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MP 6.1

Outcomes following surgery for chronic orchialgia

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Introduction: Chronic testicular pain is a common referral for urologists. Recognized causes for chronic orchialgia are many and include infection, trauma, and iatrogenic following vasectomy; however, up to 50% may be idiopathic in nature. Some patients remain in pain despite conservative treatment. Epididymectomy, vasovasostomy, and microdenervation of the spermatic cord (MDSC) are surgical options for chronic orchialgia reported in the literature. We aimed to assess the safety and efficacy of outpatient surgical intervention for patients with chronic orchialgia.

MP 6.1. Table 1. Demographic, perioperative, and followup data of epididymectomy, vasovasostomy, and MDSC for chronic orchialgia

Characteristic	Epididymectomy (n=18)	Vasovasostomy (n=6)	MDSC (n=5)
Average age (years)	43 (31–60)	40 (33–51)	43 (32–70)
Average duration of pain (years) Bilateral Unilateral	7.9 (2–30) 2 16	4.8 (1–10) 5 1	6.6 (3–10) 2 3
Generalized scrotal pain			4 (80%)
Localized epididymal pain	18 (100%)	6 (100%)	1
Prior scrotal surgery Vasectomy Varicocelectomy Spermatocelectomy Epididymectomy	14 (78%) 13* 1 	6 (100%) 6 	3 (60%) 1 2
Preoperative scrotal ultrasound	7	1	
Cause Idiopathic Post-vasectomy Chronic epididymitis Post-detorsion	 3 11 (61%) 3 1	 6 (100%) 	 3 2
Anesthetic Local with cord block Deep IV sedation with local	 17 (94%) 1**	 6 (100%)	 5 (100%)
Followup at 1 month postoperative Pain-free Mild residual pain	8 (44%) 6 (75%) 2 (25%)	4 (67%) 2 (50%)	5 (100%) 3 (60%)
Postoperative complications Hematoma	 1 (12%)	 2 (25%)	 2 (40%)

Values are presented as number only, number (range), or number (%). *2 vasectomy patients also underwent detorsion and varicocelectomy. **1 patient could not tolerate local anesthetic.

Methods: We evaluated our prospective database of patients who underwent outpatient epididymectomy, vasovasostomy, or MDSC under local anesthesia and/or IV deep sedation between August 2022 and January 2023. Surgical management was offered to patients who had orchialgia >3 months and had failed conservative management. To evaluate short-term safety and efficacy, we scheduled followup at 4–6 weeks postoperative. Patients who still had residual pain were scheduled for additional followup at 2–3 months. Demographic, perioperative, and followup data were collected.
Results: Twenty-nine patients underwent surgery for chronic orchialgia, 12 of whom are pending followup. Demographics, perioperative, and followup data can be seen in Table 1. Among epididymectomy patients, all had localized epididymal tenderness, 78% had prior scrotal surgery, and 75% were pain-free at 4–6 weeks postoperative. Only one patient had a postoperative complication consisting of a hematoma that did not require intervention. All epididymectomy surgeries except for one were performed using local anesthetic. Patients who underwent vasovasostomy all had post-vasectomy pain with localized epididymal tenderness; 50% were pain-free at 4–6 weeks postoperative. Of the MDSC patients, 80% had generalized scrotal pain, 40% had prior epididymectomies for orchialgia, and 60% were pain-free at 4–6 weeks postoperative. All vasovasostomy and MDSC surgeries were done under IV deep sedation plus local anesthetic.
Conclusions: Our ongoing study demonstrates that outpatient epididymectomy, vasovasostomy, and MDSC are safe and effective surgical options for patients with chronic orchialgia. Continuation of this study will aim to capture more patients undergoing these procedures and track their followup.

MP 6.2

Ambulatory buccal mucosal graft urethroplasty in elderly population: A comparative study

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Introduction: Ambulatory buccal mucosal graft (BMG) urethroplasty has been gaining popularity over the last two decades; however, no studies have spotlighted its role in the elderly. We aimed to assess the feasibility and safety of ambulatory compared to inpatient BMG urethroplasty in the elderly population in Northwestern Ontario.
Methods: We conducted a retrospective chart review of patients who underwent BMG urethroplasty at age 65 or older in our institution between August 2019 and May 2022. Demographics, clinical characteristics, postoperative course, and complications were recorded. The followup period was calculated until October 2022.
Results: Of a total of 79 BMG urethroplasties performed by a single surgeon over two-and-a-half years, 37 patients (46.8%) were aged 65 years and above. Fifteen patients (40.5%) had undergone BMG urethroplasty as inpatients (median hospital length of stay=24 hours), while 22 patients (59.5%) had undergone BMG urethroplasty as an ambulatory procedure (median length of hospital stay=3.1 hours). There were no significant differences between the two groups regarding comorbidities, ASA score, stricture length, operative time, urethroplasty type, or global response assessment. One patient from each group developed wound infection, which was treated as an outpatient with oral antibiotics. Recurrence occurred in 3/22 (13.6%) vs. 2/15 (13.3%) during the median followup of 15 vs. 39 months in outpatient and inpatient groups, respectively. In the inpatient group, one patient developed stress urinary incontinence. One inpatient patient developed recurrent urinary tract infection,

