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MP-12.3

Urinary tract reconstruction with enterocystoplasty after radiation for pelvic cancer

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Introduction: As an alternative to cystectomy after radiation (RT), enterocystoplasty (EC) ± ureteral reimplantation or continent catheterizable channel (CC) brings the potential benefit of preserving the lower urinary tract (LUT). We report outcomes in all patients who underwent EC after RT.

Methods: This is a retrospective series of all post-RT patients who underwent EC for reconstruction from 1994–2021. Complications and functional results were recorded.

Results: Thirty-six patients (18 women,18 men) were identified. Ten patients, post-chemo-RT for colorectal cancer, underwent EC after partial cystectomy ± ureterectomy (group 1). Twenty-six after RT for prostate (n=7), gynecologic (n=13), colorectal (n=5), and liposarcoma (n=1) had surgery due to RT complications (group 2). The mean age was 58 years (median 58.5, range 33–76). All patients had EC and 24 (67%) had simultaneous ureteral reimplants into an intestinal limb (n=17) or into the bladder (n=7), with 16 having bilateral reimplants. Reimplants were done for post-tumor obstruction (group 1) or post-RT (group 2). Eight in group 2 had simultaneous CCC. The median length of stay (LOS) was nine days (4–25) and was shorter in group 2 vs. group 1; 8 (interquartile range [IQR] 6–10) vs. 13 (IQR 10–14) (p=0.0039). No <30 days surgical reintervention was prompted by the reconstruction. After a median of 38.5 months (range 2–195), nine patients (29%) required interventions, including four operations (one parastomal hernia, one vesicovaginal, two vesico-cutaneous fistulae), two ureteral anastomotic stricture dilations, and three cystolapaxies. Reintervention rate was similar in the groups. Twenty-three of 28 non-stoma patients void spontaneously, three perform intermittent catheterization, and two have catheters. Seven of 8 CCC patients do intermittent catheterization and one is awaiting vesicocutaneous fistula repair with a catheter. Thirty-two of 36 patients considered their management to be successful.

Conclusions: Prior pelvic RT is not a contraindication to EC with or without ureteral reimplantation and/or CCC. Acceptable functional outcomes and morbidity can be achieved.

MP-12.5

The outcomes of urinary diversion for neurogenic vs. non-neurogenic bladder dysfunction: A 10-year, single-center experience

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Introduction: We aimed to evaluate the results of urinary diversion for non-oncological bladder conditions.

Methods: We conducted a retrospective cohort study for 87 patients who underwent urine diversion for bladder dysfunction due to non-oncological indications over the last 10 years. According to the indication of urine diversion, the cohort was grouped into group I, neurogenic bladder (NGB), and group II, non-neurogenic bladder (non-NGB). We evaluated baseline demographic information, surgical indications, and operative data. The early outcomes were reported after four weeks following surgery and the late outcomes were reported after a minimum of six months of followup.

Results: Forty-four patients (55.6 %) suffered early postoperative complications during the first four weeks following surgery. These complications were more common in patients with NGB than in the non-NGB group (53.3 % vs. 44.4 %). Ileus was the most frequently encountered early postoperative complication in 22 (25.3%) patients and it was significantly higher in the NGB group (31.7% vs.11.1%, p=0.041). The late outcomes after a minimum of six months followup revealed an overall improvement of urological symptoms in 65.5% of patients (n=57), and this rate was higher in patients with non-NGB than NGB (74.1% vs. 61.6%) (Table 1).

Conclusions: While urine diversion for non-oncological bladder dysfunction can provide a reasonable level of symptom control, it has been associated with adverse outcomes. The overall early complications tend to be higher in NGB patients while the long-term ones are higher in non-NGB patients. Postoperative Ileus is more frequent and significantly higher in neurogenic bladder patients.

MP-12.6

Long-term followup from the ROBUST III study: Interim two-year results

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Introduction: Recently published results from the ROBUST III study have shown that the Optilume drug-coated balloon (DCB) provides a significant improvement over standard of care endoscopic management in the treatment of anterior urethral strictures with regards to anatomic success, symptom improvement, and urinary flow at one year. Followup is ongoing for subjects in ROBUST III, with interim two-year followup presented here.

