GA UR rate was 3.8%, in GB 6.9% (p:0.02), all episodes resolved in the first month. The discomfort amount in GA was significantly lower than in GB (p:0.01). At 1 mos f-up, no statistical differences were found between groups in IPSS (GA 12 vs GB 14, p:0.8), QoL (GA 3 vs GB 2.7, p:0.5), OAB screener (GA 29.3 vs GB 33.6, p:0.2), IIEF 5 (GA 10.4 vs GB 10.2, p:0.7), Qmax (GA 12.3 vs GB 12.5, p0.9), PVR (GA 26.6 ml vs GB 36.7 ml, p: 0.4), VAS discomfort/pain (GA 1.12 vs GB 1.14, p:0.9), PGII (GA 2.5 vs GB 2.7, p:0.5), MSHQ-A (GA 9.7 vs GB 9.3, p:0.4), MSHQ-BH (GA 1.5 vs GB 1.9, p:0.2). At 3-months f-up, statistical difference was achieved in OAB screener (GA 23.6 vs GB 31.5, p:0.02), while no significant difference was found in IPSS (GA 7.4 vs GB 11, p:0.07), QoL (GA 1.6 vs GB 2.2, p:0.2), IIEF (GA 13 vs 12.5, p:0.5), Qmax (15.1 vs GB 14.5, p:0.3), PVR (GA 10 ml vs GB 23.6 ml, p:0.2), VAS discomfort/pain (GA 0.75 vs GB 0.72, p:0.4), PGII (GA 2.3 vs GB 2.5, p:0.9), MSHQ-A (GA 11.1 vs GB 9.8, p:0.2), MSHQ-BH (GA 1 vs GB 1.9, p:0.05).

Interpretation of results: To date, there is no standardization of the timing of catheter removal after Rezum. Many concerns about a shorter duration of post-operative catheterization may be due to the potential increased risk of discomfort/pain, dysfunctional voiding, UR. Our data showed that catheter removal at 5 days was safe and did not increased risk of immediate adverse events, nor at 1 and 3 -mos follow-up, and did not negatively influence surgical results. Rezum is a minimally invasive surgical therapy for BPH, aimed to reduce invasiveness and consequences of BPH ablation. A long period of post-operative catheterization may be opposite to the concept of minimally invasiveness and perceived by the patient as an obstacle to performing this procedure or a very relevant discomfort. So, it is desirable to shorten the post-operative catheterization.

Conclusions: Our data demonstrated that 5 days may represent a safe and adequate period of catheterization after Rezum because it does not increase the risk of adverse events and does not negatively impact surgical outcomes.

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102 - Twelve months failure rate and functional outcomes comparison after second generation implantable nitinol device (iTIND) and prostatic urethral lift

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Introduction and aim of the study: In recent years, there has been a growing trend toward ejaculation-sparing techniques in men presenting symptomatic lower urinary tract symptoms (LUTS). However, direct comparisons between techniques are rare.

This work compares one-year functional outcomes and failure rates after implantable nitinol device (iTIND) and prostatic Urethral lift (Urolift).

Materials and methods: Data of patients presenting diagnosed with LUTS with an International Prostatic Symptom Score (IPSS) ≥ 10, Qmax < 12 mL/s, and prostate volume < 70 mL were obtained retrospectively from two different referral centers' databases. iTIND cases came from the study MT02 database and Urolift ones from a real-life prospective database. Patients with neurogenic bladder, sphincter abnormalities, urethral strictures, post-void residual (PVR) volume > 250 mL, urinary bladder stones, and active urinary tract infections were excluded from the study. Treatment failure was defined as the need for surgical retreatment for LUTS or ejaculatory dysfunction. Postoperative Uroflowmetry, PVR, IPSS, ejaculatory function, and retreatment rate were collected at 12 months follow-up.

Results: A total of 134 cases were collected. iTIND was used in 92 (68.7%) patients and Urolift in 42 (31.3%). Baseline characteristics were similar in both groups; however, Urolift patients were younger, with more significant prostate volumes and median lobe rates. No patients developed ejaculatory dysfunctions after the treatment, and the retreatment rate was similar in the two groups (13 vs 11.9%p = 0.8). Urolift demonstrated a faster length of stay. Uroflowmetry, PVR volume, and symptom scores improved in both groups; iTIND cases showed significantly better symptom score reduction. Full results are reported in the table.

Patients	iTIND (n = 92)	UROLIFT (n = 42)	P value
Age, years [IQR]	63.5 [55.25–70]	60.5 [51.75–64]	**0.006**
Anticoagulant therapy, n (%)	6 (6.5)	3 (7.1)	0.99
AUR, n (%)	3 (3.3)	3 (7.1)	0.39
Preop-Q max, mL/s [IQR]	7 [6–10]	8 [5.5–12]	0.38
Preop-PVR, mL [IQR]	50 [20–76.5]	50 [20–100]	0.8
IPSS, points [IQR]	21 [18–24]	21 [16.25–24]	0.3
Qol, points [IQR]	4 [4–5]	4 [4–5]	0.6
Prostate Volume, mL [IQR]	34 [27–45]	45 [35–58]	<0.001
Median Lobe (%)	4 (4.3)	19 (45.2)	<0.001
Day hospital (%)	45 (48.9)	30 (71.4)	<0.001
Postop-Q max, mL/s [IQR]	13.5 [11.5–16]	13.5 [9.8–15.2]	0.21
Delta Postop-PVR, mL [IQR]	22 [0–60]	21 [0 -60]	0.4
Delta IPSS, points [IQR]	15 [11–20]	10 [3.5–14.5]	<0.001
Delta Qol, points [IQR]	3 [2–4]	2 [1–3]	**0.035**
Normal Ejaculatory Function, n (%)	92 (100)	42 (100)	0.99
Reintervention, n (%)	12 (13)	5 (11.9)	0.8

Interpretation of results: Both techniques effectively improved urinary symptoms without causing ejaculatory dysfunction, with iTIND demonstrating greater symptom score reduction and Urolift offering a shorter hospital stay.

Conclusions: The 12-month failure rate was similar for iTIND and Urolift. Urolift had a shorter hospitalization. Uroflowmetry and PVR were comparable, while iTIND showed slightly better symptom improvement, though its clinical significance requires further study.

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103 - Holmium Laser Enucleation of the Prostate (HoLEP) and Green Laser Enucleation of the Prostate (GreenLEP): Effectiveness and safety in treating LUTS due to Benign Prostatic Hyperplasia

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Introduction and aim of the study: Compare the effectiveness and safety of Holmium Laser Enucleation of the Prostate (HoLEP) and Green Laser Enucleation of the Prostate (GreenLEP) in treating Lower Urinary Tract Symptoms (LUTS) due to Benign Prostatic Hyperplasia (BPH).

Materials and methods: We conducted a retrospective cohort study utilizing a 2:1 propensity score matching based on preoperative characteristics to balance the cohorts of HoLEP (n = 240) and GreenLEP (n = 120) patients. Perioperative outcomes and post-operative functional results were analyzed using a variety of statistical tests, including Wilcoxon rank sum and Fisher's exact tests.

Results: Both groups were matched for age, prostate volume, and baseline symptom severity post-matching. The surgical time for GreenLEP was 65 min (median) and 85 min (median) for HoLEP ($p < 0.001$). Surgical specimen weights were respectively 68 grams (median) in HoLEP and 45 grams (median) in GreenLEP; ($p < 0.001$). At 12 months follow-up, the Qmax was 21 mL/s (median) for Holep group and 20 mL/s (median) for GreenLEP group ($p = 0.001$). Median increase in Qmax was 162% and 122% ($p = 0.003$) respectively in the HoLEP and GreenLEP group.

Interpretation of results: The surgical time was significantly shorter for GreenLEP compared to HoLEP. However, HoLEP resulted in larger surgical specimen weights compared to GreenLEP. At 12 months follow-up, both groups showed significant improvement in maximum urinary flow rate (Qmax) and International Prostate Symptom Score (IPSS), but the improvement in Qmax was more pronounced in the HoLEP group compared to the GreenLEP group. The post-operative complication rates were low and comparable between groups.

Conclusions: Both HoLEP and GreenLEP are effective treatments for LUTS due to BPH, with significant improvements in urinary flow and symptom scores. HoLEP provides a greater increase in Qmax, albeit with longer surgical times and larger specimen weights. These findings can guide urologists in personalized patient treatment planning based on specific procedural benefits and patient needs.

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104 - Long term urodynamics outcomes of Y-shaped intracorporeal robotic neobladder after radical cystectomy

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Introduction and aim of the study: Robot-assisted radical cystectomy (RARC) with orthotopic intracorporeal neobladder reconstruction (IONB) is increasing in popularity over the open approach. This technique is favored for its minimally invasive nature and the potential to enhance patients' quality of life. The Y-shaped ONB is a simple reconstruction technique for patients undergoing RARC. This study aimed to evaluate the urodynamics outcomes of patients who underwent RARC with intracorporeal Y-shaped neobladder reconstruction.

Materials and methods: The study included patients who underwent RARC with the creation of an intracorporeal orthotopic Y-shaped neobladder for the treatment of muscle-invasive bladder cancer. Patients with different urinary diversions or those with neurogenic dysfunction were excluded. All participants underwent uroflowmetry (URF) and UDS at 12 and 36 months postoperatively. Additional data collected included BMI, use of indwelling catheters (IC), self-intermittent catheterization (SIC), daytime urinary incontinence (DT-UI), nocturnal urinary incontinence (N-UI), and the frequency of voluntary micturition at follow-up (FU) intervals.

Results: A total of 18 patients who underwent RARC between January 2020 and May 2021, including 13 males and 5 females, met the study criteria. At 12 months, 2 patients required ICs, 3 SIC (average: 3.6 catheters/day), 2 experienced DT-UI (average: 1.2 pads/day), and 2 had N-UI. By 36 months, 1 patient required an IC, 2 continued SIC (average: 3.8 catheters/day), and 4 reported UI (2 DT-UI and 2 N-UI). 13 patients were able to undergo URF at 12 months, increasing to 16 at 36 months. Post-void residual (PVR) volumes decreased from 38.7 mL at 12 months to 21.9 mL at 36 months ($p < 0.05$).

