

Thursday 26 June 10.30–11.30

Poster Session 13: Surgery of LUT Dysfunction

Chairmen: P. Abrams and M. Lucas

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Who treats urethral strictures and how?

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INTRODUCTION

National Service Framework guidelines for urological pelvic cancers suggest that surgical outcomes in general are better for those treating more than 50 cases per year, and recommendations have been made to limit open pelvic cancer surgery to those achieving these numbers. We assessed the implications for open urethral surgery in the light of this recommendation.

METHODS

The full members of BAUS were circulated with a questionnaire about the treatment of

urethral strictures. The results from the respondents were compared with Hospital Episode Statistics data.

RESULTS

There are 600 visual internal urethrotomies (VIU) and 1943 urethral dilatations (UD) performed each year. All urologists leave an indwelling catheter, usually for 2–5 days after VIU, but none use it after UD unless there has been excessive bleeding. Most regularly use intermittent self-catheterization after VIU or UD. There are 596 urethroplasties performed each year; 35 urologists perform 545 anterior urethroplasties, of whom 12

perform > 5/year and three >20/year. Fifteen urologists perform a total of 51 posterior urethroplasties each year, of whom only two do >5/year and one >20/year. Three surgeons perform half the urethroplasties in the UK each year.

CONCLUSIONS

A population of 1 million will generate 40 UD, 12 VIU, 11 anterior urethroplasties and one posterior urethroplasty. To maintain proficiency in urethroplasty the UK probably needs six to eight two-man units treating at least 60 cases a year, one or two of whom would do all the posterior urethroplasties.

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Early experience with a xenograft pubovaginal sling

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INTRODUCTION

The pubovaginal (PV) sling is the standard method of treating stress urinary incontinence (SUI) in many institutions. In our experience the major contributor to early postoperative morbidity is pain related to the incision in the lower abdomen. We obviated the need for this incision by introducing an alternative to rectus fascia, the porcine collagen xenograft.

PATIENTS AND METHODS

From April 2001 to April 2002, 84 patients underwent PV sling surgery; 42 received rectus fascia slings (group 1) and 42

xenograft slings (group 2). All patients had urodynamically confirmed SUI. The immediate postoperative course of both groups was studied with particular reference to wound complications, timing of voiding trials and length of hospital stay, and the results compared. The patients were assessed at 6 weeks, 3 and 6 months after surgery, and all data were accrued prospectively.

RESULTS

Both groups were well-matched for urodynamic findings, age, duration of symptoms and history of previous genitourinary tract surgery. In group 2 the mean operative duration was significantly

shorter (23 vs 47 min), there were no wound complications, voiding trials began on the first day after surgery (vs 2 days for group 1) and the mean length of hospital stay was significantly shorter (2.9 vs 4.2 days). Continence rates for both groups were similar at the follow-up.

CONCLUSIONS

The early results from xenograft slings correlate well with those achieved using traditional rectus fascia. The procedure leads to less morbidity, facilitating early mobility, earlier voiding trials and more prompt discharge from hospital.

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Early complications using the transvaginal tape in the treatment of stress urinary incontinence

D. RIX and A.C. THORPE

*Department of Urology, Freeman Hospital, Newcastle upon Tyne, UK***OBJECTIVE**

To evaluate the complications during and after surgery in a cohort of women (operated by one surgeon) undergoing transvaginal tape (TVT) placement for urodynamic stress incontinence (USI).

PATIENTS AND METHODS

Eighty women (mean age 55 years) underwent TVT placement for USI between May 1999 and October 2002. All women had video-urodynamics (VCMG) before surgery; 48 (60%) had type I, 30 (39%) type IIa and two (2%) type III USI. Although 35 (44%) complained of irritative symptoms, only five (6%) were shown to be unstable on VCMG. Twenty-five women (31%) had undergone previous hysterectomy, 12 (15%)

colposuspension, 10 (13%) Macroplastique injections and eight (10%) an anterior vaginal repair.

