Initial Experience With Elevate Repair System For Pelvic Organ Prolapse
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Introduction:
The Elevate™ prolapse repair system comprises polypropylene mesh anchored through sacrospinous ligament and obturator fascia fixation points. We present our initial experience, focusing on safety, feasibility, and early subjective/anatomic outcomes.

Materials & Methods:
Eleven women underwent repair of anterior/apical compartment prolapse using the Elevate system, with 10 undergoing concurrent mid-urethral sling placement. Baseline anterior/apical POP-Q staging comprised stage II(n=3) and III(n=8) anterior, and stages I(n=3), II(n=5), and III(n=1) apical defects. Anatomic outcomes were assessed using POP-Q staging. Subjective outcomes were assessed using the International Consultation on Incontinence Questionnaire-Vaginal Symptoms (ICIQ-VS) and the Incontinence Impact Questionnaire (IIQ-7). Additional focus was placed on operative characteristics and complications.

Results:
Patient age was 68 years (±9), with mean follow-up of six months. Mean blood loss and operative time was 113 cc (±20.7) and 71 min (±20.7), respectively. Post-operative examination demonstrated resolution (stage 0) of anterior/apical prolapse in all patients, and absence of mesh erosion. Total IIQ-7 scores improved from 6.5 (±3.2) to 1.8 (±1.7) at baseline and post-operative assessments (p<.001). ICIQ-VS domain scores for dragging pain and vaginal bulge improved from 0.9 (±0.9) to 0.0 (±0) and 3.0 (±.94) to 0.0 (±0), respectively (p<0.05, both comparisons). Ten patients reported subjective satisfaction. One remaining patient denied satisfaction due to persistent incontinence. No early complications were identified.

Conclusions:
The Elevate™ system is associated with significant improvements in validated symptom and quality of life indices. Early anatomic restoration is excellent. No complications were noted in our early experience. Further patient accrual and follow-up is ongoing.
Active Surveillance Program at a Tertiary Veterans Affairs Medical Center
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Introduction: Active surveillance has become an accepted practice in an effort to reduce over-treatment of prostate cancer. The purpose of this study is to evaluate initial data after the establishment of an active surveillance program at a VA medical center and to compare these patients to those with delayed biopsy.

Materials & Methods: A retrospective review identified 42 men who were diagnosed with prostate cancer and met criteria for active surveillance. We followed patients with a PSA every 6 months and annual biopsy, unless prompted by an increasing PSA value.

Results: 42 patients met criteria for active surveillance with 33 followed per our guidelines and the remainder having delayed biopsy. Among the 33 patients, 21 had repeat biopsies at an average of 11.1 months compared to 9 patients with delayed biopsies at 33.4 months. Five men have chosen definitive treatment at an average of 11 months. The number of positive cores from initial to repeat biopsy increased by 37% for in-program patients (IP) and 54.8% for delayed biopsy patients (DB). Total Gleason score increased by 0.7 for IP and 1.2 for DB between biopsies. On repeat biopsy, 14% of IP converted to a Gleason score ≥8 compared to 33% for patients with delayed biopsy.

Conclusions: We have demonstrated that an active surveillance program can be safely and effectively established at a VAMC. Although the ideal time frame for repeat biopsy remains unclear, waiting 2.5 years may place patients at increased risk for local progression.
Urinary Diversion After Pelvic Exenteration
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Introduction: The objective of this retrospective study was to analyze long-term outcomes of urinary diversion in patients after pelvic exenteration, and their satisfaction with the method of urinary diversion.

Materials & Methods: Charts of patients who underwent pelvic exenteration since January of 1990 at two Institutions (National Oncological Centre, Tbilisi, Georgia and Virginia Commonwealth University Medical Center, Richmond, USA) were reviewed. Ninety-four of these patients required urinary diversion. Diversion-related complications, long-term outcomes, and patient satisfaction with urinary diversion were analyzed.

Results: Exenteration was performed for gynecologic malignancies in 44 patients, for rectal cancer - in 27, for bladder cancer - in 17 and for soft tissue sarcoma - in 6. Forty-five patients underwent total exenteration and 49 - anterior exenteration. An incontinent stoma was created in 24 patients, continent stomas - in 36, bladder substitution was performed in 23 patients and rectal diversion in 11. Six patients (6.4%) died in the immediate postoperative period. Urinary continence was achieved in 85.3% of patients with continent stoma and in 90.9% of patients with bladder substitution. Upper urinary tract compromise was documented in 6.6% of renal units. Almost all patients with continent diversion were satisfied with their quality of life. Approximately one-third of patients with an incontinent urostomy expressed unhappiness with their condition and were willing to undergo major operation to convert to continent diversion.

