SUFU Fellows Forum
Wednesday, February 28, 2018
Austin, Texas

Education Committee Chair:
Michael E. Albo, MD
SUFU 2018 Fellows Forum
Wednesday, February 28, 2018
1:30 p.m. – 5:45 p.m.
*Not CME Accredited

Sessions One & Two are held concurrently. Speakers and times are subject to change.
Location: 616 AB, 6th Floor

1:30 p.m. – 1:35 p.m. Welcome and Introduction
Michael E. Albo, MD

1:35 p.m. – 2:20 p.m. Selecting a Practice

1:35 p.m. – 1:45 p.m. Practice Models
Jennifer T. Anger, MD, MPH, FPMRS

1:45 p.m. – 1:55 p.m. Nuts and Bolts of Contract Negotiations
Timothy B. Boone, MD, MPH

1:55 p.m. – 2:05 p.m. Navigating New Metrics of Performance
Roger R. Dmochowski, MD, MMHC, FACS

2:05 p.m. – 2:20 p.m. Getting a Job - My Experience (Recent Graduates)
Seth A. Cohen, MD
Fenwa Milhouse, MD
Yahir Santiago-Lastra, MD

2:20 p.m. – 2:50 p.m. Physician Leadership – Why is it Important, Who does it and How to get Started?
J. Christian Winters, MD, FACS

2:50 p.m. – 3:00 p.m. SUFU – How, Why and When to get Involved
Kathleen C. Kobashi, MD, FACS

3:00 p.m. – 3:15 p.m. Q&A

3:15 p.m. – 3:30 p.m. Break

3:30 p.m. – 5:30 p.m. Fellow Abstract Presentations
Please Note: Groups 1 & 2 are held concurrently.

Group 1
Location: 616 AB, 6th Floor
Moderators: Melissa Kaufman, MD, PhD
Alvaro Lucioni, MD

Group 2
Location: 615 AB, 6th Floor
Moderators: Michael E. Albo, MD
Anne P. Cameron, MD, FPMRS

5:30 p.m. – 5:45 p.m. Wrap Up/Q & A
Please Note: Sessions One & Two are held concurrently.

**Breakout Group One**

*Location: 616 AB, 6th Floor*

**Moderators:**
- Melissa Kaufman, MD, PhD
- Alvaro Lucioni, MD

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OVERACTIVE VOIDING BEHAVIOR IN SURGICALLY-INDUCED MENOPAUSAL MICE EXPOSED TO LIPOPOLYSACCHARIDE (LPS) IS MODULATED BY DISTINCT GENE NETWORK PATHWAYS

Marian Acevedo Alvarez, MD1, Judy Yeh, MD2, Lery Alvarez-Lugo, MS2, Ming Lu, MD2, Warren G. Hill, MD3 and Toby Chai, MD2

1CT; 2New Haven, CT; 3Boston, MA

Presented By: Marian Acevedo-Alvarez, MD

Introduction: Overactive bladder (OAB) and urinary tract infection (UTI) increase in incidence during perimenopause. Both conditions respond to estrogen, suggesting they may share common pathophysiological mechanisms sensitive to estrogen signaling. In this study, we aim to ascertain the effect of estrogen on voiding behavior in response to lipopolysaccharide (LPS), surrogate for bacteria, using mice after ovariectomy (OVX) vs sham.

Methods: Female C57BL6 mice underwent OVX or Sham (n = 10/group). Micturition behavior was characterized using voiding spot assay (VSA) at pre-surgery, 4 weeks post-surgery (prior to LPS exposure), and after each of the three consecutive days of intravesical inoculation with LPS. Mice were euthanized and bladders harvested for histologic examination. Gene expression was characterized using a separate cohort of OVX and Sham mice (n = 9/cohort), with bladders harvested at baseline (Day 0) and after LPS inoculation on Day 1 and Day 3 of serial LPS. Urothelium was isolated from OVX and Sham mice (n = 3/time point) and RNA was extracted for microarray chip hybridization. Ingenuity Pathway Analysis was used to identify specific genes showing patterns of fold changes in expression (cutoff ≥ 2, p < 0.05) paralleling changes in voiding behavior.

Results: OVX mice had increased voiding frequency throughout 3 days of LPS exposure whereas Sham mice almost normalized voiding behavior by day 3 (Fig 1). Flattened rugae were seen on histological evaluation of bladders from OVX mice but not from Sham mice. Out of 34K transcripts, 6 genes were identified showing patterns of changes in expression, correlating with patterns of voiding behavior. For example, each of the specific genes changed in opposite directions in OVX versus Sham animals on day 1 versus day 3, mimicking opposite changes in voiding frequencies. Yet, these genes also changed in the same direction in OVX and Sham at day 1, mimicking similar voiding frequencies.

Conclusion: Overactive voiding behavior persisted in OVX mice but resolved in Sham mice with repeated LPS challenge. Changes in expression of six urothelial genes were identified that mimicked voiding behavior, serving as potential targets for new OAB and UTI treatment paradigms.

Funding: SUFU OAB Grant.
Marian Acevedo Alvarez, MD

Birthplace: Bayamon, Puerto Rico

Medical School: NYU School of Medicine

Residency: OB/GYN Program at New York University School of Medicine

Fellowship: Yale University

Plans after Fellowship: N/A
DO PATIENTS DISCONTINUE OVERACTIVE BLADDER MEDICATIONS AFTER SACRAL NEUROMODULATION?

Katherine Amin, MD, Dena Moskowitz, MD, Kathleen Kobashi, MD, Una Lee, MD and Alvaro Lucioni, MD
Virginia Mason Medical Center, Department of Urology, Seattle, WA
Presented By: Katherine Amin, MD

Introduction: Overactive bladder medications (OABM) are often discontinued due to poor tolerability, and recent data shows long-term usage of anticholinergic (AC) OABM is associated with detrimental dose-dependent cognitive effects. Use of 3rd line therapy, including sacral neuromodulation (SNM), can minimize or avoid these potential side effects. However, a subset of patients continue OABM while on 3rd line therapy. We reviewed records of OAB patients to assess the usage of concurrent OABM in patients who have undergone SNM.

Methods: We performed a retrospective review of electronic medical records for all patients who underwent SNM from 8/2014-6/2016. Patients were excluded if indication was urinary retention or if underwent SNM removal. We reviewed clinical characteristics, urodynamic parameters, and filled OABM by an external prescription database. Concurrent therapy was defined as filling an OABM prescription for ≥11 consecutive months at 1 year following SNM surgery. We examined Patient Global Impression of Improvement (PGI-I) and percent improvement. T-test and Fisher’s exact test were used to compare groups.

Results: 78 patients who underwent SNM were identified. 4 patients restarted OABM intermittently >1 year after surgery and were not included in the analysis. Table 1 shows demographic and clinical characteristics. 82.1% (n=64) of patients stopped and never restarted OABM (SNM alone). 12.8% (n=10) of patients consecutively filled OABM prescriptions at least 1 year following surgery (concurrent). Of these patients, 7 filled an AC, 1 filled a beta-3 agonist, and 2 patients filled both medication types sequentially. Concurrent patients were significantly older than SNM alone patients (74.5 vs 64.9 years, p=0.004). There was no difference between groups regarding BMI, gender, SNM revision, urodynamic parameters, PGI-I, or patient-perceived percent improvement.

Conclusion: >80% of patients who progressed to SNM discontinued OABM and utilized SNM as their sole treatment modality. A smaller portion of patients (12.8%) concurrently used OABM following SNM for ≥1 year. Because symptom improvement and patient satisfaction were equivalent between groups, SNM presents an opportunity to provide patients with a successful outcome while avoiding the cumulative cognitive decline associated with AC medications.
Katherine Amin, MD

Birthplace: Madison, WI

Medical School: University at Buffalo

Residency: Mount Sinai Medical Center, Department of Urology

Fellowship: Virginia Mason Medical Center

Plans after Fellowship: N/A
LONG TERM OUTCOMES OF TRIAMCINOLONE INJECTIONS IN INTERSTITIAL CYSTITIS/BLADDER PAIN SYNDROME

Iryna Crescenze, MD, Anne Cameron, MD, John Stoffel, MD, Paholo Barboglio, MD, Quentin Clemens, MD and Priyanka Gupta, MD
University of Michigan, Ann Arbor, MI
Presented By: Iryna Crescenze, MD

Introduction: Triamcinolone injections are listed as a third line therapy for patients with ulcerative interstitial cystitis/painful bladder syndrome (IC/PBS) and as an alternative to fulguration alone. Limited data exists to date to demonstrate the symptom specific benefits of steroid injections, duration of benefit and need for repeat injection. This study aimed to describe the long-term outcomes of triamcinolone injection use in ulcerative IC/BPS.

