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382 INTERMITTENT SELF CATHETERIZATION FOR URETHRAL STRICTURES IS ASSOCIATED WITH POOR QUALITY OF LIFE

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METHODS: Institutional Review Board (IRB) approval was obtained from both institutions: Devine-Jordan Center for Reconstructive Surgery and Pelvic Health, a division of Urology of Virginia, Urology Department, Eastern Virginia Medical School (EVMS), Norfolk Virginia, USA, and Urology Section, Centro de Educaci3n Medica e Investigaciones Cl3nicas "Dr. Norberto Quirno" (CEMIC), Buenos Aires Argentina. The proposed is a retrospective observational study of all adult patients who underwent urethral reconstruction to a perineal urethrostomy with the use of a single buccal mucosal graft between January 1, 1999 and December 31, 2010, and had at least one post-operative follow-up visit. All surgeries were performed by 3 surgeons, which applied the same technique (GHJ, KAM, and RV).

RESULTS: A total of 57 patients were included in this series. Patients' age range from 27 to 81 years (mean 59). Stricture length ranged from 4 to 20 cm (mean 15.22). Etiologies included unknown in 27, Hypospadias in 9, Lichen Sclerosus in 8, iatrogenic in 7, Fournier in 3, urethral cancer in 2 and penile cancer in 1. Mean follow up was 42 months (R 6.43 to 119). Overall success was 91%. Five patients had recurrence, of which two had a successful redo urethrostomy, two are being managed with periodic dilations and one patient died of another cause.

CONCLUSIONS: BMG perineal urethrostomy is a valid alternative for complex urethral strictures due to Lichen Sclerosus, previous failed reconstructions or hypospadias cripples. Midterm results are encouraging for this novel technique.

Source of Funding: None

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STRICTURE LENGTH AND ETIOLOGY ARE PRE-OPERATIVE INDEPENDENT PREDICTORS OF STRICTURE RECURRENCE AFTER URETHROPLASTY: A MULTIVARIATE ANALYSIS OF 604 URETHROPLASTIES

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INTRODUCTION AND OBJECTIVES: Urethroplasty is the gold standard therapy for urethral stricture, but failures do occur. The purpose of this study is to evaluate pre-operative factors prior to urethroplasty that may predict stricture recurrence.

METHODS: A retrospective review of all urethroplasties performed at an academic tertiary referral centre from August 2003 to July 2012. Preoperative data was collected including age, stricture length, location and etiology, co-morbidities, and previous procedures. All urethroplasties were performed by a single surgeon and were assessed within one month post-operatively, had cystoscopy at 6 months and then followed-up as required. Failure was defined as a recurrent stricture <16 Fr on cystoscopic assessment. Multivariate analysis was calculated by Cox regression in SPSS 11 software.

RESULTS: 651 urethroplasties were performed during the study period with complete information and follow-up in 604 (93%). Mean patient age is 44.5 years with an average stricture length of 4.8 cm. 123 (20.4%) had a previous reconstruction. Stricture etiology was trauma in 155 (25.7%), hypospadias in 64 (10.6%), lichen sclerosus in 58 (9.6%), iatrogenic in 56 (9.3%), radiation (brachy/XRT) in 23 (3.8%), inflammatory in 17 (2.8%), and idiopathic in 231 (38.2%). Overall urethral patency is 90.7% (548/604) with failures occurring between 2 weeks and 77 months post operatively. Of the failures, the average time to recurrence is 11.7 months with the majority (42/56; 75%) identified within 6 months. Multivariate regression identifies lichen sclerosus, iatrogenic, and inflammatory etiologies to be independently associated with stricture recurrence with hazard ratios (95% CI) of 5.9 (2.1-16.5; p=0.001), 3.4 (1.2-10; p=0.02), and 7.3 (2.3-23.7; p=0.001), respectively. Strictures \geq 5 cm recurred significantly more often (13.8% vs. 5.9%) with a HR 2.3 (1.2-4.5; p=0.01). Co-morbidities, smoking, previous urethroplasty, stricture location and an age \geq 50 were not associated with stricture recurrence.

CONCLUSIONS: Urethroplasty is an excellent option for urethral stricture disease with urethral patency rates approaching 91%.

While recurrences may happen over 6 years after surgery, the majority (75%) can be identified within the first six months. Long segment strictures (\geq 5 cm) as well as lichen sclerosus, inflammatory and iatrogenic etiologies are associated with increased risk of recurrence.

Source of Funding: None

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ALTERNATIVE ORAL MUCOSA GRAFTS

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INTRODUCTION AND OBJECTIVES: Oral mucosa grafts are a proven source of extragenital tissue for urethroplasty, with buccal mucosa being the predominate choice. Labial and lingual mucosa are less commonly used, with concern regarding cosmetic and functional complications. We have evaluated these alternatives, presenting a retrospective review of lingual and labial mucosa grafts with attention to technique measuring outcome in regard to stricture recurrence and donor site complications.