Conclusions: In our experience, continent urinary diversion has yielded overall good functional results, high patient satisfaction rate and is feasible in most patients undergoing pelvic exenteration.
Racial Differences in Bladder Management Methods in Patients with Spinal Cord Injury/Disability (SCI/D)

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Introduction: Data on the prevalence of bladder management methods (BMM) in patients with SCI/D is limited. Our goal was to provide prevalence of BMM and identify factors associated with various BMM in patients with SCI/D.

Methods: A retrospective review was performed on 876 SCI/D patients actively followed at a tertiary Veterans Affairs hospital. BMM were compared according to medical and demographic variables including mechanism of injury, level of injury, age, gender, and race and analyzed using Fisher’s Exact and t-tests with p<0.05 considered significant. Multivariate regressions were used to identify independent risk factors for BMM.

Results: Data on BMM were available on 863/876 patients (98.5%). The majority of patients were Caucasian (449/805, 55.8%). The most common BMM was spontaneous voiding (251/863, 29.1%), followed by intermittent catheterization (IC) and indwelling catheterization [221/863 (25.6%) for both groups]. Of the 440 patients (51.0%) requiring some form of catheterization, IC was less commonly employed than indwelling catheterization for patients with cervical injuries (78/221, 35.3%) vs. patients with lower injuries (143/221, 64.7%; p<0.05). Non-Caucasians used spontaneously voiding(188/356, 52.8%) more commonly than Caucasians (177/449, 39.4%; p<0.05). Caucasian race was an independent risk factor for indwelling catheterization (OR = 1.46, CI: 1.024 - 2.073; p<0.05).

Conclusions: Our study provides prevalence data for BMM in a large population of SCI/D patients. In our population, Caucasians were more likely to use indwelling catheters and less likely to use spontaneous voiding, which may suggest that there are racial differences in perceptions regarding BMM and access to urologic care.
Short-Term Efficacy of a Transobturator Sling in Women Veterans with a History of Sexual Trauma
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Introduction: Transobturator midurethral slings have been shown to be efficacious in the treatment of stress urinary incontinence. However, efficacy in patients with history of sexual trauma and mixed incontinence (MUI) has not been reported. The objective of this investigation was to determine the short-term efficacy of the Obtryx® transobturator sling in the treatment of this patient population.

Materials & Methods: 25 women with MUI were identified who underwent an Obtryx sling placement by a single surgeon at a Veterans Affairs (VA) Hospital from 06/01/2006 to 9/17/2009 using the VA’s computerized medical record. The Urogenital Distress Inventory (UDI-6) and Incontinence Impact Questionnaire (IIQ-7) were available preoperatively on all patients. Post-operative outcomes were determined by questionnaire data or upon review of subjective history. Scoring specific to urge urinary (UU) symptoms and stress urinary (SU) symptoms were evaluated. The surgical outcomes were characterized as “cured/improved” or “no change/worse.”

Results: 24 patients were included in this study. The average age and BMI were 51.9 years and 35% respectively. Average follow up was 208 days. 63% of patients reported a history of sexual trauma. In these patients, 93% reported improvement of their SUI and 73% reported improvement in UU. Women with no history of sexual trauma reported a 100% improvement in SU and 89% improvement in UU. No statistical differences in surgical outcomes were noted between women with or without history of sexual trauma.

Conclusions: Mid-urethral slings represent a viable option for treatment of mixed urinary incontinence in women with a history of sexual trauma.
Evaluation Of A New Robotic Prostatectomy Program At A Tertiary Veterans Affairs Medical Center

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Introduction: The purpose of this study is to examine preoperative, intraoperative, and postoperative variables associated with establishment of a robotic prostatectomy (DVP) program at a VA medical center.

Materials & Methods: Patients were retrospectively reviewed between March 2009 and February 2010, the first 12 months of a new robotic surgery program at our institution. Our control group was the same time period one year earlier. Preoperative, intraoperative and postoperative data was collected and compared.