Methods: Patients with IC/PBS undergoing cystoscopy with steroid injection (CPT 52283, 53899) from 04/2005 to 12/2015 were identified from an electronic medical record. Patients were excluded if they had ulcerations due to other causes such as radiation or scarring. Medical records were reviewed to assess baseline patient characteristics and treatment outcomes. Paired student t-test was used to compare outcomes prior to and after treatment.

Results: Thirty-one patients were followed for a median of 41 months (4−72). Median age was 65 years (45−96), 81%(25/31) were women, and median duration of symptoms was 3 years (0−13). All patients tried and failed multiple other treatment modalities and had biopsies confirming no malignancy and complete lesion fulgurations. Six were on cyclosporine at the time of injection. After first triamcinolone injection 90%(28/31) reported subjective overall improvement, 2 had marginal improvement, and 1 patient reported no improvement. Mean AUA symptom scores decreased from 17.1+/−6.9 to 12.6+/−7.8 (p=0.005) and quality of life scored from 4.5+/−1.5 to 3.2+/−2.0 (p<0.001). Specifically, frequency score decreased with injection from 3.8+/−1.3 to 2.7+/−1.6 (p=0.002) and nocturia from 3.6+/−1.2 to 2.9+/−1.07 (p=0.040). Eighty-one percent (25/31) had repeat injections. The median number of injections was 3 (1−11) with an average time between injections of 9.2+/−7.1 months. At the last follow up 32%(10/31) patients were planning for repeat injections for symptom recurrence and 42%(13/31) patients were on cyclosporine, of which 4 were managed with both injections and cyclosporine.

Conclusion: Triamcinolone injections are effective in reducing frequency and nocturia and improving overall quality of life in patients with ulcerative IC/BPS. The average duration of benefit is 9 months and >80% will require repeat injections for symptom recurrence. A third of the patients continue on long term therapy and which can be combined with medical management.
Iryna Crescenze, MD

Birthplace: Chodoriv, Ukraine

Medical School: Medical College of Wisconsin

Residency: Cleveland Clinic

Fellowship: University of Michigan

Plans after Fellowship: N/A
CONTEMPORARY REVIEW OF COMPLICATIONS ASSOCIATED WITH AUTOLOGOUS RECTUS FASCIA PUBOVAGINAL SLINGS
Sophia D Delpe, Casey G. Kowalik, Pei Yang, W. Stuart Reynolds, Melissa R. Kaufman, Roger R. Dmochowski
University of Michigan, Ann Arbor, MI
Presented By: Sophia Delpe Goodridge, MD

Introduction: Stress urinary incontinence (SUI) affects women worldwide and can cause a significant amount of distress. There has been an increase in the utilization of autologous fascial slings for the management of SUI. The aim of this study is to assess the types of and risk of complications associated autologous rectus fascial slings (ARFS).

Methods: This was an IRB approved retrospective review of women who underwent ARFS placement between January 2006 and December 2016. Medical comorbidities and complications within 30 days of surgery were collected. Exclusion criteria included concomitant abdominal surgery. Urinary retention was defined as the need for catheterization for greater than 2 weeks following surgery. Statistical analysis with t-tests and Chi-square tests were performed to compare those women who had a complication and those who did not.

Results: We identified 325 women, mean age of 56.1 (SD:12.4), meeting inclusion and exclusion criteria. Ninety-eight women (30.2%) had a total of 115 complications. There were 78 (67.8%) Clavien I, 26 (22.6%) Clavien II, 7 (6.1%) Clavien IIIa, and 4 (3.4%) Clavien IIIb complications. There were no Clavien IV or V complications. Wound complications (seroma n=17, infection n=14, wound dehiscence n=7, hematoma n=5, fascial dehiscence n=0) were the most common, occurring in 43 (13.2%) women. Urinary retention occurred in 38 (11.7%) women. Women who experienced a complication were more likely to have had prior SUI surgery (70% v. 56.4%, p=0.018) and take chronic pain medications (15.3% v. 7.9%, p=0.043) than those women who did not have a complication. There was no difference in age or body mass index (BMI) between those who had a complication and those who did not. Prior abdominal surgery, prior radiation therapy, immunosuppression, diabetes, cardiovascular disease, and pulmonary comorbidities were not associated with an increased risk of complications.

Conclusion: In this study, prior SUI surgery and chronic pain comorbidities were associated with increased complications. Further study is needed to explore these findings. BMI, prior abdominal surgery and diabetes did not appear to be associated with a higher rate of complications following ARFS. This information is invaluable when planning and counseling patients for surgery.
Sophia Delpe Goodridge, MD

**Birthplace:** Brooklyn, NY

**Medical School:** UNC Chapel Hill

**Residency:** Yale School of Medicine

**Fellowship:** Vanderbilt

**Plans after Fellowship:** N/A
Introduction: The majority of patients with multiple sclerosis (MS) experience at least one moderate to severe urinary complaint and many MS patients also experience some degree of urinary retention. Our goal was to study how post-void residual (PVR) affected urinary quality of life in MS patients with symptomatic lower urinary tract symptoms (LUTS).

Methods: We performed an IRB approved retrospective review of MS patients with LUTS presenting to a tertiary neurourology clinic. Patients who had a PVR recorded in our clinic, either catheterized or via ultrasound, were included in our analysis. Urinary symptom quality of life was assessed through the American Urological Association Symptom Score (AUA-SS), and the Michigan Incontinence Symptom Index (M-ISI). Chart review was performed for history of recurrent urinary tract infections (defined by ≥2 UTIs over 6 months or ≥3 UTIs over 1 year), demographics, type and duration of MS, use of disease-modifying therapy (DMT) and use of bladder antispasmodics or alpha-blocker therapy.

Results: Between 2014 and 2017, 104 patients with a diagnosis of MS underwent PVR assessment in our clinic. Average patient age was 56.37 years, 70.19% of patients were female and 83.58% were Caucasian. Relapsing-remitting MS was the most common type of disease (53.19%) followed by secondary-progressive (36.17%). Recurrent UTIs were reported in 26% of patients and 7.69% performed intermittent self-catheterization.

The average post-void residual was 123.41cc (range 0-650cc). Mean AUA score was 19.13 (moderate-severe symptoms) with an average bother score of 4.14 (mostly dissatisfied). Analysis of PVR as a continuous variable did not show an association between increasing PVR and increasing AUA SS or bother score (p=0.53 and 0.44 respectively). PVR tertiles for the cohort were <50ml (n=39), 50-150ml (n=30), greater than 150 (n=35). Average AUA SS by group were 17.96, 20.08, 19.74, AUA bother scores were 4.19, 4.29, 3.97 and M-ISI scores were 13.72, 12.69, 14.89. No relationship between AUA SS, bother score or M-ISI and PVR tertile was demonstrated (p=0.54, p=0.60 and p=0.57), and no correlation was found between increasing PVR and history of recurrent UTIs (p=0.55).

Conclusion: Our study did not demonstrate differences in reported urinary symptoms between MS patients based on PVR. Risk of recurrent UTI was likewise not correlated with increasing PVR. The role of PVR measurements in managing MS patients remains unclear.
Elizabeth Van Huffel Dray, MD

**Birthplace:** Bridgeport, CT

**Medical School:** University of North Carolina- Chapel Hill

**Residency:** Loyola University Medical Center

**Fellowship:** University of Michigan

**Plans after Fellowship:** Greenville Health System Greenville, SC
URINARY LEVELS OF MONOCYTE CHEMOATTRACTANT PROTEIN-1 (MCP-1) PREDICT THE SEVERITY OF SYMPTOM AND RESPONSE TO TREATMENT IN PATIENTS WITH OVERACTIVE BLADDER (OAB)

Gamal Ghoniem, MD, FACS, Bilal Farhan, MD, Ahmed Ahmed, MD and Frank Zaldivar, MD, PhD
UC, Irvine, CA
Presented By: Bilal Farhan, MD

Introduction: We hypothesize that MCP-1 urinary levels correlate with OAB patients' symptom severity. Our aim is to correlate normalized MCP-1 urinary levels to OAB symptoms before and after treatment. We conducted prospective study on patients with OAB symptoms and age-matched controls.

Methods: Urinary MCP-1 levels were measured in 36 patients with OAB and 13 controls. Patients were treated after the first visit by different OAB treatments (anticholinergic, Beta-3 agonist and or, onabotulinum toxin A, neuromodulations). Urinary MCP-1 levels were measured by (ELISA). The urinary MCP-1 levels and OAB symptoms severity were compared at baseline, 1 month, and 3 months after treatments. Different validated OAB questionnaires were used.

Results: The baseline urinary MCP-1 levels of patients with untreated OAB were significantly higher than that of controls with means. Urinary MCP-1 levels were significantly reduced at 3 months in 28 OAB-responders (77.8%). On other hand, 8 OAB- non-responders, showed unchanged in urinary MCP-1(Table 1).The severity of OAB symptoms and QoL had significantly decreased with urinary MCP-1 levels OAB- responders at 1 and 3 months of OAB treatments(Table 2).

