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MP15-03 NATIONAL VARIATION IN URETHROPLASTY COST AND PREDICTORS OF EXTREME COST: A COST ANALYSIS WITH POLICY IMPLICATIONS

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INTRODUCTION AND OBJECTIVES: Urethral stricture disease is common and costly. When compared to endoscopic treatments, urethroplasty has been proven to be a cost-effective approach to manage urethral stricture. Little is known regarding urethroplasty cost variation and what factors are associated with high cost. Our objective was to analyze a national sample of urethroplasty patients to determine what variables were associated with the highest cost.

METHODS: We conducted a retrospective analysis using the 2001–2010 Healthcare Cost and Utilization Project - Nationwide Inpatient Sample, which is a nationally representative 20% sample of hospitalizations from acute care U.S. hospitals. The NIS captures hospital charges which were converted to cost using the HCUP Cost-to-Charge Ratio. We examined patient, hospital, year, and type of urethroplasty using logistic regression to determine which factors correspond with higher cost, defined as the top quintile. All analyses accommodated the complex sample survey aspects of NIS.

RESULTS: A total of 2298 urethroplasties were reported in NIS over the study period representing an estimated total 12389 (95% CI 8750–16029) procedures. The median charges were \$19866 (IQR \$14346–\$29382) with associated costs of \$7321 (\$5677–\$10000). Multiple factors were associated with extremes of cost. Patients with any comorbid conditions had increased odds of high cost urethroplasties (OR 1.4, 95% CI 1.1–1.6) compared to those without comorbidities. Patients with 3 or more comorbidities had even higher odds (OR 2.2, 1.3–3.8). Patients with obesity (OR 1.8, 1.2–2.5) and history of renal failure (OR 2.3, 1.2–4.6) were most likely to have extremes of cost compared to other comorbidities. As expected, inpatient complications increased the odds of high hospital costs (OR 2.7, 1.8–3.9), with wound (OR 6.1, 2.6–14.5) and respiratory (5.2, 1.7–15.9) complications increasing the odds of high costs the most. Buccal mucosal graft and use of other graft urethroplasty both increased the odds of high costs by 1.6 (1.0–2.4 and 1.1–2.3, respectively). Extremes of cost were not associated with variations in patient age and race, payer type, hospital size, location, teaching status, region, and volume of urethroplasty cases, and year of urethroplasty.

CONCLUSIONS: Cost variation for inpatient urethroplasty has policy implications as efforts to bend the healthcare cost curve in the U.S. has led to increased attention and scrutiny of excessive procedural costs. Understanding which aspects of care increase cost can be used to promote targeted cost reduction efforts.

Source of Funding: none

MP15-04 ENDOSCOPIC TREATMENT OF VESICourethRAL STENOSIS AFTER RADICAL PROSTATECTOMY: OUTCOMES AND PREDICTORS OF SUCCESS

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INTRODUCTION AND OBJECTIVES: Vesicourethral anastomotic stenosis (VUS) is a significant complication after radical prostatectomy. Our current understanding of treatment is based on small series using single treatment modalities. Our study objective is to describe outcomes and predictors of success for endoscopic treatment of VUS post radical prostatectomy.

METHODS: A retrospective review identified 131 patients who underwent endoscopic treatment for VUS after radical prostatectomy at our institution over a 10-year period. Bladder neck strictures after TURP and urethral stenoses after primary radiotherapy were not included in this study. The primary outcome measure was success defined as no evidence of

recurrent stenosis <16Fr on cystoscopy. Clinical factors examined were treatment modality, prior endoscopic failure, concurrent radiotherapy, BMI >35, diabetes and tobacco use. Treatment modalities were divided into 5 groups: holmium laser incision, "cold knife" incision, electrocautery resection, dilation or urolume stent. Descriptive statistics as well as univariate and multivariate binary logistic regression were performed.

RESULTS: 131 patients required 292 endoscopic treatments for a mean of 2.2 treatments per patient. Success rate of a single endoscopic treatment was 44.2% with a mean follow-up duration of 9.6 months. On univariate analysis treatment modality ($p<0.0001$) and prior failed treatment ($p=0.035$) were associated with success while diabetes ($p=0.59$), radiotherapy ($p=0.28$), tobacco use ($p=0.20$) and BMI >35 ($p=0.57$) were not. Success after first, second, and third endoscopic treatments was 48.9%, 48.6%, and 36.1% respectively. 19.1% of patients required more than 3 treatments. On multivariate analysis treatment modality remained significantly associated with treatment success ($p<0.0001$). Treatment success of holmium laser incision, cold knife, electrocautery, dilation and urolume stenting were 54.9%, 33.3%, 40.6%, 13.0%, and 60.0% respectively. Holmium laser incision was associated with significantly better success ($p<0.001$) while dilation had significantly worse outcomes ($p<0.0001$).

CONCLUSIONS: Most patients with vesicourethral stenosis after radical prostatectomy are successfully treated with endoscopic modalities but often require multiple procedures. Unlike anterior urethral strictures, the use of repeat endoscopic treatments appears justified in this specific scenario. Holmium laser incision is the most effective treatment modality while urethral dilation is the least successful.

Source of Funding: None

MP15-05 EFFECTS OF PRIOR RADIATION ON OUTCOMES FROM VESICAL NECK INCISION WITH INTRALESIONAL MITOMYCIN C FOR RECALCITRANT BLADDER NECK CONTRACTURE

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INTRODUCTION AND OBJECTIVES: The antiproliferative agent, mitomycin C (MMC), has shown preliminary efficacy as adjunctive treatment during vesical neck incision (VNI) for recalcitrant bladder neck contracture (BNC). Often, patients with severe BNC have prior radiation exposure for genitourinary malignancy. Radiation exposure and its resultant tissue changes render VNI less effective. The impact of prior radiation exposure on outcomes of VNI+MMC is unknown. We hypothesize the efficacy of VNI+MMC will be comparatively less robust in radiated tissue.

METHODS: All patients with prior radiation therapy for prostate or bladder cancer and recalcitrant BNC who underwent VNI+MMC between January, 2013 and March, 2014 were included. At least one prior failed VNI qualified the patient as recalcitrant. Patient characteristics are found in table 1. Tri or quadrant incisions were made to the level of perivesical fat, when possible. Approximately 0.5 mL of 0.4 mg/mL MMC was injected among incision sites. Cold-knife incisions were used without coagulation, in efforts to minimize thermal damage. Success was considered when post-operative flexible cystoscopy was completed without needing dilation.

RESULTS: Nine patients were followed for a median of 8 months. Patient characteristics are found in table 1. Six (67%) patients had history of radiation therapy (RT), three (33%) patients were radiation-naive (RN). Median time from RT to VNI+MMC was 7 years. One RT patient (17%) achieved an open bladder neck after one procedure. Four (67%) RT patients were open after two procedures and one failed two procedures. All RN patients had open bladder necks after one procedure.

CONCLUSIONS: Radiation induced tissue changes impair wound healing and may present a barrier for intralesional therapies. While VNI+MMC resulted in open bladder necks in most RT patients, multiple procedures were usually necessary. Patients with prior RT represent a difficult to treat population that may not benefit from adjunctive MMC injection during VNI. Limitations include retrospective design, unknown BNC length, small sample size, short follow-up, and lack of objective voiding parameters.