Results: Between March 2008 and February 2009, 30 patients underwent open radical retropubic prostatectomy (RRP). With the introduction of DVP, total prostatectomies increased to 43 (6 RRP, 37 DVP), an increase of 43%. RRP decreased by 80%. BMI, PSA, Gleason score and staging were similar for both groups. Average EBL was 1315mL for RRP vs. 166mL for DVP (p<0.01). Mean operative time in minutes were 253 and 274 for RRP and DVP respectively. Complications included 2 rectal perforations, one each for RRP and DVP, one death after RRP (cardiopulmonary event post-op) and one open conversion for failure to progress. Average length of stay was 5.3 and 1.6 days for RRP and DVP respectively (p<0.01). Total positive margins were 30% for RRP and 16% for DVP (p=0.19).

Conclusions: During the first 12 months of our DVP program, the total number of prostatectomies increased dramatically. Our study shows that a robotic surgery program can be implemented in a safe and efficient manner with improvement in EBL and length of stay, similar complication rates and equivalent oncologic outcomes.
**Effect Of Mid-Urethral Sling Placement On Urgency And Urge Incontinence**

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**Introduction:** Contemporary research suggests the incidence of de novo urgency and urge incontinence (UI) following mid-urethral sling placement may be low, with many patients achieving improvement/resolution of these symptoms. We sought to investigate this hypothesis in a patient cohort undergoing TVT-O placement.

**Methods:** Sixty patients underwent TVT-O placement in the treatment of stress-predominant mixed incontinence. Outcomes were assessed using 3-day bladder diary, combined with multiple validated incontinence questionnaires. Attention was placed on questionnaires focused on urgency and UI (International Consultation on Incontinence Questionnaire-Female Lower Urinary Tract Symptoms (ICIQ-FLUTS); Urgency Perception Score (UPS)).

**Results:** Mean age and follow-up was 64 years (±13) and 8.7 months (±3.4), respectively. Significant improvements in overall incontinence were seen, with improvements in daily pad use [2.9 (±2.7) to 0.9 (±1.4)] and incontinence episodes [4.1 (±3.3) to 0.8 (±1.4)] being observed (p < 0.001, both comparisons). Forty-nine patients (82%) denied absence of stress urinary incontinence (SUI) under any circumstances. Focus on measures of urgency/UI identified improvements in mean ICIQ-FLUTS domain scores for UI from 2.1 (±1.1) to 0.9 (±1.0) (p value < 0.001), with 19 (32%) and 22 (37%) patients reporting score resolution (post-operative score = 0) or improvement. Similarly, mean UPS total score improved from 10.1 (±4.5) to 6.1 (±3.6) (p value < 0.001,) with score improvement or cure identified in 78%. Only one patient reported de novo UI based on UI score. The majority of patients (83%) did not require anticholinergics post-operatively.

**Conclusion:** TVT-O placement is associated with significant improvements in validated measures of urgency/UI, in combination with a low rate of de novo UI. Expected improvements in reported SUI were seen.

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Introduction: The mechanical processes of adjustable passive stiffness (APS) and length adaptation likely underlie normal bladder function and account for its ability to undergo a sevenfold length change during filling and to contract efficiently throughout this range in filling volume. The objective of this investigation was to identify APS and adaptation in a mouse model, in which genetic and molecular manipulations are widely available.

Materials & Methods: Mouse bladder strips were used. Two strips, one with and one without urothelium were cut from each bladder. Both strips were hung between clips attached to isometric force transducers. KCl was used to stimulate tissues. Three series of passive tension measurements were made at 80, 90 and 95% of optimal length (Lo) at peak active tension to find APS. Three consecutive contractions at Lo + 1 mm (Lref) were completed to find adaptation.

Results: Passive tension at each length was increased if tissues were contracted at 50% Lo, but not increased if tissues were not contracted, revealing the existence of APS in the mouse bladder (p<0.05, N=5). Active tension in bladder strips at Lref in KCl with and without urothelium increased with successive contractions, confirming the presence of adaptation in the mouse bladder (p<0.05, N=4).

Conclusions: This is the first study to demonstrate that APS and adaptation occur in a mouse bladder model. Further research into molecular pathways involved in these mechanical processes may identify novel therapies for treatment of disorders of bladder contractility and overactivity that are prevalent in our aging population.