MP 6.2. Table 1. Clinical, demographic, and operative data of patients

	Outpatient (n=22)	Inpatient (n=15)	P
Age (years) Median (range)	69 (65–84)	72 (65–78)	0.82
Comorbidities, n (%)			
Coronary artery disease	7 (31.8)	7 (46.6)	0.49
Diabetes	6 (27.3)	4 (26.6)	0.96
Peripheral vascular disease	5 (22.7)	0 (0)	0.06
Obstructive sleep apnea	6 (27.3)	3 (20)	0.84
Hypertension	6 (27.3)	5 (33.3)	0.72
Stricture length (cm) Median (range)	3.1 (1–7)	4 (2–14)	0.2
Stricture site, n (%)			
Vesico-urethral anastomotic stenosis	4 (18.2)	1 (6.6)	0.62
Membranous	2 (9.1)	1 (6.6)	0.79
Bulbar	12 (54.5)	9 (66.6)	0.74
Penile	4 (18.2)	2 (33.3)	0.69
Pan urethral	0 (0)	2 (13.3)	0.15
Cause of stricture			
Idiopathic	4 (18.2)	3 (20)	0.89
TURP/TURBT/GL	11 (50)	6 (40)	0.54
Lichen sclerosis	1 (4.5)	1 (6.7)	0.77
Trauma	1 (4.5)	0	0.40
Radical prostatectomy	4 (18.2)	1 (6.7)	0.62
Hypospadias	0	1 (6.7)	0.40
Radiation	1 (4.5)	3 (20)	0.28
Number of previous endoscopic procedure Median (range)	3 (1–5)	3 (1–5)	0.32
ASA Median (range)	3 (1–3)	3 (2–3)	0.82
Global response assessment Median (range)	5 (3–5)	4 (3–5)	0.09
Urethroplasty type, n (%)			0.09
Dorsal onlay	13 (54.2)	12 (80)	
Ventral onlay	9 (37.5)	3 (20)	
Operative time (min) Median (range)	164 (100–210)	182 (120–280)	0.48
Length of hospital stay (hours) Median (range)	3.1 (2–5.25)	24 (24–72)	<0.001*
Complications, n (%)			
Wound infection	1 (4.5)	1 (6.7)	0.77
Recurrence	2 (9.1)	1 (6.7)	0.79
Stress urinary incontinence	0	1 (6.7)	0.40
Recurrent urinary tract infections	0	1 (6.7)	0.40
Success rate (no-recurrence rate)	19 (86.4)	13 (86.6)	0.40
Followup (months) Median (range)	15 (6–49)	39 (12–55)	

*Statistically significant at p≤0.05

which was treated with a low-dose prophylactic antibiotic. The success rates were comparable between the groups: 86.4% outpatient vs. 86.6.% inpatient (Table 1).
Conclusions: Our findings corroborate the evolutionary shift in the practice in our center that the inpatient urethroplasty has, to a considerable extent, been replaced with ambulatory BMG urethroplasty in the elderly population. Outpatient BMG urethroplasty in the elderly can be safe with no additional morbidity. The patient's age, comorbidities, stricture length, stricture location, and operative type do not appear to be factors for admission while the patient's access to healthcare, mobility, homecare support, and hospital discharge policies are key.

MP 6.3

The sublingual vaccine MV140 is dominant over prophylactic antibiotics for the prevention of recurrent, uncomplicated urinary tract infections in adult women: A cost-utility analysis

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Introduction: Recurrent, uncomplicated urinary tract infections (ruUTIs) in women are associated with burdensome symptoms, high antibiotic (Ab) use, and significant costs. The sublingual vaccine MV140 has demonstrated significant reduction in ruUTI rate in Canada (Kingston early experience study) and Europe (randomized placebo-controlled trial). This analysis examines the cost-effectiveness of MV140 as an alternative to prophylactic Ab (pAb) treatment for ruUTI prevention in adult women, in the Canadian healthcare setting.
Methods: A cost-utility model was developed to follow ruUTI patients over a 1.25-year time period through four health states: UTI-free survival (UFS), acute UTI (aUTI), pyelonephritis, and death. A decision tree was used to model the aUTI state, accounting for the effects of Ab resistance and choice of first-line Ab treatment, while transition probabilities in the Markov model were derived from a published direct comparison. Cost inputs included drug acquisition/administration, healthcare resource use, adverse events (AEs), and lost productivity, and were based on Canadian governmental resources. Utilities and disutilities were derived from published literature. The base case is deterministic; multiple one-way sensitivity analyses and probabilistic analyses (n=5000) were performed to assess model uncertainty.
Results: MV140 was associated with cost savings (-$1621) and increased quality of life years (QALYs; 0.01) as compared to pAbs, with an incremental cost-effectiveness ratio (ICER) of -$258 366 in the base case (societal perspective). MV140 remained dominant over pAbs in all scenario analyses, with cost-savings ranging from -$176 to -$2285 (Table 1).
Conclusions: MV140 represents a cost-effective alternative to pAbs in the Canadian healthcare system. Improving Ab stewardship will represent further public health benefits beyond those assessed in this model, including decreasing patient burden of disease and promotion of decreased Ab resistance.
Acknowledgements: This economic analysis was funded by Red Leaf Medical.

