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MP55-10 UTILIZATION OF ENDOSCOPIC MANAGEMENT FOR URETHRAL STRICTURES IN AQUA

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reduce post-operative pain in these patients. We aim to assess the efficacy and safety of liposomal bupivacaine infiltration on the BMG harvest site in alleviating pain by evaluating the post-operative pain score, narcotic requirement and associated morbidities.

METHODS: After IRB approval, a single-blinded randomized controlled trial was conducted among adult patients with urethral stricture, that were evaluated suitable for substitution urethroplasty using BMG. Patients were randomized using computer generated allocation scheme to group 1 (liposomal bupivacaine) and group 2 (control). Patient demographic and peri-operative data were collected. Outcome assessed were: post-operative day 1 -2 narcotic use, converted as cumulative morphine equivalents on a 24-hour basis. A validated survey with 10-point visual analogue scale for evaluation of patient reported oral pain score, associated oral morbidities, and oral conditions on post-procedural day 1-3 and 1-month follow-up. Fisher-exact test and independent T-test was used to analyze the data with statistical significance set at 0.05 level. (Clinicaltrials.gov registration NCT03720223)

RESULTS: A total of 50 eligible patients were enrolled, 7 were excluded according to predefined exclusion criteria (Group 1: 21, Group 2: 22). No significant baseline characteristics difference was noted between the treatment groups. Compared to group 2, a significantly lesser narcotic requirement was noted among the patients in group 1 on post-op day 1 (IV Morphine equivalent mean difference 8.58; 95%CI 1.59, 15.56, p=0.017). No significant between group difference was noted for narcotic requirements on post-op day 2. Likewise, no between group difference was noted for post-procedural oral pain score, and oral morbidities on post-op day 1 to 3, and at 1-month follow-up. For post-procedural oral conditions, a significantly higher number of patients in group 1 have reported oral numbness at post-op day 2 (14 (87.5%) vs 8 (44.4%); p=0.013), which was not sustained and equivalent to group 2 at 1-month follow-up.

CONCLUSIONS: Our study showed that Liposomal bupivacaine infiltration to the BMG harvest site is safe and may adequately address the post-procedural oral pain, with noted significantly fewer narcotic requirements at post-op day 1. Although, higher incidence of oral numbness can be reported among these patients on post-op day 2, which was not long-lasting. Future studies may consider to evaluate the cost-effectiveness to determine suitability for routine use.

Source of Funding: None

**MP55-09
ENDOSCOPIC TREATMENTS PRIOR TO URETHROPLASTY:
TRENDS IN MANAGEMENT OF URETHRAL STRICTURE DISEASE
SINCE THE AUA GUIDELINE**

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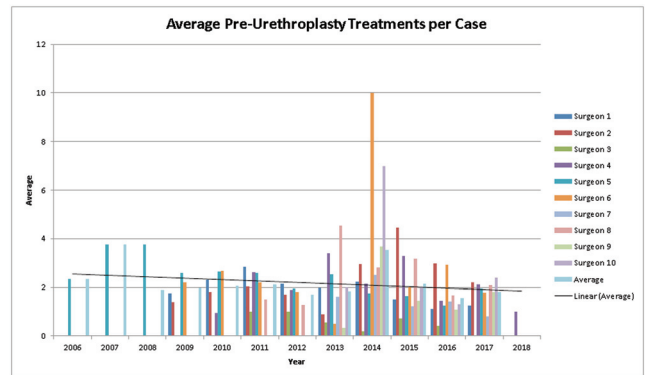
INTRODUCTION AND OBJECTIVES: Endoscopic treatment of urethral stricture disease (USD) continues to be the most common treatment of USD despite its poor success compared to urethroplasty. AUA guidelines regarding the management of male USD were presented in May 2016, advocating consideration of urethroplasty in patients with 1 prior failed endoscopic treatment. The aim of our study is to determine if the number of endoscopic treatments of USD prior to urethroplasty has decreased since the implementation of the AUA guideline.

METHODS: A retrospective review of a prospectively maintained, multi-institutional urethral stricture database of high volume, geographically diverse institutions was performed. We evaluated pre-urethroplasty endoscopic treatment patterns prior to and after the AUA male stricture guideline.

RESULTS: 2,964 urethroplasties were reviewed in 10 institutions. The overall average number of endoscopic treatments prior to urethroplasty for the entire cohort was 2.15 (SD= 4.887). There was a

decrease in the number of endoscopic treatments prior to urethroplasty in the pre-May 2016 compared to post-May 2016 cohorts both for overall urethroplasties (2.3 vs 1.6, P=0.0012) and anterior urethroplasties specifically (2.6 vs 1.9, P=0.0026).