Conclusion: Urinary MCP-1 levels were significantly higher in patients with OAB than in the controls. Patients with OAB who responded to treatments had significantly reduced urinary MCP-1 levels in association with a decreased severity of OAB symptoms at 3 months.

These promising findings could help understanding the pathophysiology of OAB and neurophysiological signaling in the bladder function, identification of a potential marker, and/or developing new drug targets for treatment of patients suffering from OAB.

Table 1: Urinary MCP-1 levels in controls, OAB patients (responders, non-responders)

<table>
<thead>
<tr>
<th>Urinary MCP-1 levels</th>
<th>Subjects No.</th>
<th>Baseline(Pre-treatment)</th>
<th>3-Months(post treatment)</th>
<th>P-Value</th>
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<tr>
<td>Controls</td>
<td>13</td>
<td>51.02 ± 9.63</td>
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<tr>
<td>OAB: 36</td>
<td>28 (77.8%)</td>
<td>257.13 ± 49</td>
<td>72.87±13</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Non-responder</td>
<td>8 (22.2%)</td>
<td>246.5± 45</td>
<td>244.37±32</td>
<td>=0.207</td>
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Figure 4A and 4B: Urinary MCP-1 levels at baseline (pre-treatment), 3 months (post-treatment) in OAB patients and control subjects (A); correlation coefficient pre-treatment MCP-1 levels and OAB severity symptoms (OAB-V6) at Visit 1. Error bars indicate standard error, and asterisk indicates significance.
Bilal Farhan, MD

Birthplace: Jordan

Medical School: Qadisiyiah Medical School

Residency: King Abdullah University Hospital

Fellowship: University of California, Irvine

Plans after Fellowship: N/A
Introduction: Historically, the use of magnetic resonance imaging (MRI) in patients with sacral neuromodulation (SNM) devices has been limited. Currently the InterstimTM II model has only FDA approval for 1.5 Tesla (T) MRI head scans. Our institution completed an in-vitro study demonstrating insignificant heating of InterStimTM systems during 1.5 T lumbar/pelvic MRI. The goal of this study was to determine the safety of InterstimTM in patients during non-head MRI, specifically, lumbar and pelvic 1.5 T MRI.

Methods: We prospectively recruited InterstimTM II model implanted patients requiring lumbar/spine or pelvis 1.5 T MRI. Patients completed validated questionnaires and a survey regarding their usual SNM sensation pre MRI scan. The implantable pulse generator (IPG) was interrogated and impedances and battery life were assessed pre and post MRI. Patients were monitored during MRI study. An MRI-related adverse events questionnaire was completed post MRI. Validated questionnaires were completed 1 month after the MRI to assess for any changes in SNM therapeutic efficacy. Descriptive statistics were calculated.

Results: Eleven patients were enrolled in the study. All patients underwent lumbar/spine MRI. The most common indication for MRI was lower back pain 55% (6/11). Immediately after the MRI only 1 patient reported discomfort at the site of the IPG during the MRI, however, discomfort was only present during the scan and not afterwards. Two of the patients reported warmth at the site of the IPG during the MRI, again, this sensation was only present during scanning. None of the patients experienced stimulation or movement at the IPG site and no paresthesia was reported. There were no significant changes in impedances and battery life during IPG interrogation post MRI. Threshold amplitudes for sensation and localization of stimulation were unchanged post MRI. Urogenital Distress Inventory (UDI-6) and Incontinence Impact Questionnaires (IIQ-7) 1 month after MRI did not show worsening scores compared to pre MRI scores. None of the patients reported a negative Patient Global Impression of Improvement (PGI-I) score 1 month after MRI.

Conclusion: No significant adverse events occurred in patients implanted with an InterStimTM II device who underwent 1.5 T non-head MRI scan. Rare complaints reported were discomfort and warmth at the IPG site during scanning. Therapeutic efficacy of SNM was not affected 1 month after undergoing a non-head MRI scan.
Juan M. Guzman-Negron, MD

Birthplace: San Juan, Puerto Rico

Medical School: Universidad Central del Caribe

Residency: University of Puerto Rico

Fellowship: Cleveland Clinic

Plans after Fellowship: Cleveland Clinic - Weston, FL
CHANGE IN CLINICAL AND PSYCHOSOCIAL PARAMETERS FOR THOSE AFFECTED BY GENITAL PAIN AT BASELINE IN UROLOGIC PELVIC PAIN SYNDROME (UCPPS) OVER 1 YEAR

Presented By: Christine Horton, MD

Introduction: Baseline predictors of reported worse urologic pain and urinary symptoms of UCPPS include extra-pelvic pain sites, chronic overlapping pain conditions and poorer psychosocial health (including anxiety and depression). The majority of patients affected by UCPPS (77% of MAPP I cohort) report genital pain suggesting that genital pain may be a separate predictor of UCPPS symptom severity and progression. Baseline data may assist in identifying predictors for disease progression.

Methods: Predictive factors for worsening of pain and urologic symptoms over a year in the UCPPS cohort within MAPP I include report of widespread pain on BPI, higher amount of non-urological symptoms and poorer overall health on SF-12.1-3 To date, there has not been a longitudinal assessment of patients with UCPPS noting genital pain and their progression of symptom severity and amount of reported flares.

Results: We propose to evaluate baseline and changes that are noted over a year’s time in pain sites (genital pain on BPI versus no genital pain) and how they covary with reports of widespread pain, urologic, and pelvic pain symptoms. Identifying temporal characteristics of pain ‘spread’ and their relationship to genital pain mapping may help identify patient phenotypes with more centrally acting mechanisms of pain sensitization. This in turn may help clinicians tailor treatment and outcome monitoring on the basis of pain site recording with focus on genital pain mapping.
Christine Horton, MD

**Birthplace:** New York

**Medical School:** University of Pittsburgh School of Medicine

**Residency:** University of North Carolina, Chapel Hill

**Fellowship:** University of Southern California Keck School of Medicine

**Plans after Fellowship:** N/A
PAINFUL URGENCY AND/OR PAINFUL FILLING PREDICTIVE OF SOMATIC SYMPTOMS AND CHRONIC PAIN IN WOMEN WITH OVERACTIVE BLADDER

Casey G. Kowalik, MD, Sophia Delpe, MD, Rachel Sosland, MD, Melissa R. Kaufman, MD, PhD, Roger R. Dmochowksi, MD and W. Stuart Reynolds, MD, MPH
Nashville, TN
Presented By: Casey G. Kowalik, MD

Introduction: Current theories hypothesize that overactive bladder (OAB) and Interstitial Cystitis/Bladder Pain Syndrome (IC/BPS) comprise a spectrum of bladder hypersensitivity with overlapping symptoms. Symptoms of painful urgency and filling are common in women with OAB and may be correlated with more severe urologic symptoms and decreased quality of life. This analysis investigated the relationships of painful urgency and filling with somatic symptoms and chronic pain conditions in women with OAB without an IC/BPS diagnosis.

Methods: Women with OAB symptoms and without IC/BPS diagnosis were recruited to complete validated questionnaires assessing urinary symptoms (OAB symptom scale [OAB-ss] and Health Related Quality of Life [OABq-HRQL]), somatic symptoms, and pain syndromes. Participants were categorized into 3 groups, (1) Neither (2) Either or (3) Both, based on their report of painful urgency and/or painful filling. Multivariable regression analyses were performed to determine factors predictive of have either or both painful urgency and/or painful filling.

Results: Of 218 women with OAB symptoms, 46% (n=101) had neither painful urgency nor painful filling, 43% (n=94) had either, and 11% (n=23) had both. There was an increase in average OAB-SS, pain intensity, and somatic symptom score, and a decrease in OAB-HRQL from neither > either > both. Controlling for age, women with either or both urologic pain symptoms had an increase in somatic symptom score by 1.5 and 3 points and an increase in pain intensity by 3 and 6.5 points, respectively, compared to women in the neither group. Additionally, women with either or both symptoms were 2.9 and 3.5 times more likely to have irritable bowel syndrome and 3.3 and 4.5 times, respectively, more likely to have chronic pelvic pain.

Conclusion: In this group of women with OAB, without IC/BPS, the majority reported either painful urgency, painful filling, or both. Experiencing painful urgency and/or filling was associated with increased somatic symptom burden and pain intensity. Additionally, women with either or both symptoms were more likely to have chronic pain conditions, hypothesized to have a common central pathophysiology. These findings support the hypothesis that OAB and IC/BPS diagnoses may represent a continuum of bladder hypersensitivity with women experiencing pain being more likely to also have underlying central sensitization mechanisms.

Funding: NIH funding UL1TR000445, 1K23DK103910-01A1. SUFU Foundation grant.
Casey Kowalik, MD

**Birthplace:** Nashua, NH

**Medical School:** University of Virginia

**Residency:** Lahey Hospital & Medical Center

**Fellowship:** Vanderbilt University Medical Center

**Plans after Fellowship:** Position at Kansas University Medical Center
OPIOID PRESCRIPTION AND USAGE IN SACRAL NEUROMODULATION, SLING, AND PROLAPSE SURGERY: ARE WE CONTRIBUTING TO THE OPIOID EPIDEMIC?