Methods: A total of 127 subjects were randomized in a 2:1 fashion at 23 sites, 79 treated with Optilume and 48 treated with standard of care. Followup past one year was limited to those treated with the Optilume DCB. Followup for two years is ongoing, with 29 of the 79 subjects completing two-year followup at the time of the writing of this abstract. Eligibility criteria included anterior strictures with ≥2 prior treatments, length ≤3 cm. Long-term endpoints included freedom from repeat treatment, International Prostate Symptom Score (IPSS), and peak urinary flow rate (Qmax).

Results: Subjects randomized to the Optilume DCB had an average of 3.2 prior treatments and an average stricture length of 1.6 cm (46% ≥2 cm), with 8/79 (10.1%) having penile strictures and 9/79 (11.4%) having prior pelvic radiation. IPSS remained significantly improved, from 22.0 at baseline to 9.7 at two years (p<0.001). Qmax also remained significantly improved, from a baseline value of 7.6 mL/sec to 13.7 mL/sec at two years (p<0.001). Freedom from repeat intervention for subjects treated with the

MP-12.5. Table 1. Early and late outcomes of urine diversion patients post-non-oncological bladder conditions

Early & Late outcomes	Overall (n=87)	NGB (n=60)	Non-NGB (n=27)	p
Early outcomes within 4 weeks postoperatively				
Patients with early complications	44 (50.6%)	32 (53.3%)	12 (44.4%)	0.443
Fever	13 (14.9%)	13 (21.7%)	0 (0%)	0.008*
Pelvic infection/abscess	4 (4.6%)	4 (6.7%)	0 (0%)	0.306
Wound infection	12 (13.8%)	4 (6.7%)	8 (29.6%)	0.007*
Pneumonia	2 (2.3%)	2 (3.3%)	0 (0%)	1.000
UTI	4 (4.6%)	4 (6.7%)	0 (0%)	0.306
Ileus	22 (25.3%)	19 (31.7%)	3 (11.1%)	0.041*
Sepsis	1 (1.1%)	1 (1.7%)	0 (0%)	1.000
Blood loss + transfusion	4 (4.6%)	4 (6.7%)	0 (0%)	0.306
Cardiac complications (Arrythmias/NSTEMI)	3 (3.4%)	1 (1.7%)	2 (7.4%)	0.226
Reoperation (Acute surgical complications)	2 (2.3%)	2 (3.3%)	0 (0%)	1.000
Late outcomes after 6 months followup				
Patients with late complications	49 (56.3%)	33 (55%)	16 (59.3%)	0.711
Patients with stoma complications**	27(31%)	17(28.3%)	10(37%)	0.378
Stoma leakage	13 (14.9%)	7 (11.7%)	6 (22.2%)	0.381
Stoma stenosis	9 (10.3%)	6 (10%)	3 (11.1%)	0.695
Stoma hernia	10 (11.5%)	6 (10%)	4 (14.8%)	0.503
Stoma site pain/bleeding	1 (1.1%)	1 (1.7%)	0 (0%)	0.617
Stoma retraction	2 (2.3%)	0 (0%)	2 (7.4%)	0.090
Anastomotic ureteric stricture	2 (2.3%)	2 (3.3%)	0 (0%)	1.000
Stones (ureters, kidney)	17 (19.5%)	13 (21.7%)	4 (14.8%)	0.456
Patients with wound complications**	11(12.6%)	5 (8.3%)	6 (22.2%)	0.088
Wound separation/incisional hernia	8 (9.2%)	3 (5%)	5 (18.5%)	0.101
Sinus/fistula formation	4 (4.6%)	2 (3.3%)	2 (7.4%)	0.585
Recurrent wound infection/abscess	2 (2.3%)	1 (1.7%)	1 (3.7%)	0.527
Reoperation (persistent symptoms)	10 (11.5%)	7 (11.7%)	3 (11.1%)	1.000
Hydronephrosis/renal impairment	6 (6.9%)	3 (5%)	3 (11.1%)	0.369

Optilume DCB was significantly increased as compared to the repeat intervention rate for standard endoscopic management at one year. No late-onset treatment-related adverse events were observed. Two-year followup is expected to be complete by the time of abstract presentation.
Conclusions: The Optilume DCB continues to exhibit significant improvements in symptoms, flow, and reintervention rates through two years post-treatment in a difficult-to-treat patient population and represents an important new tool in the urologist's armamentarium.

