Poster Session 10: Functional Urology
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MP 10.1

Estimating the real-world incidence of urethral complications after prostate cancer treatment: A population-based analysis

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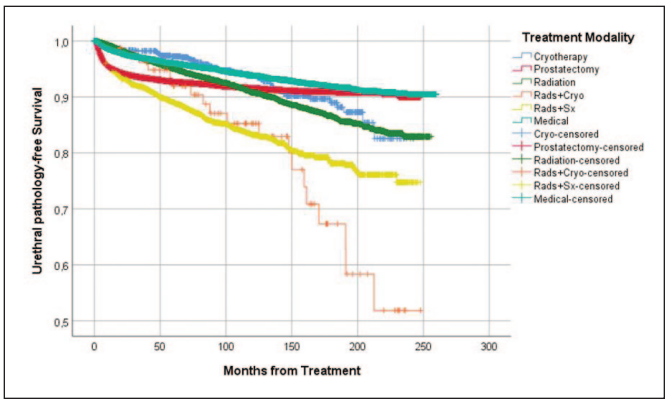
Introduction: There is a paucity of literature regarding the incidence of long-term urethral complications after prostate cancer treatment. Our objective was to assess the long-term incidence of urethral complications after different treatment modalities for prostate cancer.

Methods: All men with a diagnosis of prostate cancer from 2002–2021 from the Alberta Cancer Registry were included. The Discharge Abstract Data (DAD) and the National Ambulatory Care Reporting System (NACRS) were searched for different treatment modalities and urologic diagnosis/procedures. Patients were allocated into six different groups: radical prostatectomy (RP), radiotherapy (RT), cryotherapy (Cryo), medical treatment/observation (MT/O), RP+RT, or Cryo+RT. Urethral complication was defined as development of stenosis, fistula, or a urethral/bladder neck procedure >30 days after treatment (excluding TURP, diagnostic procedures, and incontinence). We compared the incidence of urethral complications among different groups using Cox regression

Results: A total of 47 387 patients with prostate cancer diagnosis were identified, with a median age of 66 years (IQR 60–74); 3140 patients developed a urethral complication at a median followup of 76 months. Table 1 shows the cumulative incidence of urethral complications. On Kaplan-Meier analysis (Figure 1), urethral complication rate was different among groups (p<0,001). On multivariable Cox-regression analysis including age (p<0.001) and stage p=0.002) at diagnosis, all treatment modalities (except for cryotherapy) were associated with development of urethral complications compared to MT/O. In particular, combined modalities such as RP+RT (HR 2.9, p<0,001) and RT+Cryo (HR 3.6, p<0.001) showed the highest risk. Complications after RP reached a plateau at 10 years, whereas other modalities continued to accumulate complications over the long-term.

Conclusions: Patients undergoing prostate cancer treatment are at risk for developing urethral complications in the long-term regardless of treatment type. Specifically, combined modalities pose a heightened risk.



MP 10.1. Figure 1. Kaplan-Meier curve for urethral pathology-free survival among different treatment modalities.

MP 10.1. Table 1. Cumulative incidence of urethral complications among different treatment modalities

Modality	n	1 year	5 years	10 years	15 years	20 years
Radical prostatectomy (RP)	10 838	5%	7%	9%	9%	10%
Radiation (RT)	14 488	1%	5%	10%	14%	17%
Cryotherapy (Cryo)	821	1%	3%	6%	11%	16%
RT + Cryo	80	1%	8%	17%	42%	48%
RP + RT	2035	5%	12%	17%	22%	26%
Medical/observation	19 124	2%	4%	6%	8%	9%
Global	47 386	2%	5%	8%	11%	13%

MP 10.2

Outcomes after chronic isolated epididymal pain (CIEP): A retrospective study

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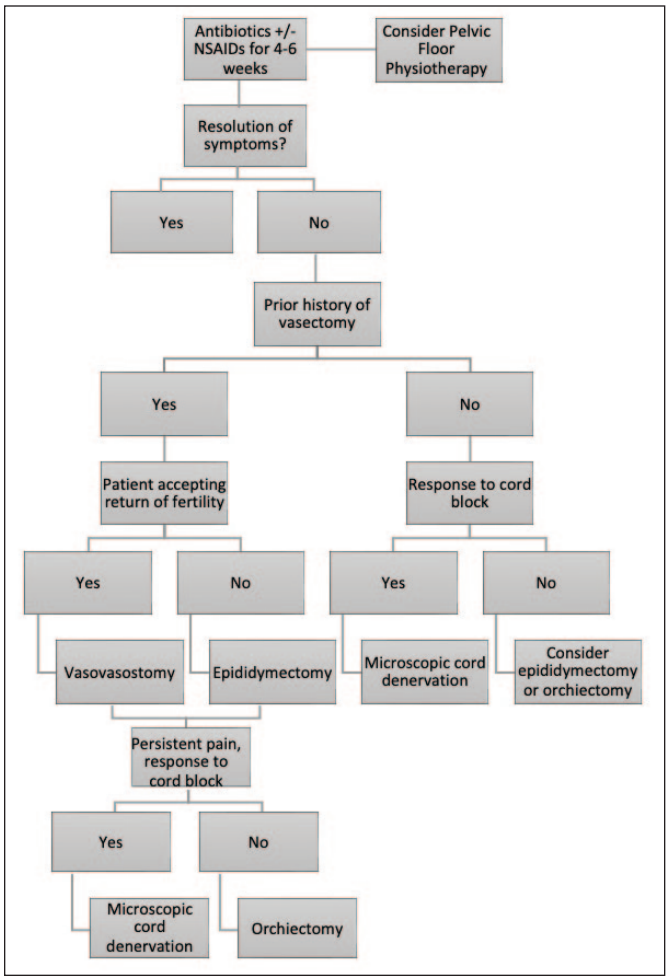
Introduction: Chronic epididymitis imposes significant physical and psychosocial distress on affected patients. Despite being a commonly encountered urologic condition, there remains a paucity of understanding and literature surrounding the management and natural history of isolated epididymal pain. Typically, patients who do not respond to conservative management undergo an epididymectomy; however, the literature on its efficacy is also scarce, with success rates varying widely from 10–90% in existing studies. Our goal was to better describe the etiology and natural history of isolated epididymal pain. Furthermore, we aimed to describe the rates of success associated with epididymectomy.