Dena Moskowitz, MD, Katherine Amin, MD, Alvaro Lucioni, MD, Kathleen Kobashi, MD and Una Lee, MD
Virginia Mason Medical Center, Seattle, WA
Presented By: Dena Moskowitz, MD

Introduction: The opioid problem in the US has reached epidemic proportions and prescription of opioids after surgery can lead to chronic use. We explore prescribing patterns and use of opioids after three common surgeries: sacral neuromodulation (SNM), prolapse repair (PRL), and midurethral sling (MUS) before and after an educational intervention to reduce opioid prescriptions.

Methods: A retrospective chart review at our institution was performed on all patients who underwent SNM, PRL, and MUS from June 2016 to May 2017. Patients were excluded if they were on chronic opioid therapy, or had a surgical complication causing increased pain. Patient characteristics as well as the amount of opioid prescribed to each patient after surgery were examined. A telephone survey was performed to identify the number of opioid pills used after surgery and patient satisfaction with pain control. A multiple regression model was used to identify factors associated with variability in opioid usage. Appropriate prescribing guidelines were established based on these results, and an educational intervention was performed with prescribing providers and patients. We then evaluated changes in opioid prescription and usage after the intervention.

Results: 123 patients met inclusion criteria for retrospective review: 64 SNM, 15 MUS, and 44 PRL (vaginal and robotic, with and without MUS). Patients were prescribed 135%, 150%, and 165% more morphine milligram equivalents (MME) than were used for PRL, SNM, and MUS respectively. The majority of patients were satisfied with their pain control. Patients with diabetes (p=0.01), prior pelvic floor surgery (p=0.047), history of substance abuse (p=0.036), and rectocele repair (p=0.003) used more MMEs. Preliminary prospective data shows a significant reduction in MME prescribed for PRL (P=0.02) with no change in patient satisfaction.

Conclusion: Our data demonstrate over-prescription of opioids after SNM, PRL, and MUS and identify potential factors associated with increased use of opioids. Current prescribing patterns are not evidence-based and can contribute to the epidemic of opioid abuse, diversion, and overdose. Evidence-based guidelines for opioid prescription after SNM, PRL, and MUS can lessen the impact of these surgeries on the opioid epidemic.
Dena Moskowitz, MD

Birthplace: Toronto, Canada

Medical School: Medical College of Wisconsin

Residency: University of California Irvine

Fellowship: Virginia Mason Medical Center

Plans after Fellowship: N/A
CLINICAL EXPERIENCE WITH POSTERIOR TIBIAL NERVE STIMULATION IN THE ELDERLY

Cristina Palmer, DO, Nobel Nguyen and Gamal Ghoniem, MD, FACS
University of California Irvine, Orange, CA
Presented By: Cristina J. Palmer, DO

Introduction: According to AUA/SUFU guidelines, posterior tibial nerve stimulation (PTNS) has been recognized as a third line treatment in the management of overactive bladder (OAB). OAB is a condition that affects up to 10-26% of adult males and 8-42% of adult females, with increasing prevalence with age. The elderly population is unique, with increased medical comorbidities and the possibility for cognitive or functional deficits. To date, there is a paucity of studies looking at this specific patient population in regard to the PTNS treatment modality. We aim to evaluate the use of PTNS in an elderly population and determine treatment response, concomitant therapies, and alternate treatments needed after therapy.

Methods: We performed a retrospective chart review of patients aged 65 or older undergoing PTNS at a single institution over a six-year period, with IRB approval. We examined clinicopathologic variables potentially associated with the outcomes of interest, which include response to treatment, use of combination therapy, and need for alternative therapies after PTNS.

Results: In total, 53 patients age 65 or older underwent an induction course of PTNS (12 sessions) between 2011-2017, 23 male (45.3%) and 29 female (64.7%). We used a non-elderly control group of 20 patients. Mean age of subjects was 75.75 years (range 65-93), mean BMI was 26.33 kg/m² (range 17.4-43.9 kg/m²). 18 patients (34%) had 1-2 medical comorbidities, 23 patients (43.4%) had 3-4 medical comorbidities, and 12 patients (22.6%) had more than 5 comorbidities. 36 patients (69%) utilized anticholinergic treatments prior to PTNS, 5 used a β-3 agonist, and 3 had botox injections. After PTNS, 37 patients (70%) reported improvement of their symptoms. 21 (39%) utilized combination therapy during PTNS. Only 7 patients utilized an anticholinergic after PTNS, 6 used a β-3 agonist, 5 had botox injections, and 2 sacral neuromodulation. Of the patients who reported improvement with PTNS, average BMI was 25.078 kg/m². Average BMI of patients without improvement with PTNS was 29.23 kg/m². When looking at variables such as age, gender, race, BMI, and comorbidities, we found obese BMI (30+ kg/m²) to be the only statistically significant variable predicting failure of response (p=0.0024), which was the same in our control group. We then performed a logistic regression, multivariate analysis and found that none of these factors were predictive of the improvement of treatment after PTNS.

Conclusion: In our elderly population of patients undergoing PTNS for OAB, we found the subjective response rate of 70% was well within the established success rates reported in the literature of 37-82%. While 39% of the patients used a concomitant treatment during PTNS therapy, only 13.2% required alternative treatment after PTNS. Obese BMI was the only variable predictive of failure in our cohort. Of elderly patients who received botox injections with continued symptoms, all reported symptom improvement following PTNS.
Cristina Palmer, DO

Birthplace: Orange, CA

Medical School: Chicago College of Osteopathic Medicine

Residency: Cook County Hospital, Chicago, IL

Fellowship: University of California Irvine

Plans after Fellowship: Private Practice, Los Angeles
SAFETY AND EFFICACY OF ONABOTULINUMTOXINA INJECTIONS IN OCTO AND NONAGENARIANS

Patricia M. Zahner, Laura L. Giusto, MD, Jessica C. Lloyd, MD, Juan M. Guzman-Negron, MD, Shree Agrawal, BS, Courtenay K. Moore, MD, Raymond R. Rackley, MD, Sandip P. Vasavada, MD and Howard B. Goldman, MD

Cleveland, Ohio
Presented By: Patricia Zahner, MD

Introduction: OnabotulinumtoxinA (BTX-A) injections are commonly used third-line therapies for treatment of overactive bladder (OAB). The most common side effects, urinary retention and urinary tract infections (UTIs), may deter some providers from performing this treatment in the elderly, even though rate of OAB increases with age with associated increased morbidity and decreased quality of life. We examine the rate of complications and efficacy in patients 80 years or greater versus patients between the ages of 50-70 years receiving intradetrusor BTX-A for the treatment of OAB.

Methods: A retrospective case series of patients who underwent BTX-A injection at a tertiary care center from January 2007 through September 2017 was conducted. Patients were stratified into an “elderly” cohort, greater than 80 years old (EC), and a comparator “younger” cohort (YC) 50-70 years. Demographics, clinical characteristics, post-BTX-A complications and patient-reported satisfaction following treatment were collected. Statistical analyses included chi-square and t-tests for patient characteristics and univariable and multivariable logistic regression models for outcomes.

Results: The EC consisted of 62 patients (48%) with a mean age of 84 years, ranging from 80-94 years, versus the YC of 68 patients (52%) with a mean age of 59 years, ranging from 50-70 years. Among EC patients, 76% had comorbid conditions (47% moderate to severe), and in the YC, 65% had comorbidities (31% moderate to severe) (p = 0.24). Complication rates between both groups were 23% for the EC and 16% for the YC (p = 0.36). Among the EC, 11% experienced urinary retention versus 4% in the YC (p = 0.14). UTI was seen in 6% of the EC and 7% of the YC (p = 0.84). The most common complication for the elderly cohort was retention (54%) and UTI (56%) for the younger cohort. With respect to efficacy, 47% of the EC reported satisfaction after their final treatment, versus 53% of the YC (p = 0.31). Regardless of age group, patients with severe comorbid conditions compared to those with none were associated with a higher likelihood of re-hospitalization (OR:16.1, p = 0.03).

Conclusion: The number of patients aged 80 years or more seeking care in urology offices for OAB continues to grow. Our data suggest that intradetrusor BTX-A injections are safe and effective in the elderly population, with no significant difference in UTIs or urinary retention versus younger patients.
Patricia Zahner, MD

Birthplace: Mineola, NY

Medical School: Rutgers, New Jersey Medical School

Residency: Thomas Jefferson University

Fellowship: Cleveland Clinic Foundation

Plans after Fellowship: N/A
Please Note: Sessions One & Two are held concurrently.

