Moderated Poster Session II: Reconstruction/Andrology
Thursday, September 29, 2016
10:15 am – 12:00 pm

P19
A novel technique for reconstruction of fossa navicularis and distal pendulous urethral stricture via transurethral ventral buccal mucosal inlay

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Background: The repair of distal urethral strictures usually involves a penile skin incision to gain access to the urethra for various forms of external urethrotomy and subsequent repair with flaps or grafts. These incisions place the repair at risk for fistula formation, glans dehiscence and suboptimal cosmetic outcomes. We introduce a novel surgical technique for reconstruction of distal urethral strictures without a need for skin incision. Our approach, a modified endoscopic technique, employs a ventral internal urethrotomy and precise transurethral delivery and fixation of BMG to the surface of the urethrotomy.

Methods: A ventral urethrotomy is performed transurethrally and a wedge of the obstructive tissue is removed to access a proximal patent lumen. An appropriate size BMG is harvested and prepared for delivery. Both arms of a double-arm 6-0 polydioxanone suture are passed through the proximal apex of the graft then through the urethra at the proximal apex of the urethrotomy and externalized through the skin. The arms of the suture are pulled externally to deliver the graft precisely into its place in the urethra. Additional 6-0 double-armed sutures are then used to quilt the graft at its mid-portion and their knots are tied externally. The distal edge of the graft is sutured to the edge of the meatotomy with absorbable sutures. We conducted a retrospective chart review of all the patients after a distal urethral stricture repair since March 2014 by a single surgeon (DN). Surgical, functional and patient reported outcomes were reviewed. Patients were assessed preoperatively and post-operatively at six weeks, four, eight, 12 months, and then yearly. Routine followup included uroflow, PVR, SHIM and IPSS scores.

Results: This procedure was performed in a total of 10 male patients. Mean age was 46 years (26–69), mean stricture length 1.8 cm (1–4). At a mean followup of 6.5 months (2–24), there were no recurrences, fistula, penile chordee, or adverse effects on sexual function. Mean uroflow preoperatively was 4.6 (2–9), postoperatively 20 (8–32), mean preoperative PVR 77 (0–248), postoperative PVR 28 (0–78), mean preoperative SHIM score 18 (5–25), postoperative 20 (1–25) and mean preoperative IPSS 15 (5–29), postoperative 4 (2–11).

Conclusions: We demonstrate the feasibility of an incisionless distal urethral stricture repair with ventral inlay BMG. This single-stage technique avoids urethral mobilization or skin incision and ultimately prevents glans dehiscence or fistula formation. It also circumvents the use of genital skin flaps in patients affected with LS.

P20
Buccal mucosal graft augmentation urethroplasty for bulbomembranous strictures after radiation therapy for prostate cancer

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Background: Urethral stricture disease that develops as a result of radiation therapy for prostate cancer occurs in the bulbomembranous urethra. These strictures are difficult to treat due to ischemic changes in the local tissues. Anastomatic urethroplasty has been encouraged to avoid free grafting into an ischemia graft bed. We present our series of patients undergoing buccal mucosal graft urethroplasty for post-radiation bulbomembranous urethral strictures and compare both dorsal and ventral approaches.

Methods: We reviewed consecutive patients undergoing buccal mucosal graft augmentation urethroplasty for bulbomembranous strictures after radiation therapy for prostate cancer at two institutions. Patient factors and recurrence rates are presented.

Results: Fifteen men underwent urethroplasty. Nine patients had a dorsal onlay buccal graft and six patients underwent urethroplasty with a ventral onlay. Eleven men had previously received external beam radiation therapy, while two were treated with brachy therapy alone and two received both. The mean age was 68 years (56–77). All patients had bulbomembranous urethral involvement and mean stricture length was 6 cm (3–17 cm). At a mean followup of 10 months (4–31months), there were two stricture recurrences, each managed with a single DVIU. Each recurrence was in a patient who underwent ventral onlay. One patient who underwent ventral onlay reported new incontinence after urethroplasty, while continence status was unchanged in the remaining patients.

Conclusions: Urethroplasty with buccal mucosa grafting techniques has been shown to be successful in patients with radiation-induced bulbomembranous urethral stricture. Buccal mucosal grafting techniques should be considered in this setting. Larger studies are required to more accurately predict recurrence and incontinence rates

P21
Patient characteristics, morbidity, and mortality of genital and perineal burns

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Background: Involvement of the genitalia and perineum in burn injuries can be devastating. In the literature, among all burn patients there is a reported incidence of 3–12% of patients that have genital involvement. Recent national registry data have reported that genital involvement in burns as an independent predictor of mortality. This highlights the need for more research in genital burns. This study used our institutional burn registry to report patient characteristics, morbidity, and mortality.