MP 6.3. Table 1. Incremental cost savings and benefits associated with MV140 as compared to pAb

	Incremental costs ($, MV140 vs pAbs)	Incremental QALYs (MV140 vs pAbs)	ICER ($/QALY)
Base Case (Deterministic)			
Base case (societal perspective)	-$1,621.07	0.01	-$258,366.09 (Dominant)
Key Scenario Analyses (Deterministic)			
Public payer perspective	-$175.53	0.01	-$27,976.63 (Dominant)
Time horizon: 1 year	-$1,251.13	0.01	-$235,579.91 (Dominant)
Community setting	-$1,580.59	0.01	-$254,943.44 (Dominant)
Nitrofurantoin usage favored	-$1,617.41	0.01	-$255,090.84 (Dominant)
pAbs lose efficacy post-treatment	-$2,284.91	0.01	-$285,503.31 (Dominant)

Note: Numbers may appear off due to rounding.
ICER: incremental cost-effectiveness ratio; pAbs: prophylactic antibiotics; QALYs: quality of life years

MP 6.4

Multi-institutional analysis of surgery for lichen sclerosus-induced penile urethral strictures: Confirming single-stage urethroplasty as the treatment standard

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Introduction: The optimal treatment of penile urethral strictures related to lichen sclerosus (LS) is controversial. The heart of the debate is if a single-stage reconstruction should be preferentially employed over a two-stage repair to minimize the number of surgeries. Additionally, depending on patient preference a urethrostomy is a viable option. The objective of this study is to compare single-stage urethroplasty, staged urethroplasty, and perineal urethrostomy for the treatment of LS-related penile urethral strictures (PUS).

Methods: A retrospective analysis was performed on patients undergoing urethroplasty for LS induced PUS at nine institutions. Meatal strictures <2 cm in length and panurethral strictures (>10 cm) involving the bulbar urethra were excluded from the study. Patients were reconstructed using either a single-stage approach, a staged technique, or perineal urethrostomy. The primary outcome was urethral patency at followup cystoscopy. Secondary outcomes were 90-day complications, sexual dysfunction, and chordee or urethrocutaneous fistula. Cox regression or two-tailed Chi-squared test were used for comparison.

Results: A total of 231 patients were analyzed, with an average age of 51.6 years and mean stricture length of 5.5 cm. Prior endoscopic treatments were performed in 197 patients (85.3%), with a mean of 3.0 prior endoscopic treatment attempts. Overall, 127 (55.0%) were managed with single-stage buccal mucosa graft (BMG) urethroplasty, 44 (19.0%) with staged BMG, and 60 (26.0%) with perineal urethrostomy. At a mean followup of 68.6 months, overall stricture-free rate was 81.0% (n=187). Clavien ≥2 90-day complications occurred in 17 patients (9.8%). De novo erectile dysfunction occurred in 13 patients (5.6%), chordee in seven (4.8%), and urethrocutaneous fistula in three (3.4%). On Mantel-Cox testing, there was no difference in stricture recurrence between techniques (15.7% vs. 27.3% vs. 20.0%, p=0.60) and no difference in 90-day complications (8.0% vs. 15.6% vs. 9.8%, p=0.45), erectile dysfunction (7.1% vs. 4.5% vs. 3.3%, p=0.55), chordee (6.7% vs. 0.0% vs. 3.6%, p=0.33), and urethrocutaneous fistula (2.2% vs. 9.1% vs. 0.0%, p=0. 0.17). On Cox regression analysis, obesity (BMI>35) was associated with higher rates of stricture recurrence (HR 2.31, 95% CI 1.28–4.17, p=0.006) while no other clinical variable was.

Conclusions: Favorable outcomes of single-stage techniques for the treatment of LS-induced PUS confirm single-stage urethroplasty as the treatment standard, especially when considering the decreased number of surgeries the patient is exposed to.

MP 6.5

How does the CUA neurogenic bladder guidelines risk stratification work with longitudinal followup?

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Introduction: There are no tested surveillance strategies for neurogenic lower urinary tract dysfunction (NLUTD). The CUA neurogenic bladder guidelines present a followup framework, and our previous work evaluated how well these stratify patients at baseline. Our objective was to evaluate the effectiveness of the of these guidelines with longitudinal followup.

Methods: We conducted a prospective, observational cohort study of adult NLUTD patients who required urodynamics. They underwent standardized medical history/questionnaires, renal imaging, and creatinine tests. The primary outcome was the correlation between risk category and need for urological management.

Results: We had 26 high-risk (HR) and 23 medium-risk (MR) NLUTD patients with one-year followup. The most common etiology of their NLUTD was SCI (78%). Mean neurogenic bladder symptom scores were similar between groups at year 1 (HR -11.2 vs. MR -11.2, p=0.43) and had a similar change from baseline (-0.75 vs. -1.1). Mean creatinine change was slightly higher in the HR group (+6.1 vs. +1, p=0.05). The number of people with ≥1 UTI during one-year followup was similar between groups (HR -26.9% vs. MR -23.1%). Among high-risk patients at one year, more were offered alternate bladder management (15.4% vs. 3.8%, p=0.09) and more needed bladder-related medication (15.4% vs. 7.7%, p=0.2). There was a greater risk of needing onabotulinum toxin in the MR group (3.9% vs. 11.5%, p=0.16), and no difference in needing surgery (3.9% vs. 3.8%, p=0.49). The number of people that had a newly identified need for alternate bladder management (HR -3.9% vs. MR-4.4%), medication (HR -3.9% vs. MR -4.4%), onabotulinum toxin (HR -3.9% vs. MR -13.0%), or bladder surgery (HR -3.9% vs. MR -3.9%) during the one-year routine followup visit was similar between risk groups (p>0.05). Approximately 1/3 of both HR and MR patients didn't accept recommended NLUTD interventions.