Methods: A retrospective, case-control study was conducted at the Manitoba Men's Health Clinic, with approval from the University of Manitoba REB. All patients presenting with chronic epididymitis, defined as discomfort or pain localized to the epididymis for at least three months, were identified. Information regarding patient demographics, past medical and surgical history, duration of pain, localization of pain, findings on previous ultrasounds, prior conservative therapies trialed, and response rates, as well as response rates to surgical therapy, were collected.

Results: From April 2022 to 2023, a total of 275 patients with chronic orchialgia were identified, and among them, 74 patients specifically presented with chronic isolated epididymal pain. The average duration of symptoms was as follows: 22.9% of patients experienced symptoms for 3–6 months, 10% for 6–12 months, and 67.1% for over 12 months; 13.5% (n=10) had associated ejaculatory pain, 8.1% (n=6) had lower urinary tract symptoms, and 4.1% (n=3) had erectile dysfunction. Ultrasound findings were observed in 68.9% of patients, with 31.1% having an epididymal cyst, 27.1% having a varicocele, 5.4% having a spermatocele, and 4.1% having a hydrocele. Among those who underwent conservative therapy, only 36.2% of patients reported a positive response. Surgical intervention was performed on 23 patients, including 16 who underwent an epididymectomy, three who underwent cord denervation, and two who underwent vasovasostomy and spermatocelectomy each. Most patients (n=13, 81.3%) who underwent an epididymectomy had a positive response to the surgical intervention, defined as

no pain on followup, while all patients undergoing other surgical interventions experienced a positive response.
Conclusions: Chronic epididymal pain is a condition with limited data surrounding its management. Prior to referral, a large proportion of patients did not undergo any conservative treatment, and of those that did, there was limited response rates. For those who underwent surgical intervention, all were pain-free on followup, except three patients who underwent epididymectomy.



MP 10.2. Figure 1.

MP 10.3

Outcomes of the artificial urinary sphincter among men with prior pelvic radiation: Device survival and impact of time since radiation

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Introduction: The artificial urinary sphincter (AUS) can improve continence and quality of life for men with post-prostatectomy incontinence; however, the exact impact of radiation on outcomes of the AUS is still unclear. Our objective was to describe our surgical revision rate in patients with prior radiation and determine if time since radiation significantly impacts the risk of device failure.
Methods: This was a retrospective cohort study using administrative records to identify all adult males who underwent a first-time AUS from 2012–2023 with a single surgeon. We only included patients who had received pelvic radiation prior to AUS. The primary outcome was any failure of AUS requiring repeat surgical intervention, while our secondary outcome was failure due to infection or erosion. Primary exposure was time, in months, from completion of radiation to AUS insertion. Cox regression analysis was used; $p<0.05$ was considered significant.
Results: We identified a total of 101 men who met inclusion criteria. The median age (interquartile range [IQR]) was 72 (69–76) years. The median time between radiation and AUS implantation was 93 (IQR 43–131) months. The most often used cuff size was 4 cm (43%). The median followup after AUS implantation was 24 months (IQR 9–56) months, with 16 men having repeat surgical intervention on the AUS. The five-year overall device survival was 87%. Time in months from radiation was not significantly associated with all-cause device failure (HR 1.00, 95% CI 1.00–1.01, p=0.37). Larger cuff size was significantly associated with a lower risk of all-cause device failure (HR 0.28, 95% CI 0.06–0.89, p=0.03). Similar results were seen with the secondary outcome specific to device infection or erosion.
Conclusions: Patients with prior radiation have a high device survival at five years. Time since radiation is not a significant predictor of device failure; however, a larger cuff size is significantly protective against repeat surgical intervention.

MP 10.4

Comparison of efficacy and efficiency of open and robotic approaches to complicated ureteral reconstruction