**Breakout Group Two**

*Location: 615 AB, 6th Floor*

**Moderators:**
- Michael E. Albo, MD
- Anne P. Cameron, MD, FPMRS

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<td>Melanié Aubé, MD</td>
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<td>3:40 p.m. – 3:50 p.m.</td>
<td>Solafa Elshatanoufy, PharmD, MD</td>
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<td>3:50 p.m. – 4:00 p.m.</td>
<td>Laura Giusto, MD</td>
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<td>4:00 p.m. – 4:10 p.m.</td>
<td>Esther Han, DO</td>
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<td>4:10 p.m. – 4:20 p.m.</td>
<td>Deborah Hess, MD, MS</td>
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<td>4:20 p.m. – 4:30 p.m.</td>
<td>Lindsay Kissane, MD</td>
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<td>4:30 p.m. – 4:40 p.m.</td>
<td>Rena Malik, MD</td>
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<td>4:40 p.m. – 4:50 p.m.</td>
<td>Laura Nguyen, MD</td>
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<td>4:50 p.m. – 5:00 p.m.</td>
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<td>5:00 p.m. – 5:10 p.m.</td>
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<td>5:10 p.m. – 5:20 p.m.</td>
<td>Melissa Sanford, MD</td>
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<td>5:20 p.m. – 5:30 p.m.</td>
<td>Raveen Syan, MD</td>
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<td>5:30 p.m. – 5:45 p.m.</td>
<td><strong>Wrap Up/Q &amp; A</strong></td>
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Introduction: Surgical treatment of bulbar urethral strictures depends on accurate preoperative planning including retrograde urethrogram (RUG), voiding cystourethrogram (VCUG) and endoscopy. There has been some interest in perineal ultrasound to better delimitate the anatomy and help determine surgical procedure. Our aim is to determine if a high quality preoperative RUG, performed by the urologist, allows us to accurately predict intraoperative management when performing a bulbar urethroplasty.

Methods: A review of all male patients who underwent bulbar urethroplasty, from January 2013 through July 2017, at a single institution, was performed. All patients underwent a preoperative RUG, performed by their treating urologist. The predicted surgery – excision and primary anastomosis (EPA) versus buccal mucosa grafted urethroplasty (BMGU) – identified via the preoperative consultation and the consent form, as well as the performed surgery, were noted. Other variables, such as patient age, body mass index, stricture length, prior stricture treatments, operative time and estimated blood loss were also noted.

Results: 221 male patients (median age 50, interquartile range [IQR] 35 – 61) underwent bulbar urethroplasty at our institution, by four fellowship-trained urologists. The type of surgery performed was an EPA in 57% (n = 127) and a BMGU in 43% (n = 94) of patients. The surgery performed was the same as predicted in 90% of cases (n = 199). Of the 22 patients with inaccurate preoperative prediction, 5 cases consisted of a predicted EPA with a performed BMGU, and 17 cases of a predicted BMGU with a performed EPA.

None of the recorded variables were shown to significantly affect the procedure prediction outcome.

Conclusion: A good quality preoperative RUG allows us to accurately predict intraoperative management in 90% of bulbar urethroplasty cases. This eliminates the need for additional diagnostic tests, including perineal ultrasound.
Mélanie Aubé, MD

Birthplace: Ottawa, Ontario, Canada

Medical School: Université Laval

Residency: McGill University

Fellowship: Genitourinary Reconstructive Surgery, Eastern Virginia Medical School

Plans after Fellowship: Reconstructive Urologist at McGill University Health Center, Montreal, Quebec, Canada
RELATIONSHIP BETWEEN PELVIC ORGAN PROLAPSE AND METABOLIC SYNDROME

Solafa Elshatanoufy, PharmD, MD, Humphrey Atiemo, MD, David Richardson, MD and Ali Luck, MD
Henry Ford Health Systems, Detroit, Michigan
Presented By: Solafa Elshatanoufy PharmD MD

Introduction: The prevalence of pelvic organ prolapse (POP) has been increasing with the increase in the proportion of elderly patients. Metabolic Syndrome (MS) is a constellation of signs that are associated with insulin resistance and increased risk of cardiovascular disease. It also increases in prevalence with increasing age. In this study we sought to find if an association exists between MS and POP in the U.S population.

Methods: Patients were recruited from our urogynecology and female urology clinics. All the patients were referred to our clinics with various pelvic floor complaints. After written informed consent, a waist circumference was measured and recorded. The remaining MS criteria were collected from the chart including, blood pressure, fasting blood glucose; if not available glycated Hemoglobin; triglycerides, and high density lipoprotein. Other variables collected include age, gravity, parity, number of vaginal deliveries, body mass index, and history of previous pelvic organ prolapse surgery. A pelvic organ prolapse quantification was performed as part of our routine examination.

Results: A total of 142 patients were recruited. 138 were included in our analysis. The average age was 69 (±10.6). Metabolic Syndrome was not significantly associated with POP (OR: 0.827, 95% CI 0.421−1.625). None of the MS sub-categories were significantly associated with POP after controlling for other confounders such as age and number of vaginal deliveries. Age was significantly associated with POP (p=0.009). Body mass index, gravity, parity or number of vaginal deliveries were not independently associated with POP.

Conclusion: MS was not associated with POP. Only age was significantly associated with the development of pelvic organ prolapse.
Solafa Elshatanoufy, PharmD, MD

**Birthplace:** Cairo, Egypt

**Medical School:** Ross University School of Medicine

**Residency:** Detroit Medical Center/Wayne State University

**Fellowship:** Henry Ford Health Systems

**Plans after Fellowship:** N/A
SAFETY AND EFFICACY OF ONABOTULINUMTOXIN A INJECTIONS IN THE SETTING OF SUPRAPUBIC CATHETERS

Laura L. Giusto, MD1, Patricia M. Zahner, MD2, Jessica C. Lloyd, MD2, Juan M. Guzman-Negron, MD2, Shree Agrawal, BS2, Courtenay K. Moore, MD2, Raymond R. Rackley, MD2, Sandip P. Vasavada, MD2 and Howard B. Goldman, MD2
1Cleveland Clinic Foundation, Cleveland, Ohio; 2Cleveland, Ohio
Presented By: Laura L. Giusto, MD

Introduction: In patients with suprapubic tubes (SPTs), complaints of urinary leakage per urethra or around the tube are common, and are often refractory to medical therapy. Intradetrusor onabotulinumtoxinA (BTX-A) injection is considered a “next step” for these patients. However, potential benefit must be balanced with risk factors inherent to patients with indwelling catheters including bacterial colonization and chronic inflammatory changes to bladder mucosa. We assessed the use of intradetrusor BTX-A in the setting of existing or concomitant SPT as a safe way to decrease urinary leakage.

Methods: Patients undergoing BTX-A injection with SPT in situ or concomitant SPT placement were retrospectively reviewed with CPT codes. Clinical characteristics were pre-procedure urinalysis and urine culture, peri-procedural use of antibiotics, with outcomes considered as complications (30 day post-procedure urinary tract infection (UTI), bleeding, retention or hospitalization), and degree of perceived improvement. Patient characteristics were assessed by chi-square or t-test analyses and outcomes were assessed by univariable and multivariable logistic regression models.

Results: Fifty patients underwent BTX-A injection in the setting of SPT, 43 (86%) of whom were female. Mean age was 59 years and mean BMI was 30.1 kg/m². Common overlapping indications for BTX-A injection were neurogenic bladder (86%) and incontinence (52%). Pre-procedural urine cultures were positive at time of injection among 56% of patients. Nearly all patients received documented peri-procedural antibiotics (96%) and 44% received a post-procedure antibiotic course. Positive preoperative urine culture correlated to increased likelihood of prescribed post-procedure antibiotics (OR: 3.56, p=0.04). Complications occurred in 5 patients (10%), with UTI (4/5) and hematuria (4/5) being most common. One of the patients required re-hospitalization and intravenous antibiotics for their UTI, and another required re-hospitalization for clot evacuation. Following first BTX-A injection, 44 (88%) reported a subjective improvement of reduced leakage and went on to receive an average of 4 BTX-A therapies (p = 0.03). The mean number of BTX-A treatments was 3.26 (range 1-12).

Conclusion: Intradetrusor BTX-A injection appears to be safe and efficacious in patients with SPTs, with the most common complication being UTI. This therapy may be considered for diminishing urinary leakage in this challenging-to-manage population.
Laura L. Giusto, MD

Birthplace: Pittsburgh, PA

Medical School: Robert Wood Johnson Medical School

Residency: Temple University

Fellowship: Cleveland Clinic

Plans after Fellowship: N/A
DOES SURGERY IMPROVE BOWEL FUNCTION IN PELVIC ORGAN PROLAPSE?

