Title

MP78-14 INTERNATIONAL EXPERT CONSENSUS ON DEVELOPMENT OF A STATE OF THE ART MALE GENITAL SIMULATION MODEL FOR URETHROPLASTY AND ARTIFICIAL URINARY SPHINCTER INSERTION

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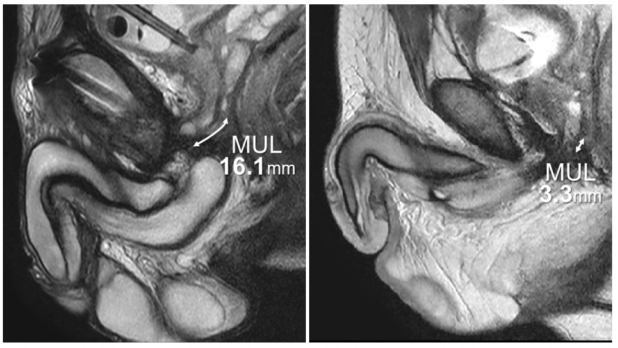
not associated with the patient's age, body mass index, a histo urethroplasty, or the type of urethroplasty (simple perineal or elaborate approach). However, an open bladder neck on antegrade cystoscopy and/or cystourethrography (OR 11.85, 95% CI 2.23-62.9, p=0.004) and a longer MUL (every extra millimeter, OR 0.87, 95% CI 0.76-1.00, p=0.04) were significant predictors of PUI on multivariate analysis.

CONCLUSIONS: A greater preoperative MUL is significantly and positively associated with PUI in male patients with PFUI. MUL on MRI may be potentially valuable to reconstructive urologists when counseling patients in clinical practice, prior to urethroplasty.

Figure. 1



Representative sagittal T2-weighted MRI images of pelvic fracture urethral injuries with a long MUL (left) and short MUL (right).

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MP78-14

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INTRODUCTION AND OBJECTIVE: The number of available simulation-based models for technical skills training in urology is rapidly increasing, and development of training around these procedures should follow a structured approach. Utilizing modern education theory previously used to develop a hydrogel model for penile prosthesis placement, we aim to establish the criteria for development of a hydrogel male genital simulation model for Urethroplasty and Artificial Urinary Sphincter Insertion using international expert consensus.

METHODS: 19 international experts of genitourinary reconstructive surgery were invited to participate in a three phase consensus building approach (modified Delphi technique). A total of 39 unique questions with 155 sub questions over three rounds were included in 4 categories 1) Overall utility of the model 2) anatomical and procedural components, 3) tissue fidelity and 4) evaluation of performance. Components reaching a content validity index (CVI) $\geq$0.80 were utilized to fabricate a prototype model.

RESULTS: 106 of the 155 (68.3%) questions reached the consensus benchmark. Regarding utility, consensus was reached that a non-biohazardous urethral model and simulation-based platform would be very beneficial and should be developed using a validated ucational approach. The expert panel agreed the simulator should allow for surgical practice in a risk free environment and allow performance evaluation. Consensus was reached on key anatomical components (Table 1) including an initial training focus of a 2 cm proximal bulbar stricture. The panel agreed a model should allow flexible application of urethroplasty techniques such as grafts. The addition of an obturator canal was prompted from the group given desires for future urethral sling simulation. Furthermore, the experts approved a framework for a standardized evaluation metric for urethroplasty. They agreed motion analysis wearables for efficiency of movement and retrograde infusion test for anastomotic integrity have value as objective standardized feedback.

CONCLUSIONS: Harnessing the consensus of 19 international experts, the framework for a robust and bio-safe model for reconstructive urethral surgery with proposed objective evaluation parameters of surgical performance was achieved. Fabrication of the prototype based on this consensus statement is in development.

Table 1: Consensus on Overall Anatomy, Surgical Steps, and Evaluation Metrics

Anatomy	AUS Steps to Simulate	Urethroplasty Steps to Simulate	Evaluation
Perineum	Perineal Incision/Exposure	Perineal Incision/Exposure	Retraction
Investing Fascia Over Urethra	Dissection To Expose Urethra	Dissection To Expose Urethra	Urethral Dissection
Urethra	Circumferential Urethral Dissection	Circumferential Urethral Dissection	Efficiency
Corpus Spongiosum	AUS Device Preparation	Bulbar Artery Sparing	Anastomosis Technique
Bulbospongious Muscle	Check Urethra For Injury	Release Central Tendon	Respect For Tissue
Corpora Cavernosum	Counter Incision	Urethral Dissection	Autonomy
Pubic Arch	Access Retroperitoneal Space	Removal Scarred Urethra	Case Difficulty
Pubic Bone With Tubercle	Cuff Placement	Urethral Spatulation	
Scrotum With Dartos	Tubing Passage	Clock Face Sutures	
Bucks Fascia	Development Subdartos Pouch	Water Tight Anastomosis	
Central Tendon	Tubing Connections	Split Corpora	
Paired Bulbar Arteries	Close Perineum	Pass Sound From Above	
Inguinal Canal			
Adductor Longus			
Obturator Canal			

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MP78-15

MANAGEMENT AND OUTCOMES OF ILEAL POUCH-URETHRAL FISTULAS

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INTRODUCTION AND OBJECTIVE: Fistulas may develop following ileal pouch anal anastomosis (IPAA), but urinary tract involvement in this setting is rare. We thus aim to describe our experience with the management of ileal pouch-urethral fistulas (IPUF) following restorative proctocolectomy with IPAA.

METHODS: We retrospectively identified patients with documented IPUF managed at our institution from a urethral fistula cohort through keywords and procedure codes. In a retrospective medical record review, we obtained demographic, clinical and operative data, including diagnostic methods, individual management strategies and outcomes and described our findings.

RESULTS: We identified thirteen patients with a diagnosis of IPUF managed from 2005–2022. Median age at IPAA was 29 years (range 11–53). Indications for IPAA included familial adenomatous polyposis (n=3) and ulcerative colitis (n=10). Interval events included IPAA dilations (n=5) and dual radiation therapy for prostate cancer (n=2). Median time from IPAA to fistula diagnosis was 15 years (range 0.5–38.5). Initial management consisted of urinary diversion with either suprapubic tube (n=6) or Foley catheter (n=1) and fecal diversion with either loop (n=8) or end ileostomy (n=3); five had dual urinary/fecal diversion. Four patients experienced resolution with either urinary (n=2) or fecal (n=2) diversion alone. Eight patients eventually required pouch excision and end ileostomy, of which seven underwent concomitant urethral repair. Gracilis muscle interposition was employed in addition to primary closure in five patients. Only one patient successfully underwent re-do IPAA. With a median follow-up of 4 years (range 0.3–13 years), all patients had resolution of their fistulas without recurrence.

CONCLUSIONS: IPUFs are an uncommon complication of IPAA. In this cohort, all patients had urinary tract preservation, but in most instances, permanent fecal diversion was necessary. These results can help guide management of this complex issue.