Conclusions: In a group of patients with NLUTD stratified by high and medium risk according to the CUA guidelines, there was a numerically greater chance of people in the HR group requiring change in bladder management or bladder medication change; however, our small sample size did not show statistically significant differences. This highlights the need for followup despite stable patient-reported bladder symptoms. Similar numbers of patients in the HR and MR groups developed a new need for NLUTD intervention during the one-year period, suggesting that stable HR patients may be able to lengthen followup intervals.

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MP 6.6

Sexual dysfunction after anterior urethroplasty

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Introduction: Sexual dysfunction is a potential complication of urethroplasty. Our objective was to assess the rates of erectile dysfunction (ED) and ejaculatory dysfunction (EjD) according to type of urethroplasty, namely between excision and primary anastomosis (EPA) and substitution urethroplasties in the anterior urethra, and whether these rates change over time.

Methods: A total of 151 patients who underwent anterior urethroplasty with either an EPA or substitution urethroplasty between September 2016 and August 2022 were included in this retrospective analysis based on a prospectively maintained database. ED was defined using the International Index of Erectile Function (IIEF), with ED defined as: severe (5–7), moderate (8–11), mild to moderate (12–16), mild (17–21), and no ED (22–25). EjD was assessed using the Male Sexual Health Questionnaire short form (MSHQ-SF). Endpoints were assessed at three and 12 months postoperatively. The Pearson Chi-squared test and the Mann-Whitney test were used to assess differences in median IIEF and MSHQ scores by urethroplasty type.

Results: The median preoperative IIEF score was 23. At three and 12 months postoperatively, the median IIEF score of the overall cohort improved from 16 to 19, respectively (p<0.05). The EPA group reported poorer erectile function at three months compared to their substitution counterparts (median IIEF 13 vs. 20, p<0.05). This difference in IIEF score between EPA and substitution urethroplasty disappeared at 12 months, predominantly because the EPA group improved their median IIEF score from 13 to 17 at three and 12 months, respectively. Specifically, 27.1% of EPA patients reported severe ED at three months followup compared to 17.1% at 12 months. The median total MSHQ score at baseline was 10. At three and 12 months, the median total MSHQ score of the overall cohort was 11 and 12, respectively. There was a statistically significant difference showing worse EjD of the EPA group compared to the substitution group at three months (median MSHQ 9.5 vs. 12.5, p=0.01). This difference disappeared at 12 months specifically because of the improvement in the median MSHQ score of the EPA group from 9.5 to 12 (p<0.05).

Conclusions: ED and EjD are relatively common following urethroplasty. ED and EjD rates worsen postoperatively at three months, more for the EPA group than for the substitution cohort; however, there is a significant recovery of ED and EjD mostly in the EPA group by the 12-month followup. This study supports the idea that sexual dysfunction after urethroplasty is a dynamic process and recovery favors EPA compared to the substitution group.

MP 6.7

Post-micturition incontinence does not impact patient-reported satisfaction after anterior urethroplasty

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Introduction: The definition of success from the patient's perspective is a predominant factor in urethroplasty outcomes; however, some patients after urethroplasty are not "satisfied" with their surgery despite unobstructed voiding. Post-micturition incontinence (PMI) is a potential complication in patients who undergo anterior urethroplasty. The goal of this study was to determine whether PMI rates varied according to type of urethroplasty, namely between excision and primary anastomosis (EPA) and substitution urethroplasties, and whether this difference changed over time. Moreover, we report the association between PMI and patient-reported satisfaction.

Methods: This is a retrospective study based on a prospectively maintained database. Patients with an anterior bulbar stricture treated between September 2016 and August 2022 with either an EPA or substitution urethroplasty were included. PMI was defined as a single question from a validated questionnaire (USS PROM): "How often have you had a slight wetting of your pants a few minutes after you had finished urinating and had dressed yourself?" Possible answers were "none" – 0 to "all the time" – 4. PMI was defined as any answer >1. Postoperative satisfaction was defined using a single question from the USS PROM: "Are you satisfied with the outcome of your operation?" Possible answers were "very satisfied" – 0 to "very unsatisfied" – 3. Satisfaction was defined as any answer <1. Patient-reported responses were assessed at three and 12 months postoperatively. The Pearson Chi-squared test was used to analyze differences in PMI and satisfaction by urethroplasty type.

Results: A total of 132 patients were included in the analysis; 56% of patients were incontinent preoperatively, with no difference between the EPA and substitution groups (p=0.450). At three months postoperatively, 44.7% of the overall cohort reported PMI. Specifically, 33.9% of EPA patients reported PMI compared to 56.4 % of their substitution counterparts (p=0.004). At 12 months, 50.1% of the overall cohort reported PMI but there no longer was a statistically significant difference between the EPA and substitution cohort at 12 months (p=0.098). Despite high rates of PMI at 12 months postoperatively, 73.6% of the overall cohort reported to be "very satisfied." Moreover, there was no association between PMI and self-reported satisfaction at three and 12 months.