Methods: A retrospective chart review was performed from our institutional burn center registry for cases of genital burns from July 2010 to January 2016. Data were gathered on patient demographics, mechanism, total body surface area (TBSA), length of stay, burn location, mortality, and presence of bacteriuria and bacteremia. Univariate statistical analysis was performed with t-test and chi-square.

Results: One hundred and twelve cases of burns to the genital region were identified from 1595 total admissions to our burn center. Genital burns affected males more than females (65.2%), although this percentage is simi-

lar to non-genital burn controls. The TBSA was higher for genital burns compared to non-genital burns (12.7% vs. 4.8%; p<0.0001). The most common mechanism for genital burns was scald, and the most commonly involved genital region was the perineum. Significantly more patients with genital burns had bacteriuria compared to those without genital burns (9.7% vs. 0.9%; p<0.0001). Mortality was significantly worse for patients with genital burns (8% vs. 0.9%; p<0.0001).
Conclusions: Burn injury to the genitals and perineum are rare but associated with higher mortality rates than burns not involving the genital region. The etiology of the higher mortality rates among genital burn patients has not yet been elucidated. Among our patient population, patients with genital burn have significantly higher bacteriuria rates, although the trend to higher bacteremia rates did not reach statistical significance. More research is needed to identify the factors that impact higher rates of mortality in this patient population.

P22
Bulbospongiosus muscle dissection and ejaculatory function outcomes in urethroplasty

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Background: It has been speculated that bulbospongiosus muscle (BSM) bisection may negatively affect ejaculatory function. New dissection techniques were proposed with the intent of minimizing neuromuscular damage. We hypothesized that muscle sparing techniques may have better ejaculatory outcomes as compared to bisection techniques.
Methods: Our institution's urethral stricture database was used to retrospectively analyze all male patients undergoing anterior urethroplasty. Excluded patients were those who underwent multi-staged procedures, had previous BSM dissections, had poor ejaculatory function unrelated to their stricture, and those who did not complete surveys. The patients were divided into four groups based on the type of BSM dissection: 1) traditional midline muscle bisection, 2) unilateral bisection (Kulkarni-type), 3) muscle-sparing (Barbagli-type), and 4) distal urethroplasty patients with no muscle manipulation. To evaluate outcomes, patients were given pre- and postoperative Men's Sexual Health Questionaires (MSHQ). Ejaculatory function and bother scores (best possible 35 and 5, respectively) from the MSHQ surveys were compared between groups.
Results: A total of 173 patients were included in the database between August 2012 and March 2016. Of those, 48 men met inclusion criteria. Twelve, eight, 18, and 10 patients were included in Groups 1–4 (Table 1). The groups were compared and found to differ significantly in preoperative ejaculatory function scoring (p=0.019). Postoperative ejaculatory function was found to be improved when all patients were evaluated together (p=0.026). No single group achieved statistical significance in exhibiting a change between pre- and postoperative function. No statistically significant difference was identified comparing ejaculatory bother either between groups or in relation to the procedure.
Conclusions: Urethroplasties involving any type of muscle dissection may result in improved ejaculatory function possibly by simply un-obstructing the urethral lumen. Randomized prospective studies assessing subjective and objective outcomes are needed to determine whether different techniques of muscle dissection have an effect on ejaculatory function.

P23
Changes in nocturnal bladder diary parameters in men after urethroplasty for anterior urethral strictures

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Background: We evaluated changes in nocturnal voiding patterns of men (M) before and after anterior urethroplasty for urethral stricture disease using a 24-hour bladder diary.
Methods: This was a retrospective study of M undergoing anterior urethroplasty for urethral stricture between June 2011 and August 2015 and who had a preoperative and postoperative 24-hour bladder diary. Diaries done any time prior to surgery and only those done at least one month after surgery were included. On the 24-hour diary, patients were asked to record the volume and time of each urination. Paired t-tests were performed on nocturnal voiding variables.
Results: One hundred and four anterior urethroplasties were performed during the study period, of which 17 had bladder diaries. Mean age was 45.4 years (range 26–70). The majority had bulbar urethral strictures (n=10, 58.8%) followed by pendulous-bulbar strictures (n=4, 23.5%), bulbo-membranous (n=2, 11.8%), and penile (n=1, 5.9%). Means of correction were buccal mucosa onlay graft (n=8, 50%), end-to-end repair (n=6, 37.5%), urethroplasty (n=1, 6.3%), and augmented excision and primary anastomosis with buccal graft (n=1, 6.3%). Mean days from surgery to first postoperative 24-hour bladder diary was 287.5 days (median 109, range 32–1116). Preoperative and postoperative changes in nocturnal bladder diary parameters are listed in Table 1.
Conclusions: Anterior urethral reconstruction improves nocturnal voiding parameters. The most striking change was decreased nocturia severity postoperatively, which appears to be attributable to a combination of increased bladder capacity and decreased nocturnal urine production. This is the first study evaluating changes in nocturnal voiding function after urethroplasty.