UDS was at 12 and 36 months postoperatively. UDS data showed improvement over time, with increases in cystometric bladder capacity (mean: 384 mL at 12 months vs. 495 mL at 36 months, $p < 0.05$), abdominal leak point pressure (ALPP) (mean: 81.4 cmH2O vs. 97.1 cmH2O, $p < 0.05$), and reductions in PVR (mean: 81.5 mL vs. 49.8 mL, $p<0.05$). No ONB spasms were observed at the 36-month UDS assessment.

Interpretation of results: The results indicate a clear trend of functional improvement over time for patients undergoing RARC with intracorporeal Y-shaped neobladder. Increases in bladder capacity, ALPP, and reductions in PVR suggest that this ONB has satisfying functional outcomes over the FU period. These findings highlight the potential for progressive continence and voiding improvements without significant complications. However, individual outcome results emphasize the need for tailored patient selection.

Conclusions: The findings suggest that RARC with Y-shaped IONB reconstruction is viable for eligible patients. UDS results indicate progressive functional improvements, particularly regarding bladder capacity and PVR. However, these outcomes should be compared with UDS data from other commonly performed IONB during RARC. Further research is warranted to confirm and expand upon these results.

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105 - Usefulness of urodynamics in the diagnosis of bladder pain syndrome/interstitial cystitis: Our experience from a regional referral centre

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Introduction and aim of the study: Performing urodynamic study (UDS) is not recommended for the routine diagnosis of Bladder Pain Syndrome/Interstitial Cystitis (BPS/IC) according to the European Society for the Study of Interstitial Cystitis (ESSIC) and the American Urology Association guidelines. Although UDS findings are not pathognomonic for BPS/IC, it may provide useful information to predict therapeutic success. With this retrospective study, we aim to determine the most significant UDS parameter and the role of this exam on the diagnosis of concurrent conditions such as bladder and voiding dysfunctions.

Materials and methods: From 01/2013 to 01/2025, 84 patients met the ESSIC and the National Institute of Diabetes and Digestive and Kidney Diseases criteria for BPS/IC in our institution. UDS was performed in both young and male patients to exclude disfunctions. Male:female ratio was 1:9, with a mean age of 53 years (21–69). UDS was performed in 44 cases (52%) with the Medical Measurement System instrument Laborie. With the patient in a standard sitting position, a 7Ch urodynamics microtip transducer catheter was inserted and the bladder filled at 30 ml/s. A pressure-flow study was performed prior to recording the following parameters: first desire to void, cystometric bladder capacity (CBC), detrusor compliance (DC), detrusor pressure at Qmax, Voided volume and postvoid residual. Blaivas-Groutz bladder outlet obstruction (BOO) nomogram was applied, and bladder and urethral dysfunctions were defined based on the International Continence Society terminology report.

Results: 24 patients (54%) studied with USD demonstrated reduced CBC (≤350 ml) and increased bladder sensitivity (12 experienced urgency), with 15 (34%) showing reduced DC (<30 ml/cmH20). Detrusor overactivity (OD) was noted in 7 (16%) and underactivity in only 1 case. 16 patients (36%) were finally diagnosed with UDS-proven BOO.

Interpretation of results: Hesitancy and overactive/hypertonic urethral pressure were more frequently observed in younger patients, showing characteristics of pseudo-dyssynergy. We found that pain/pressure discomfort was experienced by BPS/IC patients without necessary correlation with CBC and bladder filling. In patients diagnosed with reduced DC and high bladder tone, we found pivotal to perform a slow-flow hydrodistension to reduce bladder insults. Our findings of 16% OD patients more represented compared to the percentages reported in literature (14%). Some patients with BPS/IC are known to report symptoms of voiding dysfunction, including BOO. Based on our experience, 16 individuals exhibited obstructive voiding on urodynamic studies. Our findings suggest that bladder pain may lead to reflexive poor relaxation of the pelvic floor.

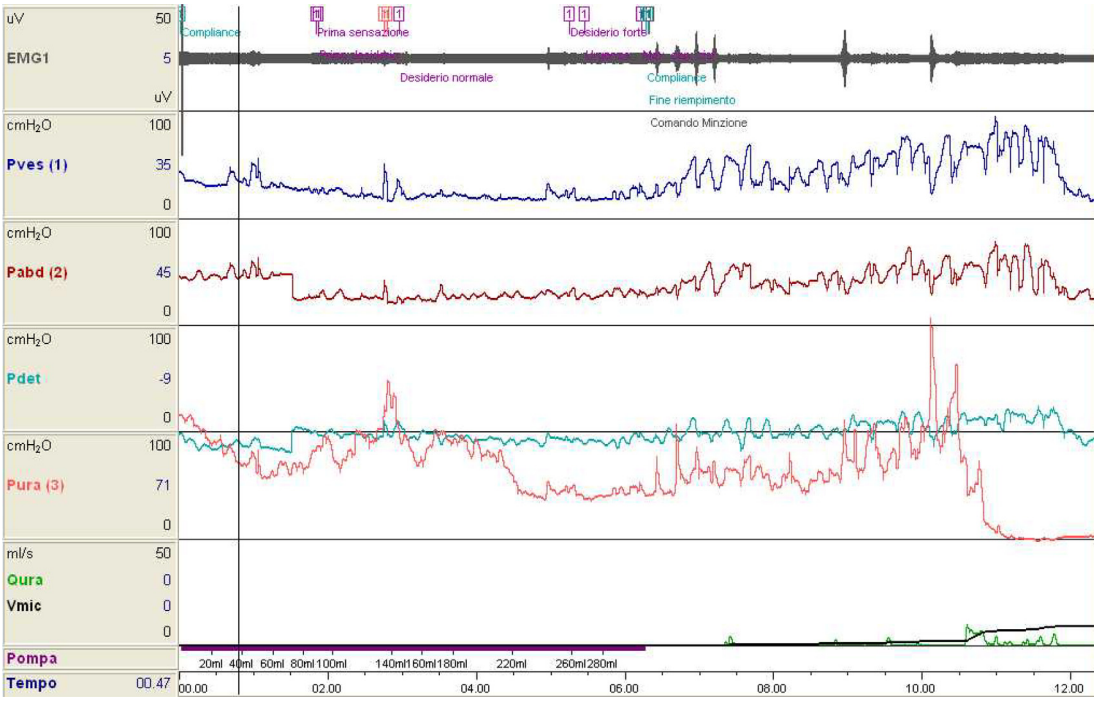

Fig. 1. UDS showing BPS/IC and BOO in a female patient.

Conclusions: UDS has the potential to play a role in the diagnostic and therapeutic process for BPS/IC, by better elucidating associated bladder dysfunctions or voiding disorders. Performing UDS in BPS/IC patients might help the urologist choosing specific and tailored treatment strategies (see Fig. 1).

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106 - Overactive bladder is associated to single components of metabolic syndrome: A multicenter cross-sectional analysis

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Introduction and aim of the study: To evaluate the associations between metabolic syndrome (MS) components and overactive bladder (OAB).

Materials and methods: A consecutive series of patients in three centers from June 2024 to October 2024 were consecutively enrolled. All patients were evaluated with clinical, pharmacological and demographic characteristics. Patients were evaluated for the presence of MetS using the ATPIII criteria. LUTS were evaluated using IPSS and OAB score. Association between OAB and MetS was evaluated using Pearson correlation. Risk factors for OAB and MetS were evaluated using logistic regression analysis.

Results: In total, 228 participants with a median age of 49.8 years and a median BMI of 24 kg/m^2 were enrolled in the study. Overall, 160/228 (70%) were men while 68/228 (30%) were women. Overall, 54/228 (24%) presented the MetS and 142/228 (62%). Overall, no correlation was observed between MetS and OAB even in the per sex analysis. When looking at women patients the presence of OAB positively correlated with diabetes (r = 36%; p = 0,003) and hypertension (r = 33%; p = 0,006). When looking at men patients the presence of OAB positively correlated with dyslipidemia (r = 23%; p = 0,004) and hypertension (r = 18%; p = 0,021).

Interpretation of results: Analyzing the data it is possible to note that men with dyslipidemia and hypertension and women with diabetes had an increased risk of having OAB. All three are important factors of the metabolic syndrome, underlining that the latter may be associated with OAB. Modification of these factors, where possible, should be advised to patients.

Conclusions: The present study adds further evidence to the possible association between components of the MetS and overactive bladder. Important differences exist between men and women. Future studies should assess the impact of treatment of MetS components in OAB management.

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107 - Transcutaneous tibial nerve stimulation for overactive bladder syndrome in non-responder patients: Preliminary results

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Introduction and aim of the study: Transcutaneous posterior tibial nerve stimulation (TPTNS) has been proposed as a home-based, patient-centered therapy that could improve access to treatment. Aim of the study was to evaluate the safety and efficacy of 12 weeks of TPTNS in reducing urinary symptoms in patients with OAB in patients non-responder to previous conservative treatments.

Materials and methods: This was a single-centre, prospective study which included patients of both sexes non-responder to pharmacological therapy for OAB. Baseline evaluation comprised 3-day bladder diary, uroflowmetry (UF) with post void residual volume (PVR), Visual Analogue Scale (VAS) to score the bother of urinary symptoms on QoL (0 = worse; 10 = best), Overactive Bladder questionnaire-Short Form (OAB-q SF). After face-to-face instruction in the use of the device, patients performed TPTNS therapy (Tensi+®) at home, 20 min daily (as per protocol). Baseline evaluation was repeated at 1, 3 and 6-months f-up. Treatment success was defined as at least a 50% reduction in urgency voids with or without incontinence or at least a 30% reduction in 24-h frequency from baseline to week 12.

Results: Fifteen OAB patients (12 F, 3 M) were enrolled with mean ± SD age 43.3 ± 22.8 y.o. The mean ±SD duration of OAB symptoms before TPTNS was 5.5 ± 1.7 y.o. No patient was on OAB therapy; all patients had PVR < 50 ml. All patients experienced clinically meaningful improvement in OAB symptoms: at 3-mos-f-up all subjects achieved the reduction in urgency, 13/15 (86.6%) improved day-time and night-time urinary frequency and 11/15 (73.3%) urgency incontinence episodes; these results were maintained at 6-mos f-up. No changes in UF parameters and PVR were noted during the f-up (p < 1). Comparison of pre- and post-treatment OAB-q SF scores revealed a significant improvement of the total score (p < 0.00). VAS score increased during the therapy and at the last follow-up (p < 0.00). The success rate was 95%. The 3 patients with associated chronic pelvic pain reported a significant decrease of pain at 3-mos f-up (VAS p < 0.0). No significant adverse events were observed.

