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### Title

MP60-09 PSYCHOMETRIC TESTING OF A PROM FOR MALE URETHRAL STRICTURE:  
URETHRAL STRICTURE SYMPTOM AND IMPACT MEASURE

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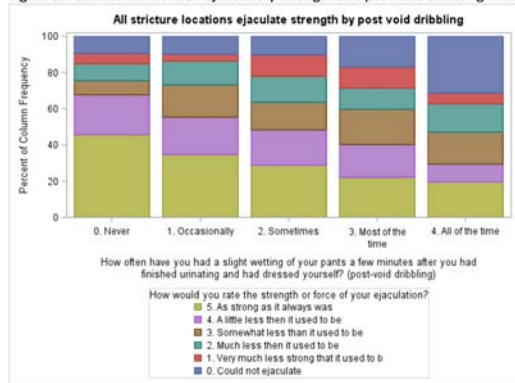
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all of the following subsets: bulbar UP ( $p < 0.01$ ), penile UP ( $p = 0.03$ ), bulbar onlay graft UP ( $p = 0.03$ ), penile onlay graft UP ( $p = 0.3$ ) and bulbar EPA ( $p < 0.01$ ). There were too few ventral graft procedures to compare dorsal vs. ventral onlay.

**CONCLUSIONS:** Post-UP PVD and EjD are associated, supporting the theory of a common etiology. The association persists whether the UP is in the penile or bulbar urethra, suggesting that BS damage is not the primary cause. The association persists whether the bulbar UP is done with a graft vs EPA, suggesting that graft placement is not the cause; but we were unable to compare dorsal vs. ventral graft. By exclusion, these symptoms may be due to a loss of elasticity that is inherent to any UP (with or without a graft) or due to a neurologic cause.

Figure 1: Association between ejaculatory strength and post void dribbling in urethroplasty patient



Source of Funding: none

**MP60-08 FURTHER DEFINING WHICH OUTCOMES ARE ASSOCIATED WITH PATIENT SATISFACTION AFTER URETHROPLASTY**

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**INTRODUCTION AND OBJECTIVE:** Outcomes after urethroplasty can be assessed by multiple measures both surgeon-reported and patient-reported. Our objective is to determine which clinical outcomes are associated with patient satisfaction after urethroplasty.

**METHODS:** From 2012-2018, 387 patients enrolled in this prospective single-center study. Patient reported outcomes were assessed preoperatively and 6 months postoperatively including patient satisfaction, voiding function, erectile function, ejaculatory function, penile curvature/appearance, genitourinary pain, post-void dribbling, and standing voiding function. Voiding function was assessed with the IPSS, erectile function was assessed with the IIEF-5 and ejaculatory function was scored with a hybrid of the brief sexual function inventory. The remaining measures were assessed using literature derived 3 or 5 point Likert scales. Urethroplasty success was defined as the easy passage of a 16Fr flexible cystoscope. Descriptive statistics were used to summarize findings while multivariate binary logistic regression was used to determine the association between outcomes and patient satisfaction.

**RESULTS:** Of the 387 patients, mean age was 49.5 years with a mean stricture length of 4.5cm. Urethroplasty techniques included buccal mucosa graft onlay (51.7%), anastomotic (30.7%) or staged (12.1%) reconstruction. At 6-months follow-up 96.1% of patients were stricture free on cystoscopy while 81.7% reported being satisfied. On multivariate binary logistic regression, improvement in IPSS (O.R. 1.1, 95% CI 1.1-1.2,  $p = 0.04$ ), de novo erectile dysfunction (O.R. 0.5, 95% CI 0.2-0.9,  $p = 0.04$ ), de novo penile curvature (O.R. 0.4, 95% CI 0.2-0.9,  $p = 0.03$ ) and improved standing voiding function (O.R. 1.3, 95% CI 1.1-1.5,  $p = 0.004$ ) were associated with patient satisfaction. However, cystoscopic success ( $p = 0.60$ ), change in pain score ( $p = 0.14$ ), post-void dribbling ( $p = 0.69$ ), change in penile length ( $p = 0.44$ ), and ejaculatory dysfunction were not ( $p = 0.51$ ).

**CONCLUSIONS:** Improved voiding function, patient reported penile curvature, de novo erectile dysfunction and improved standing

voiding function are independently associated with patient satisfaction after urethroplasty and should likely be incorporated into any patient centered approach to urethral stricture. While perhaps important to surgeons, cystoscopic success is not associated with patient satisfaction.

Source of Funding: Dr. Rex Boake Studentship in Urology

**MP60-09 PSYCHOMETRIC TESTING OF A PROM FOR MALE URETHRAL STRICTURE: URETHRAL STRICTURE SYMPTOM AND IMPACT MEASURE**

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**INTRODUCTION AND OBJECTIVE:** The Urethral Stricture Symptom and Impact Measure (USSIM) is a condition-specific outcome measure for men with urethral stricture. Concept elicitation, cognitive, and prioritization interviews were performed with patients, literature reviews, and clinician interviews to create USSIM content. We describe outcomes following field-testing and assessment of measurement properties for the purpose of creating an outcome measure that is reproducible and able to detect change after treatment.