Conclusions: More than 50% of patients with anterior bulbar strictures have PMI. Patients undergoing graft urethroplasties seem to be more affected by PMI than patients undergoing EPA at three months postoperatively but the difference in PMI seems to disappear at 12 months. Despite such high rates of PMI, this does not affect the degree of satisfaction, where more than 75% of patients reported being "very satisfied" after their operation. This study further emphasizes the complex interplay between what patients consider as satisfaction and what experts consider as complications in urethral reconstruction.

MP 6.8

Retrospective evaluation of intermediate-term patient outcomes and stricture recurrence following extended day surgery (XDS) urethroplasty

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Introduction: Traditionally, urethroplasty required a >24hr postoperative stay. COVID-19 restrictions on beds have resulted in transition to XDS urethroplasty with discharge <24hrs. We previously demonstrated that XDS has comparable short-term outcomes to inpatient procedures at our center. Our current study aimed to assess intermediate-term outcomes in XDS patients compared to inpatient procedures.

Methods: We conducted a retrospective, single-center, cohort study of all patients receiving XDS urethroplasty (discharge <24hrs) from November 2020 to June 2022. Urethral patency and patient-reported outcomes were assessed on postoperative cystoscopy and followup appointments. Patients were case-matched based on age, stricture location, and etiology to previous inpatient urethroplasties. Data was analyzed by Kaplan-Meier survival curves and Cox proportional hazard multivariate regression.

Results: A total of 171 patients underwent XDS urethroplasty during the study period. Mean age and stricture length were 52.2 years (SD 15.9) and 4.42 cm (SD 2.53cm), respectively. Most (96.5%, 165/171) patients had documented followup cystoscopy, with a mean followup time of 13.5 months. Urethral patency was maintained in 93.3% (154/165) of XDS and 93.0% (159/171) of inpatients. Median time to recurrence was 4.63 months for XDS patients and 6.00 months for inpatients, with no difference in recurrence-free survival between cohorts on Log-rank test ($\chi 2$=0.89, p=0.35). Multivariate regression identified lichen sclerosis (HR 7.7, 95% CI 2.3–29.7, p=0.001) and hypospadias (HR 15.2, 95% CI 3.7–66.3 p<0.0001) as independent risk factors for stricture recurrence. XDS was not associated with increased risk of urethroplasty failure on combined analysis (HR 0.91, 95% CI 0.61–3.8, p=0.36). On followup, erectile dysfunction was the most commonly reported adverse outcome (19/165; 12%), followed by sexual dysfunction (19/165; 12%) and persistent pain (15/171; 9%). Frequency of patient-reported outcomes was not significantly different between patient cohorts.

Conclusions: This is the first study to assess intermediate-term outcomes of XDS urethroplasty in Canada. Our findings show XDS urethroplasty has comparable success rates to prior standard of care requiring inpatient admission. This data supports XDS as an excellent treatment option for urethral strictures in a resource-limited universal healthcare setting.

MP 6.9

Critical analysis of U-Score and LSE classification as predictive tools for anterior urethroplasty outcomes: Delineating associations and diagnostic discrimination in a cohort of 1573 patients

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Introduction: Urethroplasty alleviates urinary tract obstruction due to urethral strictures. A few tools facilitate discussion of urethroplasty risks and benefits; however, they lack validation in large patient populations with long-term followup. This study examined the validity of the U-score (US) and LSE classification systems in predicting urethroplasty outcomes.

Methods: A retrospective review of anterior urethroplasties for 1573 male patients at a single center from 2003–2021 was conducted. Success was defined as easy passage of a cystoscope at followup with no urinary function change. Complications were defined as a Clavien >1 during the 90-day perioperative period. US and LSE scores were calculated and their associations with stricture recurrence and complications were evaluated using Cox and binary logistic regression. Receiver operating characteristic (ROC) analysis determined each score's diagnostic ability.

Results: Urethroplasty success was 92.0% at a median followup of 90 months. On Cox regression, both US (HR 1.74, 95% CI 1.52–1.99, p<0.001) and LSE (HR 1.47, 95% CI 1.35–1.61, p<0.001) scores were associated with increased risk of stricture recurrence. On ROC analysis, the area under the curve (AUC) for US and LSE were 0.71 (95% CI 0.66–0.75, p<0.001) and 0.69 (95% CI 0.64–0.74, p<0.001), respectively, indicating acceptable diagnostic prediction for stricture recurrence. Only 8.2% of patients experienced a 90-day complication. Both US (OR 1.19, 95% CI 1.04–1.37, p=0.01) and LSE (OR 1.13, 95% CI 1.01–1.26, p=0.03) scores were associated with an increased risk of complications. On ROC analysis, AUC for US and LSE were 0.57 and 0.55, respectively, indicating poor prediction for complications.

Conclusions: Both US and LSE are associated with increased stricture recurrence and complications. Both systems perform acceptably for predicting stricture recurrence but poorly when predicting 90-day complications. Hence, they require refinement to reliably predict urethroplasty outcomes.

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MP 6.10

4 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, II, and III). ROBUST I (RB1), the first-in-man trial conducted as a single-arm, prospective, multicenter study in Latin America (four sites, 53 subjects) followed by ROBUST II (RB2), early feasibility (five sites, 15 subjects), and ROBUST III (RB3), the randomized pivotal trial (79 Optilume, 48 control; 32 crossover; 14 pharmacokinetic group). Data combined from all three studies are presented here.