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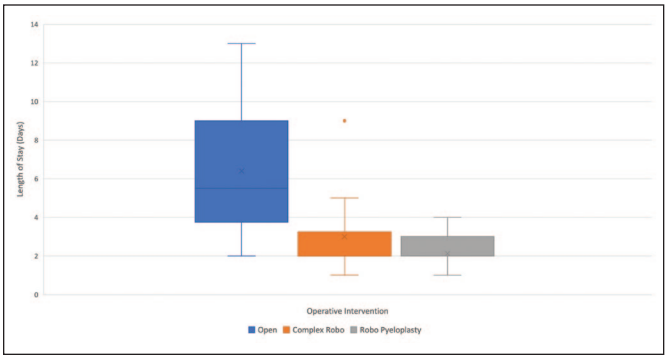
Introduction: With the increasing accessibility of robotic platforms, ureteral reconstruction surgeries, including pyeloplasty and reimplantation, have shifted from open to minimally invasive approaches. This study aimed to evaluate the disparities in outcomes and effectiveness between laparoscopic robot-assisted reconstruction (LRR) and open procedures (OP) for complex ureteral reconstruction, with robotic pyeloplasty (RP) serving as a benchmark.
Methods: We conducted a retrospective analysis of elective complicated upper tract reconstructions in adults at our tertiary care institution from 2013–2022. The comparison involved 14 patients undergoing LRR and 10 undergoing OP techniques. Reconstruction was considered complicated if there was a history of LRR or OP of the urinary tract, multiple ureteral strictures, or ureteral defects requiring grafts. Primary outcomes included length-of-stay (LOS) and success rate at one year. Median operative time was a secondary outcome.
Results: A total of 85 patients were identified, with 61 of them undergoing RP. Most LRR and OP patients (16/24) underwent upper tract reconstruction for iatrogenic stricture. Patient characteristics are detailed in Table 1. LRR and RP patients had a shorter LOS compared to OP (3.0 vs. 2.1 vs. 6.4 days, p≤0.001) (Figure 1), with a similar success rate at 12 months (86% vs. 93% vs. 80%, p=0.35). Blood loss during LRR differed significantly from RP (p=0.002) but not from OP (p=0.484). RP had the fastest median operative time, with no significant difference between LRR and OP (156 min vs. 220 min vs. 240 min, p<0.001).
Conclusions: LRR for ureteral reconstruction proves efficacious and less invasive than OP. Modern robotic techniques yield comparable outcomes in both complex and simple scenarios. In settings with robotic technology, LRR may be the preferred technique, offering decreased LOS and similar success rates to OP. Surgical technique selection may be influenced by surgeon experience and preference.



MP 10.4. Figure 1. In-hospital stay post-ureteral reconstruction.

MP 10.4. Table 1. Patient characteristics of those undergoing ureteral reconstruction

	Robotic Pyeloplasty	Laparoscopic Robot-Assisted Procedure	Open Procedures
Number	61	14	10
Age (Median)	44	52	55
M:F	22:39	6:8	4:6
Etiology	Congenital: 22 Stone/Endourologic: 24 Unknown: 15	Redo Pyeloplasty: 6 Iatrogenic Surgery: 7 Iatrogenic Radiation: 1	Redo Pyeloplasty: 2 Iatrogenic-Surgery: 7 Iatrogenic-Radiation: 1
Side (L/R/Transplant)	29/31/0	10/4/0	4/4/2
Median Operative Length (min) (IQR)	155.5 (127.5-180.75)	205 (185.25-248.25)	198.5 (166.5-279)
Procedure	Pyeloplasty: 61	Pyeloplasty: 6 Ureteral Reimplant: 4 Graft Ureteroplasty: 4	Ureteral Reimplant: 9 Ureteroureterostomy: 1

MP 10.5

Is detrusor overactivity with detrusor underactivity limited to the frail elderly?

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Introduction: Detrusor overactivity with detrusor underactivity (DO-DU) represents a challenging clinical condition associated with advanced age. This study compared an older cohort of DO-DU patients with a younger cohort to characterize differences based on age. In doing so, we hope to improve recognition and subsequent management of DO-DU.

Methods: Patients diagnosed with DO-DU on multichannel urodynamic studies (UDS) at a single centre from 2012–2022 were included. Patients were divided into two groups: the "younger" group (<70 years) and the "older" group (≥70 years). Demographics, symptoms, risk factors, and UDS findings between the two groups were compared using univariate statistical analysis.

Results: A total of 244 patients were identified and included in the analysis, with 119 (48.77%) in the younger group and 125 (51.23%) in the older group. There were 125 (51.23%) male patients and 119 (48.77%) female patients. The median age was 60 years (IQR 49–65) for the younger group and 76 years (IQR 73–80) for the older group. Multiple sclerosis was more prevalent in the younger group (10.92% vs. 2.40%, p=0.007), while diabetes mellitus (21.6% vs. 8.4%, p=0.004), history of incontinence surgery (13.6% vs. 5.9%, p=0.006), and history of pelvic radiation (9.6% vs. 2.5%, p=0.021) were more prevalent in the older group. Older patients reported a higher incidence of urgency (85.6% vs. 72.3%, p=0.01) and urge incontinence (74.4% vs. 55.5%, p=0.002) on history. Comparison of UDS findings demonstrated greater maximal cystometric capacity (400 ml vs. 350 ml, p=0.023), higher postvoid residual volumes (180 ml vs. 108 ml, p=0.001), and greater use of abdominal straining during voiding in the younger group (31.9% vs. 17.6%, p=0.009). The degree of DO and bladder contractility indices (BCI) were similar between the two groups (32 vs. 38 cm of H2O, p=0.251 and 58 vs. 62, p=0.253).

Conclusions: DO-DU is not exclusive to older patients. It can be diagnosed in individuals with risk factors, regardless of age. Clinicians need a high degree of suspicion in patients with risk factors for DO-DU in order to make the correct diagnosis and manage the condition appropriately.

MP 10.6

Antibiotic use in the treatment of post-cystoscopy urinary tract infections at the McGill University Health Center

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Introduction: Cystoscopy is central to urologic practice, permitting visualization and intervention in the lower urinary tract. It is performed in a variety of settings, with variable incidence of urinary tract infections (UTIs) depending on setting and infection-control protocol. Although relatively infrequent, post-cystoscopy UTIs represent a burden on the healthcare system and urologic patients alike. Similarly, unscrupulous use of antibiotics potentiates the entrenchment of antibiotic-resistant bacteria in the community. It is, therefore, important to discern between true UTIs and asymptomatic bacteriuria and treat accordingly.