**METHODS:** A sample of 238 men with urethral stricture was assessed across 9 TURNS centers from 2016- 2018. The USSIM was administered before and 3-9 months after urethroplasty, and it was administered two weeks apart for test-retest reliability. Cystoscopy confirmed urethral patency after surgery. Psychometric analyses included exploratory factor and item response theory analyses. Internal consistency, validity, and test-retest reliability were also analyzed. To assess validity, the USSIM was compared to the only existing stricture-specific outcome measure.

**RESULTS:** Exploratory factor analyses identified an 8-item voiding-related scale and a 3-item sexual function scale. The voiding subscale was highly sensitive to change,  $t(228) = 23.01, p < .0001$ , mean reduction = 36.6 on a 0-100% scale (Figure 1). The sexual function subscale was also sensitive to change,  $t(159) = 5.76, p < .0001$ , mean reduction = 9.9 on a 0-100% scale (Figure 2). Empirical reliability was .82 and .70 for the voiding and sexual subscales, respectively. Validity coefficients for the voiding scale were  $r_s \geq .37$  for other measures of voiding symptoms,  $p_s < .0001$ . Test-retest ICC was .30 for voiding and .56 for sexual items. Following clinical review, the USSIM was reduced: 1 perceived quality-of-life item, 1 surgical outcome item, and 11 other items with urinary and sexual subscales.

**CONCLUSIONS:** The USSIM was psychometrically strong with adequate measurement properties. The reduced version is now being validated for clinical use.

Figure 1. Change in USSIM voiding scale from pre- (solid) to post-surgery (dashed).

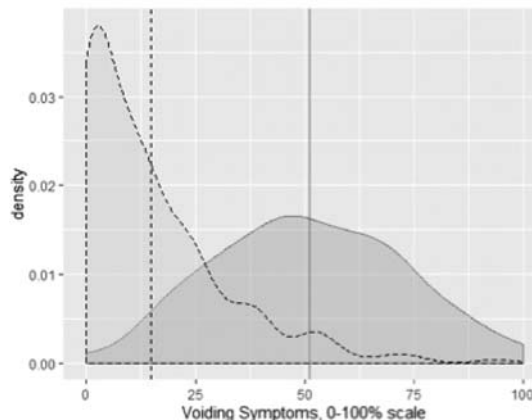
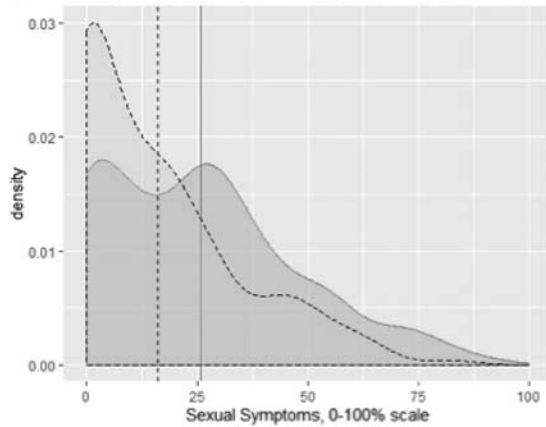


Figure 2. Change in USSIM sexual scale from pre- (solid) to post-surgery (dashed).



Source of Funding: Private donation from Donald Rich

Table 1: Univariable and multivariable logistic regression analysis for any complication: Sub-cohort with ASA ≤ 2(N= 1,156)

	Univariable Regression			Multivariable Regression		
	OR	95% CI	p	OR	95% CI	p
<b>Chemistry</b>						
Normal*	-	-	-	-	-	-
Abnormal	0.962	0.469-1.972	0.915	0.97	0.465-2.022	0.935
Not-performed	1.113	0.683-1.812	0.667	0.85	0.382-1.893	0.691
<b>Hematology</b>						
Normal*	-	-	-	-	-	-
Abnormal	1.533	0.867-2.712	0.142	1.584	0.893-2.811	0.116
Not-performed	1.404	0.815-2.419	0.222	1.447	0.632-3.312	0.382
<b>Liver Function Tests</b>						
Normal*	-	-	-	-	-	-
Abnormal	0.989	0.211-4.635	0.989	0.928	0.197-4.376	0.925
Not-performed	1.259	0.667-2.375	0.477	1.167	0.579-2.348	0.666
<b>Coagulation Profile</b>						
Normal*	-	-	-	-	-	-
Abnormal **	0	0-Inf	0.98	0	0-Inf	0.98
Not-performed	1.191	0.712-1.993	0.505	1.154	0.637-2.092	0.637
<b>Age (Years)</b>	0.993	0.979-1.008	0.361	0.995	0.980-1.010	0.507
<b>Race</b>						
White*	-	-	-	-	-	-
Black	1.436	0.732-2.817	0.293	1.5	0.758-2.969	0.244
Other/Unknown	1.268	0.772-2.084	0.348	1.306	0.776-2.198	0.314

Source of Funding: none

**MP60-10**

**INTENSITY OF PREOPERATIVE TESTING FOR URETHROPLASTY AND ITS ASSOCIATION WITH OUTCOMES: A PROPENSITY SCORE MATCHED ANALYSIS**

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**INTRODUCTION AND OBJECTIVE:** With increased emphasis on healthcare spending and value-based care, it is important that physicians are judicious when pursuing preoperative testing in patients undergoing low-risk surgical procedures. Our goal was to investigate the current practice of routine preoperative testing before urethroplasty and to determine if the results are clinically significant.