Methods: A total of 196 subjects were treated with Optilume in RB1, RB2, and RB3 in Latin America, Canada, and the U.S. Men with 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 with RB1 at four-year followup, RB2 at three-year followup, and RB3 at two-year followup, currently. The safety endpoint assessed serious urinary events. The effectiveness endpoint was the proportion of subjects with ≥30% improvement in International Prostate Symptom Score (IPSS). Secondary outcomes included quality of life, freedom from reintervention, erectile function, flow rate, and postvoid residual volume. Subjects receiving secondary treatment were considered failures.

Results: At the time of this abstract submission, IPSS improved in all patients treated with Optilume from 22.6 at baseline to 9.7 at two years. Peak urinary flow rate (Qmax) in patients treated with Optilume showed sustained improvement throughout followup (7.2–14.6 mL/s). Freedom from repeat intervention was 79% at two-year followup. There was no impact on erectile function and no reported serious adverse events.

Conclusions: Subjects with recurrent bulbar strictures treated with Optilume exhibited significant improvement in symptomatic and functional outcomes through four years post-treatment with demonstrably low retreatment rates.

MP 6.11

Intraoperative innovation in the surgical management of idiopathic retroperitoneal fibrosis: Alternatives to omental wrapping and traditional intra-peritonealization

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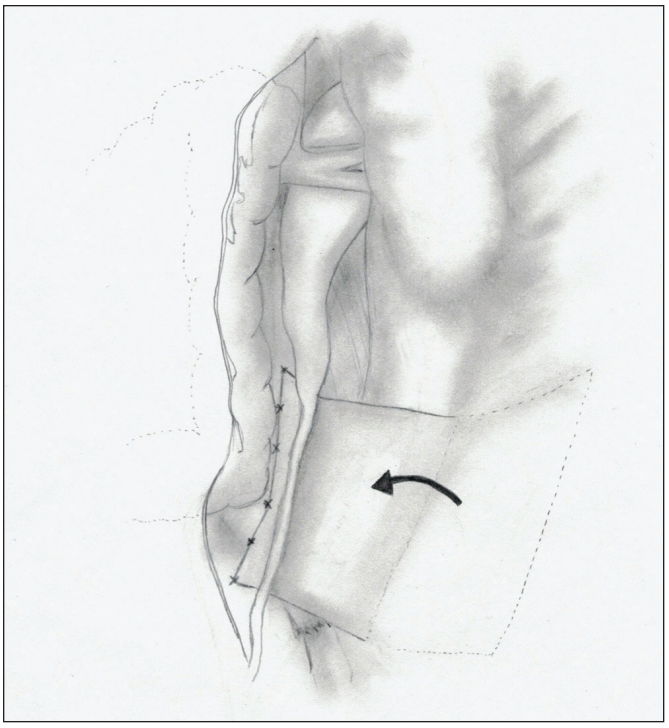
Introduction: Idiopathic retroperitoneal fibrosis (RPF) is an inflammatory, fibrotic process of the retroperitoneum that can progress to extrinsic obstruction of the urinary collecting system. Surgical treatments involve ureterolysis followed by isolation of the ureters from the fibrotic process. Two standard techniques include intra-peritonealization of the ureters or omental wrapping. We aimed to describe two alternative surgical techniques to isolate the collecting system from the fibrotic mass following ureterolysis for idiopathic RPF.

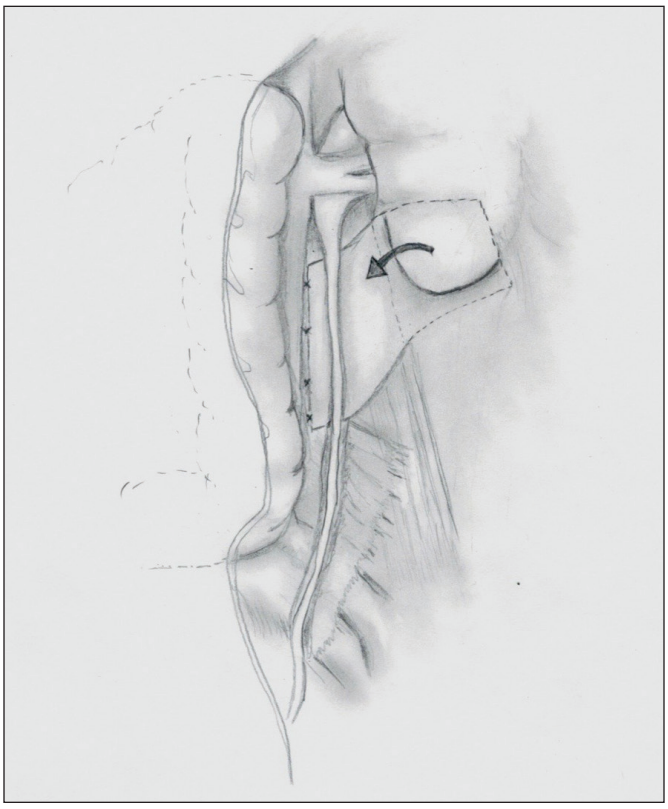
Methods: Three adult male patients underwent salvage ureterolysis at our institution (two bilateral, one unilateral) from 2017–2022. Double-J stents were placed at the start of each case. After performance of the traditional "split and roll technique" to free the ureters from the fibrotic mass, flap coverage over the fibrotic bed was performed to separate the ureters from the affected tissues. In Case A and B, creation of an anterolateral peritoneal flap (Figure 1) was performed. In Case C, a combined Gerota's flap (Figure 2) and anterolateral peritoneal flap technique was used. Both techniques provided a well-vascularized tissue layer for interposition while maintaining trajectory of the ureters with avoidance of ureteric kinking. Stents were removed at six weeks postoperative. Followup included diuretic renography and computed tomography (CT) or ultrasound at 3–4 months postoperative.

