Title

MP56-12 CYSTOSCOPIC FINDINGS FOLLOWING ANTERIOR URETHROPLASTY PREDICTS THE NEED FOR SECONDARY SURGICAL INTERVENTION: A MULTI-INSTITUTION ANALYSIS FROM TRAUMA AND UROLOGIC RECONSTRUCTIVE NETWORK OF SURGEONS

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RESULTS: In the main group: anastomotic urethroplasty − 17 patients, augmentation urethroplasty - 9, multi - stage urethroplasty/ perineostomy-4. The following operations were performed in the control group: anastomotic urethroplasty in 24 cases, augmentation urethroplasty-in 4 cases, c in 2 cases. The median (min-max) follow − up after surgery was 12 years (6-22 months). The effectiveness in the main group was 93.3%. In 2 cases, a relapse was noted. In the control group, the efficiency was 76.7%. Relapse occurred in 7 cases. The median period of bladder drainage with a urethral catheter after surgery was 14 and 7 days in the control and main groups, respectively ($p< 0, 05$). The frequency of infectious complications (urethritis, orchepididymitis, p/o wound suppuration) was significantly lower in the main group ($p<0.05$). The median postoperative Qmax in the control group at the time of observation was (min-max) 19.85 ml/ sec (9-23.8), in the main group − 24 ml/sec (10-40) ($p>0.05$).

CONCLUSIONS: The results of urethroplasty with the combined use of platelet-rich plasma in patients with recurrent urethral stricture demonstrate a decrease in the frequency of early relapses of urethral stricture, a reduction in the duration of bladder drainage and the frequency of infectious complications.

Source of Funding: No source of funding.

MP56-11

REFRACTORY LOWER URINARY TRACT SYMPTOMS (LUTS) FOLLOWING SUCCESSFUL URETHROPLASTY: FURTHER EXAMINING "LUTS FAILURE"

David Chapman, Jordan Bekkema, Keith Rourke, Edmonton, Canada*

INTRODUCTION AND OBJECTIVE: An ill-defined proportion of patients undergoing urethroplasty fail to experience improvement in lower urinary tract symptoms (LUTS) despite being stricture-free. We aim to identify the incidence, associations, and causes of “LUTS failure” after urethroplasty.

METHODS: Patients undergoing urethroplasty over a 6-year period were offered enrollment in a prospective study examining urinary function after urethroplasty. Patients were assessed pre-operatively and 6-months postoperatively using the international prostate symptom score (IPSS) and cystoscopy. “LUTS failure” was defined as less than 3-point improvement in IPSS, despite an anatomically successful urethroplasty. Multivariable logistic regression was utilized to evaluate the association of several patient factors with “LUTS Failure”.

RESULTS: Of 365 patients meeting inclusion criteria, mean postoperative IPSS (20.3 vs. 5.4; $p<0.0001$) and median urinary quality of life (UQOL)(5 vs. 1; $p<0.0001$) were significantly improved. Despite being stricture-free, 7.7% of patients reported “LUTS failure” and 10.1% reported UQOL non-response. On multivariable logistic regression, increasing age (O.R.1.04, 95%CI 1.01-1.06, $p=0.006$) and hypospadias (O.R.18.2, 95%CI 2.1-156.0, $p=0.008$) were associated with “LUTS failure” while stricture location ($p=0.76$), length ($p=0.14$), previous urethroplasty ($p=0.96$), failed endoscopic treatment ($p=0.17$), type of urethroplasty ($p=0.93$) and other etiologies were not. Qualitatively, the most common causes of “LUTS failure” were detrusor underactivity (39.3%), detrusor overactivity (21.4%), pelvic floor dysfunction (21.4%) or BPH (14.3%). Only increasing age was associated with UQOL non-response (O.R.1.03, 95%CI 1.01-1.07, $p=0.02$).

CONCLUSIONS: While many patients experience improved voiding function after urethroplasty, 7.7% experience “LUTS failure” and 10.1% report UQOL non-response. Both occurrences are independently associated with increasing patient age and most commonly related to detrusor underactivity.

Source of Funding: Northern Alberta Urology Foundation

MP56-12

CYSTOSCOPIC FINDINGS FOLLOWING ANTERIOR URETHROPLASTY PREDICTS THE NEED FOR SECONDARY SURGICAL INTERVENTION: A MULTI-INSTITUTION ANALYSIS FROM TRAUMA AND UROLOGIC RECONSTRUCTIVE NETWORK OF SURGEONS

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INTRODUCTION AND OBJECTIVE: Prior work has established that post-operative urethroscopy may be an effective tool to predict re-operation within 1 year following urethroplasty. Here, we examine early surveillance urethroscopy findings and long-term outcomes among urethroplasty patients.

METHODS: A cohort of 304 patients with $>$ 4 years follow-up after anterior urethroplasty at 10 institutions underwent postoperative evaluations (average 112.5 days post-op, range 95.5-145 days) using a flexible 17 Fr cystoscope. Patients were categorized into groups based on exam findings: a. normal lumen; b. large-caliber stricture ($\geq$ 17 Fr stricture) defined as the ability of stricture to accommodate the cystoscope; and c. small-caliber stricture ($<$ 17 Fr stricture) that the cystoscope could not be passed easily. We defined surgical failure as stricture recurrence requiring re-intervention. Kaplan-Meier survival curves were fitted using days to last follow-up or recurrence as the time variable, and recurrence status as the event indicator.

RESULTS: Overall, 72/304 (24%) patients had a recurrence. Patients who required reoperation had the following distribution based on surveillance urethroscopy: 29/194 (15%) had a normal lumen, 11/60 (18%) had a ($\geq$ 17 Fr stricture), and 32/50 (64%) had a $<$ 17 Fr lumen. A urethral caliber of $\geq$ 17 Fr was found to have a reoperation rate that was not different to a lumen that was completely free of scar recurrence ($p = 0.53$). The Kaplan−Meier graph shows the post-anterior urethroplasty cumulative probability of intervention-free survival according to postoperative cystoscopy group (Figure 1).

CONCLUSIONS: Early cystoscopic visualization of scar recurrence that narrows the lumen to $<$ 17 Fr following anterior urethroplasty is a significant long-term predictor for patients who will eventually require repeat intervention. A subset of patients with noticeable scar recurrence of $\geq$ 17 Fr at first urethroscopy avoided repeat surgery after long-term follow-up.

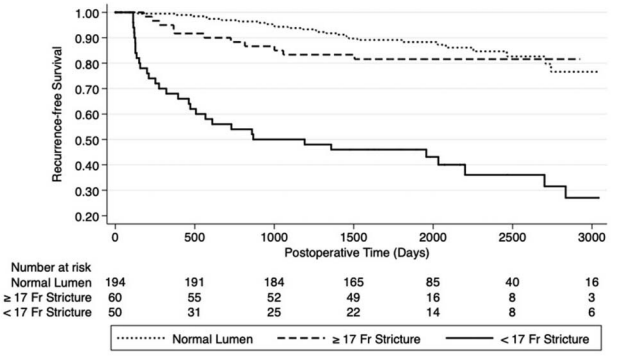

Fig. 1 Cumulative probability of recurrence free survival after anterior urethroplasty. (Log-rank test for equality of survivor functions: $p < 0.001$)

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