Methods: A single-center, retrospective chart audit was conducted on all patients having undergone flexible cystoscopy at the McGill University Health Center (MUHC) from March 1 to April 30, 2023 (n=615). Charts were analyzed to determine the incidence of post-cystoscopy UTIs, defined as UTIs within 30 days of cystoscopy. Prescription patterns of antibiotics according to urine culture results before, during, or after cystoscopy we also analyzed.

Results: Eighty-eight (13.7%), 319 (51.9%), and 55 (8.9%) patients had a urine culture before, during, or after cystoscopy, respectively. Of these, 26 (31%), 83 (26%) , and 17 (31%) were positive. Symptomatic UTIs were documented in 16 patients (2.6%), with one, six, and four of whom had a positive urine culture before, during, or after cystoscopy, respectively. Fifty-six patients received antibiotics after cystoscopy (9.1%), with eight (1.3%) patients having both UTI symptoms and antibiotic prescription documented in their chart within 30 days of cystoscopy.

Conclusions: We estimate the rate of post-cystoscopy UTI to be between 1.3–9.1% at the MUHC. Whereas only 2.6% of patients had documented UTI symptoms, 9.1% of patients received antibiotics after cystoscopy, suggesting potential overtreatment of asymptomatic bacteriuria at the MUHC.

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MP 10.7

5 years of the Optilume® drug-coated balloon for recurrent anterior urethral strictures: A summary of ROBUST I, II, and III

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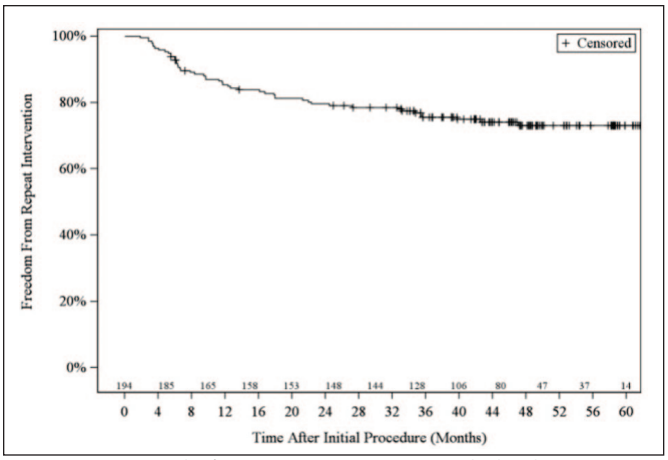
Introduction: The Optilume drug-coated balloon has been studied in three clinical investigations. ROBUST I (RB1), the first-in-man trial conducted as a single-arm, prospective, multicenter study (four sites, 53 subjects) followed by ROBUST II (RB2), early feasibility (five sites, 16 subjects), and ROBUST III (RB3), the randomized pivotal trial (79 Optilume subjects). Optilume data combined from all three studies is presented here.

Methods: A total of 194 subjects were treated with Optilume in RB1, RB2, and RB3 in Latin America, Canada, and the U.S. Men with anterior urethral strictures ≤3 cm and 1–4 prior endoscopic interventions were treated with Optilume. Followup was completed at three months, six months, and annually thereafter. All studies were designed to follow subjects through five years. RB1 has completed five-year followup, while RB2 and RB3 are currently at four-year and three-year followup, respectively. Outcomes included anatomic success at six months, International Prostate Symptom Score (IPSS), quality of life, freedom from repeat intervention, erectile function, flow rate (Qmax), and postvoid residual volume. Subjects receiving secondary treatment were considered failures. The safety endpoint assessed serious urinary events. Patients who failed standard-of-care therapy in the control arm of RB3 were allowed to cross over at six months and were followed.



MP 10.7. Figure 1. Freedom from repeat intervention in patients treated with Optilume.

Results: IPSS improved in all patients treated with Optilume from 22.6 at baseline to 11.5 at five years. Qmax had a sustained improvement through followup (7.2 to 13.2 mL/s). Freedom from repeat intervention, estimated by Kaplan-Meier, is approximately 73.1% at five-year followup (Figure 1). There was no impact on erectile function and no reported serious adverse events.
Conclusions: Subjects with recurrent bulbar strictures treated with Optilume exhibited improvement in studied outcomes through five years post-treatment, with demonstrably low recurrence rates.

MP 10.8

Optilume urethral dilation for recurrent urethral stricture disease

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Introduction: Recurrent urethral strictures impact patients' quality of life and necessitate effective treatment strategies. Optilume® is a paclitaxel-coated balloon dilator device that allows for endoscopic stricture dilation that purportedly offers improved outcomes over standard endoscopic management. This study sought to characterize real-world outcomes of patients undergoing Optilume® technology for the management of recurrent urethral strictures.
Methods: This is a single-center, retrospective cohort of patients undergoing Optilume urethral dilation for recurrent urethral stricture disease. Strictures were diagnosed via cystoscopy, retrograde urethrogram, and/or voiding cystourethrography to confirm stricture location and length. Information regarding patient demographics, number and type of prior treatments, and postoperative uroflow parameters were collected. The primary outcome was treatment failure, defined as the inability to pass a flexible 16 Fr scope through the treated area within 12 months after balloon dilation. Secondary outcomes were procedures for stricture recurrence after balloon dilation, including repeat endoscopic management and urethroplasty. Time to failure was evaluated with Kaplan-Meier survival analysis.
Results: Fifty-two patients treated by three fellowship-trained reconstructive urologists were included with a mean age of 45.7±17.5 years. The median followup time was 129 (80–325) days. The most common stricture etiology was idiopathic (67.3%). The majority of strictures were located in the bulbar urethra (98.1%), and the mean stricture length was 1.8±0.84 cm, with a median stricture diameter of 12 Fr. Among this cohort, 34.6% of patients had one prior endoscopic treatment, with the remainder having had ≥2 treatments. Urinary characteristics post-treatment demonstrated improved flow rate and postvoid residuals (PVR) at three months (17.1 mL/s, PVR 25 mLs) compared to pre-treatment baseline (10.5 mL/s, PVR 72 mLs). Seventeen (32.1%) patients experienced failure after treatment. The median time to failure diagnosis was 233 (146–330) days. Four patients (7.6%) went on to additional treatment (four endoscopic management, two urethroplasty).
Conclusions: Urethral balloon dilation with a paclitaxel-coated balloon (Optilume) offers durable clinical outcomes during short-term followup in a real-world cohort. The treatment results in improved urinary characteristics and provides a reasonable success rate. Further research is warranted to establish its long-term durability.