Results: Postoperative diuretic renography for all patients demonstrated no evidence of obstruction. Case A imaging at three months revealed persistent unilateral hydronephrosis, which improved on later imaging. Case B and C imaging showed no hydronephrosis. All patients continue to be followed and have stable renal function without the need for further intervention.

Conclusions: Idiopathic RPF continues to be a rare yet challenging condition to treat. We describe reliable alternatives to traditional surgical techniques during ureterolysis for patients having failed medical management.



MP 6.11. Figure 1. Creation of anterolateral peritoneal flap.



MP 6.11. Figure 2. Creation of Gerota's flap.

MP 6.12

Laparoscopic-assisted minimal incision pyeloplasty: Early experience with a novel technique

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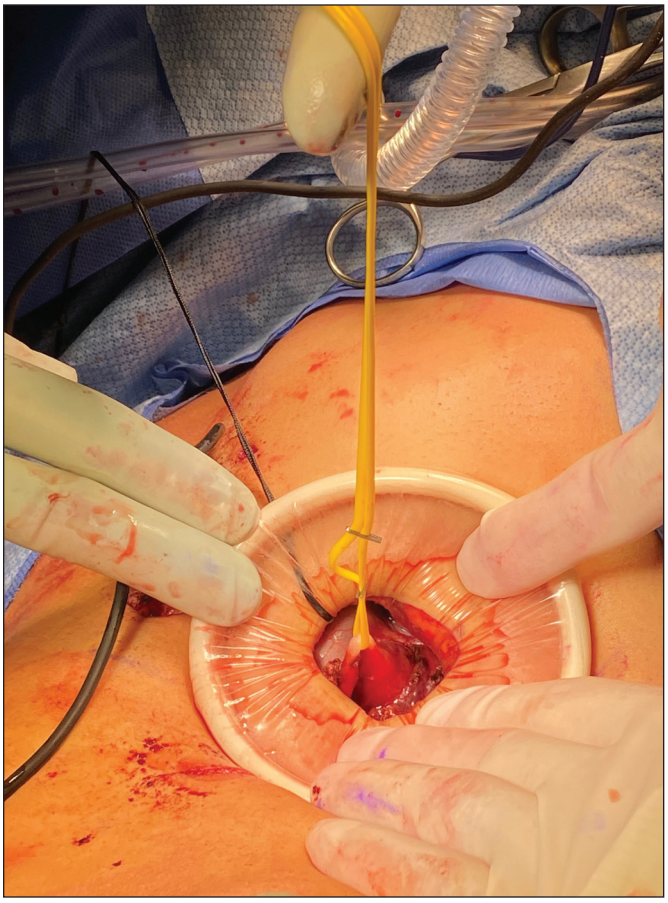
Introduction: Laparoscopic pyeloplasty is the standard treatment for ureteropelvic junction obstruction (UPJO) in adult patients; however, intracorporeal anastomotic construction can be technically challenging and time-consuming. Extracorporeal maneuvers have been described for laparoscopic pyeloplasty in the pediatric population but not in adult patients. The goal of our study was to determine the feasibility of a modified pyeloplasty technique using an Alexis® wound retractor to aid extracorporeal anastomosis creation in adults (Figure 1).

Methods: We conducted a retrospective chart review of all pyeloplasty procedures (14 conventional/pure laparoscopic approach; 14 modified approach) at our institution from 2019–2022. Two-sample t-tests were used for comparative statistics.

Results: The modified technique had significantly less operative time (181.2 vs. 218.9 minutes, p=0.03) and similar hospital stay (2.6 vs. 2.9 days, p=0.7) when compared to the conventional (pure laparoscopic) approach. Postoperative diuretic renography revealed resolution of obstruction in all patients in the modified group and 92.9% of patients in the conventional group. All patients across both cohorts reported symptomatic improvement. Two patients had Clavien-Dindo grade I complications with the modified technique. The laparoscopic approach had urine leaks occur in three patients, two requiring nephrostomy tube insertion (Clavien-Dindo grade IIIA). There were no wound complications or hernias in the Alexis® retractor group. Patient demographics are listed in Table 1. Results and complications are outlined in Table 2.



MP 6.12. Figure 1.