Interpretation of results: This study showed that TPTNS was a safe and effective treatment for OAB in non-responder patients to previous conservative management. Urinary symptoms have already improved after 4 weeks of therapy and they were cured or significantly reduced within 6 months in vast majority of patients. The great advantages of this treatment were the non-invasiveness and the administration in the privacy at home. The limit could be that TPTNS should be repeated. However, our encouraging results may indicate that TPTNS could represent a step in the management of OAB in patients non-responder to first-line therapy before considering any invasive treatments. A further challenging question may be its use as a potential alternative initial therapy.

Conclusions: The home-based stimulation device (TTNS, Tensi+®) offers a safe and effective treatment for patients with OAB syndrome and improves QOL.

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108 - Womens's urodynamic characteristics behind clinical diagnosis of overactive bladder syndrome, chronic pelvic pain, voiding dysfunctions, pelvic organ prolapse

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Introduction: To investigate women's urodynamics (UD) characteristics behind clinical diagnosis of overactive bladder syndrome (OAB), non-neurogenic/neurogenic voiding dysfunctions (VD), chronic pelvic pain (CPP), pelvic organ prolapse (POP).

Materials and methods: Data were collected by a national multicenter study recording clinical diagnosis and UD features in women with following main complains: OAB dry/wet, non-neurogenic/neurogenic VD, CPP, POP. The main UD findings evaluated were: detrusor overactivity (DO), detrusor underactivity (DU), detrusor hyperactivity with impaired contractility (DHIC), VD, urinary incontinence (UI). In the same woman, multiple UD observations and clinical diagnoses could be found.

Results: Centers involved were 11; data were completed on 1337 women (median age 72 y.o). Females in OAB dry/wet group were 548, with UD diagnosis of: DO 53.6%, DU 12.2%, DHIC 3.6%, VD 23.5%, UUI 32.1%, SUI 30.5%, MUI 12.4%. Among 411 complaining UI, 59.6% had UUI/MUI, 40.6% SUI. Non-neurogenic VD group consisted of 257 women with DO in 28%, 32.3% with DU, 3.1% with DHIC; overall VD rate was 59.9%, sustained by only BOO in 68.2%, with concomitant DU in 31.8%, with associated DO in 29.9%. Among neurogenic VD group (72 females), DO was found in 62.5%, DU in 31.9%, DHIC in 16.7%; overall VD was found in 54.2%, with DU in 30.7%, DO in 58.9%, DHIC in 15.4%, only BOO in 69.3%. Among 32 women with CPP, DO was UD recorded in 21.8%, DU in 28.1%, overall VD in 46.8% with DU in 46.7%, with BOO in 53.3%. Women with POP were 210: 35.7% showed UD observation of DO, 14.3% of DU, 0.9% of DHIC, 52.4% of VD. Of these latter, DO was recorded in 36.4%, DU in 19.1%, BOO in 80.9%.

Interpretation of results: As expected, DO was observed in just over half of OAB patients. Interestingly, among women complaining urgency and UI, a relevant part (40.6%) showed at UD only SUI and no DO leading a leakage was uncovered. This finding may strengthen the role of UD in better understanding and manage females with UI and how the subjectivity of these patients might be misleading. On the other hand, this result may confirm that OAB wet may be an often-missed UD diagnosis. Obstructive conditions, more likely on a functional basis, were the main UD diagnosis in both neurogenic and non-neurogenic women with VD, while detrusor impairment was found in a minor part; DHIC diagnosis was more common in neurogenic bladder. As expected, CPP condition was associated with a high rate of VD and sustained by BOO in just over half, while in a relevant percentage by detrusor impairment. This latter finding may indicate that urinary dysfunction in these women may be often assessed too late, when the damage caused by potential chronic functional obstruction has already developed. In POP group, DO and VD were the most common UD diagnosis, and less than a fifth of them showed voiding symptoms due to detrusor weakening.

Conclusions: Urodynamic characterization of multiple lower urinary tract and pelvic area disorders in women can provide several functional findings useful for further management.

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109 - Urodynamic male phenotypes in neurogenic and non-neurogenic voiding dysfunction

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Introduction: To evaluate the urodynamic (UD) features of voiding dysfunction (VD) underlying the clinical diagnosis of bladder outlet obstruction (BOO)/benign prostatic obstruction (BPO) and neurogenic VD in males.

Materials and methods: A national multicenter study on UD data allowed us to investigate the type of VD in males with suspected clinical diagnosis of BOO/BPO (Group 1 — G1) and neurogenic voiding urinary symptoms (Group 2 — G2). The VD UD diagnoses were divided as follows: (i) BOO due to BPO or other VD; ii) detrusor underactivity (DU). Overall detrusor overactivity (DO) and its association with BOO/BPO, neurogenic VD and DU was evaluated. UD was performed according to Good Urodynamic Practices and using both International Continence Society recommended nomograms for obstruction e detrusor contractility in referral Centers for UD. In the same man, multiple UD observations and clinical diagnoses could be found.

Results: Centers involved were 9; data were completed on 780 males (mean age 69 y.o): G1 629 (80.6%), G2 151 (19.4%). In G1, BOO/BPO was urodinamically diagnosed in 51.5% males, DU in 35.8%, other VD in 12.7%; DO was found in 51.5% of the patients and was associated to DU in 12.1% and with BOO in 28.3%. In this Group, among males with DO (324/629), 33.8% showed DHIC, in 54.9% BOO/BPO was concomitant, while DU with BOO was found in 11.4%. In G2, UD diagnosis was: VD 69.5%, DU 30.5%. Overall, DO was recorded in 58.9% and was coexistent to DU in 12.6%; among males with DO (89/151) 32% showed DHIC.

Interpretation of results: In almost half (48.5%) of males with non-neurogenic LUTS suspected for BOO/BPO, UD diagnosis showed a different pathological mechanism underlying (other VD or DU). This finding could mean that in a relevant rate of patients the UD investigation may change the further management. As expected, DO was often associated with voiding dysfunctions, while a minor part of males showed DHIC (12.1%). Most patients with neurogenic voiding LUTS had obstructive diseases, but in a relevant part of them a detrusor impairment was found. A similar rate of DHIC was found in both Groups.

Conclusions: Urodynamic *phenotyping* of men with clinical suspicion of BOO/BPO highlighted that a high rate of patients may need to change their therapeutic management after UD. In neurogenic patients with VD, UD showed that an important part a them suffered from detrusor impairment, confirming the relevance of UD investigation in this type of patients.

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110 - Intraoperative evaluation of changes of Urethral Pressure Prolife (PPU) during Robot-Assisted Radical Prostatectomy (RARP)

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Introduction and aim of the study: The aim of the study was to perform a real time intraoperative evaluation of changes of urethral pressure prolife (PPU) during robot-assisted radical prostatectomy (RARP), in order to identify which surgical step mostly influence the urethral pressure at the level of the sphincter complex.

Materials and methods: We prospectively collect data regarding 37 patients who underwent RARP at a single tertiary centre. Patients who had undergone surgery for benign prostatic hypertrophy (BPH) or who had neurological comorbidities were excluded.

The value of the PPU (cmH2O) was recorded, by the sound mechanical extraction, at salient points of the intervention: induction of the pneumoperitoneum (basal), section of the prostatic apex, Rocco's stitch, completion of the vesico-urethral anastomosis. A Gaeltec urethral sound, a transducer (Cuillin Nanologger Gaeltec Investigator) and dedicated software were used to conduct the measurements during surgery. Logistic regressions were used to identify factors correlating with an immediate continence after urethral catheter removal. All tests were two sided, with alfa set at <0.05.

Results: Median PPU values of 38 (27–43), 21 (17–30), 29 (19–38), 32 (24–43) cmH2O were recorded at baseline, prostate apex section, Rocco's stitch and after completion of the vesicourethral anastomosis, respectively. Recovery of continence after catheter removal was 59,3% (16 patients) within one month, 70,4% (19 patients) within 2 months and 85,2% (23 patients) within 3 months.

Interpretation of results: Compared to the demolition phase, an incremental trend was seen after the Rocco's stitch till obtaining a further increase at the end of the anastomosis, reaching values close to the basal ones. We failed to identify preoperative factor impacting on immediate recovery of continence after catheter removal (all $p > 0.05$).

Conclusions: The increase in PPU values in the reconstructive phases compared to the demolition phases, reaching values close to baseline values at the end of the surgery, reaffirms the important role of reconstructive techniques in increasing sphincter pressure, despite the demolition of anatomical structures fundamental for urinary continence. Although the increase of PPU after Rocco's stitch does not reach the statistical significance to be considered an independent predictor of early recovery of post-RARP continence, due to the reduced sample size, this correlation cannot be excluded but will have to be investigated on a larger cohort of patients.

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111 - Prevalence and impact of pelvic floor disorders in women with endometriosis: A multicenter observational study

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Introduction and aim of the study: Endometriosis and pelvic floor disorders (PFDs) share common pathogenetic mechanisms. The prevalence of PFD in women with endometriosis may be underestimated. The aim of the study was to measure the prevalence of PFDs in women with endometriosis.

Materials & methods: In this multicenter, observational, cross-sectional study, women were recruited through web links or at our clinics. Subjective symptoms of PFD were studied with: Urinary Distress Inventory 6 (UDI6), Colorectal-Anal Distress Inventory 8 (CRADI8), Wexner Scale for Fecal Incontinence, Wexner Constipation Scoring System, and Female Sexual Function Index (FSFI). Women underwent pelvic ultrasound, urodynamic study (UDS), and anorectal manometry (ARM). Results are expressed as mean ± standard deviations or percentages.

Results: 122 women were included. The mean age was 35.5 ± 7.3 years, BMI 22.6 ± 3.9 kg/m^2.

UDI6 was 33.0 ± 27.0 (severe symptoms: 25.2%), CRADI8 29.7 ± 22.9 (severe symptoms: 25.2%). 81.8% had sexual dysfunction (FSFI < 26.55). 50.9% had symptoms of fecal incontinence; 57.1% had moderate, severe, or very severe constipation symptoms.