METHODS: 59 patients (56 men, 3 women) underwent urethroplasty between 2000 and 2012, mean age of 50 (18 \pm 77), with a total of 62 grafts harvested. 36 of these procedures were a single stage dorsal onlay urethroplasty with 26 being repaired in a staged fashion for distal urethral plate replacement for either balanitis xerotica obliterans (16), hypospadias (8), or epispadias (2). Labial grafts were harvested from the lower lip excluding the frenulum, and at least 1 cm from the vermilion border. Hydrodissection was performed using 1/4% marcaine with epinephrine. Care was taken to maintain the plane of dissection just beneath the mucosa and avoid the labial fat and mental nerve. Lingual grafts were harvested lateral to the frenulum excluding the lateral border. While labial donor sites were left open to re-epithelialize secondarily, lingual donor sites were closed primarily. 48 labial grafts were harvested with dimensions ranging from widths of 1.5 to 2 cm, with lengths ranging from 4 to 12 cm, while 14 lingual grafts were harvested with dimensions ranging from widths of 1.5 to 2 cm, with lengths ranging from 3.5 to 7 cm.

RESULTS: 54/62 (87%) of these procedures were considered successful in regard to stricture recurrence as measured by AUA symptom score and complex uroflowmetry at mean last follow up of 20 months (6 to 99). For those 8 patients who developed recurrent symptoms or reduction in flow, 5 were found to have stricture recurrence involving the grafted portion of the repair (labial). No patient reported long-term morbidity involving the graft harvest site (e.g. numbness, alteration in phonation, change in external cosmetic appearance).

CONCLUSIONS: Labial and lingual oral mucosa grafts are suitable alternatives to buccal mucosa grafts resulting in similar outcomes with minimal morbidity. Procurement of labial or lingual tissue requires careful dissection with avoidance of underlying structures given the potential for cosmetic and functional sequelae. Use of these tissues allows for repair of longer strictures utilizing additional oral mucosa, or for patients in which the buccal mucosa has already been harvested, or as the initial graft site.

Source of Funding: None

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INTERMITTENT SELF CATHETERIZATION FOR URETHRAL STRICTURES IS ASSOCIATED WITH POOR QUALITY OF LIFE

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INTRODUCTION AND OBJECTIVES: Intermittent self catheterization (ISC) has been popularized as a conservative form of managing urethral stricture disease for several decades. ISC is perceived as a relatively simple and painless procedure that may prevent the complications of bladder outlet obstruction while obviating the need for

indwelling catheters or reconstructive surgery. We report patient perceptions of ISC among men with urethral strictures who regularly self-catheterized.

METHODS: We constructed a visual analog questionnaire to evaluate performance of ISC by men referred for management of urethral strictures at four institutions (figure). Items assessed included the duration, frequency, difficulty and pain associated with ISC. Impact on quality of life was assessed through the interference of ISC with daily activity. The questionnaire was distributed to stricture patients regularly performing ISC. The primary outcome was the patient's perceived quality of life (QOL). Multivariate analysis was performed to assess factors that affected this outcome.

RESULTS: All 65 patient questionnaires obtained were analyzed. Median age was 67.3 y (range, 15.5 to 94.0) with median length of catheterization 2.5 years (range, 0.04-20). The median number of times patients catheterized each day was 1 time (range, 0-7.5). The majority of patients (38/65, 62.3%) rated their displeasure with their catheterizing regimen in the severe range (score 7-10), and 19 (31.1%) and 12 (19.7%) of the patients also rated their difficulty and pain respectively with catheterization as a 7 or worse. Statistically significant covariates associated with poor QOL were higher level of pain, younger age and difficulty catheterizing. However, on multivariate analysis only difficulty catheterizing ($P \leq 0.01$) and age ($P=0.05$) were statistically significant predictors of QOL.

CONCLUSIONS: Long-term ISC for management of urethral strictures is associated with a poor quality of life in young men.