MP 6.12. Table 1. Patient demographics and clinical characteristics

Characteristics	Modified	Laparoscopic
Patients	n = 14	n = 14
Age (years)	18-72 (44.68 +/- 18.57)	18-78 (42.64 +/- 19.77)
Sex (M, F)	3, 11	5, 9
Side (left, right)	6, 8	7, 7
Crossing vessel	10 (71.6%)	10 (71.6%)

MP 6.12. Table 2. Postoperative outcomes and complications

Parameters	Modified	Laparoscopic	p-value
Surgery time (min)	131 – 226 (181.21 +/- 28.95)	172 – 299 (218.92 +/- 36.64)	p = 0.0325*
Foley removal (days)	1.14 +/- 0.36	1.31 +/- 0.63	p = 0.4286
Drain removal (days)	2.2 +/- 0.56	2.08 +/- 0.51	p = 0.6164
Length of stay (days)	2.64 +/- 0.75	2.86 +/- 1.91	p = 0.7068
Stent removal (days)	34.29 +/- 7.06	35.69 +/- 11.24	p = 0.8525
Pre-operative function	42 +/- 10.69	42.33 +/- 5.88	p = 0.7343
Post-operative function	42.22 +/- 9.01	42.92 +/- 6.24	p = 0.8216
Complications (%)	2 / 14 (18.1%)	4 / 14 (28.5%)	-
Urine Leak (%)	0	3 / 14 (21.4%)	-
Pyelonephritis	0	0	-
Sepsis (%)	0	1 / 14 (7.1%)	-
Secondary stones	0	1 / 14 (7.1%)	-
Anastomotic stenosis	0	0	-
Hernia Rate	0	0	-
Cellulitis (%)	1 / 11 (9.1%)	0	-
Improved pain (%)	14 / 14 (100%)	14 / 14 (100%)	-
Improved drainage (%)	14 / 14 (100%)	13 / 14 (92.9%)	-

Conclusions: Extracorporeal anastomosis creation using an Alexis® wound retractor during laparoscopic pyeloplasty is both efficient and efficacious for the treatment of adult UPJO. Perceived technical ease by surgeons makes this a compelling alternative to conventional laparoscopic pyeloplasty. Further study in larger patient cohorts is needed prior to wide adoption of this technique.

UP 6.1

Management of radiation-induced storage symptoms with onabotulinum toxin A

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Introduction: Radiation therapy for pelvic malignancies can lead to delayed bladder complications. Hemorrhagic cystitis due to radiation is often a focus of research and publications; however, storage symptoms are a common complication urologists must address. Storage symptoms are often managed like overactive bladder, including the use of onabotulinum toxin A (OnaBot A).

Methods: We conducted a retrospective study of patients that had been treated at Rockyview General Hospital from 2010–2022 with OnaBot A due to storage symptoms with a history of pelvic radiation. Data were collected from the electronic medical records with ethics approval from the University of Calgary.

Results: Twenty-one patients were identified with an age range of 65–90 years, comprised of 16 male and five female patients. Male patients' pelvic radiation was for prostate cancer while the female patients had prior gynecological, colorectal, or anal cancer (Figure 1). Urodynamics was available on 11 patients (nine male, two female). Response to OnaBot A was categorized as: mild, good, or nil response based on history from their followup. Three patients had nil response, 14 patients had good response and their bladder symptoms became manageable, while four patients had mild response (Figure 2). Patient-reported outcome questionnaire data was available incompletely pre- and post-procedure. The dosage of OnaBot A was 100 units for 85.7% of the patients, while 9.5%

had 200 units and 4.8% had 300 units. Patients returning for repeated injections were used as a surrogate for efficacy.

Conclusions: Patients who have refractory storage symptoms with history of radiation cystitis can be offered OnaBot A. These patients are complex cases, as they can have both urethra and bladder dysfunction. More formal use of urodynamics and patient-reported outcomes would be useful to characterize and report results.

References:

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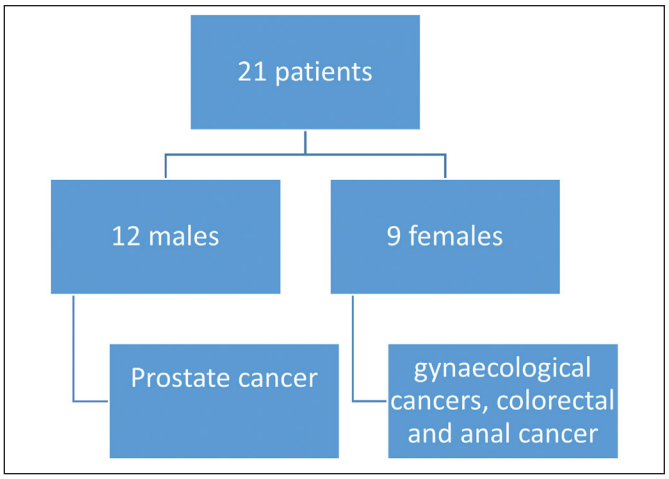
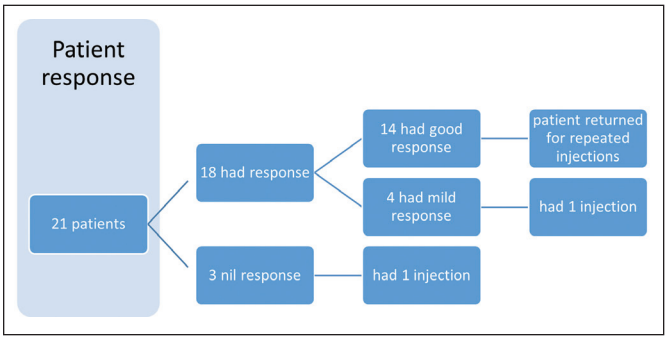


UP 6.1. Figure 1.



UP 6.1. Figure 2.