P24
Early ambulation decreases hospital stay in renal trauma: A randomized, prospective sudy

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Background: Non-operative management (NOM) is the standard of care for blunt renal trauma. Observation for blunt renal trauma has been widely adopted with practitioner dependent duration of bed rest. A paucity of data exists regarding the effect of bed rest on outcomes and on hospital length of stay (LOS). Urologists commonly offer either bed rest for four to five days or until the resolution of gross hematuria. Given the system-wide emphasis on reducing LOS, we sought to prospectively determine if early ambulation leads to shorter hospital stays and its safety for patients with Grade 2–4 blunt renal trauma.
Methods: After obtaining IRB approval and consent from patients with Grade 2–4 renal laceration, patients were randomized to either four days of strict bed rest or strict bed rest until resolution of hematuria. Primary endpoint was hospital LOS while intervention performed, complications, and rate of re-bleed was also collected. The study was closed due to failure to accrue.

P22. Table 1

	All (n=48)	Group 1 (n=12)	Group 2 (n=8)	Group 3 (n=18)	P value	
Preoperative function	24.1 ± 7.6	21.5 ± 11.0	19.5 ± 6.3	24.9 ± 5.1	29.4 ± 3.7	0.019
Postoperative function	26.8 ± 8.7	28.0 ± 6.4	24.4 ± 11.3	25.4 ±10.6	29.8 ± 3.4	0.419
P value	0.026	0.062	0.103	0.763	0.764	
Preoperative bother	3.8 ± 1.2	3.5 ± 1.5	3.3 ± 1.2	4.0 ± 1.1	4.3 ± 1.1	0.234
Postoperative bother	4.2 ± 1.2	4.3 ±1.1	4.1 ± 1.1	4.1 ± 1.4	4.3 ± 1.3	0.958
P value	0.074	0.096	0.087	0.726	1.000	

P23. Table 1. Bladder diary parameters

Bladder diary parameter	Pre-urethroplasy	Post-urethroplasy	P value
24-hour voided volume (mL)	Mean: 1818.0 Median: 1500.0 Range: 439–6225	Mean: 2100.7 Median: 1882.0 Range: 746–4543	0.35
Maximum voided volume (mL)	Mean: 338.1 Median: 350.0 Range: 80–700	Mean: 416.4 Median: 400.0 Range: 130-740	0.07
Actual number of night voids	Mean: 1.6 Median: 1.0	Mean: 0.8 Median: 1.0	0.06
Nocturnal urine volume (mL)	Mean: 443.4 Median: 371.8 Range: 74–1650	Mean: 378.2 Median: 347 Range: 10.4–977.2	0.44
Nocturnal polyuria index	Mean: 0.2 Median: 0.2	Mean: 0.2 Median: 0.2	0.09
Nocturnal bladder capacity index	Mean: 1.5 Median: 1.6	Mean: 1.0 Median: 1.0	0.15
Nocturnal index	Mean: 1.1 Median: 1.0	Mean: 0.9 Median: 0.8	0.07

Results: From August 2012 to September 2015, 12 patients were randomized into one of the two groups. The bed rest group consisted of four patients while the early ambulation group consisted of eight. Median age overall was 23.5, with 22.99 in the bed rest and 25.61 in the early ambulation group (p=0.8). Overall, three were female (25%) and nine were male (75%). The cohort consisted of one Grade 2 (8.3%), eight Grade 3 (66.7%), and three Grade 4 (25.0%) renal lacerations. Median time to ambulation was two days, with five and 1.5 days for bed rest and early groups, respectively (p<0.01). Median LOS was four days with six days and three days for the bed rest and early groups, respectively (p<0.05).No re-bleeds were documented in either group and no interventions were required for the early ambulation group. Two patients in the bed rest arm required angiography without other intervention and one required a blood transfusion. One patient acquired a catheter associated urinary tract infection.
Conclusions: Strict bed rest protocols are associated with higher morbidity due to prolonged immobilization and the subsequent increase in LOS exposure iatrogenic morbidity and cost. Albiet a small sample size, our data illustrate Level 1 evidence that early ambulation yields decreased hospital LOS without causing adverse side effects.