PATIENT CATHETERIZATION IMPACT QUESTIONNAIRE	
Name:	_____
MRN:	_____
Date:	_____
1. How long have you been catheterizing? _____	
2. During the past four weeks, how many times per day did you catheterize? _____	
3. During the past four weeks, how difficult was it to perform catheterization? (Please draw an "X" on the line corresponding to your response).	
Very easy	Extremely difficult
4. During the past four weeks, how did the need to catheterize interfere with your work or other regular daily activities? (Please circle one of the following responses)	
a. Not at all	
b. A little bit	
c. Moderately	
d. Quite a bit	
e. Extremely	
5. During the past 4 weeks, how painful was it to perform catheterization? (Please draw an "X" on the line corresponding to your response).	
No pain	Extreme pain
6. If you were to spend the rest of your life with your current catheterization regimen, how would you feel about that? (Please draw an "X" on the line corresponding to your response).	
Pleased	Terrible

Source of Funding: None

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FUNNELLING OF THE BLADDER NECK AFTER RADICAL RETROPUBIC PROSTATECTOMY - RADIOLOGICAL APPEARANCE AND CLINICAL RELEVANCE

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INTRODUCTION AND OBJECTIVES: Characteristic anatomical changes occur following radical retropubic prostatectomy (RRP) for prostate cancer. Consequently identification of individual landmarks namely the vesico-urethral anastomosis (VUA), bladder base above and membranous urethra below may be more difficult on routine imaging. As a result, in patients with post-RRP bladder neck contractures (BNC) localising the exact site of the stricture may not be possible in many cases. It has become apparent to us that one such anatomical change responsible for this can be identified radiologically as 'funneling' of the bladder neck. We define MRI and urethrographic evidence to support this.

METHODS: 106 post-RRP pelvic MRIs were reviewed. These were T2 weighted images in the coronal plane. Surgery had been performed between 1994 and 2011 via an open or laparoscopic/robotic approach. A further 19 pre-operative ascending/descending urethro-

grams in patients with proven post-prostatectomy BNC who eventually went on to have open surgical correction (redo-VUA) were also reviewed.

RESULTS: In 81 of 106 MRIs reviewed (76.4%), the bladder base was not flat but was noted to have a tapered, 'funnel-shaped' appearance, seen to lie within the levator sling. This is irrespective of whether an open or minimally invasive approach was adopted. Of the 19 patients having confirmed BNC, this typical funnelled appearance was noted in 16 of the 19 urethrograms (84.2%). 7 of these patients also had an MRI and in all, funneling of the bladder neck was present. During most cases of revision surgery for BNC, significant scarring and fibrosis is present and this extends more proximally than the anastomosis itself. The dissection needs to be taken further backwards to identify a healthy 'bladder neck', often necessitating crural separation and inferior wedge pubectomy to allow access and a tension-free anastomosis. This tends to make surgery more complicated than a routine bulbo-prostatic anastomotic urethroplasty following pelvic fracture and we believe that this 'funneling' is responsible.

CONCLUSIONS: Funneling of the bladder neck is a clearly identifiable radiologic finding on MRI and fluoroscopy after RRP. This makes it difficult to identify anatomical landmarks and the exact location of strictures using routine imaging techniques when planning surgery for BNC. This funnelled area gets caught up in the scarring and fibrosis around the anastomosis and probably accounts for the more extensive dissection necessary to reach healthy bladder neck tissue during reconstruction in these cases.

Source of Funding: None

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UROLOGIC PROBLEMS IN SPINA BIFIDA PATIENTS TRANSITIONING TO ADULT CARE

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INTRODUCTION AND OBJECTIVES: Management of urologic problems in spina bifida (SB) patients is critical to maintaining quality of life and preventing complications. We have implemented an adult multidisciplinary SB clinic at our institutions (Universities of Utah and Minnesota) to aid in SB patients transitioning to adult care. We hypothesized that there was poor compliance and active problems requiring operative management in these patients.

METHODS: We retrospectively reviewed patients seen at adult SB clinics at the Universities of Utah and Minnesota over 1 year from April 2011 - April 2012. We identified bladder and bowel management, urologic problems, time from last urologic care, interventions, screening needs, and compliance.

RESULTS: We found 65 patients, with a mean age of 30 years. The mean time since last urologic evaluation was 22 months (range 1 month to 10 years). Bladder management included 48 (74%) performing intermittent catheterization, 7 (11%) voiding by valsalva, and 3 (5%) with an indwelling catheter. Bowel management in 52 patients, included, 23 (35%) with spontaneous defecation, 7 (11%) using a Malone antegrade continent enema 11 (17%) used laxatives, 2 (3%) had colostomy, and 6 (9%) used digital stimulation. Urologic problems included 25 (38%) with recurrent urinary tract infections, 34 (52%) with urinary incontinence, 12 (18%) with fecal incontinence/constipation, 11 (17%) with difficulty catheterizing/stomal stenosis, 9 (14%) with urolithiasis, 1 (1.5%) pelvic mass, and 2 (3%) renal masses. 29 patients (45%) required an operative intervention. These included 7 botulinum toxin injections, 10 stone surgeries, 5 anti-incontinence surgeries, and 7 reconstructive bladder surgeries. 48 (74%) of patients were overdue at time of presentation for screening including cystoscopy, renal imaging, or urodynamics. With regards to compliance, 4 (6%) have failed to reschedule follow-up.