CONCLUSIONS: This is the first study to demonstrate a decrease in the number of endoscopic treatments of USD prior to urethroplasty since development of the AUA stricture guideline. Further research is needed to determine if there will be a continued trend in the declining use of endoscopic treatment and elucidate the barriers to earlier urethroplasty in patients with USD.



	Anterior Urethroplasty	Posterior Urethroplasty	Total
Participants, n	2,581	383	2,964
Patient Demographics			
Mean age (range), years	47.2 (0-91)	56.7 (8-86)	48.4 (0-91)
Mean BMI (range)	30.1 (11-64)	27.9 (10-52)	29.8 (10-64)
Co-morbid Conditions			
Diabetes, n (%)	345 (13.4%)	58 (15.1%)	403 (13.6%)
Hypertension, n (%)	813 (31.5%)	177 (46.2%)	990 (33.4%)
Hyperlipidemia, n (%)	516 (20.0%)	121 (31.6%)	637 (21.5%)
Coronary Artery Disease, n (%)	70 (2.7%)	16 (4.2%)	86 (2.9%)
COPD, n (%)	57 (2.2%)	12 (3.1%)	69 (2.3%)
Peripheral Vasc Disease, n (%)	36 (1.4%)	6 (1.6%)	42 (1.4%)
History of Malignancy, n (%)	187 (7.2%)	135 (35.2%)	322 (10.9%)
Prior Pelvic Radiation, n (%)	20 (0.8%)	140 (36.6%)	160 (5.4%)

Source of Funding: None

**MP55-10
UTILIZATION OF ENDOSCOPIC MANAGEMENT FOR URETHRAL
STRICTURES IN AQUA**

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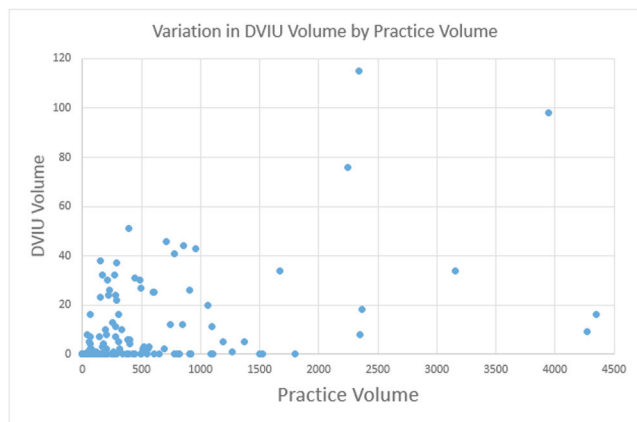
INTRODUCTION AND OBJECTIVES: Repeated endoscopic management of urethral strictures has poor long-term success. Recent AUA guidelines on urethral stricture disease encourage early urethroplasty. Contemporary patterns of urethral stricture disease management and the affect of the AUA guidelines on them are poorly understood. We hypothesized that practices with greater numbers of urethral stricture patients would be likely to perform frequent DVIU.

METHODS: We queried the AQUA database using a combination of Current Procedural Terminology (CPT) codes and International Statistical Classification of Diseases (ICD) 9/10 codes to identify patients with urethral stricture and how they were managed. We calculated total patient volume at the practice level as well as frequency of direct vision internal urethrotomy (DVIU) and urethroplasty.

RESULTS: We identified 77,742 unique patients diagnosed with urethral stricture in AQUA since 2014. Caucasians accounted for 75.4% of patients. The patients were cared for by 1343 providers at 171 practices. There was wide variation in utilization of DVIU (Figure 1) at both the practice-level and the provider level, where we noted a 20-fold variation. On average, practices performed 0.54 urethroplasties vs. 7.8 DVIU procedures. There was a positive correlation between a greater

practice utilization of DVIU and increased urethroplasty volumes (correlation coefficient +0.80).

CONCLUSIONS: DVIU is utilized significantly more frequently than urethroplasty. There is wide variation in the utilization of DVIU across practices and providers. Future research should determine whether this variation is guideline concordant or driven by variation in case mix. On the other hand, this care may be guideline discordant and driven by a lack of knowledge or by specific patient or physician preferences.