P25
Outcomes following urethral reconstruction in the geriatric population

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Background: Urethral reconstruction has evolved as gold standard treatment for urethral strictures. As the population of the US gets older, increasing numbers of geriatric patients are undergoing urethral reconstruction. This patient population tends to have different baseline characteristics that have the potential to affect surgical outcomes. We investigated patient reported and surgeon reported outcomes in urethroplasty patients over 65 years of age to define the determinants of success and potential morbidities in this age group.
Methods: This was a retrospective chart review of post-urethroplasty patients from August 2012 to February 2016. The cohort was divided based on age; those 65 years and older were considered "geriatric." Patients under 18 years old, prisoners, and those with out-of-state followup were excluded. At presentation, baseline demographics, maximum urine flow (Qmax), measured by uroflowmetry, and International Prostate Symptom Score (IPSS) were collected. These were related to postoperative measures of urine flow, patient-reported satisfaction, complications, and need for subsequent procedures.
Results: One hundred and fifteen patients met inclusion criteria. Twenty-six patients were age 65 or older. The geriatric population had a higher prevalence of diabetes and a lower rate of smoking and prior urethroplasty than the under 65 population. The prevalence of prior endoscopic procedures was similar in both groups. Pre and postoperative Qmax and IPSS showed statistically significant improvement in the geriatric age group (mean Qmax, in ml/second, improved from 4.7 [range 2–11] to 19.5 [3–56]; p<0.001; mean IPSS 19–11; p=0.001). These results were similar to what was observed in patients under the age of 65 (mean Qmax improved from 7.2 [0–24] to 23.5 [2–61]; p<0.001; mean IPSS from 20 [0–35] to 5 [0–29]; p<0.001). Average length of hospital stay was one day for geriatric patients and 0.97 days for the younger population, which was not significant (p=0.557).
Conclusions: Surgical outcomes and patient satisfaction following urethral reconstruction in geriatric patients seems to be similar to that observed in the general population. Furthermore, these patients do not require increased hospital stays.

P26
Surgical management of adult acquired buried penis: Escutcheonectomy, scrotoplasty, and penile split thickness skin graft

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Background: Adult acquired buried penis as a result of obesity is a morbid condition with increasing incidence. Affected patients have poor sexual function, urine dribbling and skin breakdown, mood disturbance, and poor quality of life (QoL). Lichen sclerosis develops causing subsequent stricture disease. Weight loss is ineffective due to chronic skin changes and suprapubic fat pad (termed the escutcheon) lymphedema. Previous efforts have described limited repairs including isolated resection of the escutcheon, which unfortunately often leads to reburying. We present a more extensive surgical repair including escutcheonectomy, scrotoplasty, and penile degloving with split-thickness skin graft (STSG) to provide definitive repair and halt the progression of the disease process.
Methods: A retrospective chart review was conducted of patients managed surgically for adult acquired buried penis in 2015–2016. Nine patients were identified who underwent escutcheonectomy, scrotoplasty, penile degloving, and STSG repair. All patients had morbid obesity as a sole etiology or significant contributing factor. Outcomes evaluated were surgical complications, reburying of the penis, graft take rate, and urinary symptoms.

P26. Table 1. Demographics (n=9)	
Age	45.4 ± 13.8
Weight (kg)	143.0 ± 14.0
Body mass index	45.4 ± 3.7
Comorbidities	
Diabetes	6/9 (67%)
Hypertension	5/9 (56%)
Hyperlipidemia	5/9 (56%)
Lichen sclerosus	9/9 (100%)
Depression	2/9 (22%)

Results: Nine patients underwent repair of adult acquired buried penis. All patients had good cosmetic results and durable unburying at intermediate term followup. Etiology of buried penis was due to morbid obesity in all cases. Mean patient body mass index (BMI) was 45.4±3.7. Sixty seven percent of the patients in the series were diabetics and 56% had hypertension and hyperlipidemia (Table 1). Mean operative time, length of stay (LOS), and estimated blood loss (EBL) were 305±21 min, 5.6±1.1 days, and 321±147 cc respectively. STSG take rate was 80-100% (mean 91%) (Table 2).
Conclusions: Adult acquired buried penis is a challenging condition to treat. Limited surgical repairs can lead to reburying of the penis, need for further procedures, and the progression of urethral disease with voiding dysfunction. Escutcheonectomy, scrotoplasty, and STSG have encouraging intermediate-term outcomes with durable unburying of the penis and good STSG take rates. Further followup in larger series is needed, but results are thus far encouraging.

P27

Practice patterns among genital burn patients: Surgical interventions and urologic service involvement

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Background: Plastic surgeons, general surgeons, and urologists all play in a role in the management of this specific burn patient population. The distribution of genital burn cases managed by urologists has not been previously described. This study assessed the role of urology in managing genital burns and identified characteristics of patients whose cases required urologic involvement.
Methods: A retrospective chart review was performed from our institutional burn center registry for cases of genital burns from July 2010 to January 2016. Data were gathered on patient demographics, mechanism, total body surface area (TBSA), length of stay, mortality, burn degree, burn location, surgical intervention, urologic service involvement, reason for consultation, and urologic intervention.
Results: Out of 112 cases of genital burns, eight (7.1%) required surgical intervention to the genital region by excision and grafting. All eight patients had third- or fourth-degree burns. Six of the patients suffered scald burns, while the other two suffered burns from fire or flames. All surgical interventions were performed by a plastic surgery trained burn surgeon. Among patients with genital burns, 10 (8.9%) had consultation by a urologic service. Most common reason for consultation was Foley management including placement and assessment for removal. Urology was also consulted to evaluate need for urologic procedures, assess extent of genital involvement and manage artificial urinary sphincter. No patients required surgical intervention from a urologic service. One patient had an intraoperative consultation due to concern for urethral involvement. Despite the level of urologic service involvement, no salvage procedures were performed by urology for burn injury complications.
Conclusions: Management of genital burns involves many subspecialties. Most burns are treated with local wound care only, but acute surgical intervention is indicated in severe cases. In our practice pattern, urologists are rarely involved in the care of genital burn patients. When urology is consulted, the consult question seldom involves burn management. Despite the rarity of consultations for genital burn patients, no salvage procedures for urologic complications were identified.