MP10.9

Surgical management for ureteroenteric strictures: A single-surgeon experience

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Introduction: Non-malignant ureteroenteric strictures (UES) following radical cystectomy are a well-documented complication, occurring in nearly 10% of open cystectomies and up to 25% robot-assisted cystectomies. These strictures subsequently increase the risk of infection, nephrolithiasis, and chronic kidney disease. Most patients are initially treated with endoscopic interventions. In cases where endoscopy proves ineffective, a significant portion of patients may be presented with the option of chronic nephrostomy tube placement instead of undergoing definitive surgical management, primarily due to the intricate nature of the surgical procedure. The objective of this study was to report our experience performing ureteroenteric reimplantation.
Methods: A retrospective analysis was conducted on patients who underwent ureteroenteric reimplantation for UES by a single surgeon from January 2016 to July 2023, with additional manual data input of patients. Demographic and surgical outcomes were extracted. Success was defined as the ability to render patients nephrostomy tube/ureteric stent-free as well as radiographic improvement. Descriptive statistics and stepwise regression were performed to assess predictors of operative success, complications, and length of stay.
Results: Thirty-two patients were identified, 20 male and 12 females, encompassing 41 renal units. Patient demographics are detailed in Table 1. All patients had preoperative nephrostomy tubes placed and 46% had previously unsuccessful endoscopic repair. The median length of stay was 10±7.1 days; 34% experienced Clavien-Dindo 3+ complications. A success rate of 96.9% was seen, with one failure secondary to cancer recurrence. Stepwise regression showed no factors predictive of length of stay or complications. Average length of followup was 40.1±51.6 months.
Conclusions: Ureteroenteric reimplantation offers a high probability of achieving a durable response despite its associated complexities, extended length of hospital stay, and early complications. These results underscore the importance of meticulous patient selection and surgical techniques and should encourage surgeons to prioritize surgical intervention when feasible, rather than resorting to chronic nephrostomy tubes. This cohort may have been preselected for increased complications and extended length of stay due to the high incidence of radiation-associated stricturing. Further research, involving larger patient cohorts and potentially robotic repair, is warranted to gain a more comprehensive understanding of this procedure and to enhance patient care and quality of life.

MP 10.10

How do surgical interventions for neurogenic lower urinary tract dysfunction impact quality of life?

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Introduction: Adult patients with neurogenic lower urinary tract dysfunction (NLUTD) may be offered surgical interventions for NLUTD symptoms; however, the relative impact of these on quality of life (QoL) is unclear. Our objective was to conduct a systematic review of studies evaluating QoL changes for different NLUTD surgical interventions.
Methods: A systematic review was carried using online databases. Adult patients with NLUTD who underwent bladder surgery were included. We excluded non-English language articles and those without a QoL assessment. Two independent reviewers screened the articles, and any discrepancies were resolved by a third reviewer. Standardized data extraction tables were used.
Results: A total of 1074 articles were screened and 15 were included for qualitative synthesis. Among the 12 studies that evaluated reconstructive surgery (augmentation, catheterizable channel, or diversion), nine assessed QoL at a single time-point post-intervention, and only three (n=94) included pre- and post-intervention assessments of QoL. Only one study used validated outcomes: the Qualiveen score improved by 20–28% across domains, and the SF-26 improved

5–28% across domains. The two studies with unvalidated QoL assessments showed 100–300% and 614% improvement in QoL. Three studies evaluated QoL after stress incontinence surgery; however, only two of these (n=58) addressed pre-post QoL. A year after advanced male sling placement, the overall assessment of continence QoL was 177% better and the validated ICIQ-SF score improved by 71%. After >1 year following midurethral sling placement, 68% felt their QoL had "improved," with a 2–4-point improvement on the ICIQ questions.
Conclusions: The literature supporting a change in QoL in adult NLUTD patients undergoing surgical interventions is extremely limited. While many studies report QoL, few have assessed it pre- and post-intervention, and many use unvalidated outcome measures. Prospective studies with longitudinal measures of QoL are necessary.