Source of Funding: Institutional Funds

MP55-11
TEMPORAL TRENDS IN THE INCIDENCE OF PELVIC FRACTURE ASSOCIATED URETHRAL INJURIES IN UNITED STATES

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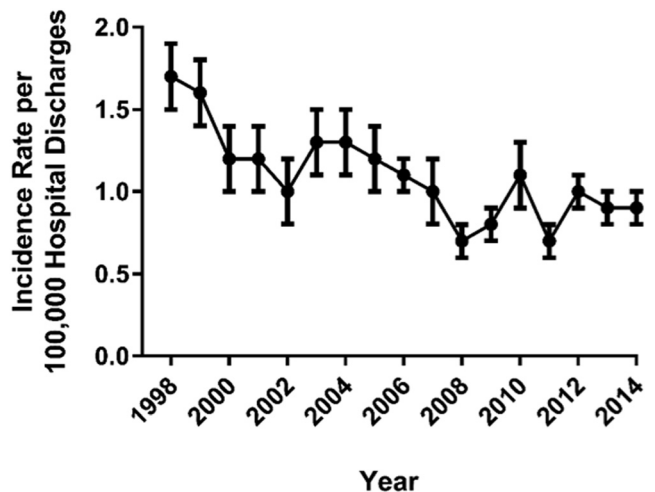
INTRODUCTION AND OBJECTIVES: Pelvic fracture associated urethral injuries (PFUIs) can cause significant patient morbidity. The management of these patients is complex and can result in lifelong consequences in the forms of stricture, incontinence, and erectile dysfunction. There is a large discrepancy in the prevalence and etiologies of PFUIs between different countries, which is related to differences motor vehicle regulations, seat belt laws, and traffic infrastructure. In the United States, statewide seat belt laws were passed from 1984-1995 and airbag requirements went into effect in 1998. We use a large contemporary population based cohort to assess the temporal trend in PFUIs after these regulations.

METHODS: The National Inpatient Sample (NIS) is a weighted sample of inpatient hospital discharge data with ICD-9 procedure and diagnosis codes. Pelvic fractures were identified by any of the 808.xx ICD-9 diagnosis codes. PFUI was identified by the combination of an 808.xx diagnosis code with an ICD-9 procedure code for suprapubic tube placement (either code 57.17 or 57.18). SAS v9.2 software was used to analyze frequencies. All data were analyzed with trend weights provided by the NIS to account for changes in the study design over time using years 1998-2014.

RESULTS: Average age was 38 years. 784 (11.5%) patients were female. 654 patients (9.6%) died while hospitalized. There was downward trend in the annual incidence of PFUI in the time frame studied. The incidence of PFUI significantly decreased from 1.7 ± 0.2 cases per 100,000 hospital discharges in 1998 to 0.7 ± 0.1 cases per 100,000 in 2011 ($p=0.0067$). The incidence appears to have stabilized from 2011 to 2014. In the time frame studied, National Highway Traffic Safety Administration surveys demonstrated that seat belt use increased from 58% to 87%.

CONCLUSIONS: While the true incidence of PFUI is likely underestimated in this study, we demonstrate a decreasing trend in the incidence of PFUI in the United States from 1998 to 2014. This occurred

after mandatory seat belt and airbag motor vehicle regulations that were implanted in the 1990s. This decrease does, however, result in fewer opportunities to train reconstructive surgeons in complex posterior urethroplasty.



Source of Funding: none

MP55-12
IMPACT OF PATIENT AND PROVIDER CHARACTERISTICS ON RECURRENCE FOLLOWING URETHROPLASTY

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INTRODUCTION AND OBJECTIVES: We aim to characterize and determine predictors of urethral stricture recurrence following urethroplasty. This is the largest study to evaluate predictors of recurrence and first to include provider characteristics.

METHODS: Patient who underwent urethroplasty between 1995 and 2015 were identified from the Statewide Planning and Research Cooperative System (SPARCS) database, a comprehensive all-payer reporting system containing patient level data on all hospital discharges in New York State. Recurrence and repeat urethroplasty were identified by linking subsequent discharges. The chi-square test was used to compare variables. Multivariable logistic regression was used to determine predictors of recurrence and repeat urethroplasty.

RESULTS: 1,481 patients undergoing urethroplasty were identified between 1995 and 2015. 1,285 (87%), 132 (9%) and 64 (4%) underwent primary anastomosis, buccal graft and other graft urethroplasty, respectively. 158 (11%) patients experienced recurrence, and of these patients, 95 (6%) underwent repeat urethroplasty. The average time from the initial urethroplasty to recurrence and repeat urethroplasty were 848 and 808 days, respectively. The majority (53.8%) of recurrence occurred within 1 year. Multivariable analysis demonstrated that risk factors for urethral stricture recurrence were race (OR black vs. white: 1.77, CI: 1.1, 2.8, $p=0.014$), age (OR: 1.01, CI: 1, 1.03, $p=0.001$) and income (OR: 25-50th percentile vs top quartile: 1.69, CI: 1.01, 2.83, $p=0.044$). Of the patients with recurrence, insurance (OR Medicaid vs. private insurance: 0.25, CI: 0.07, 0.86, $p=0.027$) was the only predictor of urethroplasty. Other patient characteristics, provider characteristics and use of graft did predict recurrence.

CONCLUSIONS: Urethroplasty is a robust treatment for urethral stricture with 91% of patients requiring only primary repair without the need for second stage or repeat urethroplasty. Predictor of recurrence include race, age and income. Graft usage, surgeon volume and hospital characteristics are not associated with recurrence.