During UDS (n = 103), mean first sensation of filling was at 138.2 ± 60.9 mL and a strong desire to void at 334.4 ± 94.8 mL. Maximum cystometric capacity was 437.8 ± 101.3 mL and bladder compliance 91.6 ± 110.7 mL/cmH2O. 14.6% of women showed detrusor overactivity (DO). Peak flow rates (20.7 ± 7.0 mL/s) and mean flow rates (12.5 ± 4.2 mL/s) were in a normal range.

Among women with DO, 73.3% had deep infiltrating endometriosis (DIE). Of these, 2 had nodules in the bladder, 1 in the uterovesical pouch, 1 in the rectum, 2 had right and 1 left hydronephrosis.

In the ARM (n = 109), first constant sensation volume (37.9 ± 19.2 mL), desire to defecate volume (79.5 ± 33.1 mL), maximum tolerated volume (179.1 ± 68.3 mL), mean rest pressure (51.1 ± 22.7 mmHg) and mean (107.9 ± 28.3 mmHg) and maximum contraction pressure (158.7 ± 56.3 mmHg) were generally normal. However, 27.3% showed pelvic dyssynergy.

Among women with DIE (n=59), the percentage of women with pelvic dyssynergy was similar (26.9%), but more women showed DO (22.0%).

Interpretation of results: Women with endometriosis showed a relevant prevalence of symptoms of PFD, in particular sexual dysfunction and constipation. The ARM confirms the functional defecation disorder, as 27% had pelvic dyssynergy.

When examining single questions of the UDI-6, the worst symptoms emerged in questions investigating bladder sensitivity symptoms (frequent urination and tenesmus). These data are confirmed by objective evaluation of PFD, as a general trend of high bladder sensitivity emerged and 14.6% of women showed overactive bladder with DO. Women with DO have a high prevalence of DIE, with a distribution of nodules that may reflect the symptoms emerged.

Conclusions: In conclusion, endometriosis, particularly DIE, may affect bladder filling and rectal voiding phases. This underestimated problem may highly affect quality of life of women with endometriosis.

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1F - Defining and mapping pelvic pain: A scoping review for the advancement of clinical practice

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Introduction and aim of the study / Introduzione e scopo dello studio: Pelvic pain is a multifactorial condition that poses a significant challenge for urological and multidisciplinary care due to its complex etiology and varied clinical manifestations. The lack of standardized definitions and visual tools for representing pain hinders accurate differential diagnosis and treatment planning. This study aims to perform a scoping review of Pelvic Pain definitions and develop innovative pain maps to visually depict pain distribution, enhancing diagnostic and therapeutic processes.

Materials and methods / Materiali e metodi: A scoping review was conducted across four major databases (PubMed, Scopus, Web of Science, Cochrane Library), selecting secondary literature such as systematic reviews, guidelines, and consensus statements. A total of 31 articles were included, focusing on Pelvic Pain definitions and descriptions. Data were synthesized to create graphical pain maps based on established classifications, including those of the International Association for the Study of Pain (IASP) and the European Association of Urology (EAU).

Results / Risultati: The analysis revealed significant heterogeneity in Pelvic Pain definitions, with terminology varying across medical specialties. Pain maps were developed to represent distribution patterns for key urological conditions, such as bladder pain syndrome and chronic prostatitis. These maps demonstrated typical pain irradiation to areas such as the perineum, lower abdomen, and genitals. They were found to facilitate both differential diagnosis and communication between clinicians and patients.

Interpretation of results / Discussione: The findings highlight the utility of pain maps in clinical practice, offering a visual tool to bridge the gap between complex symptom descriptions and precise diagnosis. Pain maps can aid in identifying specific Pelvic Pain syndromes, improving diagnostic accuracy and treatment planning. However, the lack of standardized definitions across disciplines underscores the need for further research and consensus-building.

Conclusions / Conclusioni: Pain mapping is a valuable innovation for managing Pelvic Pain, addressing the need for better diagnostic tools and fostering a multidisciplinary approach. By standardizing these tools, healthcare professionals could improve patient outcomes and streamline care pathways for individuals with Pelvic Pain.

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3F - Specific and nonspecific chronic pelvic pain: A critical review of definitions and terminology

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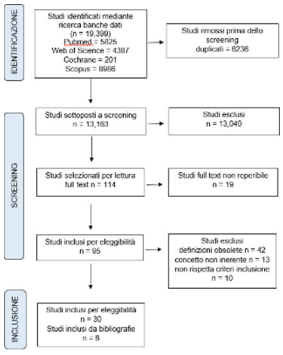
Introduction and aim of the study / Introduzione e scopo dello studio: Chronic pelvic pain represents a significant challenge in the global health landscape, due to the complexity of the underlying pathophysiological mechanisms and its overlap with other chronic conditions. This complexity is also reflected in the lack of a universally accepted definition, as well as in the difficulty to discriminate pain that depends on specific pathology from non-specific pain. This review aims to critically analyse the definitions and terminology currently used in the literature.

Materials and methods / Materiali e metodi: Two reviewers conducted a search of four major databases (Pubmed, Web of science, Cochrane Library and Scopus) to obtain studies up to July 2024; only secondary literature studies reporting information on the definition or terminology of chronic pelvic pain were selected; the keywords used include all concepts of pain and pelvic girdle, and strings have been formulated to suit the peculiarities of each database. No time limits were placed and articles published in any language were included. Two independent reviewers participated in the screening and data extraction phase, creating a standardised data collection form; the collected data were subjected to a qualitative analysis to identify not only recurring themes but also significant divergences in the various definitions of pelvic pain. Finally, the two reviewers included different studies depending on the aim of their own thesis.

Results / Risultati: 30 studies were included from the literature search, and 6 additional studies from cross references, including guidelines, position statements and classifications from international societies, reviews and books. They were subdivided according to the domain and the specific condition they dealt with; where there were several studies concerning the same specific condition, an attempt was made to give relevance and significance to the particularities highlighted by each study.



Interpretation of results / Discussione: Most of the literature has focused on the specific pathologies underlying chronic pelvic pain; not all clinical conditions meet the identified criteria and the hypothesised pathophysiological mechanisms: there are "non-specific" pain conditions in which clinicians must learn to consider the pain itself as a disease in its own right and to treat not the pathology but the underlying mechanism. The lack of shared terminology and homogeneous diagnostic criteria makes it difficult to compare the results of studies. Several authors emphasise the importance of developing a unified, evidence-based taxonomy that takes into account the neurophysiological mechanisms and psychosocial aspects of pain.

Conclusions / Conclusioni: The difference between specific and non-specific chronic pelvic pain conditions is evident; the clinician must be able to recognise and manage them accordingly. It is hoped that the information from this review can be used to develop valuable tools for clinicians.

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6F - Role of botulinum toxin infiltrative therapy in pelvic floor muscles for the treatment of chronic pelvic pain

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Introduction and aim of the study: Chronic pelvic pain syndrome (CPPS), affecting approximately 15% of women, significantly impairs quality of life and is often secondary to conditions like endometriosis or recurrent UTIs. Pelvic floor muscle spasticity causes vascular compression, ischemia, nociceptor activation, and release of pro-inflammatory mediators (e.g., bradykinin, substance P), leading to hyperalgesia and spasms. Guidelines recommend amitriptyline (10–75 mg/day) with pelvic floor rehabilitation as first-line therapy. Botulinum toxin shows promise by reducing peripheral and central sensitization through neurotransmitter inhibition and TRPV1 modulation. This study compares botulinum toxin injections to amitriptyline for CPPS with non-neurogenic muscular hypertonia.

Materials and methods: Thirty patients with chronic pelvic pain (CPP) and a non-neurogenic pelvic floor hypertonia were recruited. All had difficulty relaxing pelvic floor muscles and initially underwent conservative rehabilitation, including PFMT, myofascial therapy, and trigger point treatment. Non-responders (n = 24) were divided into Group A (n = 12), treated with botulinum toxin (BoNT), and Group B (n = 12), treated with amitriptyline (10–75 mg/day).

Group A received electromyographically guided bilateral injections of 20 U BoNT into the puborectalis and pubococcygeus muscles every three months (two cycles). Pelvic floor tone was measured using the Reissing Tone Scale (RTS), and pain was assessed via the Visual Analogue Scale (VAS) at baseline (T0), three months (T1), and six months (T2).

Results: All patients in Group A showed a reduction in hypertonia on the RTS scale (from +3 to 0) and improved pain symptoms on the VAS scale compared to the control Group B. In Group B, despite a reduction in pain on the VAS scale, partial hypertonia persisted (RTS +1). No local or systemic adverse events were reported following drug administration.

Interpretation of results: The results suggest that treatment in Group A was more effective in reducing hypertonia and alleviating pain symptoms compared to the control Group B. While Group B experienced partial pain relief, residual hypertonia persisted, indicating a less comprehensive therapeutic effect. The absence of adverse events highlights the safety of the intervention. These findings support the potential efficacy of the treatment in addressing both muscular hypertonia and pain in patients with CPPS. In the management of CPP, current guidelines recommend the use of amitriptyline as a first-line therapy due to its proven efficacy in controlling neuropathic and visceral pain. Botulinum toxin, through its dual peripheral and central actions, contributes to the reduction of central nervous system sensitization, a key factor in pain chronicity.

Conclusions: Botulinum toxin treatment appears effective in managing pain associated with non-neurogenic hypertonia, offering a viable alternative to oral pharmacological therapy. Further studies are needed to assess its long-term efficacy and tolerability.

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7F - Possible association between spasmophilia and chronic pelvic pain: A preliminary analysis

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Introduction and aim of the study: Chronic Pelvic Pain Syndrome (CPPS) is a highly prevalent and disabling condition in urogynecological and rehabilitative settings. CPPS has multifactorial causes, including urological, gynecological, gastrointestinal, musculoskeletal, neurological, and psychological factors. No single mechanism has been identified; instead, a combination of infections, neurogenic inflammation, hypoxia, glycosaminoglycan layer damage, and pelvic muscle dysfunctions (weakness, cramps, contractures) contribute. While CPPS-fibromyalgia links are well-documented, no studies explore CPPS-latent tetany association. Latent tetany manifests as paresthesia, numbness, distal pain, muscle tension, and spasms, impairing fine motor skills. The Kugelberg test is key for diagnosis. Similarly, CPPS patients often exhibit pelvic muscle tension, spasms, fatigue, and motor incoordination. The aim of this study is to evaluate the association between chronic pelvic pain and latent tetany, with the goal of improving diagnostic accuracy and facilitating a targeted therapeutic approach.