MP 10.11
Transvaginal vesicovaginal fistula repair: Efficacy and safety
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Introduction: Controversy still exists about optimal timing of repair and surgical approach for vesicovaginal fistula (VVF). We aimed to review our fistula patients regarding etiology, perioperative parameters, and outcome following transvaginal VVF repair.
Methods: Between 1995 and 2023, 84 women with VVFs underwent transvaginal repairs. All data were captured in a database, concurrent with treatment, or from the institutional chart. Data were retrospectively reviewed for etiology, previous repairs and surgery, clinical presentation, location of fistula, surgical parameters, complications, and success rate. The transvaginal approach involved a multilayer closure with monofilament absorbable sutures and local flap interposition. For the first 40 patients, suprapubic catheters were used, and for the remaining 44, urethral foley catheters were used. Catheter drainage was maintained for approximately four weeks. The outcome was determined by cystogram and symptoms. Success was fistula closure. Institutional ethics board approval was obtained.
Results: Mean patient age was 47 (median 49, range 24–81) years. All patients presented with continuous incontinence with the diagnosis confirmed on cystoscopy and cystogram. Two patients had concomitant ureterovaginal fistulas, one of which was repaired transvaginally simultaneously. Eighty-one of 84 (96%) had previous pelvic surgery, 21 (25%) prior pelvic malignancies, and seven had pelvic radiation. Etiology was hysterectomy in 64 patients (76%), childbirth (vaginal or C-section) in seven (8%), other surgery in 10 (12%), and radiation in three (2%). The mean time from fistula occurrence to repair was 14.6 (median 7, range 2–276) months. Mean fistula size was 7.5 mm (median 5, range 2–20). Fistula location was posterior to the trigone in 62 patients (74%), trigone in 13 (15%), and bladder neck in nine (11%). Twenty-six patients (31%) had had a previous failed repair. Seven (8%) had multiple failed repairs, both abdominal and vaginal. Eighty-two of 84 fistulas (98%) were successfully closed after one transvaginal repair, with a followup mean of 17 (median 9, range 1–142) months. Etiology of the two failures was radiation. One had a subsequent successful abdominal repair and the other an ileal conduit. The success for radiation-induced fistulas was lower than for other etiologies (p=0.0009). No difference in outcome was seen with either suprapubic or urethral catheter.
Conclusions: Transvaginal VVF repair is an efficacious treatment for VVFs. For its relative lack of morbidity and low cost, vaginal repair can be considered first as a surgical option.

MP 10.12
Short-term outcome of Optilume® in vesicourethral anastomotic stenosis
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Introduction: The off-label use of Optilume® for vesicourethral anastomotic stenosis (VUAS) has been rarely studied. This study sought to evaluate the short-term outcomes of Optilume in patients diagnosed with VUAS.
Methods: We conducted a retrospective chart review on patients who were diagnosed with VUAS and were treated with Optilume from April 2023 to January 2024 (ongoing). We descriptively presented the basic characteristics, frequency of previous treatments (dilations and/or bladder neck incision [BNI]) and their respective recurrence intervals, and Optilume recurrence-free (defined as successful cystoscopy) and recurrence interval.
Results: To date, we have included seven cases aged 64–83 years. The followup period ranged from 2–7 months. On average, patients had three dilations and/or one BNI before Optilume. Optilume recurrence rate was reported at 28.5% (2/7), with average recurrence intervals of 44.5 (38 and 51) days, while the other five cases (71.5%) have been recurrence-free for an average of 177.8 days (until Jan 12, 2024). The average Optilume recurrence-free interval of 139.7 (range 38–239) days for seven cases showed promising outcomes, while the average recurrence intervals after the alternative treatments that were used before Optilume in the same patient sample were dilation, 19 (8–42) days and BNI, 55 (30–80) days.
Conclusions: The study's preliminary findings indicate a promising short-term outcome (recurrence-free period) for Optilume, surpassing its counterparts (such as BNI and dilation) in VUAS treatment. A study with a larger sample size is warranted to draw a firm conclusion.

MP 10.12. Table 1. Patients' basic characteristics and outcomes of VUAS treatments (dilation, BNI, Optilume)

ID	Age (yr)	DM	HTN	CAD	Dilation (N)	Dilation average of recurrence interval (days)	BNI (N)	BNI average of recurrence interval (days)	Catheter dependency interval (days)	Optilume recurrence interval (days)	Optilume recurrence- free interval (days)
1	64	No	Yes	Yes	4	8	2	60	377	38	38
2	72	No	Yes	No	3	8	0	NA	113	No recurrence yet	239
3	83	Yes	Yes	Yes	3	15	0	NA	149	No recurrence yet	189
4	71	Yes	Yes	Yes	5	42	2	50	138	No recurrence yet	136
5	75	No	Yes	No	0	34	0	NA	NA	No recurrence yet	136
6	73	No	No	Yes	5	20	1	30	225	51	51
7	72	No	Yes	No	3	29	2	80	14	No recurrence yet	189
Average	72.9				3.2	22.3	1	55	169.5	44.5	139.7

MP 10.13

Examining pessary use and satisfaction in managing pelvic organ prolapse: Results from a multicenter patient survey

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Introduction: Vaginal pessaries are a common method of managing pelvic organ prolapse (POP), as well as different types of urinary incontinence. As a conservative option, they allow patients to maintain fertility and successfully improve overall quality of life; however, though they have many positive attributes, there are several reasons why patients may choose to discontinue using pessaries and proceed with surgery to treat their condition instead. This study aimed to examine the factors associated with successful and unsuccessful pessary fittings, explore ideal characteristics of a pessary from a patient's perspective, and explore patients' experiences of pessary use in treating POP.

Methods: Participants completed an online survey regarding pessary use and ideal characteristics of a pessary. Participants were recruited from social media advertisements, online support groups for women's health-related conditions, and pelvic floor clinics.

Results: We recruited 100 participants, of which 77 fully completed the survey. Respondents cited pelvic pain, excess vaginal discharge and odor, as well as difficulty with pessary placement as the most common issues related to pessary use (Table 1). Easy insertion, removal, and relief from side effects were the most commonly reported ideal characteristics for pessary use. Most participants reported some improvement from using a pessary but still noted lingering symptoms. Moreover, over half of the participants found it necessary to include an applicator to aid with pessary insertion and removal (Table 2).