Esther Han, DO, Laura Nguyen, MD, Jason Gilleran, MD, Jamie Bartley, DO, Kim Killinger, MSN, Judith Boura, MS and Larry Sirls, MD
Beaumont Health, Royal Oak, MI
Presented By: Esther Han, DO

Introduction: To evaluate the effect of different surgical procedures on bowel function in women with pelvic organ prolapse (POP)

Methods: Adult women enrolled in a prospective POP database between 2008 and 2014 were reviewed. Baseline (BL) data and outcomes at one year (1y) after enrollment were collected including the Colorectal-Anal Distress Inventory-8 (CRADI). Patients were grouped by having surgery (SGY) within the first year or no surgery (N-SGY) and compared. Sub-analyses of the SGY group were then performed by surgical approach (vaginal (Va) or abdominal (Ab)), concurrent hysterectomy (HYS), placement of mesh, and concurrent posterior repair. Data were analyzed with descriptive statistics, Chi-square tests, Fisher's exact tests, paired t-tests, and Wilcoxon rank sum tests.

Results: There were 233 SGY and 60 N-SGY of 293 prolapse patients. The N-SGY group was significantly older (67 ± 12 yrs. vs. 63 ± 11 yrs., p = 0.009). 24.4% (57/233) of total surgery patients underwent a concurrent posterior repair (POS); all were done vaginally. In the SGY vs. N-SGY groups, CRADI scores were similar at BL but at 1y, SGY scores improved significantly (table). When comparing Va vs. Ab approach and mesh use vs. no mesh, there were no differences in BL nor 1y scores (table). When comparing HYS to no HYS (N-HYS), BL was significantly lower for HYS but there was no difference at 1yr. All treatment groups had significant CRADI improvement, within group, from BL (table). 40.1% (57/142) of the vaginal group had a concurrent rectocele repair (POS). When comparing POS to no POS (N-POS), baseline CRADI was significantly different; CRADI at 1y was not (table). Both groups had significant improvement in CRADI scores from BL to 1y (table). All differences met the minimum important difference established for the CRADI

Conclusion: Women who underwent surgical repair for prolapse had significantly improved CRADI scores regardless of approach. Vaginal prolapse surgery improves bowel symptoms even in patients who do not have posterior compartment repair.

Funding: Ministrelli Program for Urology Research and Education

<table>
<thead>
<tr>
<th></th>
<th>SGY (n)</th>
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<th>P-value</th>
<th>Ab (n)</th>
<th>Va (n)</th>
<th>P-value</th>
<th>HYS (n)</th>
<th>No HYS (n)</th>
<th>P-value</th>
<th>Mesh (n)</th>
<th>No Mesh (n)</th>
<th>P-value</th>
<th>POS (n)</th>
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<tr>
<td>Med. BL</td>
<td>21.9 (233)</td>
<td>15.6 (60)</td>
<td>0.13</td>
<td>20 (75)</td>
<td>22 (142)</td>
<td>0.22</td>
<td>14 (68)</td>
<td>28 (165)</td>
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<td>22 (177)</td>
<td>27 (56)</td>
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<td>37.5 (57)</td>
<td>14 (85)</td>
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<td>Med. 1y</td>
<td>9.4 (177)</td>
<td>6.3 (46)</td>
<td>0.63</td>
<td>9.4 (62)</td>
<td>6.3 (104)</td>
<td>0.76</td>
<td>6.3 (52)</td>
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<td>0.55</td>
<td>9.4 (134)</td>
<td>12.5 (43)</td>
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<td>P-value within group</td>
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<td>0.62</td>
<td>0.00 01</td>
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<td>0.00 01</td>
<td>0.00 01</td>
<td>0.003</td>
<td>&lt;0.00 01</td>
<td>0.019</td>
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Table. Median (Med.) CRADI scores at baseline (BL) and 1 year (1y) for surgery (SGY) vs no surgery (N-SGY), abdominal (Ab) vs vaginal (Va), with or without concurrent hysterectomy (HYS vs N-HYS), mesh vs no mesh use, and with or without concurrent posterior repair (POS vs N-POS).
Esther Han, DO

Birthplace: Stephenville, TX

Medical School: University of North Texas Health Science Center

Residency: Detroit Medical Center

Fellowship: Beaumont Health

Plans after Fellowship: N/A
A COMPARISON OF SYNTHETIC MIDURETHRAL SLINGS (MUS) AND AUTOLOGOUS PUBOVAGINAL SLINGS (PVS) IN THE SETTING OF CONCOMITANT SURGERY

Deborah Hess, MD, MS, Rena Malik, MD, Alana Christie, MS and Maude Carmel, MD
UT Southwestern, Dallas, TX
Presented By: Deborah Hess, MD, MS

Introduction: Management for stress urinary incontinence may include bulking agents or slings. These procedures are often done in combination with other related procedures. We sought to identify differences between the use of MUS and PVS in the setting of concomitant surgery.

Methods: Female patients were identified using the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP), a prospectively collected database of 688 participating institutions used to evaluate and improve surgical outcomes. Patients were identified between 2008-2015 as undergoing MUS (CPT: 57288) or PVS (CPT: 57288+20920, 20922 or 20926). Concomitant procedures, also identified by CPT code, included prolapse surgeries and benign hysterectomy. Patients were excluded whose sole concomitant surgery was cystoscopy, suprapubic tube placement or urethrolysis in the setting of PVS placement.

Results: Of the 36,754 patients who underwent sling placement between 2008-2015, 36,562 (99.5%) had a MUS and 192 (0.5%) had a PVS placed. A total of 21,604 patients (59%) had a concomitant procedure at the time of sling placement. When stratified by sling type (MUS vs PVS), 59% of patients getting a MUS had a concomitant procedure as compared to 51% of patients getting a PVS (p = 0.02). Surgical specialty was significantly associated with sling type. Of PVS placed, 18% were placed by gynecologists and 80% by urologists. While getting a MUS is more likely overall, the odds of getting a PVS at the time of concomitant surgery are greater when performed by urology (OR 2.7, 95% CI 1.9-3.7, p<0.0001) in comparison to gynecology (OR 1.2, 95% CI 0.6-2.6, p=0.62).

Conclusion: A small percentage of slings placed are PVS. The majority of these are placed by urologists. In the setting of concomitant surgery, MUS is most common; however, the odds of getting a PVS are greater when performed by urology in comparison to gynecology.
Deborah Hess, MD, MS

**Birthplace:** Boston, MA

**Medical School:** University of Michigan

**Residency:** Harvard, Longwood

**Fellowship:** UT Southwestern

**Plans after Fellowship:** N/A
EFFECT OF AGE ON OUTCOMES OF TRANSVAGINAL NATIVE TISSUE REPAIRS FOR APICAL VAGINAL PROLAPSE

Lindsay Kissane, MD1, Isuzu Meyer, MD1, Kimberly Martin, PhD2, Jubilee Tan, MD1, Kathryn Miller, MD3 and Holly Richter, MD1

1University of Alabama at Birmingham, Division of Urogynecology and Pelvic Reconstructive Surgery, Birmingham, AL; 2University of Alabama at Birmingham, Department of Epidemiology, Birmingham, AL; 3University of Alabama at Birmingham, Department of Obstetrics and Gynecology, Birmingham, AL

Presented By: Lindsay Martin Kissane, MD

Introduction: There is a paucity of data regarding impact of aging on surgical outcomes in women undergoing vaginal prolapse repair. The primary aim was to compare subjective treatment success in older versus younger women at least 3 years post transvaginal native tissue repair for apical prolapse. Post-operative symptom severity, quality of life (QoL), overall symptomatic improvement, surgical complications, and retreatment were also examined.

Methods: Women who underwent primary transvaginal native tissue repair for apical prolapse between 2011 and 2013 were eligible for this retrospective cohort study. Subjects were mailed the Pelvic Floor Distress Inventory (PFDI-20), Pelvic Floor Impact Questionnaire (PFIQ-7), Patient Global Impression of Improvement (PGI-I). Patients were categorized as “younger” (age<70) or “older” (age≥70). Primary outcome was treatment success defined as “no” to “do you usually have a bulge or something falling out that you can see or feel in your vaginal area” from the PFDI-20.

Results: Of 641 eligible patients, response rate was 49% for younger and 56% for older groups (p= 0.13). Median follow-up time was 58 months for each group (Interquartile range [IQR] 18 for younger and IQR 14 for older). Median age was 61 (IQR 11) for younger and 74 (IQR 5) for older subjects. No difference in concomitant procedures were noted between groups (all p>0.05). Treatment success was noted in 76% of younger versus 84% older women (p= 0.11). Post-operative PFDI-20 and PFIQ-7 total and subscale scores, and PGI-I were similar between groups (table, all p>0.05). A composite success, defined as having absence of bulge symptoms and no retreatment, was noted in 69.9% of younger and 81.1% of older subjects (p=0.04). Retreatment rate and surgical complications were similar between groups (table, both p>0.05).