MP-12.7
Ambulatory buccal mucosal graft urethroplasty in the geriatric population: Comparative study

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Introduction: Ambulatory buccal mucosal graft (BMG) urethroplasty has been gaining popularity over the last two decades. We aimed to assess the feasibility and safety of BMG ambulatory urethroplasty in the geriatric population compared to inpatient urethroplasty.
Methods: A retrospective chart review of patients who underwent BMG urethroplasty at the age of 65 or above in our institution between August 2019 and July 2021. Demographics, patient characteristics, postoperative course, and complications were recorded.
Results: Over two years, a total of 73 BMG urethroplasties were performed by a single surgeon. Of these, 31 patients (42.4%) were found to be above the age of 65. Fifteen patients (48.3%) had undergone BMG urethroplasty as inpatients, while 16 patients (51.6%) had undergone BMG urethroplasty as an ambulatory procedure. The median age was 69 (65–84) years in the outpatient group compared to 72 (65–78) years in the inpatient group. There were no significant differences in the comorbidities, American Society of Anesthesiologists score, stricture length, operative time, urethroplasty type, or global response assessment between both groups. The length of stay was significantly shorter in the outpatient group, with a median of four hours compared to 24 hours for the inpatient group. One patient in each group had to be seen in the emergency room a few days after discharge for suspicion of wound infection treated with oral antibiotics as outpatients (Table 1).
Conclusions: Outpatient BMG urethroplasty in the elderly is feasible, with no added morbidity to the patients. Patient age, comorbidities, stricture length, stricture location, and operative type did not seem to play a factor requiring readmission. Larger studies are needed.

MP-12.7. Table 1. Clinical demographic and operative data of geriatric urethroplasty patients

	Outpatient (n=16)	Inpatient (n=15)	p
Age years, median (range)	69 (65–84)	72 (65–78)	0.67
Comorbidities, n (%)			
Coronary artery disease	6 (37.5)	7(46.6)	0.61
Diabetes	6 (37.5)	4 (26.6)	0.51
Peripheral vascular disease	4 (25)	0 (0)	
Obstructive sleep apnea	4 (25)	3 (20)	0.74
Hypertension	4 (25)	5 (33.3)	0.61
Stricture length, cm, median (range)	3 (1–4.5)	4(2–14)	0.1
Number of previous endoscopic procedure, median (range)	2.5 (1–5)	3 (1–5)	0.38
ASA, median (range)	3 (1–3)	3 (2–3)	0.51
Operative time, min, median (range)	150 (100–210)	180 (120–280)	0.45
Length of hospital stay, hours, median (range)	4 (2–5.25)	24 (24–72)	<.00001*
Stricture site, n (%)			
Vesico-urethral anastomotic stenosis	1 (6.25)	1 (6.6)	0.96
Membranous	2 (12.5)	1 (6.6)	0.58
Bulbar	10 (62.5)	9 (60)	0.88
Penile	3 (18.7)	2 (13.3)	0.68
Pan urethral		2 (13.3)	
Urethroplasty type, n (%)			
Dorsal onlay	8	12	0.08
Ventral onlay	8	3	
Global response assessment median (range)	5 (3–5)	4 (3–5)	0.07
Complications, n (%)			
Wound infection	1 (6.25)	1 (6.6)	0.96

*Statistically significant at p≤0.05.

MP-12.8

Dorsal onlay buccal mucosal graft for female urethral stricture: Clinical and patient-reported outcome measures

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Introduction: Female urethral stricture is an uncommon condition that significantly impacts quality of life and results in worse patient-reported outcome measures (PROM). Urethroplasty with different reconstructive techniques remains one of the most accepted treatment options. Current evidence is limited with this type of reconstruction, particularly in female patients. Additionally, published data have not focussed on the PROM after surgical repair. This study aims to determine the success rate, functional, and patient-reported outcomes of dorsal onlay buccal graft in the treatment of female urethral stricture disease.

Methods: Between September 2016 and April 2021, 18 consecutive women treated with dorsal onlay buccal mucosa graft were included in this study. All patients presented with voiding dysfunction after failed attempts of clinic–based urethral dilations. Clinical data were extracted from medical records, including baseline demographics, etiology of stricture, previous treatment, operative time, length of stay, complications, uroflow findings, urethrocystoscopy, International Prostate Symptom Score (IPSS), Patient Perception of Bladder Condition (PPBC), and Overactive Bladder-Validated 8-question Screener (OAB-V8). Primary outcome was the success of dorsal onlay buccal graft urethroplasty, defined as no need for further instrumentation, or open surgery and resolution of symptoms without any recurrent stricture.