Conclusions: Our study is one of the first to examine factors associated with a successful pessary fitting by exploring patients' personal preferences. Findings demonstrated that patients had important concerns with pessary use, and a high number either stopped or were considering stopping even when it improved their POP. While pessaries can help manage POP, further improvement is warranted to increase pessary use.

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MP 10.13. Table 1. Pessary users' experiences

Pessary insertion, n (%)	
By patients	44 (57.9)
By family, friends	5 (6.6)
By a professional	26 (34.2)
Other (pessary does not fit)	1 (1.3)
Experience of pessary insertion, n (%)	
Easy	29 (39.7)
Neutral	21 (28.8)
Difficult	23 (31.5)
Experience of pessary removal, n (%)	
Easy	19 (25.7)
Neutral	27 (36.5)
Difficult	28 (37.9)

Note: Missing responses were removed from the table, explaining why certain questions had less than 77 responses.

MP 10.13. Table 1. Pessary users' experiences

Experience of difficulty when cleaning the pessary, n (%)	
Yes	72 (94.7)
No	4 (5.3)
Difficulties/ issues experienced using pessary, n (%)	
Vaginal discharge/odor	24 (32.4)
Pelvic pain or pressure	26 (35.2)
Bleeding/open sores	9 (12.2)
Difficulty inserting or removing pessary	31 (41.9)
Urine leakage	31 (41.9)
Reduced amount of intercourse	14 (18.9)
Stopped using pessary/ considered stopping the use of the pessary n (%)	
Yes	31 (41.9)
No	36 (48.6)
Other	7 (9.5)
Benefits of using pessary, n (%)	
Improves sexual life	3 (3.9)
Improves confidence	31 (40.3)
Stops urine leakage - more comfortable laughing and coughing	16 (20.8)
Ability to exercise and move around more comfortably	46 (59.7)
Bulging reduced	59 (76.6)
Other	2 (2.8)
Improvement in symptoms since using the pessary, n (%)	
Been completely solved	11 (14.7)
Been improved somewhat, but there are still complications	45 (60)
Not improved condition at all	11 (14.7)
Other	8 (10.7)
Recommend pessary to others, n (%)	
Yes	73 (94.8)
No	4 (5.2)

Note: Missing responses were removed from the table, explaining why certain questions had less than 77 responses.

MP 10.13. Table 2. Desired pessary characteristics by participants

The ideal characteristics of a perfect pessary n (%)	
Disposable (no need to wash)	17 (22.1)
Easy insertion and removal	63 (81.8)
Side effect relief (bulging/pain/pressure relief, stops urinary leakage, etc.)	63 (81.8)
No displacement or friction	42 (54.5)
No or less vaginal discharge/odor	32 (41.6)
Softer and more flexible than existing pessaries	36 (46.8)
Autonomy for users (less reliability on clinicians/family/friends for pessary maintenance)	37 (48.1)
Other	3 (3.9)
Needs for applicator for pessary insertion n (%)	
Yes	44 (57.9)
No	32 (42.1)
The ideal price for a customized pessary n (%)	
<$50	30 (38.9)
$50-100	16 (20.8)
$100-200	16 (20.8)
$200-500	4 (5.2)
$500 or more	5 (6.5)
Not sure	6 (7.8)

MP 10.14

Mimicking urinary tract infections caused by uropathogenic *Escherichia coli* using a collagen-based tissue engineering model

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Introduction: Throughout a lifetime, 60% of women will have a urinary tract infection (UTI), and uropathogenic Escherichia coli (UPEC) will be isolated in >85% of these cases. Among UTI-affected patients, 20–30% will be exposed to recurrences (rUTI), leading to higher social and economic costs for the community. Indeed, some bacteria can invade uroepithelial cells, which provide isolation and protection through an F-actin network. This intra-bacterial community (IBC) allows bacteria to divide while being protected from antibiotics and the immune system. Bacteria can also invade deeper in the uroepithelial cells to create a quiescent intracellular reservoir (QIR). Antibiotics are not constantly effective, as demonstrated by rUTI, and their use can lead to significant complications, such as antibiotic resistance. Therefore, new strategies are required to prevent rUTI. Due to the low average rate of successful translation of 2D cell culture and in vivo animal models to clinical trials, new models, such as those produced by tissue engineering, are required. We have developed a 3D model of bladder mucosa using organ-specific cells and collagen gels.

Methods: Collagen gels populated with bladder mesenchymal cells created a stromal compartment. Bilayer urologic tissues were obtained by the addition of urothelial cells on the top of the constructs. After a week of horizontal expansion in submerged conditions, tissues were raised at the air/liquid interface for three weeks. The epithelium quality was evaluated, and tissues were infected with control BL21 E. coli or UPEC UTI-89 expressing GFP. They were infected for six hours before being rinsed and incubated for three additional weeks with antibiotics. Chitosan was then used to induce a resurgence of UPEC and mimic rUTIs

Results: After a six-hour infection period, we detected the presence of IBC in our tissue when UTI- 89 was used, whereas IBC was not seen with BL21. After UPEC infection, QIR was detected until three weeks of culture with antibiotics. After removing the upper urothelial layer using chitosan, UPEC resurged and infected the epithelial cells, except in conditions where antibiotic treatment was continued.

Conclusions: The presence of IBC is a rare occurrence. Therefore, we continue to optimize the infection parameters to increase it because the QIR number depends on the number of IBCs. Nevertheless, our model is unique, mimicking the different phases of the UTI cycle in a human context.