Conclusion: Older and younger women had similar subjective success rates at least 3 years post transvaginal native tissue prolapse repair. Using a composite success outcome, older women had significantly higher success rates. Postoperatively, both groups reported similar symptom severity and condition-related QoL. This information may be helpful in counseling regarding surgical expectations and decision making.
Lindsay Kissane, MD

Birthplace: Barrington, IL

Medical School: Florida State University COM

Residency: Winthrop University Hospital

Fellowship: UAB

Plans after Fellowship: Florida- currently job searching
THE UTILITY OF URODYNAMIC EVALUATION IN CLINICAL PRACTICE

Rena Malik, MD, Deborah Hess, MD, Maude E Carmel, MD, Gary Lemack, MD and Philippe Zimmern, MD
UT Southwestern Medical Center, Dallas, TX
Presented By: Rena D. Malik, MD

Introduction: Urodynamic Studies (UDS) are commonly used to help elucidate lower urinary tract function during storage and voiding. They are resource-intensive and may not alter patient treatment plans. We sought to prospectively evaluate UDS and their utility in patient care.

Methods: Patients with UDS ordered during usual clinical care by 3 FPMRS board certified physicians from April 2017 to October 2017 were included. Physicians were surveyed at the time of ordering UDS and at the post-UDS clinic visit to assess indications for UDS, question to be answered by UDS, pre and post UDS diagnosis, treatment plan, confidence level, and perceived helpfulness of UDS. The Nurse conducting UDS was surveyed on the reproducibility of patient symptoms and perceived difficulty of UDS.

Results: Of 187 UDS ordered by 3 FPMRS providers, 70 (37%) were included of which 54 (29%) underwent UDS for neurogenic (26%) and non-neurogenic LUTS (74%). The majority of UDS were conducted to characterize patient incontinence (67%), and 24% of patients had a history of prior lower urinary tract surgery. UDS Nurses found 96% of UDS to fully or partially reproduce patient symptoms. Nurses found 20% of UDS difficult due to catheter malfunctions, patient physical limitations, and communication abilities. Post-UDS, providers found 96% of UDS interpretable. Half of all patients had no clear treatment plan prior to UDS. UDS resulted in a change in or new treatment plan in 78% of patients. On a Likert scale, mean pre-UDS confidence level was 3.0±0.9 (range 0-5). Mean post-UDS confidence was 4.2±0.7, with 72% of evaluations having a change of at least 1 confidence point. Patients undergoing UDS for mixed urinary incontinence (MUI) were significantly more likely to have a change in treatment plan compared to patients with other indications for UDS (92% vs 67%, p=0.046).

Conclusion: UDS done in a tertiary referral center are nearly always interpretable and result in a change in treatment plan over three-fourths of the time. UDS increase provider confidence in the treatment plan. UDS was especially helpful in patients with MUI as they often resulted in a change in treatment plan.
Rena D. Malik, MD

**Birthplace:** Buffalo, NY

**Medical School:** NYU School of Medicine

**Residency:** University of Chicago Medicine

**Fellowship:** UT Southwestern Medical Center

**Plans after Fellowship:** N/A
ADVANCE SLING IN PATIENTS WITH PREVIOUS PROSTATE RADIATION

Laura Nguyen, MD, Natalie Gaines, MD¹, Allison Gurney-McMaster², Esther Han, DO³, Kenneth Peters, MD³, Jason Gilleran, MD³, Melissa Fischer, MD³, Judith Boura, MS³ and Larry Sirls, MD³
¹San Antonio, TX; ²Rochester, MI; ³Royal Oak, MI
Presented By: Laura Nguyen, MD

Introduction: AdVance slings are used to treat male stress urinary incontinence, often after prostate treatment. Our objective was to evaluate the effect of prior prostate radiation therapy (RT) on outcomes after AdVance sling.

Methods: We retrospectively reviewed patients who underwent AdVance sling placement from 2006 to 2016 at a large-volume teaching institution. Men were divided into groups by history of RT then compared. We defined cure as 0 pads per day or 1 safety pad or report of 100% dry, improvement as 1-2 pads/day and >50% improvement in leakage, and failure as >2 pads/day or <50% improvement in leakage.

Results: 134 men underwent AdVance sling with complete data available. 36 patients (26.9%) had had RT (31 radical prostatectomy [RP] and RT, 2 transurethral resection of prostate [TURP] and RT, 3 RT only), while 98 did not (91 RP, 4 TURP, 3 no prior prostate treatment). Mean age was not different between groups (RT 61 years v. no RT 62 years, p=0.48). Preoperative number of pads and pad weight were higher in patients with previous RT but these differences were not statistically significant (number of pads: RT n=24, 2.4 pads v. no RT n=77, 2.0 pads, p=0.18; pad weight: RT n=4, 322g v. no RT n=28, 198g, p=0.12). Overall rates of cure, improvement and failure were 53%, 33% and 14%, respectively. These rates did not significantly differ between groups (p=0.07). However, when cured and improved patients were grouped ("success"), outcomes were better in patients without prior prostate radiation (RT 27/36, 75% v. no RT 88/98, 90%; p=0.03; Table 1).

Conclusion: Men with prior prostate RT had decreased success after AdVance sling compared to men without prior RT, however 40% were cured and an additional 35% were improved. AdVance sling is a viable option for appropriately selected patients after RT.

Table. Patient outcomes, by previous radiation status.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Radiation (n=36)</th>
<th>No radiation (n=98)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cure</td>
<td>15 (41.7%)</td>
<td>56 (57.1%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cure vs. improvement vs. failure</td>
<td>0.072</td>
<td></td>
</tr>
<tr>
<td>Improvement</td>
<td>12 (33.3%)</td>
<td>32 (32.7%)</td>
<td></td>
</tr>
<tr>
<td>Failure</td>
<td>9 (25.0%)</td>
<td>10 (10.2%)</td>
<td>0.030*</td>
</tr>
<tr>
<td></td>
<td>Cure or improvement vs. failure</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Laura N. Nguyen, MD

Birthplace: Steinbach, MB, Canada

Medical School: Queen’s University

Residency: University of Ottawa

Fellowship: Beaumont Urology

Plans after Fellowship: McMaster University Hamilton, ON, Canada
RESURGENCE OF MID URETHRAL SLING FOR STRESS URINARY INCONTINENCE FOLLOWING THE 2011 FDA PUBLIC HEALTH NOTIFICATION

Presented By: Ricardo Palmerola, MD

Introduction: The release of the updated FDA Public Health Notification for vaginal mesh in July 2011 elicited concern for its use, prompting position statements by the AUA and other organizations regarding safety. We previously reported a decrease in synthetic mid urethral sling (MUS) implantation with an increase in urethral bulking (UB) and pubovaginal sling (PVS) following the 2011 Notification despite an increase in the number of new patients presenting with stress urinary incontinence (SUI). In this follow up study, we assessed changes in management over a 7-year period.

Methods: A retrospective chart review was conducted to identify patients evaluated for SUI by two surgeons between June 1, 2010 and May 31, 2017. Patients assigned a primary International Classification of Diseases 625.6 (ICD-9) or N39.3 (ICD-10) code were identified. The database was cross referenced with patients who underwent any procedure for SUI, identified by Current Procedure Terminology (CPT) codes 51715 (endoscopic injection of implant material into submucosal tissues of the urethra and/or bladder neck) and 57288 (sling operation for SUI). Rates of diagnosis and treatment were analyzed at 6 month intervals.

Results: 743 patients were evaluated for SUI, of which 362 (48.7%) underwent a procedure. The number of new patients increased during the study period, peaking in the twelfth period (Figure 1). Initially all slings placed were mesh slings, with a decline in the third period and increase in UB (Figure 2). The number of total procedures declined until the eighth interval, then rose with a concomitant increase in MUS. Meanwhile, PVS and UB remained stable. Conclusion: After the FDA Public Health Notification, there was a decrease in the number of procedures performed for SUI. More recently, there has been an increase in SUI procedures, specifically MUS. This may indicate less reluctance by patients to undergo surgery and specifically MUS over time since the FDA notification.
Ricardo Palmerola, MD

Birthplace: New York

Medical School: Penn State College of Medicine

Residency: Northwell Health

Fellowship: NYU Langone

Plans after Fellowship: N/A
URINARY RETENTION AFTER ADVANCE® SLING: A MULTI-INSTITUTIONAL RETROSPECTIVE STUDY

Jennifer Rolef, MD1, Goran Rac, MD1, Lauren Rittenberg, MD1, Lindsey Cox, MD1, Arthur Mourtzinos, MD2, Leaney Westney, MD3, Mike Metro, MD4 and Eric Rovner, MD1

1Medical University of South Carolina, Charleston, SC; 2Lahey Clinic, Burlington, MA; 3MD Anderson, Houston, TX; 4Temple University, Philadelphia, PA

Presented By: Jennifer Rolef, MD

Introduction: To better characterize the management of and factors associated with urinary retention after male Advance® transobturator sling placement for urinary incontinence.