Results: The most common stricture etiology was iatrogenic (55.56%) or idiopathic (38.89%). Mean age at surgery (standard deviation) was 56.9 (11) years. Mean body mass index was 27.7 (8.1). Mean stricture length was 2.1 (0.84) cm. There were 14 distal urethra stricture (77.7%), two proximal (11.1%), and two pan-urethral (11.1%). The mean followup period was 15.9 (14.6) months. The success rate was 100%. Postoperative average flow rate improved significantly (preoperative 4.54 (3.36) ml/s vs. postoperative 6.95 (3.40) ml/s, p=0.027). Mean postvoid residual decreased significantly (preoperative 173 (167) ml vs. postoperative 92.9 (128) ml, p<0.01). After treatment, IPSS, OAB-V8, and PPBC scores improved significantly (p<0.01). The mean operation time was 88.9 (12.5) minutes. Mouth pain and dryness symptoms were reported in two patients (11.1%).

Conclusions: The early and medium-term results demonstrate that dorsal onlay buccal mucosa graft urethroplasty is a safe and successful management option with a high success rate. Functional and patient-reported outcomes significantly improved after surgery.

MP-12.9

Complex buccal graft urethroplasty combined with holmium laser enucleation of the prostate in the setting of concomitant urethral stricture disease and benign prostatic hyperplasia

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Introduction: Urethral strictures and benign prostatic hyperplasia (BPH) are two causes of urinary obstruction. We present a case of a 75-year-old man with significant BPH (200 g) with a concomitant obliterative bulbar stricture that precluded a two-stage approach.

Methods: The holmium laser enucleation of the prostate (HoLEP) was performed through a perineal dorsal urethrotomy. Once the HoLEP was completed, the stricture was then examined and found to have a long obliterative segment. A non-transecting anastomotic repair of 2 cm was then combined with a 5 cm dorsal buccal onlay urethroplasty. Total stricture length was 7 cm.

Results: The patient did not have any acute postoperative complications. Following removal of his urethral catheter one month postoperatively, the patient was found to have some residual prostate fragments in his bladder that were removed in the outpatient clinic. At three months postoperatively, the patient was voiding well (maximal flow rate of 14 mL/s) and had no evidence of recurrence on cystoscopy. Although having a favorable urethral stricture surgery patient-reported outcome measure lower urinary tract symptom (USS PROM LUTS) score of 5, he did report some rare postvoid dribbling. His Peeling's voiding picture score was 3, and he was very satisfied with his surgery.

Conclusions: To our knowledge, this is the first case reporting simultaneous complex urethroplasty and HoLEP for a long obliterative urethral stricture and concomitant BPH. This case report shows that this approach can lead to successful outcomes and high satisfaction at three months postoperatively.

MP-12.11

An initial evaluation of the Canadian Urological Association neurogenic bladder guideline risk stratification

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Introduction: Neurogenic lower urinary tract dysfunction (NLUTD) is challenging to treat. Urological complications, such as infection, stones, and renal failure, mean that many patients require urological surveillance. The Canadian Urological Association (CUA) neurogenic bladder guideline presents a framework for followup of NLUTD, however, there has been no formal evaluation of how this framework may function in the real world. Our objective was to evaluate the effectiveness of the proposed risk stratification system.

Methods: This is a prospective, two-center, observational cohort study. Adult NLUTD patients who required urodynamics were offered enrollment. They underwent standardized medical history and questionnaires; the most recent renal imaging and renal function measurements were obtained. Patients with a requirement for immediate bladder surgery (not suitable for surveillance) were excluded. The primary outcome was the correlation between risk category and the need for urological management. Chi-squared and t-test were used.

Results: There were 68 patients enrolled. NLUTD etiology was spinal cord injury (SCI) (78%), multiple sclerosis (MS) (17.6%), and spinal bifida (SB) (4.4%); 46% of SCI patients had a cervical SCI. Most patients used clean intermittent catheterization (CIC) (63.6%), followed by voiding (16.7%) and indwelling urethral catheter (4.5%). At baseline, 62% were classified as high-risk and 38% as medium-risk, as per the CUA guideline. Comparing the high-risk to the medium-risk group, a greater proportion were recommended new bladder medications (43% vs. 30%, p=0.32), intravesical onabotulinum toxin (49% vs. 30%, p=0.16), or change in bladder management (35% vs. 26%, p=0.46). There was no difference in the mean Neurogenic Bladder Symptom Score (SF) between both groups (11.8 vs 12.3, p=0.80).