Materials and methods: The study included 12 adults (9 females, 3 males, aged 20–65, mean age 42) with CPPS. Inclusion criteria: CPPS diagnosis, informed consent, no analgesic therapy for 10+ days. Exclusion criteria: neurological disorders, pelvic surgery history, electrolyte imbalances, or inability to consent. Subjects underwent physiatric evaluation for pelvic floor dysfunction, VAS scoring, and the Kugelberg test. The test measured electromyographic activity of the first interosseous muscle during ischemic stimulation induced by a sphygmomanometer cuff inflated 20 mmHg above systolic pressure for 10 min, followed by 3 min of hyperventilation.

Results: The 10 patients diagnosed with CPPS tested positive for the Kugelberg test, showing triplets and quadruplets in the EMG recording of the first interosseous muscle during the hyperventilation phase. The Trousseau sign was positive in 7 patients, while 1 patient tested negative (no triplets or quadruplets were recorded during the hyperventilation phase). One patient was excluded from the study due to early termination of the diagnostic process.

Interpretation of results: Ten CPP patients were evaluated; eight tested positive for spasmophilia. CPP, spasmophilia, and fibromyalgia are linked by central sensitization, where neuromuscular dysfunction and micro-spasms amplify pain. Limited calcium reserves in pelvic muscles increase spasm risk, contributing to

chronic pain. Spasmophilia may exacerbate pudendal nerve compression, intensifying CPP. Multidisciplinary treatment targeting neuromuscular dysfunction and central sensitization is crucial.

Conclusions: This study highlights a strong correlation between CPPS of muscular etiology and latent tetany. Proper identification of the association between these two conditions will improve diagnostic accuracy, enabling more effective clinical management and targeted conservative treatment.

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8F - Graded motor imagery and perineal massage in patients with chronic pelvic pain: Case series

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Introduction and aim of the study: Chronic pelvic pain (CPP) is a common complaint lasting for at least six months. It is often associated by other dysfunctions including sexual dysfunction. CPP shares similarities with other chronic pain conditions and should therefore be managed as a persistent pain. Graded Motor Imagery (GMI) has demonstrated potential in managing conditions of CPP such as phantom limb pain, complex regional pain syndrome. A recent study suggested a promising role for GMI in reducing CPP; however, its impact on sexual dysfunction remains unclear. This study proposes a modified approach of the GMI applied to the perineal massage, to evaluate its potential effect on sexual function, pain, quality of life and anxiety.

Materials and methods: This case series study included four adult female patients diagnosed with CPP, presenting with primary symptoms of pain and sexual dysfunction. Participants completed online questionnaires at the baseline and follow-up after 3-weeks intervention. The intervention consisted of a 3-phase program. 1. Discrimination of the perineal massage phases: a video presentation on pelvic floor anatomy and perineal massage, supported by images and descriptions. Participants completed an online quiz to assess their understanding. 2. Motor Imagery: participants listened to an audioguide describing the perineal massage, encouraging visualization of this activity. 3. Mirror Therapy: self massage performed in front of the mirror. Primary outcomes, sexual dysfunction and pain, were assessed using the Female Sexual Function Index (FSFI) and the Numeric Pain Rating Scale (NPRS). Secondary outcomes, quality of life and anxiety, were evaluated using the SF-36 subscales and the Cognitive Behavioral Assessment 2.0.

Results: All four patients completed the intervention. While the results were not statistically significant, improvements were observed in all measured domains. The mean FSFI total score increased from 20.65 to 25.58. NPRS mean scores decreased from 5.25 to 2.75, with an effect size of 0.50. SF-36 subscale scores showed improvement in general health (44.78 to 54.18), pain (54.75 to 60.62), and role limitations due to physical health (43.75 to 62.5).

Discussion: Although statistical significance was not achieved due to the small sample size, the observed improvements suggest a positive trend. Notably, the FSFI scores increased, with two participants exceeding the clinical cutoff of 26,55 (peak 28,1), and pain-related domains improved across all questionnaires.

Conclusions: The application of GMI to perineal massage in patients with CPP demonstrated potential benefits in pain reduction, sexual function, and quality of life, suggesting it may address patients' health needs. However, the lack of statistical significance and the small sample size limit the conclusions that can be drawn. Further studies with larger samples and different designs are needed to establish the efficacy of integrating perineal massage with GMI for improving sexual function in CPP patients.

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9F - Incidence of urinary tract infections after urodynamics or videourodynamics in SCI patients with application of a preparation protocol for urodynamics

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Introduction and aim of the study: To date, there is no consensus on the safety and efficacy of administering antibiotics to prevent urinary tract infections (UTIs) after urodynamic testing (UDS) and the development of bacterial resistance.

The aim of our study was to investigate the incidence of UTI in patients with a neurological bladder who underwent UDS. Patients with spinal cord injury (SCI/D) evaluated at our centre underwent antibiotic prophylaxis according to risk class division.

Materials and methods: The observational, prospective, single-centre study involves patients admitted to the Spinal Unit with SCI/D of any aetiological nature, grade AIS A, B, C and D and any neurological level, undergoing UDS investigation.

The aim is to recruit 205 patients in 12 months.

We used an internal protocol with guidelines for antibiotic prophylaxis, based on data from a previous collection on the incidence of infections at our facility. Based on infectious risk, nephro-vesical complications and comorbidities/age (Charlson index), patients were stratified into 3 risk classes (low-R1, medium-R2, high-R3). Based on the risk class, the need for antibiotic prophylaxis prior to urodynamic examination was assessed. Symptomatic UTIs within 48–72 h after the investigation were recorded. Patients undergoing prophylaxis had a follow-up urinalysis 10 days after the examination to assess the occurrence of any antibiotic resistance.

Results: The first 57 patients were analysed: 19 patients (33.3%) AIS A, 9 (15.8%) AIS B, 13 (22.8%) AIS C and 16 (28.1%) AIS D. Subdivided according to risk class into: 40 R1 (70.2%), 13 R2 (22.8%) and 4 R3 (7%).61.4% had an overactive bladder.

The analysis showed no symptomatic UTI 48–72 h after UDS.

Of the 57 patients, 9 received antibiotic prophylaxis and 2 (belonging to class R2) were taking antibiotic therapy at the time of the examination for other reasons.

At urine culture at 10 days 3 patients (5.3%) developed antibiotic resistance: 2 belonged to R2 and 1 to R3.

Interpretation of results: Preliminary results show the absence of UTIs at 48–72 h in both prophylaxed and non-prophylaxed patients, preliminarily demonstrating the validity of the protocol.

With regard to the development of antibiotic resistance in patients undergoing antibiotic prophylaxis, the small sample size does not allow statistically significant results to be provided to date.

Conclusions: Appropriate stratification of patients with NLUTD secondary to UDS according to risk categories, also taking into account comorbidities unrelated to the spinal cord lesion, is a promising strategy that well identifies patients at risk of developing symptomatic UTI after UDS. This stratification currently appears to have the potential to reduce the incidence of symptomatic post-UDS UTI, while the effect on antibiotic resistance has yet to be evaluated.

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10F - Treatment of pelvic pain: Diagnostic and therapeutic pathway in two clinical cases treated with Scrambler Therapy

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Introduction and aim of the study: Pelvic pain often has a multifactorial etiology and is difficult to diagnose, especially in patients with sensory disorders. This 2-case analysis explores how a diagnostic error may delay the identification of the most appropriate therapeutic strategy.

Materials and methods: Both patients with initial misdiagnosis presented with pelvic pain, urination and evacuation disorder, and sexual dysfunction.

1: 49-year-old male with crushed L3 and coccyx fracture in 2012, with residual pelvic pain, exacerbated by urination, evacuation and ejaculation, with associated dysuria, constipation and erectile deficit. Initial diagnosis of neurological bladder and bowel, and erectile deficit. Neurological causes then excluded; orientation towards functional disorder (hypertonic pelvic floor and dyssynergia), resulting from post-traumatic inflammatory and painful state. Pelvic floor rehabilitation performed for antalgic/decontracting aim, with reduction of dyssynergia and pain, and positive effects on micturition and defecation, but return to contracture state and persistent pain under stress.

2: 52-year-old female suffering from multiple sclerosis since 2011 with mainly sensory and algic symptoms, constipation, dysuria and urinary retention. Pain not well localized, but triggered by urination and evacuation. Intermittent catheterization and antimuscarinic therapy set in, even without detrusor overactivity, then treated with bladder botulinum toxin injections, with poor efficacy. The indication for botulinum toxin was not confirmed at the last urodynamic examination.

Both underwent 10 sessions of Scrambler Therapy (ST), verifying its efficacy each time with NRS, applied to various parameters and recording the duration of analgesia.

Results: At each session, NRS decreased for both patients. NRS also diminished for sleep disturbance and 24-hour average from the first to the last session.

The duration of analgesia increased from the first to the last session, from 30 min to one hour (patient 1), and from 2 to 20 h (patient 2).

Both patients reported an improvement in all dysfunctions. The benefits lasted for a month, then gradually expired.

In patient 1 pain resumed with less intensity, but peaked at NRS 7/10; after 4 sessions of pelvic floor rehabilitation NRS dropped to 2/10. In patient 2, the NRS returned to previous values as the effects ended.

Interpretation of results: Both have in common a delayed diagnosis and subsequent treatment of chronic pain.

ST showed good but short-lived results. The questions are whether earlier, longer treatments, re-training can improve long-term results, and whether the persistence of irritative spines (e.g. degenerative diseases) may favor pain return.

Conclusions: An early diagnostic approach is crucial to intervene with the best strategies. ST demonstrated an improvement in quality of life, but chronic cases may require more sessions or re-training, as suggested by the concept of 'bypassing pain memory' on which it is based.

A larger case series with control groups is needed.

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11F - Chronic pelvic pain syndrome and visceral dysfunction in endometriosis: Efficacy of rehabilitative approach. A pilot study

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Introduction and aim of the study: Endometriosis is a benign and chronic gynaecological disease, and it is the most frequent cause of pelvic pain and female infertility. It can affect various pelvic organs, thus altering their proper function. The aim of the study is to evaluate the effectiveness of rehabilitative treatment in reducing chronic pelvic pain and associated symptoms of visceral dysfunction in patients with endometriosis.