Methods: The medical records of patients who underwent AdVance® sling insertion across four institutions over a ten-year period from 2007-2017 were reviewed. 255 patients who had at least one post-operative visit were included in the study. Post-operative urinary retention was defined as either a complete inability to urinate or an elevated post-void residual (PVR) of greater than 350cc.

Results: Of the 255 patients included in the study 27 patients (10.6%) had urinary retention at the time of their first post-operative visit, and 3 additional patients had new urinary retention at the time of their second post-operative visit for an overall initial postoperative urinary retention rate of 11.8% (30/255). These patients either underwent placement of Foley catheter (18/27, 66.7%) or were initiated on clean intermittent catheterization (CIC) (9/27, 33.3%). The majority (16/27, 59.2%) of patients experienced resolution of retention by their second post-operative visit. No patients required surgical intervention such as placement of suprapubic tube, sling manipulation or incision. At last follow-up, only 16.7% (5/30) of the patients who experienced post-operative urinary retention had persistent urinary retention at a mean follow-up of 430 days (Range 5 to 2,235) for an overall long term retention rate of 1.96% (5/255). 2 of these patients had known pre-existing neurogenic bladder. Patients who experienced post-operative retention were significantly more likely to have a pre-operative PVR ≥ 165 mL (5/19, 26.3%) compared to those who did not have urinary retention (10/169, 5.9%) (p= 0.0018). The pre-operative maximum detrusor pressure (Pdet) on urodynamic testing was not predictive of post-operative retention. Additionally, there was no association with patient age or medical co-morbidities including diabetes. Patients that experienced urinary retention were more likely to experience other complications (p=0.0014). Post-operative UTI had a significant association with urinary retention after AdVance sling (p=0.0022).

Conclusion: The results of our study show that urinary retention after AdVance sling placement is an uncommon event, is generally self-limited and can safely be managed with either foley catheter or CIC. In addition, patients with urinary retention are more likely to have an elevated pre-operative PVR and to experience other complications post-operatively. This is the largest study to date looking at urinary retention following male transobturator sling placement.
Jennifer Rolef, MD

**Birthplace:** Washington DC

**Medical School:** George Washington University

**Residency:** George Washington University

**Fellowship:** Medical University of South Carolina

**Plans after Fellowship:** N/A
NOVEL PARAVAGINAL CYSTOCELE REPAIR TECHNIQUE: IMPROVING UPON ANTERIOR COLPORMAPHY

Claudia Sevilla MD, Melissa Sanford MD, Sameer Chopra MD, Luis Medina MD, David Ginsberg MD, Larissa Rodriguez MD
USC Institute of Urology, Los Angeles, California
Presented By: Melissa Sanford, MD

Introduction: Traditional anterior colporrhaphy has a high recurrence rate up to 30-55%. Mesh augmented anterior repairs have improved outcomes but have a higher risk of later complications including mesh erosion up to 12%. Paravaginal defects are frequently addressed when an anterior colporrhaphy is performed, however prior techniques describe the use of permanent sutures and/or mesh. Our objective is to present a novel technique that uses a lattice of delayed absorbable sutures to combine a traditional anterior colporrhaphy with a paravaginal repair while minimizing the risk of late complications associated with mesh augmented anterior repair and improving on recurrence outcomes of the traditional anterior colporrhaphy.

Methods: A video describing the technique is presented. The surgical steps include making a midline incision from the bladder neck to the cervix or cuff. The vaginal epithelium is dissected laterally towards the obturator fossa. Imbrication of the cardinal-sacrouterine ligament complex in women with a cervix can add apical support to the anterior repair. Two PDS sutures are placed into the obturator fascia proximally and distally and 4 horizontal mattress PDS sutures are placed over the central defect. The sutures are then intertwined to create a lattice of support. Cystoscopy is performed to rule out ureteral injury and the vaginal epithelium is closed.

Results: A total of 82 patients have undergone the paravaginal repair of which 37.8% had a prior anterior repair. Preoperative anterior prolapse stages were II 50%, III 25%, and IV 23%. Median estimated blood loss was 72mL, median operative time was 50 minutes with no complications.

Conclusion: Our novel technique combing paravaginal defect repair and anterior colporrhaphy utilizing a lattice of delayed absorbable sutures can be easily incorporated with other vaginal repairs and has minimal morbidity intraoperatively. Long-term risks associated with mesh and permanent sutures such as erosion or pelvic pain can also be avoided with this technique.
Melissa Sanford, MD

Birthplace: San Antonio, TX
Medical School: UTHSCSA
Residency: USCF
Fellowship: USC
Plans after Fellowship: N/A
IS PROPHYLACTIC STRESS INCONTINENCE SURGERY NECESSARY AT THE TIME OF PELVIC ORGAN PROLAPSE REPAIR? - RATES OF FUTURE SURGERY IN A LARGE POPULATION BASED COHORT IN CALIFORNIA

Raveen Syan, MD¹, Kai Dallas, MD², Ericka Sohlberg, MD¹, Lisa Rogo-Gupta, MD¹, Christopher Elliott, MD¹ and Ekene Enemchukwu, MD¹
¹Stanford, CA; ²Stanford Urology
Presented By: Raveen Syan, MD

Introduction: Data from the OPUS and CARE trials have suggested a de novo stress urinary incontinence (SUI) rate of up to 57% after antero/apical pelvic organ prolapse (POP) surgery in previously continent women. However, the rate at which women have their de novo SUI addressed with further surgical correction is substantially less (OPUS=4.7%). We present a large population based cohort with long-term follow-up to describe rates of future SUI surgery after antero/apical POP surgery in women not undergoing concomitant SUI repair and explore risk factors for subsequent SUI surgery.

Methods: Data from the Office of Statewide Health Planning and Development (OSHPD) was used to identify all women who underwent anterior and/or apical POP repair without a concomitant SUI procedure in the state of California during the years 2005-2011. All cases had at least one year follow-up. Using multivariate analysis, both patient and surgical characteristics were explored for associations with subsequent SUI procedures after index POP repair.

Results: Of the 41,689 women who had an index POP repair without concomitant SUI surgery, 1,504 (3.6%) underwent future SUI repair with a mean follow-up of 4.1 years. Multivariate analysis revealed obesity (odds 1.99, p<0.001), use of mesh at the time of POP repair (odds 2.04, p<0.001), diabetes mellitus (odds 1.19, p=0.04) and being Caucasian were all associated with an increased odds of future SUI surgery (Table 1). Although there was no difference in the odds of future SUI surgery between anterior alone and apical alone repairs (p=0.44), combination repairs carried a higher risk (odds 1.30, p<0.001).

Conclusions: Despite the previously reported high rates of de-novo SUI reported after antero/apical POP repair, only 3.6% of women underwent subsequent SUI surgery in the long-term in our series. Given these findings, the practice of prophylactic SUI surgery at the time of antero/apical POP surgery in all patients is questionable. As certain risk factors may alter a woman’s personal risk, this information can be used to better guide decisions. Further investigation of the motivation to obtain or abstain from future SUI surgery needs to be explored.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio (95% CI)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Age</td>
<td>1.00 (0.99-1.02)</td>
<td>0.15</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>Reference (Reference)</td>
<td>Reference (Reference)</td>
</tr>
<tr>
<td>Asian</td>
<td>0.98 (0.97-1.00)</td>
<td>0.37</td>
</tr>
<tr>
<td>Black</td>
<td>1.04 (1.00-1.08)</td>
<td>0.08</td>
</tr>
<tr>
<td>Other</td>
<td>0.44 (0.39-0.51)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Repair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesh</td>
<td>Reference (Reference)</td>
<td>Reference (Reference)</td>
</tr>
<tr>
<td>Private</td>
<td>0.89 (0.85-0.93)</td>
<td>0.001</td>
</tr>
<tr>
<td>Medicaid</td>
<td>0.98 (0.93-1.03)</td>
<td>0.26</td>
</tr>
<tr>
<td>Other</td>
<td>1.01 (0.94-1.08)</td>
<td>0.71</td>
</tr>
<tr>
<td>Compartment of Repair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apical Only</td>
<td>Reference (Reference)</td>
<td>Reference (Reference)</td>
</tr>
<tr>
<td>Anterior Axial &amp; Ano</td>
<td>1.05 (1.00-1.10)</td>
<td>0.04</td>
</tr>
<tr>
<td>Concomitant Pelvic Repair</td>
<td>1.06 (1.00-1.13)</td>
<td>0.04</td>
</tr>
<tr>
<td>Mesh Augmented Repair</td>
<td>2.04 (1.79-2.32)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Obesity</td>
<td>1.52 (1.32-1.77)</td>
<td>0.001</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>1.53 (1.01-2.41)</td>
<td>0.02</td>
</tr>
</tbody>
</table>
Raveen Syan, MD

Birthplace: Luton, Bedfordshire, England

Medical School: University of Southern California, Keck School of Medicine

Residency: New York University, Urology

Fellowship: Stanford University

Plans after Fellowship: N/A