Conclusions: While not statistically significant, there was a consistent trend towards the CUA high-risk group being offered more interventions compared to the medium-risk group. Importantly, these two groups cannot be differentiated based on symptom burden. Longitudinal followup is planned.

MP-12.12

The long-term outcomes of catheterizable stoma vs. incontinent urine diversion for lower urinary tract dysfunction

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Introduction: We aimed to evaluate the long-term results of incontinent and continent catheterizable stoma urine diversion for non-malignant causes.

Methods: Patients who underwent catheterizable stoma or incontinent urine diversion for lower urinary tract dysfunction at our institute were reviewed and statistically analyzed between March 2012 and December 2019. The preoperative, intraoperative, and postoperative characteristics of the two groups were compared. The long-term outcomes were reported as soon as any medical encounter related to the operation occurred after six months of operation.

MP-12.12. Table 1. The early and late outcomes incontinent and continent urine diversions

	IUD (n=53)	CUD (n=22)	p
Patients with early complications	29 (54.7%)	12 (54.5%)	0.8
Fever	10 (18.9%)	3 (13.6%)	0.8
Pelvic infection/ABSCESS	4 (7.5%)	0 (0%)	0.9
Wound infection	6 (11.3%)	4 (18.1%)	0.6
Pneumonia	1 (1.9%)	1 (4.5%)	0.8
UTI	3 (5.7%)	1 (4.5%)	0.7
Ileus	16 (30.2%)	5 (22.7%)	0.7
Sepsis	1 (1.9%)	0 (0%)	1
Blood loss + transfusion	4 (7.5%)	0 (0%)	0.4
Cardiac complications (arrythmias/NSTEMI)	2 (3.8%)	1 (4.5%)	0.6
Reoperation	2 (3.8%)	0 (0%)	0.5
Long-term outcomes			
Urological symptoms control	36 (67.9%)	13 (59%)	0.6
Patients with late complications	29 (54.7%)	16 (72.7%)	0.2
Stoma stenosis	2 (3.8%)	5 (22.7%)	0.03*
Stoma hernia	6 (11.3%)	3 (13.6%)	0.9
Stoma site pain/bleeding	0 (0%)	1 (4.5%)	0.5
Stoma retraction	1 (1.9%)	1 (4.5%)	0.4
Anastomotic ureteric stricture	2 (3.8%)	0 (0%)	0.8
Stones (ureters, kidney)	13 (24.5%)	2 (9%)	0.1
Wound separation/incisional hernia	6 (11.3%)	1 (4.5%)	0.3
Sinus/fistula formation	3 (5.7%)	0 (0%)	0.8
Recurrent wound infection/ abscess	1 (1.9%)	1 (4.5%)	0.5
Reoperation	8 (15.1%)	1 (4.5%)	0.2
Hydronephrosis with renal impairment	6 (11.3%)	0 (0%)	0.3

p: p value for comparing between the studied groups. *Statistically significant at p≤0.05.

Results: We identified 53 patients who underwent incontinent urinary diversions (IUD) and 25 who underwent continent urinary diversions (CUD). Patients who underwent IUD had a higher rate of postoperative ileus (30.2%, n=16) and blood loss (7.5%, n=4), while CUD was associated with a higher rate of postoperative wound infection (18.1%, n=4). In the long-term, 67.9% (n=36) of patients with IUD reported improvement in urological symptoms, higher than the rate reported for CUD (59%, n=13) (p=0.6). There was no statistically significant difference in overall late complications between the two groups (54.7% vs. 72.7%, p=0.2). While stomal stenosis was the only statistically significant late complication (p=0.02), there was no significant difference in reoperation rate (15.1% vs. 4.5%, respectively, p=0.2) (Table 1).

Conclusions: The overall long-term complication rate is comparable between CUD and IUD for lower urinary tract dysfunction. The only notable individual complication is stomal stenosis, and it was not associated with a significant reoperation rate.