MP52-11
BLADDER NECK CONTRACTURES STABILIZE AFTER ARTIFICIAL URINARY SPHINCTER PLACEMENT
Kevin Krughoff*, Hayley Premo, Andrew C. Peterson, Durham, NC

INTRODUCTION AND OBJECTIVE: The optimal treatment for the combination of stress urinary incontinence (SUI) and bladder neck contracture (BNC) is often vexing to the reconstructive urologist. Anecdotal clinical experience from our group indicates that many BNCs stabilize after AUS placement. We hypothesize that AUS placement may decrease BNC recurrence.

METHODS: Men with BNC and voiding LUTS or AUR are treated at our institution with dilation, DVIU or TUR. Men with SUI electing AUS placement undergo simultaneous BNC treatment if symptomatic or if the bladder neck is ≤ 12 French and precludes catheter insertion. We queried our prospectively maintained QI database for all cases seen at our institution from 2001-2021 with a history of SUI and intervention for BNC. A total of 174 records were reviewed. Those with a urethral stent (n = 6) or less than 2 months follow up (n = 9) were excluded. The odds of recurrence and time between recurrences were compared between those with and without an AUS in place using logistic regression and the Wilcoxon Rank-Sum test. Recurrence rates and recurrence free survival were compared using multivariate Cox regression.

RESULTS: The analytic cohort of 159 was comprised of 60 patients who underwent AUS placement and 99 who did not. Baseline characteristics were similar except for a 15% higher prevalence of pelvic radiation in the AUS group (p = 0.06). A total of 278 BNC interventions were carried out in the non-AUS group (median 2 per patient) and 83 in the AUS group (median 2 per patient). After any given BNC intervention, the odds of recurrence were 75% lower (OR 0.25, CI: 0.15-0.42, p < 0.01) when an AUS was placed. On sub-analysis according to number of prior interventions, AUS placement was associated with a 90% lower odds of recurrence (OR 0.10, CI: 0.03-0.27, p < 0.01) and 2.6 years (p = 0.02) longer time to recurrence after one intervention. After two interventions, the odds were 61% less (OR 0.39, CI: 0.16-0.97, p = 0.04) and time to recurrence was 1.3 years longer (p = 0.01). Recurrence rates were 70% and 75% lower at these same time points when adjusting for prior radiation, prostatectomy, receipt of CIC teaching, smoking, age, diabetes and coronary artery disease (Figure 1).

CONCLUSIONS: Our data indicate that placement of the AUS seems to be associated with improved bladder neck stability.

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MP52-12
RISK FACTORS ASSOCIATED WITH VENOUS THROMBOEMBOLISM AFTER ARTIFICIAL URINARY SPHINCTER SURGERY? AN ASSESSMENT OF 4,870 PATIENTS
Kevin Hebert*, Niraj Paudel, Rupam Das, Rano Matta, Joshua Calvert, Benjamin McCormick, Joshua Horns, Salt Lake City, UT; James Hotaling, Salt Lake City, UT; Jeremy Myers, Salt Lake City, UT

INTRODUCTION AND OBJECTIVE: VTE (venous thromboembolism) following AUS (artificial urinary sphincter) surgery has been considered low risk. However, well powered studies assessing this risk are absent. We sought to evaluate the incidence and associated risk factors for postoperative VTE using a large cohort of 4870 men undergoing AUS surgery.

METHODS: We performed a retrospective study of men undergoing AUS surgery between 2008-2017 using IBM MarketScan, a large commercial claims database. Men were identified using AUS common procedural terminology codes (53447, 53445, 53448) and were assessed for post-operative VTE events (pulmonary embolism (PE) and deep vein thrombosis (DVT)) within 90 days of surgery. Preoperative risk factors based on the Caprini score risk system were assessed and included: spinal cord injury, varicose veins, hypercoagulable state, Factor V Leiden, prothrombin gene, lupus anticoagulant, anticardiolipin, previous DVT/PE. These risk factors and their association with post-operative VTE were analyzed using a Cox proportional hazards model from time of surgery to 90 days post-op.