P26. Table 2. Surgical details and outcomes (n=9)	
Mean followup (months)	3.5
Would dehisence	1
Split-thickness skin graft take rate	80–100% (mean: 91%)
Readmission	3
Estimated blood loss (mL)	321 ± 147
Operative time (minutes)	305 ± 21
Length of stay (days)	5.6 ± 1.1

P28

Safety and surgical outcomes of same-day anterior urethroplasty

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Background: Urethroplasty is underused for the management of urethral stricture disease; patients routinely undergo several failed endoscopic interventions before urethroplasty referral. One of the barriers to referral may be that anterior urethroplasty is routinely managed with a 2.5-day average hospitalization so patients/providers may elect repeated endoscopic intervention due to fear of longer convalescence following urethroplasty. This is despite recent literature demonstrating the safety of same-day urethroplasties. More studies showing the safety of same-day urethroplasty with comparable outcomes may dispel such fears. At our tertiary care center, we routinely perform same-day substitution and anastomotic urethroplasty. We assess the safety and short/intermediate-term outcomes of outpatient urethroplasty.
Methods: We performed a retrospective chart review of 122 consecutive anterior urethroplasty patients (15 anastomotic, 107 substitution) performed by two surgeons from 2012 through 2016. We analyzed relationships between patients who were admitted and variables of age, stricture length, stricture etiology, number and type of prior stricture procedures, and stricture recurrence rates. Multivariate analysis was used to determine which factors were predictive of admission and stricture recurrence.
Results: Ninety-two of 122 (75%) patients were discharged home same-day. Sixteen of 30 patients (53%) were admitted for anesthesia issues, late OR finish, or planned admissions for medical comorbidities. Six (20%) were admitted for pain control, and only five (17%) were admitted for unanticipated extended operative times. There was no difference between same-day and admitted groups for age (49.7 years vs. 49.3 years), stricture length (4 cm vs. 5 cm), stricture etiology, or the types or numbers of prior stricture procedures. Only the number of prior interventions predicted admission in a multivariable model (>3 prior surgeries had 5.3x odds of admission). There were no unplanned readmissions in same-day group. There was no association between stricture recurrence and same-day surgery (15% same-day, 23% admitted).

P28. Table 1. Urethroplasty failure (recurrence) and prior procedures in admitted vs. same-day urethroplasty		
No. prior procedures	Same-day (%)	Admitted (%)
≤3	37 (88)	5 (22)
>3	52 (68)	25 (32)
Failure		
Yes	14 (15)	7 (23)
No	78 (85)	23 (77)
Total patients	92 (75)	30 (25)

Conclusions: We describe the largest series of outpatient anterior urethroplasty to date. The only factor that predicted the need for postoperative admission was an increased number of prior endoscopic stricture surgeries. Success rates between same-day and admitted groups were similar. These findings highlight the feasibility and safety of same-day urethroplasty without compromising success. A timely referral for urethroplasty may improve ability to perform outpatient surgery.

P29

The PRIVATES study: Pain rates in vasectomy and testing to ensure sterility — A contemporary series

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Background: Literature on post-vasectomy pain rates and vasectomy related complications is extremely disparate. We review a contemporary, single-surgeon series of vasectomies. In particular, we assess post vasectomy pain (PVP) of any kind, post procedure clinic contact, and examine time to sterility using contemporary AUA guidelines.

Methods: A retrospective chart review of the first four years of the senior author's experience were identified and reviewed. Data for 303 men were obtained including surgical and demographic data, semen analyses (SA), and patient post-procedure clinic contact. Our technique uses local lidocaine (with or without valium), includes two high incisions, vas resection, clipping, cautery, interposition, interrupted chromic skin closure and a prescription for 20 Narcotic based pain pills. Incisional complaints were typically treated empirically with a short course of antibiotics, whereas PVP was treated with two weeks of non-steroidal anti-inflammatory drugs (NSAIDS) and a quinolone with or without scrotal ultrasound.