Materials and methods: The study involved 10 patients affected by endometriosis. Inclusion criteria are: Caucasian adult women in reproductive age, endometriosis diagnosis confirmed by ultrasound or MRI, chronic pelvic pain syndrome, pharmacological therapy with progestin therapy. Exclusion criteria are

women with prior surgical eradication treatments, diagnosed psychiatric disorders, language barriers, use of neuropathic pain medications or muscle relaxants, and/or antidepressants. Participants underwent a cycle of 10 weekly physiotherapy sessions for one hour each. Physiotherapy was based on kinesiotherapy and manual therapy. Evaluations were performed before physiotherapy (T0) and after 10 physiotherapy sessions (T1) using standardized questionnaires. The evaluated functions are urinary function using the ICIQ-FLUTS, bowel function with Wexner Score, sexual function using Female Sexual Function Index (FSFI), the quality of life through the Short Form Health Survey 36 (SF-36) and pain (both body and pelvic pain using the Numerical Rating Scale (NRS).

Results: Data analysis revealed a significant reduction in body pain: the median value of NRS in T0 was 7 while in T1 was 2 ($p = 0.031$ Wilcoxon test). The quality of life assessed by the SF-36 questionnaire changed from a median score of 55.6 at T0 to 73.6 at T1 ($p = 0.027$ Wilcoxon test). Moreover, perineal pain decreased from a median score of 5 to 0 but the difference is not statistically significant ($p = 0.125$). Urinary symptoms measured by the ICIQ-FLUTS showed a reduction of 37.5% in storage symptoms ($p = 0.188$), 33.3% in incontinence ($p = 0.500$), and 25% in voiding symptoms ($p = 0.313$). The Wexner score for bowel function decreased from a median of 8.5 to 7, that corresponds to 11.1% reduction ($p = 0.063$). Additionally, the FSFI-score improved from a median of 17 to 34 ($p = 0.094$).

Interpretation of results: Our study shows a positive change in overall results with statistically significant improvement in body pain perception and quality of life.

Conclusions: Even if hormonal therapy and surgical treatment are traditionally considered the gold standard approach in patients affected by endometriosis, this pilot study seems to suggest that rehabilitative treatment, based on the integration of kinesitherapy and manual therapy, could be an effective approach for managing chronic pelvic pain associated with endometriosis, improving quality of life of women. Further studies are necessary to confirm these preliminary data and assess the long-term efficacy of physiotherapy.

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12F - Case report of a female-to-male patient with chronic pelvic pain

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Introduction and aim of the study: A case report of a hospitalized patient with chronic pelvic pain following gender assignment surgery (FtM), emphasizing the need for multidisciplinary approaches. The primary goal of the transdisciplinary care approach was to alleviate pain-related symptoms.

Materials and methods: Case report of a 49-year-old patient, hospitalized with the admission diagnosis: chronic pelvic pain persisting since late 2021, following recent Female-to-Male transition surgeries.

Since 2011, the patient has undergone multiple gender-affirming procedures, including hysterectomy with bilateral adnexectomy, bilateral reductive mastoplasty, phalloplasty, urethroplasty with radial, pubic, and thigh flaps, followed by urethral connection, vaginectomy, scrotoplasty, and glans reconstruction.

Postoperatively, the patient developed persistent perineal pain (exacerbated when seated at 90° and during forward trunk flexion), accompanied by perineal ulcerations.

Admission assessment scales: NRS 8/10, DN4 4/10, BI 70, SF-36 55/100.

The rehabilitation team included a physician, physiotherapist, neuropsychologist, hydrokinetic therapist, and occupational therapist.

Rehabilitation strategies comprised:

- Optimization of pain therapy.
- Use of tools such as tDCS, neuro feedback and EMDR.
- A specific protocol was used for hydrokinesiotherapy.
- Evaluation with an OT for penile sheath to facilitate penetrative sex.
- Acupuncture treatment.
- Consciousness of the pelvic floor and re-education for proper respiratory activity.
- Manual treatment of surgical scars.
- Manual treatment and exercises for the spine.
- Manual treatment of the obturator membrane, sacrococcygeal area, iliopsoas, and piriformis.
- Re-education for correct defecation: The patient presents a non-relaxing pelvic floor condition, especially in the posterior compartment (Glazer protocol was applied to reduce muscle tone).
- TENS was applied with circular surface electrodes at the perianal level. Parameters: 70 Hz, 80 micsec for 30 min.
- Exercises in the gym aimed at increasing overall joint ROM, improving the patient's autonomy in ADLs.
- TTNS
- Exercises for activation of the pelvic floor and the transverse abdominal muscles in various settings, aimed at improving blood flow to the perineal region due to muscle activation.

Results: During the hospitalization, there was a gradual improvement in pelvic pain, with a period of about 3 weeks without pain in the perineal area.

Evaluation scales at discharge: NRS 4/10, DN4 4/10, BI 95, SF36 85/100.

Interpretation of results: The transdisciplinary treatment allowed for a comprehensive approach to the patient, addressing different aspects of pain and managing the limitations that pain imposed on the patient's quality of life.

Conclusions: This case underscores the complexities of managing pain in FtM gender reassignment surgery, highlighting the significance of a multimodal treatment approach in significantly improving the patient's chronic pelvic pain.

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13F - Physiotherapy treatment in women with endometriosis and dyspareunia: A scoping review

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Introduction and aim of the study: Endometriosis is a heritable, hormone-dependent gynaecological condition characterized by endometrial tissue deposited outside the uterus. It is a prevalent condition, affecting from 5% to 10% of women worldwide, and associated with a spectrum of symptoms, including dysmenorrhoea and dyspareunia. Available treatments for endometriosis are painkillers, hormone therapy and surgery; however, in recent years several trials and secondary studies showed positive results of physiotherapy in pain and dyspareunia management. The aim of this study was to map the physiotherapy techniques described in literature to treat dyspareunia in women with endometriosis.

Materials and methods: This scoping review was conducted according to the Joanna Briggs Institute guidelines. We searched PubMed, Web of Science, Scopus and Embase up to May 26, 2024. We included studies with no limitations in terms of design assessing the effects of any kind of physiotherapy program for women affected by endometriosis. Studies inclusion and exclusion criteria were set a priori.

Results: We included 22 studies. We identified 9 physiotherapy interventions, in particular: (4) physiotherapy treatment in general, to learn how to relax the pelvic floor and integrate it in the activity of daily living; (11) manual therapy, with different techniques, Wurn, Thiele massage, acupressure stretching and myofascial relaxation; (5) TransCutaneous Electrical Nerve Stimulation (TENS), applied without a needle in the S3–S4 region; (8) educational intervention, teaching anatomy and functioning of the pelvic floor, and sex education intervention; (5) physical exercise, with pelvic floor exercises, yoga, aerobic exercises, endurance and stretching; (1) radiofrequency; (2) NMES; (1) biofeedback and (1) Kegel exercises.

The most proposed and validated treatments were manual therapy (N=11), educational and sexual intervention (N = 8), exercise (N = 5) and TENS (N = 5). The aim of these treatments was to reduce the symptom, and 15 out of 7 studies shown positive results compared to standard care or no multidisciplinary care.

Interpretation of results: Educational intervention helps the patient to stop associating the relationship with pain, limiting the central sensitization of pain. Studies have shown that the physiotherapist often works in a multidisciplinary context, because endometriosis is often associated with other conditions, so teamwork is successful in chronic overlapping pain conditions. This reinforces the validity of conservative intervention in this type of patients.

Conclusions: The landscape of pelvic floor physiotherapy for endometriosis-associated dyspareunia is broad, with diverse therapeutic options. However, further methodologically rigorous research is necessary to compare the efficacy of specific interventions and strengthen the evidence base. Enhanced awareness of the physiotherapist's role within a multidisciplinary framework can advance clinical practice and optimize patient outcomes in this domain.

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14F - Pelvic floor rehabilitation in patients with endometriosis and sexual dysfunctions: Survey

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Introduction and aim of the study: Endometriosis is a chronic and debilitating condition characterized by the presence of endometrial-like tissue outside the uterus, often associated with chronic pelvic pain and sexual dysfunctions such as dyspareunia. These symptoms significantly impair patients' quality of life and psychological well-being (Zondervan et al., 2020). Pelvic floor rehabilitation has emerged as a promising therapeutic approach to address sexual dysfunctions related to endometriosis by improving pelvic floor function and reducing pain (Mills et al., 2016). This study aims to evaluate the effectiveness of pelvic floor rehabilitation in improving sexual health and reducing pain in women with endometriosis, with a focus on patient-reported outcomes.

Materials and methods: This observational study utilized an online questionnaire to collect data from 41 women diagnosed with endometriosis and associated sexual dysfunctions, all of whom underwent pelvic floor rehabilitation. The questionnaire was divided into two sections: a demographic and therapeutic overview and the Female Sexual Function Index (FSFI) assessment tool (Filocamo et al., 2014). Statistical analysis was performed using Jamovi and R software to explore the impact of the intervention on sexual function and pain levels.

Results: Among participants, 87.8% reported significant benefits from pelvic floor rehabilitation, including reduced pain during sexual activity and improved control of the pelvic floor muscles. The most commonly utilized techniques were manual therapy (92.7%), pelvic floor exercises (85.4%), and home based exercises (80.5%). The average satisfaction score for the intervention was 7.83 out of 10, indicating high levels of patient approval. The FSFI results showed improvements in sexual desire, arousal, lubrication, orgasm, and overall satisfaction, with a notable reduction in pain during intercourse.

Interpretation of results: These findings highlight the efficacy of pelvic floor rehabilitation in addressing sexual dysfunctions in women with endometriosis. The combination of physical therapy and behavioral interventions appears to enhance pelvic muscle functionality, reduce pain and improve sexual satisfaction. However, a small subset of patients (4.9%) did not experience significant benefits, underscoring the need for a personalized and multidisciplinary approach. The role of psychological support, such as cognitive-behavioral therapy, should be emphasized to manage anxiety and distress associated with chronic pain (Mills et al., 2016).

Conclusions: Pelvic floor rehabilitation is an effective and well-received intervention for managing sexual dysfunctions in women with endometriosis, significantly improving their quality of life. These results advocate for its integration into a multidisciplinary treatment framework that addresses both physical and psychological dimensions of the condition. The study highlighted the importance of identifying patient-specific factors in order to optimize and personalize the rehabilitation process, thereby improving treatment outcomes.

