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Abstract 101

Urethroplasty: Does postoperative imaging correlate to functional outcomes?

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Introduction: Open surgical urethroplasty is considered the gold standard for management of urethral strictures. The techniques and approach to urethroplasty are broad, as are postoperative imaging and surveillance strategies. In this study, we review our postoperative retrograde urethrograms (RUG) to evaluate if there is correlation between extravasation of contrast and functional surgical outcomes.

Methods: This is a retrospective review of open anterior urethroplasties on cis-male patients completed by two surgeons at one institution between September 2021 and February 2023. Patients with history of congenital hypospadias were excluded. RUGs were routinely completed at 3–4 weeks after surgery to evaluate for extravasation of contrast at the repair site. Surveillance cystoscopy was performed at the discretion of the surgeon depending on patient symptomatology.

Results: Forty-five urethroplasties were completed in the study period. Eleven of 45 (24.4%) were excision and primary anastomosis and 34/45 (75.6%) were substitution with buccal mucosa graft. Postoperative RUG was completed on 41 patients with extravasation of contrast noted on six (14.6%) studies. Of those with extravasation, four were deemed mild and catheter was removed. The other two were managed with prolonged catheterization. One of six patients (16.7%) with extravasation at time of RUG had a symptomatic recurrence of their stricture and required reintervention at three months postop. Three of 35 patients (8.6%) whom had a normal RUG, had a symptomatic recurrence, and required intervention. Total retreatment rate of the cohort was 8.9% (4/45).

Conclusions: Extravasation of contrast at the time of postoperative RUG from urethroplasty is relatively uncommon. Most of these patients still do well. We plan on continuing preforming routine postoperative RUGs as it guides duration of catheterization.

Abstract 102

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

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Introduction: Owing to the overwhelming burden of COVID-19, buccal mucosal graft (BMG) urethroplasty in the elderly has been shifted from inpatient to ambulatory at Thunder Bay Regional Health Science Center (TBRHSC) in Canada in early 2020. This study aimed to describe our experience with ambulatory BMG urethroplasty in the elderly at TBRHSC and compare its feasibility and safety to inpatient urethroplasty before and after the practice change.

Methods: A retrospective chart review of patients with BMG urethroplasty at 65 or older was conducted between March 2018 and May 2022, i.e., pre-and post-practice change. Demographics, clinical characteristics, postoperative course, and complications were compared in patients who had ambulatory (discharged within six hours) vs. inpatient BMG urethroplasty.

Results: Of 37 BMG urethroplasties, 15 (40.5%) were inpatient, while 22 (59.5%) were ambulatory. No significant differences were found between the two groups regarding comorbidities, ASA, stricture length, operative time, and urethroplasty type. There were significant differences in complications in inpatient vs. ambulatory cases (20% vs. 4.5%). Recurrence was observed in 3/22 (13.6%) ambulatory and 2/15 (13.3%) inpatient cases (p=0.79). Likewise, no significant difference in success rate was reported in the ambulatory vs. inpatient group (86.4% vs. 86.7%).

Abstract 102. Table 1. Clinical, demographic, and operative data of patients

	Ambulatory (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)	0.20
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 (0.0)	2 (13.3)	0.15
Cause of stricture			
Idiopathic	4 (18.2)	3 (20.0)	0.89
TURP/TURBT/GL	11 (50.0)	6 (40.0)	0.54
Lichen Sclerosis	1 (4.5)	1 (6.7)	0.77
Trauma	1 (4.5)	0 (0.0)	0.40
Radical prostatectomy	4 (18.2)	1 (6.7)	0.62
Hypospadias	0 (0.0)	1 (6.7)	0.40
Radiation	1 (4.5)	3 (20.0)	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 typem n (%)			0.0
Dorsal onlay	13 (54.2)	12 (80.0)	
Ventral onlay	9 (37.5)	3 (20.0)	
Operative time (minute), median (range)	164 (100-210)	182 (120-280)	0.48
Complications n (%)	1 (4.5)	3 (20.0)	0.001*
Wound infection	1 (4.5)	1 (6.7)	
Stress urinary incontinence	0 (0.0)	1 (6.7)	
Recurrent urinary tract infections	0 (0.0)	1 (6.7)	
Success rate	19 (86.4)	13 (86.7)	0.40
Recurrence rate	3 (13.6)	2 (13.3)	0.79
Followup (month) median (range)	15 (6-49)	39 (12-55)	<0.01*

*Statistically significant at p≤0.05.

The inpatient group's followup period was significantly longer than that of the ambulatory group.
Conclusions: Ambulatory BMG urethroplasty in the elderly is safe and causes no additional morbidity, considering our study's followup period in ambulatory BMG urethroplasty was shorter than that of the inpatient; however, a longer followup time may be required to draw firm conclusions.