Results: Our 303 subject cohort's average age was 38 years (range 22–62) and had had a mean of 2.6 children (0–8) and a mean followup of 1140 days (500–1865). Patient-initiated phone contact occurred from 8% patients with roughly equal complaints of incision concerns and pain. Post procedure visits occurred in 9% of cases with the most common complaints being incisional concerns (3%), scrotal pain (3%), epididymal complaints (1%) and infection (1%). Only 2% of patients required a second visit and only one patient (0.3%) required a third visit for post-procedural pain. Patients receiving prophylactic antibiotics at vasectomy had a higher (12%) but comparable rate of later receiving antibiotics than those who did not receive prophylaxis (5%).

Only 1.7% of patients required narcotics other than the initial prescription. NSAIDs were prescribed to another 4.3% of patients for PVP. No patients had PVP refractory to NSAIDs.

Only 62% of men provided any required post-vasectomy SA (when two completely azoospermic samples were required for clearance) and of these men, 10% required a third SA and 1% required a fourth SA to ensure sterility. A phone call to the office for any reason increased the likelihood that a man would provide the required SA ($p<0.001$). Using the new guidelines, 94% would have been cleared after the first sample, 99% after the second sample and 100% after the third sample.

Conclusions: Our contemporary vasectomy series reveals men can safely be told they are at a very low risk for refractory PVP, the need for narcotic refills, and secondary procedures of any kind.

P30

Rates of hypogonadism in a nationwide sample: Results from NHANES

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Background: Testosterone deficiency has become increasingly recognized in US males with an estimated rate of hypogonadism in approximately 25–30% of aging men. Men typically present with fatigue and or loss of libido as cardinal symptoms of hypogonadism. This has been predominantly studied in middle-aged men and is believed to be related to andropause. There is minimal literature describing testosterone levels in healthy younger men. We sought to identify rates of hypogonadism in the younger population using information from a national sample.

Methods: The NHANES database was queried for all men that had total testosterone levels drawn for the years 2011–2012. Men were stratified into groups according to age. Hypogonadism was defined as those patients with a T level <300 ng/dl. Patient demographics and patient-reported fatigue was collected for all patients. Univariate and multivariable logistic regression was performed to identify variables associated with hypogonadism.

Results: A total of 2571 patients were analyzed. There were 730 men between the ages of 16 and 29 with an 18.6% rate of hypogonadism, and of these hypogonadal men, 54.3% reported fatigue. There were 446 men between the ages of 30 and 39 with a 25.2% rate of hypogonadism, and 45% of these hypogonadal men reported fatigue. The rate of hypogonadism was higher in older populations (Table 1). On univariate analysis, age ($p=0.002$), body mass index (BMI) ($p<0.0001$) and diabetes ($p<0.0001$) were associated with an increased risk of hypogonadism. Whereas, HDL level ($p<0.0001$) and smoking ($p<0.0001$) were found to have a decreased risk of hypogonadism. On multivariable analysis, BMI, HDL level, and smoking status remained significantly associated.

Conclusions: In this nationwide sample, a surprising level of biochemical and symptomatic hypogonadism was seen in men under 40. A growing body of literature suggests a connection between metabolic syndrome and hypogonadism, which is consistent with our data as well. Young men who report symptoms of hypogonadism, especially with metabolic syndrome characteristics, should be screened for low testosterone and counseled appropriately.

P31

The efficacy of tadalafil daily vs. on-demand in the treatment of erectile dysfunction: A systematic review and meta-analysis

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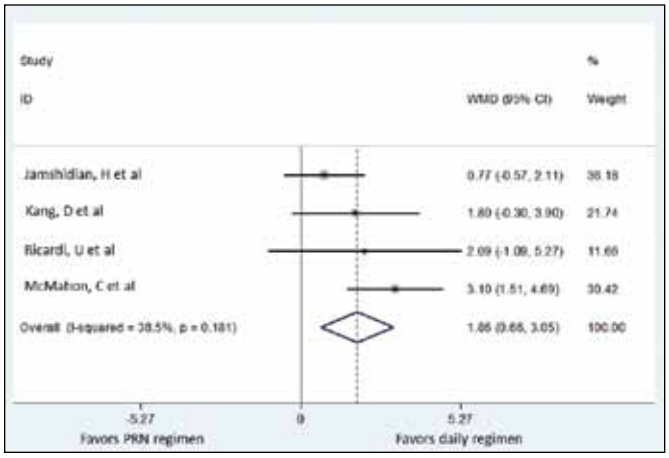
Background: Erectile dysfunction (ED) is a morbid condition for both patients and their partners. Over 40% of men over the age of 40 experience some degree of ED. Phosphodiesterase-5 (PDE-5) inhibitors are the mainstay of initial treatment but little is known about the optimal dosing frequency for patient satisfaction. We present a systematic review comparing patient satisfaction with the use of tadalafil daily vs. on-demand (PRN) dosing.