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17F - Overactive pelvic floor in females with associated sexual dysfunctions: Related urinary and bowel symptoms

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Introduction and aim of the study / Introduzione e scopo dello studio: To assess urinary and bowel condition in women with sexual dysfunction undergoing pelvic pain rehabilitation for overactive pelvic floor.

Materials and methods / Materiali e metodi: This is an ongoing observational prospective study aimed to assess the related urinary and bowel symptoms in women complaining sexual dysfunction undergoing pelvic pain rehabilitation. All women had OPF diagnosed by physicians. Sexual, urinary and bowel symptoms, quality of life (QoL) were recorded. According a threshold of 30 y.o., we divided women in Group 1 (G1) age $\leq$ G30 y.o., Group 2 (G2) > 30 y.o.

Results / Risultati: Preliminary data were completed in 22 women with mean age 34.1 y.o. G1 included 10/22 females (45.4%) with mean 24 y.o., while G2 12/22 (54.6%), with mean age 37.4 y.o. Relevant urinary symptoms with voiding emptying difficulties were referred by 7/17 females (41.1%), while discomfort during micturition by 23.5%. Bladder pain was complained by 50%, of these, 62.5% were in G1 and 37.5% in G2. In G1, voiding dysfunctions were reported 25%, discomfort in 12.5%. In G2 voiding difficulties were complained by 6/9 (66.6%), discomfort in 3/9 (33%). Overall, stypsis rate was 62.5%, in G1 40%, in G2 60%. Pain at defecation was reported by 37.5%, 16.6% were in G1, 83.3% in G2.

Interpretation of results / Discussione: A relevant rate of women reported voiding dysfunctions, but most of them were older. Bladder pain was a common complained bother, mainly in younger patients. Bowel impairment was less frequent than urinary dysfunction, and it was mostly reported by older women. However, in females with pelvic floor overactivity and sexual dysfunction, both anterior and posterior compartment were relevantly involved. Therefore, treatment of pelvic floor rehabilitation should never ignore the conditions of whole pelvic area (sexuality, urinary tract, bowel) which are often linked.

Conclusions / Conclusioni: Our preliminary results showed that women with overactive pelvic floor and sexual dysfunction may have urinary and bowel associated problems.

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18F - The importance of pelvic floor rehabilitation in patients with LARS (Low Anterior Resection Syndrome) who have undergone an enterostomy or recanalisation

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Introduction and aim of the study: Bowel cancer is the third most common cancer in the world. Its treatment often involves surgery that alters the anatomy of the terminal intestinal tract, resulting in the loss of the rectal reservoir and potential damage to the sphincter/perineal structures with consequent alteration of defecatory activity after surgery. Surgical resection of the rectum and impaired physiological properties of the neorectum are thought to be the main cause of LARS (Low Anterior Resection Syndrome). The aim of this review was to demonstrate the importance and effectiveness of pelvic floor rehabilitation for patients (pts) with LARS who have undergone ostomy packing or subsequent recanalisation as a therapeutic approach to managing symptoms and improving quality of life.

Materials and methods: A comprehensive literature review was performed using Pubmed and Cochrane databases. The research question was formulated according to the PICOS method: P (LARS pts, enterostomy pts or re-analyses), I (pelvic floor rehabilitation), C (not identified), O (improvement of LARS symptoms to demonstrate the importance of rehabilitation treatment), S (RCTs, reviews, pilot studies, meta-analyses).

Results: The systematic review identified 54 eligible records. Among them, 9 articles met the inclusion criteria: 4 randomised controlled trials, 2 systematic reviews, 2 narrative reviews and 1 pilot study published within the last 10 years.

The results of the analysis of primary and secondary evaluation tools (questionnaires, rating scales and rectal manometry) showed that the pelvic floor rehabilitation pathway for LARS pts who have previously had a prophylactic ostomy and/or recanalisation plays an important role in improving functional outcomes in LARS management. However, several limitations were identified in the analysis of the selected articles.

Interpretation of results: The majority of studies reported improvements in continence, bowel frequency and quality of life following pelvic floor rehabilitation in pts with LARS. All trials used PFMT (Pelvic Floor Muscle Training) as the standard rehabilitation strategy, adding biofeedback or rectal balloon training as a variable. Several limitations were identified, related to the lack of treatments standardisation in terms of the scoring systems used, the temporal variability in the periodic assessment of treatment results, the small number of populations subjected to clinical trials, and the heterogeneity of PFR (Pelvic Floor Rehabilitation) protocols.

Conclusions: The different treatments that characterise pelvic floor rehabilitation have a positive impact on the management of LARS and lead to a functional outcome in the reduction (in some cases significant) of LARS symptoms. It is therefore desirable to adopt a standardised treatment algorithm that results in adequate control of LARS symptoms and a high probability of significant improvement in continence, frequency of voiding and quality of life. It is also advisable to adopt uniform scoring systems for the assessment of primary and secondary functional outcomes. However, limitations related to the lack of standardised treatments and the need for more large-scale controlled clinical trials have been identified.

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19F - Stent calcification: Impact on periodic replacement and nursing role in preventing these complications

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Introduction and aim of the study: The periodic replacement of percutaneous nephrostomy or Mono-J stents is a necessary procedure for many urological patients. A retrospective cohort study was carried out in order to investigate how the incidental finding of stent calcifications affects operative time and material costs, and how nursing care could minimise this complication.

Materials and methods: Data from 270 consecutive outpatients were recorded and analysed. All patients underwent periodic nephrostomy (unilateral or bilateral) or Mono-J sent (unilateral or bilateral) replacement from January to December 2024. They were stratified by sex, age, and type of procedure. Operative time, incidental findings of calcifications, and any additional materials used were recorded.

Results: In 54/270 patients (20%) calcifications at the device level (29 nephrostomies and 25 Mono-J stents) were found. In this group, mean operating time was 24.37 min versus 10.26 min in the absence of calcifications ($p < 0.000$) and a further average increase to 33.6 min in the case of calcific bilateral nephrostomies. The average additional costs related to these complications for the materials used was €165.34 for nephrostomies and €72.90 for stents.

Interpretation of results: The presence of calcifications at the level of nephrostomies and/or mono-J stents has been shown to have a significant impact on operating times and costs, with important consequences for the scheduling and re-scheduling of operations and the working hours of operating staff. The limitation of these complications is of paramount importance in order to facilitate the running of the operating schedule and reduce costs. The analysis of the results indicates the necessity to identify organisational and training strategies to reduce these complications. One such strategy could be to focus on the nursing care of this particular patient group. Indeed, the nurse responsible for the patient with a nephrostomy or an indwelling Mono-J could play an effective educational role in promoting the correct management of the devices. It is hypothesised that adequate nutrition and hydration may have a beneficial effect on the incidence of preventable calcifications. The education of patients on the signs that could signal the presence of unwanted calcifications, also through collaboration with the dedicated enterostomal nurse's office, could allow early management of such complications.

Conclusions: The occurrence of calcifications has been demonstrated to exert a detrimental effect on operating times and the cost of material used in the operating room. The implementation of dedicated nursing care for patients with stents and/or indwelling nephrostomies has the potential to reduce the incidence of this complication.

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20F - Physiotherapy in pelvic floor dysfunctions: A survey on medical knowledge and multidisciplinary approach in Sardinia

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Introduction and aim of the study: Despite the recommendations of scientific societies such as EAU, NICE, ACOG and the proven efficacy of pelvic floor physiotherapy, the role of the specialist physiotherapist remains poorly understood among clinicians, compromising patients' access to conservative treatments.

The aims of this study were to evaluate the level of knowledge and perception by medical specialists in Sardinia regarding the figure of pelvic floor physiotherapist, investigating potential barriers to interdisciplinary collaboration and proposing possible strategies to improve the synergy between the different professionals in the management of pelvic floor diseases (PFDs).

Materials and methods: A cross-sectional observational study was conducted with an online survey shared to practicing physicians in Sardinia. The questionnaire, structured in six sections, collected demographic data, general knowledge of pelvic physiotherapy, agreement on its interventions effectiveness and identified barriers to interdisciplinary collaboration. The target population included physicians from different specialties involved in the management of PFDs.

Results: The analysis revealed that most participants treat patients with PFDs, but fewer than half demonstrated adequate knowledge about skills of pelvic physiotherapy. Furthermore, the referral rate of patients suitable for pelvic floor physiotherapy to specialized physiotherapists is low. The main barriers identified include a lack of specific training, low awareness of the effectiveness of physiotherapy, and limited interprofessional communication. Nevertheless, most doctors acknowledged the value of interdisciplinary collaboration, emphasizing the need for greater integration within care pathways.

Interpretation of results: The results highlighted significant critical issues in the interprofessional collaboration between physicians and pelvic floor physiotherapists.

The low response rate reflects broader difficulties in communication and integration between healthcare professionals, resulting in fragmented therapeutic pathways.

A significant finding from the survey concerns the gap between theoretical knowledge and practical application. Most of physicians who treat PFDs declare to be aware of the role of the specialized physiotherapist but only a minority regularly refer patients to these specialists. This gap suggests the presence of structural and organizational barriers limiting the integration between the different professional figures in care pathways. However, Interest in the proposed communication and information solutions has emerged, suggesting a gradual improvement in interprofessional collaboration over time.

Conclusions: This study highlights the need for targeted initiatives aimed at improving collaboration between pelvic floor physicians and physiotherapists. Effective strategies could include educational campaigns, interdisciplinary training sessions and the creation of integrated care models. Such measures would contribute to a more holistic patient-centered approach in people with PFDs.

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21F - Antenatal perineal training for injuries prevention: Follow up after puerperium

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Introduction and aim of the study: This retrospective analysis investigated the impact of preparation of the pelvic floor for childbirth with stretching balloons and perineal massage on the risk of pelvic floor injuries.

Materials and methods: We analyzed 150 primiparous women who accessed private clinics in Padua (Italy) in the period 2019–2023 regarding the rate of perineal trauma and postpartum dysfunction across three groups: the balloon stretching group (BSG, N = 50, 33.3%), the perineal massage group (PMG, N = 39, 26.0%), and the control group (CG, 61, 40.7%).