RESULTS

The mean (range) duration of surgery was 26 (15–45) min, with 77 patients (96%) undergoing general anaesthesia. There were no deaths. Two (2.5%) patients had a serious complication, one an intraurethral sling erosion (treated endoscopically) and one a significant (10 × 15 cm) pelvic haematoma, treated conservatively. In 79 (98%) patients the blood loss was < 100 mL. Five (6%) bladder perforations occurred; one patient had previously had a colposuspension and four an abdominal hysterectomy. All patients were managed successfully with a suprapubic catheter for 24–96 h. Of all patients, 2%

developed a minor wound infection, 7% a UTI and 2% transient groin/leg pain. The mean duration of stay after surgery was 34 h; 16 (20%) patients developed voiding dysfunction requiring intermittent self-catheterization (ISC), but 12 ceased within 3 days and four (5%) remain on long-term ISC (all four had previously undergone colposuspension). At a mean follow-up of 26 months, 10 (12%) patients complained of bothersome irritative symptoms, all of whom were stable on VCMG before surgery; 70 (88%) patients were dry, and 10 (12%) had occasional leakage.

CONCLUSION

TVT for USI has a low intra- and early postoperative morbidity rate. It is a safe procedure involving a short hospital stay, and with a good short- to medium-term outcome.

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Comparison of SPARC™ with tension-free vaginal tape in treating stress urinary incontinence

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Polypropylene mesh tape for treatment of stress urinary incontinence (SUI) has increased in popularity since 1996. In a retrospective study the results were assessed from the SPARC sling (American Medical Systems, USA), and TVT procedures, performed by one surgeon in age-matched populations.

PATIENTS AND METHODS

In all, 146 patients had a SPARC placed and 164 a TVT (mean ages 60.5 and 61.6 years, respectively). The mean (range) follow-up was 6 (2–14) months. Of the SPARC patients 52 (36%) had concomitant repairs, 94 (64%) had SPARC alone and 90 (62%) underwent

urodynamics before surgery. Of the TVT patients, 69 (42%) had concomitant repairs, 95 (58%) had TVT alone and 129 (79%) had urodynamics.

RESULTS

In patients with a SPARC placed only, the blood loss was < 100 mL and the operative duration < 30 min; in 28 of 72 patients (39%) with UI before SPARC the UI improved or resolved by 6 months. Of 146 17 (12%) had persistent or recurrent SUI. De novo UI was reported in five of 74 (7%). Complications included two superficial vaginal wound dehiscences and three (2%) cases of urine retention requiring sling release/adjustment.

Before surgery, 77 of 164 (47%) of the TVT patients had UI, which improved/resolved in 14 (18%) after TVT. Nine of 164 (5.5%) had persistent or recurrent SUI. De novo UI was reported in 12 of 87 (14%). Complications included blood loss requiring transfusion (in two) and dyspareunia (in one) or urinary retention (2.4%) requiring sling release/adjustment.

CONCLUSIONS

Early results for the minimally invasive SPARC sling compare favourably with those for the TVT. There were fewer major complications and a greater improvement in urge incontinence after SPARC than TVT.

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The rise and demise of the Vesica™ procedure: lessons to be learned about bladder neck suspension

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*Rotherham General Hospitals NHS Trust, Yorks, UK***INTRODUCTION**

The treatment of stress urinary incontinence (SUI) has had many procedures described with the aim of restoring the urethra to a well-supported position. The reference standard is considered to be the Burch colposuspension, but emphasis on minimally invasive procedures and short inpatient stays prompted the development of new techniques, one of which was the Vesica™ (Boston Scientific, USA) percutaneous bladder neck suspension (PBNS). Initially it was hailed as a great success but few long-term results have been reported.

PATIENTS AND METHODS

A total of 41 women with urodynamically confirmed SUI underwent Vesica PBNS between 1994 and 1997. From bone anchors

drilled into both pubic tubercles a polypropylene suture was passed retropubically and a Z-suture placed to include the anterior vaginal wall and endopelvic fascia on either side of the bladder neck and urethra. The polypropylene suture was then tied to the bone anchor over a spacer to achieve correct tension.