Methods: A comprehensive database search including the Cochrane Database, PROSPERO, PubMed, EMBASE, Google Scholar, and clinicaltrials.gov was conducted to identify studies that examined varying frequencies of tadalafil therapy for the treatment of ED. The primary author then extracted the data from studies that met the following inclusion criteria: (1) randomized controlled trials that examined the use of tadalafil 5–10 mg daily vs. 20 mg PRN in adult men who had erectile dysfunction for at least three months or post-prostatectomy; (2) primary or secondary endpoint of International Index for Erectile Dysfunction-Erectile Function domain (IIEF-EF); and (3) at least 12 weeks of followup. The number of patients, mean, and standard deviation was extracted for

P30. Table 1. Hypogonadism rates among age groups

Age	Number of subjects	% hypogonadism	% fatigue
16–29	730	18.6	54.3
30–39	446	25.2	45.0
40–49	397	35.7	56.2
50–59	389	30.6	49.0
60–69	407	28.1	54.6
70–79	206	33.6	27.0



P31. Fig. 1. Forest plot of the effect of tadalafill PRN vs. daily dosing regimens on patient satisfaction.

each intervention group. Meta-analysis was performed using Stata® 14.0.
Results: A total of 886 articles were reviewed for inclusion in the systematic review. Sixteen studies were identified that examined the desired dosing regimens with IIEF-EF as an outcome. However, only four of these randomized controlled trials included a common endpoint of 12 weeks. The mean IIEF-EF scores for tadalafil PRN and daily were 10.75 and 10.8 at baseline and 19.22 and 21.26 after 12 weeks, respectively. At 12 weeks, those patients taking tadalafil daily scored on average 1.86 points higher in IIEF-EF score compared to those taking tadalafil PRN (WMD 1.86, 95% CI 0.66–3.05; p=0.002, I2 38.5%; p=0.18) (Fig. 1).
Conclusions: Tadalafil continues to be an effective treatment for ED. Those patients taking tadalafil daily for three months have a significant increase in satisfaction compared to an on demand regimen based on IIEF-EF scores. Further studies are necessary to examine other scoring systems and to perform a sensitivity analysis on patients with ED due to prostatectomy or diabetes.

P32
Analysis of semen parameters during two weeks of daily ejaculation: A first in humans study

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Background: Timed and frequent intercourse around the time of female ovulation is recommended to improve conception, but is debated due to insufficient evidence. Although both short and protracted periods of abstinence have been shown to have a negative effect on semen quality, the effects of increased frequency of ejaculation have not been rigorously studied.
Methods: Twenty normal men were recruited for daily ejaculation over 14 consecutive days, after a 3–5 day abstinence period. Semen samples were collected at the beginning of the study (Day 1) and then on Days 3, 7, and 14. In addition to the standard semen analysis, markers of sperm DNA quality were assessed.
Results: The mean age of men completing the study was 25 years (range 23–33). Significant decreases were observed in mean semen volume, total motile count (TMC), and sperm concentration during the study period without significant changes in motility or morphology. A large initial change in ejaculate volume, TMC, and sperm concentration provided the primary difference in these values over the study period, with a plateau in values after this initial decrease. Metrics of DNA integrity did not change in a statistically meaningful way during the study period.
Conclusions: While a small study, this represents the most extensive examination of sperm quality with daily ejaculation. In normal men, these observed changes may not have a significant effect. However, oligospermic men in particular may benefit from less frequent ejaculation around the time of female partner ovulation or providing samples for assisted conception.

P33
Stuttering priapism: Can't keep a good man down

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Background: Stuttering priapism is a recurrent form of ischemic priapism whereby unwanted painful erections occur repeatedly with intervening periods of detumescence. While each recurrent episode should be treated emergently, the ultimate goal is to manage such patients with additional interventions aimed at preventing future episodes. For instance, consider a trial of anti-androgens or gonadotropin-releasing hormone (GnRH) agonists. In the meantime, intracavernosal self-injection using phenylephrine should be considered in patients who either fail or reject systemic (hormonal) treatment. Finally, once systemic therapy controls stuttering priapism reset the erectogenic pathway using a daily phosphodiesterase type-5 inhibitor. This study reviews both the treatment outcomes and insurance-based limitations to treating stuttering priapism.
Methods: From 2/15 through 3/16, treatment outcomes for a cohort of four patients with stuttering priapism were retrospectively reviewed. A telephone survey allowed for post-treatment feedback.
Results: Please see Tables below.
Conclusions: Although rare, stuttering priapism is a challenge to treat, taxing the patient, physicians, and hospital resources. All four patients responded to bedside treatments — avoiding surgical shunting. Lupron was well-tolerated and resulted in normalized erections within 10–21 days. During this time interval, no patients were able to obtain phenylephrine self-injections. Four to six weeks after Lupron wore off, two of three patients had recurrence of priapism. Based on this review of stuttering priapism, consider early hormonal ablation concurrent with a hospital policy allowing phenylephrine self-injections.