**METHODS:** Data was obtained from the National Surgical Quality Improvement Program (NSQIP) database. We identified 1,527 patients who underwent urethroplasty from 2010 to 2017. Chi square and one-way ANOVA tests were used to compare categorical and continuous variables, respectively, in the propensity matched cohorts. Multivariable logistic regression analyses were utilized to assess the rate of complications between testing groups.

**RESULTS:** A total of 8,455 individual laboratory tests were performed on 1,156 patients (average of 7 tests per patient), with only 959 labs (11.3%) showing abnormal results. Of the 1,156 patients, 629 (54.4%) patients had at least one abnormal lab. Patients who had at least one abnormal preoperative lab were found to be significantly older (51.49±16.57 years vs. 48.14±16.32 years; p<0.001), and to be smokers (112 (17.8%) vs. 63 (12%); p=0.005). Additionally, they were more likely to have diabetes mellitus (112 (17.8%) vs. 63 (12%); p<0.001), dyspnea (18(2.9%) vs. 16(3.0%); p=0.029), and ASA class ≥3 when compared to the group with normal preoperative labs. On a multivariable logistic regression, abnormal preoperative tests were not predictive of intra- or postoperative complications in patients with ASA ≤ 2 (n=1112) when adjusted for age and race. In patients with ASA class ≥ 3, the only lab predictive of postoperative complications was an abnormal coagulation profile. Not performing labs routinely on ASA ≤ 2 saved \$523,298 in our cohort.

**CONCLUSIONS:** Obtaining routine preoperative labs, especially in patients with ASA ≤ 2, does not affect postoperative outcomes in patients undergoing urethroplasty. Judicious use of preoperative testing may significantly curtail extraneous utilization of health care resources.

**MP60-11**

**QUALITATIVE ANALYSIS OF SUBJECTIVE IMPACT OF MALE URETHRAL STRICTURE PRE/POST URETHROPLASTY**

Bryan Voelzke\*, Spokane, WA; James Griffith, Chicago, IL; Todd Edwards, Donald Patrick, Seattle, WA; Keith Rourke, Edmonton, Canada; Jeremy Myers, Salt Lake City, UT; Sean Elliott, Minneapolis, MN; Brad Erickson, Iowa City, IA; Alex Vanni, Burlington, MA; Jill Buckley, San Diego, CA; Josh Broghammer, Kansas City, KS; Andrew Peterson, Durham, NC; Shawn Grove, Minneapolis, MN; Anthony Enriquez, Benjamin Breyer, San Francisco, CA

**INTRODUCTION AND OBJECTIVE:** Measurement of objective measures following urethroplasty (e.g., urethral patency, uroflowmetry) is vital, but patient-reported input via condition-specific outcome measures is equally vital to capture outcomes in the patient's voice. The Urethral Stricture Symptom and Impact Measure (USSIM) is a urethral stricture outcome measure newly created for clinical use. Urinary and sexual items related to impact, symptom, and function were included. We sought to assess *impact* items (Table 1) in the pre- and post-urethroplasty setting.

**METHODS:** 238 men with urethral stricture were assessed across nine centers from TURNS between 2016-2018. The USSIM was provided before and 3-9 months after urethroplasty. The original pre-surgery USSIM prior to item reduction included 31 items (24 urinary/6 sexual/1 QOL item). Exploratory factor analysis revealed that most items were indicative of symptoms and functional impact related to the concept of a urethral stricture. Given their conceptual homogeneity and novelty in the field, we focused analyses on *impact* items: 1 QOL urinary impact, 14 urinary impact, and 2 sexual impact items.

**RESULTS:** All of the impact items loaded onto a single factor (factor loadings ranged from .34-.84). Empirical reliability of an impact index was .92. The mean level of impact on a 0-100% metric was 41.6% (SD = 19.7). After surgery, impact was reduced, on average, by 25.5 points (0-100% scale; Figure 1). These results suggest that the impact index is highly sensitive to known effective treatment, t(227) = 19.5, two-tailed p < .0001, Cohen's d = 1.5 (large).

**CONCLUSIONS:** Urethral stricture in men can have an adverse impact (see gray distribution, Figure 1) but can be alleviated with reconstructive intervention. The 17 items of the USSIM formed a reliable scale that changed markedly following urethroplasty. Future research will examine scales of the USSIM as endpoints in clinical trials.