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MP 10.15

Process flow analysis of cystoscopy procedure time at the McGill University Health Center

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Introduction: Cystoscopy can be performed at bedside or, more commonly, in an outpatient clinic. Speed and efficiency are of paramount importance given the large number of urologic patients in Canada, which is only projected to rise with aging populations. Moreover, in single-payer healthcare systems, such as in Canada, it is important to optimize the distribution and use of limited material, personnel, and financial resources to permit more patients to have timely access to urologic care. To this end, we sought to map patient flow through the McGill University Health Center (MUHC) outpatient cystoscopy clinic.

Methods: A standardized patient survey was developed to assess registration and check-in time, nurse check-in time, duration of cystoscopy, and check-out duration. Patient age, sex, and indication for cystoscopy were also collected. Informed consent to participate in the study was obtained from 20 participants between November 2022 and April 2023.

Results: All time data are presented as mean ± standard deviation (SD) in hours (h) and minutes (min) (Table 1). Total duration of visit was 1h15±29 min. The primary bottleneck to patient flow was nurse check-in time at 35±27 min, i.e., 43±20 % of total time (tt) (3.2x cystoscopy duration). The second longest step in the patient encounter was check-out time at 15±12 min, i.e., 19±12% tt (1.02x cystoscopy duration). Registration check-in time was 11±4 min, i.e., 17±8 % tt (0.95x cystoscopy duration). Cystoscopy lasted 13±5 min, representing 20±9 % tt. In total, non-cystoscopy steps accounted for 1h2±28 min, i.e., 80±9% tt (5.16x cystoscopy duration).

MP 10.15. Table 1. Duration of cystoscopy visit steps

Step in cystoscopy process	Mean duration (SD)		Ratio of step: Cystoscopy duration
	Hours & minutes	%	
Registration desk check-in	11 min (4)	17 (8)	0.95
Nurse check-in	35 min (27)	43 (20)	3.20
Cystoscopy	13 min (5)	20 (9)	
Check-out	15 min (12)	19 (12)	1.02
Non-cystoscopy steps (overall check-in/out)	1h 2 min (28)	80 (9)	5.16
Total clinical time	1h 15 min (29)	100	

Individual steps in cystoscopy visit patient flow are listed, namely registration desk check-in, nurse check-in, cystoscopy time, check-out time, total non-cystoscopy time, as well as total clinical time. Data are presented in hours and minutes with standard deviations, or as percentages of total time with standard deviations. The ratio of individual steps to cystoscopy time is also presented, where applicable.

Conclusions: These data indicate that patient registration occupies most of the patient time at the MUHC cystoscopy clinic, with a small proportion of total time spent undergoing cystoscopy. Streamlining registration may improve patient satisfaction and improve access to urologic care.

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MP 10.16

Investigating continuous bladder irrigation: Quantifying unintended interruptions during CBI administration

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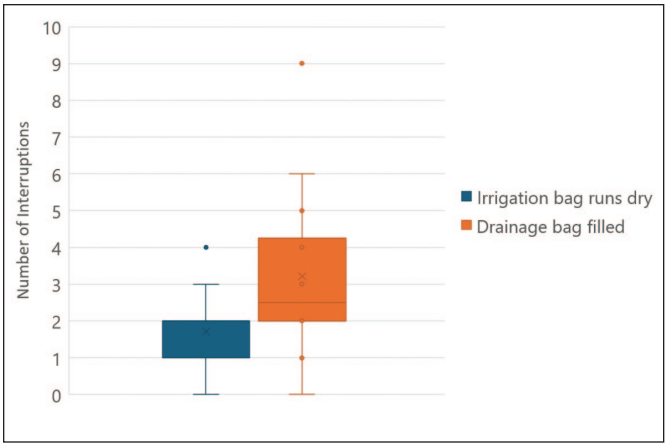
Introduction: Continuous bladder irrigation (CBI) requires diligent monitoring of irrigation and drainage bag volume, inflow rate, identification of clots or hematuria changes, and timely interventions. Unfortunately, CBI management is prone to errors and unintended interruptions, the extent of which is unknown. Herein, we sought to capture the nursing perspective in CBI management and the frequency of unintended interruptions.

Methods: Initial dimensions for a questionnaire were identified from a urologist's experience with CBI and used to construct a 36-item questionnaire, which was validated by a panel of five experts, including urologists, nurses, and researchers. Questions ascertained nursing experience, recorded CBI management challenges and workload, and captured perceived interruptions to CBI. Nurses in urology (n=10), emergency (n=14), and internal medicine (n=9) wards at one site in Toronto were interviewed.

Results: Figure 1 shows results from questions where participants reported instances of unintended interruptions, i.e., the irrigation bag running dry ceasing inflow or the foley bag reaching capacity interrupting continuous drainage, during a 12-hour shift. On average, participants reported two instances per shift of depletion of irrigation bags, ranging between 0–4. Additionally, they reported three instances per shift where the drainage bag reached capacity, ranging between 0–9.

Conclusions: Our data suggests that a patient may experience up to five interruptions during their 12-hour CBI. This issue may be exacerbated if the patient receives CBI for a duration greater than 12 hours and is under the care of more than one provider. These instances negate the "continuous" expectation of CBI and render it "interrupted bladder irrigation," the consequences of which may include recurrent clotting and longer hospital stay. Since self-reported measures may be skewed, we plan to monitor CBI in real time to accurately capture interruptions and timeliness of responses.



MP 10.16. Figure 1. Boxplot showing self-reported measures of unintended interruptions to CBI administration. Interruptions were categorized as instances where the saline bag ran dry and ceased continuous inflow, and instances where the drainage bag was filled and unable to drain bladder contents, ceasing continuous drainage.