P34
Histopathologic characterization of urethral strictures: A comparison of various types

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Background: Urethral stricture is a relatively common urologic problem, with an incidence of approximately one in 200 men. Stricture disease can result in several comorbidities that can affect a patient's quality of life, including acute urinary retention, hydronephrosis, recurrent urinary tract infections, hematuria, and formation of bladder stones. Lichen sclerosus, a chronic inflammatory disease thought to possible be autoimmune in etiology, is a known cause of urethral strictures when involving the urethra. Men with repair of urethral stricture over a 3.5-year time period were reviewed with histologic characterization of the urethral stricture. Our objective was to look at the location of urethral stricture and incidence of lichen sclerosus associated with location.
Methods: One hundred seventy-three male urethral strictures were reported in a prospective registry over a 3.5-year time period between 2012 and 2015. Of the 173 urethral strictures, 77 specimen were available for analysis. Histological examination of each specimen was performed by a surgical pathologist at the time of specimen collection. Additionally, the specimens were retrospectively studied for tissue types present (including the presence or absence of urothelium, urethral tissue, skeletal muscle, and nerve), and processes associated with repair (chronic inflammation, acute inflammation, necrosis, granulation tissue

formation, multinucleated giant cell reaction, and ectopic calcifications). The density and organization of collagen was assessed to examine the degree of fibrosis. The presence or absence of lichen sclerosus was also noted, using basal cell vacuolation, epidermal atrophy, dermal edema, homogenization of collagen, and focal perivascular infiltrate of the papillary dermis as defining features.

Results: Out of the 77 urethral strictures repairs with available specimen, 15 (19.5%) involved the fossa navicularis, five (6.5%) were pendulous urethral strictures, 13 (16.9%) were panurethral strictures, 19 (24.7%) involved the bulbar urethra, 23 (29.8%) were bulbomembranous in location, and two (2.6%) were anastomotic strictures in patients status post-prostatectomy and radiation therapy for prostate cancer. Sixteen of the 77 (20.7%) examined specimen were consistent with lichen sclerosus after histologic characterization. Eight of the 16 (50%) specimen with lichen sclerosus were noted to have clinical examination findings suspicious for lichen sclerosus prior to urethroplasty. Lichen sclerosus was found in 9/15 (60%) of fossa navicularis, 2/5 (40%) of pendulous urethra specimen, 3/13 (23%) of panurethral stricture specimen, 2/19 (10.5%) of bulbar stricture specimen, 0/23 (0%) of bulbomembranous stricture specimen, and 0/2 (0%) of the anastomotic stricture specimen. In all stricture groups, there was a high prevalence of chronic inflammation (40–100%). Skeletal muscle and nerve tissue was more prevalent in bulbomembranous strictures (60–80%) than other types.

Conclusions: While a majority of urethral strictures showed collagen fibrosis and mild-to-moderate chronic inflammation, lichen sclerosus was present in an overwhelming percentage of distal urethral strictures. Of the specimen that were consistent with lichen sclerosus, half were not suspected clinically. A high index of suspicion for this premalignant lesion should be maintained with urethral strictures, especially distal strictures, given it is not always clinically apparent.

P33. Table 1. Patient information 1

Patient	1	2	3	4
Race	White	African-American	Middle-Eastern	White
Risk factors	No	Cocaine	Thalesemia	No
ABG: pH	6.7	6.8	6.7	6.6
Sono/Doppler	No	No	No	No
Emergency room visits	15	13	3	15
No. of irrigations	3/15	8/13	2/3	8/15
No. of injections Phenylephrine (dose in mcg)	15/15 (800–2000)	11/13 (600–4000)	3/3 (1500–6000)	12/15 (500–2000)
Pelvic angiogram	Yes: negative	Yes: 2 coils	No	Yes: negative

P33. Table 2. Patient information 2

Patient	1	2	3	4
Casodex	11/12/15	3/13/15	No	8/28/15
Lupron (1 month)	11/6/15 12/5/15	3/13/15 6/29/15 9/5/15	No	8/28/15 9/25/15 10/30/15 1/4/16 2/26/16 3/25/16
After Lupron priapism stopped	10 days	14 days	N/A	10 days 21 days
Lurpon ran out, priapism returned	4 weeks (single occurrence)	6 weeks	N/A	6 weeks
Complications	No	Penile pain, pan management	No	No Lost job
Libido on Lupron	Slight decline	Lost to followup	N/A	Normal
Erections on Lupron	Present	Lost to followup	N/A	Present

P33. Table 3. Insurance coverage

Patient	1	2	3	4
Phenylephrine self-injections	No	No	No	No
Daily Cialis	No	Yes	No	No
Lupron	Yes	Yes	N/A	No