RESULTS: We identified 4870 men, median age 68 years (IQR 62-75), who underwent AUS surgery between 2008-2017. History of prostate cancer (81.6%), prostatectomy (21.8%), peripheral vascular disease (8.6%), cardiovascular disease (34.4%), and hypertension (68.2%) were common. Likewise, prior history of DVT or PE was present in 2.7% and 1.7% patients, respectively. Within 90 days of AUS surgery, the incidence of DVT and PE were 1.1% and 0.8%, respectively. First time post-operative DVT and PE events occurred in 0.5% and 0.4% patients, respectively. Of the patients experiencing a DVT or PE for the first time, 56.8% were diagnosed in an emergency department setting. History of varicose veins (HR 2.8, 95% CI [1.1-6.8], p = 0.028), prior DVT (HR 13.7, 95% CI [7.4-25.2], p < 0.001) or PE (HR 7.7, 95% CI [4.0-14.6], p < 0.001) were associated with increased risk of postoperative DVT or PE while, prior prostatectomy (HR 0.32, p = 0.003) was associated with decreased risk of postop events. No additional risk factors were independently associated with post-operative VTE risk.

CONCLUSIONS: The incidence of post-operative VTE events is higher in men undergoing AUS surgery compared to outpatient urologic surgeries of similar duration. Prior history of varicose veins, DVT, and PE are associated with increased risk post-operative VTE events, while prior prostatectomy is protective. This data should be used in preoperative setting for risk stratification and postoperatively for patient education.

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MP52-13
PRESENTING SIGNS AND SYMPTOMS OF ARTIFICIAL URINARY SPHINCTER CUFF EROSION
Linley Dia*, Samantha Nealon, Shervin Badkshshan, Avery Wolfe, Gianpaolo Carpinito, Benjamin Dropkin, Sarah Sanders, Steven Hudak, Allen Morey, Dallas, TX

INTRODUCTION AND OBJECTIVE: Presenting signs and symptoms of artificial urinary sphincter (AUS) cuff erosion are not well established in the urological literature. We sought to characterize the most common presentation and clinical risk factors for erosion to distinguish the relative frequency of symptoms that should trigger further evaluation in these unfortunate patients.

METHODS: We retrospectively reviewed our large tertiary center database to identify men who presented with cuff erosion...
between 2007 and 2020. A similar cohort of men who underwent AUS placement without erosion were randomly selected from the same database for comparison. Risk factors for cuff erosion - pelvic radiation, androgen deprivation therapy (ADT), high-grade prostate cancer (Gleason score ≥ 8) - were recorded for each patient. Presenting signs and symptoms of erosion were grouped into three categories: obstructive symptoms, worsening incontinence, and localized scrotal inflammation (SI).

RESULTS: Of 893 men who underwent AUS placement during the study interval, 61 (6.8%) sustained cuff erosion. Most erosion patients (40/61, 66%) presented with scrotal inflammation (SI) after AUS insertion, p<0.01. Relative to the non-erosion control group (n=61), men who suffered erosion had a higher prevalence of pelvic radiation (71 vs 49%, p=0.02), hypertension (87 vs 64%, p=0.003), coronary artery disease (54 vs 12%, p<0.00001), and smoking history (71 vs 51%, p=0.03).

CONCLUSIONS: AUS cuff erosion most commonly presents as scrotal inflammatory symptoms. Obstructive voiding symptoms and worsening incontinence are also common. Any of these symptoms should prompt further investigation of cuff erosion.

To calculate eGFR, the Modification of Diet in Renal Disease (MDRD) equation was utilized: eGFR (ml/min/1.73 m²) = 186 x serum Cr-1.154 x age-0.203 x 1.210 (if African American). Based on eGFR, patients were divided into five different groups: 0-29 (advanced CKD), 30-59 (Stage III CKD), 60-89 (Stage II CKD), 90-119 (Stage I CKD), and >120 (hyperfiltration). We investigated 30-day outcomes including readmission, readmission complications (both minor and major), and non-home discharge in all groups. A multivariate logistic regression analysis was performed to control for confounding variables and to identify eGFR categories as an independent risk factor for each outcome.

RESULTS: A total of 2,410 cases met inclusion criteria. Overall, most patients were elderly, overweight, and had hypertension. Patients with advanced CKD had high rates of hypertension (84.4%) and diabetes (43.8%). Patients with advanced CKD had 9.9x higher odds of non-home discharge, 7.1x higher odds of minor complications, and 6.7x higher odds of major complications (p-value <0.05).

CONCLUSIONS: Patients with non-advanced CKD had complication rates comparable to patients with better renal function. Patients with advanced CKD (eGFR<30) should be carefully selected prior to AUS surgery due to higher complication rates compared to patients with higher eGFR. Low eGFR may be used to counsel patients about risk for 30-day surgical complications.