Results: Prenatal perineal training had a significant impact on reducing the rate of perineal injury and episiotomy (27.5% in BSG vs. 48.7% in PMG and 68.3% in CG, $p = 0.008$, respectively, 9.8% vs. 26% and 40%, $p = 0.046$) and the duration of the second stage of labor (BSG and PMG had a shorter duration compared to CG with a mean difference of −0.97892 h, $p < 0.001$, respectively, −0.63372 h, $p = 0.002$). Patients who carry out the preparation with the stretching balloon are less likely to develop urinary and anal incontinence and pain during intercourse. Specifically, the rate of urinary incontinence in BSG stands at around 23.5% compared to 43.6% in PMG ($p = 0.345$) and 55% in CG ($p = 0.034$). Dyspareunia in BSG was detected in 11.8% of cases compared to 35.5% in PMG ($p = 0.035$) and 61.7% in CG ($p < 0.01$). Symptomatology inherent to the posterior compartment was reported in 9.8% of cases in BSG vs. 23.11% in PMG ($p = 0.085$) and 33.3% in CG ($p = 0.03$%)

Conclusions: Stretching balloons and perineal massage can be chosen as tools to prevent and reduce the rates of obstetric trauma during childbirth and to reduce the use of episiotomies as well as protect against the development of dysfunctions of the pelvic floor.

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22F - Pain Map 3D: An innovative model for pelvic pain mapping — Results from a survey of patients and professionals

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Introduction and aim of the study: Myofascial pelvic pain is a complex condition that is challenging to diagnose due to the lack of standardized techniques and tools. This study proposes a three-dimensional Pain Map model to identify tenderness points in the pelvic musculature through monodigital endocavitary palpation, a technique already validated in the literature as simple and cost-effective. The primary objective was to optimize the assessment process. Additionally, the study evaluated the acceptance rate of this tool through a survey addressed to both physiotherapists specialized in pelvic floor rehabilitation and patients suffering from persistent pelvic pain.

Materials and methods: A presentation video was created and subsequently shared with physiotherapists and patients. The model is represented as a cylinder depicting the anatomy of the vaginal canal and vulva, divided into three depth layers and four quadrants, facilitating the mapping of pain areas using coordinates. The video was accompanied by two surveys — one addressed to physiotherapists and one to patients — to validate the initial project hypotheses and gather feedback on the 3D Pain Map model, including ease of use and its applicability in clinical practice.

Results: The initial hypotheses underlying the 3D Pain Map project were confirmed by the responses from both professionals and patients, validating its usefulness in education and clinical practice for identifying painful areas during assessment and follow-ups. The model was well received in terms of its shape and structure, and it was recognized as a potential tool for improving intra- and inter-operator communication.

Interpretation of results: The 3D model was well received by the majority of physiotherapists, who recognized its ability to simplify the assessment phase, enhance the understanding and localization of patient-reported pain, and facilitate more immediate inter-operator communication. Its value as a teaching tool for training new professionals was also highlighted.

Patients similarly appreciated the model's use as a device for easily identifying pain points during assessment and follow-ups, allowing for a joint reassessment of symptoms with the clinician. Additionally, the model contributes to greater pelvic floor awareness among patients, promoting self-treatment and ultimately improving the efficiency, functionality, and duration of the rehabilitation process.

Conclusions: The results highlight the importance of developing innovative tools for the management and mapping of myofascial pelvic pain — practical and intuitive instruments that can be integrated with appropriate therapeutic approaches to optimize the comprehensive care of patients.

Despite the overall positive reception, the project remains open to improvements. Future revisions could include the introduction of a quantitative pain assessment scale and the integration of a pressure-feedback system to determine pain thresholds.

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23F - Epicystostomy button in pediatric age, when specialized nursing staff becomes essential

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Introduction and aim of the study: Clean intermittent catheterization (CIC) is a mainstay in the management of neurogenic bladder-sphincter dysfunction (NBSD). CIC may not always be tolerated or feasible and in these cases urinary derivation may be required. We implemented percutaneous button cystostomy (PBC) technique, previously described, to maximize applicability and minimize conversion rate. Aim of this study is to propose a nursing management protocol in the postoperative period following the placement of a PBC under anesthesia.

Materials & methods: All patients treated with PBC between 2020–2024 were retrospectively evaluated. Outcomes were evaluated considering conversion and complication rate, patient-reported tolerance to the device, effectiveness in bladder management and ease of learning button change by the caregiver. Statistical analysis with SPSS Microsoft.

Results: 50 patients (32 males) with a median age of 7.9(4.6–13.3) years were included. 5/50 were <1 year-of-age. Indications for PBC placement were spinal dysraphism (N = 36), central neurological impairment (N = 7), posterior urethral valves (PUV, N = 4), severe bilateral reflux (VUR, N = 2) and epispadias (N = 1). No conversion to open surgery nor intraoperative complications were reported. Mean operative time was 45(4.3) min. During a mean follow-up period of 22.9(17) months, 9 complications were reported, including device dislocation(1), non-febrile UTI(6), and peristomal leakage(2). No complications occurred in all patients ≤1 year-of-age. First button change was performed under anesthesia in the operating room. The second button change, which occurs after three months, was carried out exclusively by nursing staff. The third button change was performed in our specialized nursing clinic, where the caregiver is taught the procedure. From the fourth change onwards, the caregiver who has the option to receive the device at home can independently change the button and replace it on their own, without having to go to the hospital facility (3/50 patients, 6%). The rest of the patients (94%) replaced the button in the specialized outpatient clinic every three months.

Interpretation of results: The procedure showed high safety, with no intraoperative issues. Average operative time was 45 min, and during a 22.9-month follow-up, only 9 complications occurred, none in patients under 1 year. A structured follow-up allowed for caregiver training, promoting home management and reducing hospital visits, supporting PBC placement as safe and effective.

Conclusions: The implementation of percutaneous button cystostomy (PBC) shows high safety and effectiveness in managing neurogenic bladder-sphincter dysfunction. A structured nursing protocol facilitated caregiver training, enabling independent home management and reducing hospital visits.

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25F - Adherence to long-term self-training in patients with non-neurogenic urinary incontinence: Report and identification of predictive factors

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Introduction and aim of the study: Pelvic floor muscle training (PFMT), is the gold standard for the treatment of non-complicated urinary incontinence. However, PFMT is effective only if supported by constant self-training at home; this is necessary both for the achievement of rehabilitation goals during the treatment period and for their maintenance in the long-term period. The main objective of this study is to evaluate the adherence to self-training after outpatient treatment of patients with non-neurogenic urinary incontinence. The secondary objective is to identify possible predictive factors of adherence to the proposed self-training.

Materials and methods: A descriptive cross-sectional observational study was carried out involving the telephone administration of an *ad hoc* questionnaire. The questionnaire is anonymous and includes an anamnestic part and a part concerning the prosecution of the self-training at the end of the outpatient sessions, as indicated by the healthcare personnel. The interview was made during July 2024. The inclusion criteria are patients who underwent outpatient PFMT during 2023, age greater than 18 years old, consent to participate in the interview and data collection. The exclusion criteria are neurological disease, absence of consent to participate in the interview and data collection. The possible predictive factors of prosecution of self-training that were investigated are: age, body mass index (BMI), educational qualification, sports activity, whether he/she lives with the family or alone, chronic drug therapy, presence of physical pain, receiving or not a brochure for self-training.

Results: The study sample consisted of 151 people, both men (4,9%) and women (95,1%). 123 of them participated at the study (81.5% adherence). The average age was 64 years old (range 19–86). 74.0% of the people interviewed were continuing home perineal self-training at the time of questionnaire administration, while 26.0% stopped self-treatment. 53.1% of them admitted that they are unable to be consistent in medical treatment due to their personal aptitude. Moreover, most patients who did not continue self-training stopped after 3 months (68.8%), while 18.8% continued for a longer period, from 4 to 8 months, before abandoning; only 12.4% admitted to stopped doing the exercises immediately after the end of supervised sessions. A statistically significant correlation only emerged between the outcome and BMI ($p = 0.04$ Wilcoxon Test).

Interpretation of results: The data collected suggest that most patients interviewed continue self-training. BMI was the only predictive factor of adherence that we identify.

Conclusions: This survey shows a good adherence to the recommended self-training in outpatient settings. Furthermore, this investigation reveals the need to support patients with urinary incontinence with adequate tools for long-term self-management, as for example periodical meetings. The meetings could be done 3 months after outpatient therapy, because this is the period of most abandoned of self-training.

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26F - Pelvic floor awareness in female healthcare workers: A cross-sectional observational study and an educational program

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Introduction and aim of the study: Pelvic floor dysfunctions are very common within the female population and healthcare workers are particularly predisposed to them because they are subjected to manual handling of loads during daily work activities. During physical efforts, correct perineal contraction is essential to counteract the increase of intra-abdominal pressure. The aim of the study is to evaluate the possibility of educational programs in a cohort of healthcare female workers.

Materials and methods: A cross-sectional observational study was conducted in a rehabilitative hospital between May and June 2023. Participants, on a voluntary basis, completed an anonymous questionnaire consisting of two parts: the first part requested some anamnestic data, while the second one involved self-assessment on the conscious use of the pelvic floor. The only inclusion criterion was to be a female worker.

Results: The study sample was made up of 215 healthcare workers; 153 of them accepted to participate at the study (71,2%). The average age is 46 years old, and the prevalence of perineal symptoms is over 50%, included urinary incontinence and other lower urinary tract symptoms, and pelvic organ prolapse symptoms. Around 90% of the women know the functions of the pelvic floor, but just the 28% of them use the voluntarily pelvic floor counteraction during manual load handling. Significant correlations emerged between the responses to the questionnaire and the variables age, sporting and work activity, and previous perineal rehabilitation. Furthermore, 97% of healthcare workers involved consider information in this regard as useful and ask to receive a specific training.

Interpretation of results: A high prevalence of pelvic floor dysfunction and a poor conscious use of pelvic floor counteraction among female healthcare workers, suggest the importance to build a specific training and an educational program in order to prevent main causes of female pelvic dysfunctions.

Conclusions: Most of healthcare workers involved in our study, express the desire to receive a specific training about the correct use of pelvic floor muscles. Thanks to the results of our study, a special program of perineal education for healthcare workers was build up. It was made throughout an e-learning course offered during the second part of the year 2024.

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