Abstract 103

Early catheter removal after buccal mucosal graft urethroplasty: A single-center experience

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Introduction: The optimal duration of urethral catheterization (DUC) following urethroplasty is unknown and published recommendations are not inclusive. We aimed to evaluate the impact of early catheter removal (≤8 days vs. >8 days) on the extravasation and recurrence rates among all the urethroplasty procedures at Thunder Regional Health Science Centre between March 2016 and December 2022.
Methods: Upon a retrospective cohort study, the patient's age, stricture site and length, graft site and length, surgical technique, pre-and postoperative flow, retrograde urethrogram results, complications, and recurrence were collected. Based on their DUC, patients fell into two groups: early (DUC ≤8 days) and late (DUC >8 days).
Results: Of 89 patients who underwent urethroplasty, 25 (28.1%) and 64 (71.9%) patients were in the early and late catheter removal groups, respectively. Among the basic characteristics, significant statistical differences were only observed in the length of the stricture and the length of the graft, where the late catheter removal group had a longer stricture and graft. The outcome measures were statistically insignificant. Extravasation was observed in four patients (16%) in the early group and five patients (7.9%) in the late group. Recurrences were found in one patient in the early group and five patients in the late group (4% vs. 9.4%). Complications were found in one patient of the early and late catheter removal group (4% vs. 1.6%), respectively. The mean followup periods were 16.64±7.9 months and 41.36±19.8 months for the early and late catheter removal groups, respectively ($p<0.001$).
Conclusions: Given the comparable outcomes, i.e., extravasation, complications, and recurrence, to the late catheter removal, this study corroborates the early catheter removal after urethroplasty that can potentially earn a higher level of patient satisfaction; however, a more robust study with a longer followup period and larger sample size may be warranted to draw a firm and unwavering conclusion.

Abstract 104

Optimal timing for urinary catheter removal following urethroplasty: A systematic review

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Introduction: The optimal duration of urethral catheterization after urethroplasty is unknown and published recommendations are not inclusive. This study aimed to synthesize existing evidence to evaluate the outcomes of different urinary catheter removal timing (early vs. late) after urethroplasty.
Methods: We performed a comprehensive search of PubMed, Embase, the Cochrane Library, and the Web of Science from inception to August 7, 2022. Articles were initially screened by title and abstract, and subsequently by a full paper review before being included in the final analysis. All comparative studies that assessed the association between urethral catheterization duration and frequency of extravasation and recurrence rate in patients who underwent urethroplasty were included in the analysis. Exclusion criteria were case reports, case series, letters to editors, and non-English studies. The risk of bias was assessed using the Newcastle-Ottawa scale.
Results: Of the 439 relevant records in the literature databases, five studies involving 634 patients were included. In all five studies, the extravasation rate was not significantly different between the early and late catheter removal groups. Among the three studies that reported recurrence rates, the recurrence rate was low, with no statistically significant difference between the early and late catheter removal groups. Wound and urinary tract infections were among the most common complications, with a higher rate in patients with late catheter removal.
Conclusions: Early catheter removal following urethroplasty does not increase the rate of extravasation or recurrence during long-term followup. The existing evidence can serve as the foundation for additional research with a larger sample size.

Abstract 105

Is greater distance traveled for renal trauma care associated with rates of intervention?

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Introduction: Trauma patients often must be transported many miles to receive care at a level one trauma center due to the severity of these patients' injuries and the level of expertise needed to care for them. Often, this greater distance may cause delays in care or different surgical approaches to be undertaken to care for the patient. One outcome that might change based on distance traveled is the need to do angioembolism or nephrectomy for renal trauma patients. This study sought to investigate whether trauma patients that traveled from further distances and hence took longer times to get to our academic level one trauma center necessitated percutaneous angioembolism or nephrectomy to correct renal injury more than those patients that did not need to travel as far.
Methods: We queried our institutions reportable trauma database from the years 2015–2022. This data was filtered for all patients that had ICD codes pertaining to renal trauma. All renal trauma patients with zip codes where they sustained their injury were included. We then calculated the distance traveled to our hospital via Google Maps for each patient. We further aggregated diagnosis codes for percutaneous angioembolism and nephrectomy. Injury severity scores (ISS) were also collected. We divided patients into two groups based on distance traveled (0–30 miles and 31+ miles). The two groups injury severity scores were recorded. We also analyzed the number of angioembolizations and open approach renal resections completed for each distance category and analyzed for a difference between the groups.
Results: A total of 307 cases of renal trauma met the inclusion criteria for the study and had accurate zip code information on the place of injury. We found no difference in rates of percutaneous angioembolization and open renal resection between patients that traveled different distances for renal trauma care as shown in Table 1.
Conclusions: In renal trauma patients with similar injury severity score, there appears to be no difference in rates of renal angioembolization and open renal resection based on the distance that was traveled for care. This could imply that delays in care do not have significant impact on the need to do renal interventions in severe renal trauma patients.

Abstract 105. Table 1. Rates of renal intervention based on distance traveled

Mile range	ISS	Age, years	Renal trauma grade	Number of patients	Percutaneous angioembolism	Nephrectomy	Intervention rate
0–30	22.1±14.1	39.5±21.2	2.7±0.80	156	3	3	3.8%
31+	21.5±12.5	38.3±20.7	2.4±0.82	151	5	1	4.0%