RESULTS

Patients were assessed at 6 and 12 months and 5 years. The initial results were excellent, with 95% of women reporting complete dryness at 6 months. However, 20% developed wound infections secondary to haematomas in the suprapubic incisions, and 10% required a period of intermittent self-catheterization because of incomplete bladder emptying after surgery. By 12 months

only half the women remained dry, although most only reported occasional leakage. At 5 years, 85% had recurrence of SUI and half of this group had symptoms severe enough to be offered a further surgical procedure. Four patients developed significant irritative symptoms, caused by erosion of a Vesica suture into the bladder, and required surgical removal.

CONCLUSION

Initial results from this minimally invasive procedure were excellent and despite the lack of long-term data, the technique very quickly came into widespread use. 'Wonderful' new minimally invasive procedures for SUI are still gaining popularity, despite scant long-term data. Lessons must be learnt from the Vesica experience.

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Stomal complications of ileal conduit diversion

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*Institute of Urology, UCL, London, UK***INTRODUCTION**

Ileal conduit is held to be the safest and simplest form of urinary diversion. A 2–10% parastomal hernia and a 5–30% revision rate have been reported after colostomy and ileostomy. There are few reports on these problems after ileal conduit diversion. We reviewed the stomal complications of patients having ileal conduit diversion in our unit.

PATIENTS AND METHODS

The notes of 69 patients (22 men, mean age 60.7 years, range 33–82, and 47 females, mean age 48.2 years, range 4–79) having an

ileal conduit diversion for a mean (range) of 90.3 (11–504) months previously were reviewed. Information was collected on patient demographics, indication for ileal conduit and long-term complications, particularly parastomal and incisional hernia, stomal retraction, stenosis or prolapse and the development of a redundant loop. The mean (range) follow-up was 58.7 (1–434) months.

RESULTS

The main indications for a conduit were; complicated incontinence in 31 (45%), cancer in 27 (39%) and interstitial cystitis in six (9%).

Parastomal hernia developed in 12 (17%), incisional hernia in three (4%), stomal retraction in five (7%), stomal stenosis in two (3%) and redundant loop in three (4%). Twenty-two patients (32%) required further surgery for their stomal problems, with 13 (40%) requiring more than one re-operation.

CONCLUSION

The ileal conduit is associated with a 17% stomal complication rate and a 4% incisional hernia rate. The need for re-operation is high, with 32% requiring further surgery, of whom 40% require more than one re-operation.

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Is the modified ureterosigmoidostomy (Mainz II) a viable, modern option for continent urinary diversion?

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Bladder reconstruction is more popular than the modified ureterosigmoidostomy (Mainz II), but the former has a high morbidity. Patients with conventional ureterosigmoidostomy are satisfied in the long-term but have problems related to high storage pressure (renal infection, incontinence). We assessed patients with a Mainz II reconstruction, known to lower this pressure, to assess its longer term role in urinary diversion.

PATIENTS AND METHODS

Thirty-one patients with a Mainz II were followed prospectively, assessing patients

with >4 years of follow-up (mean 6.1 years, range 4–9; 17). They were divided into two groups: group A had undergone radical cystectomy for carcinoma (12) and in group B conventional ureterosigmoidostomy for bladder exstrophy had failed (five). Patient demographics, perioperative morbidity and clinical outcomes were documented.

RESULTS

In group A, 10 patients were continent and two had daytime incontinence. Two patients died from metastatic disease without the diversion compromising their terminal care. In group B, four patients were incontinent (nocturnal three, total one), with two requiring colonic conduit conversion. One

patient had one episode of pyelonephritis. Seven patients required bicarbonate for hyperchloraemic metabolic acidosis (HCA). No anastomotic neoplasms were found.

CONCLUSIONS

The Mainz II has low morbidity, with urinary infections being rare and continence rates high. HCA is prominent but easy to treat. We found no anastomotic tumours, but the assumed cancer risk should be similar to conventional ureterosigmoidostomy, and therefore surveillance is essential. Careful selection for conversion from incontinent conventional ureterosigmoidostomy to Mainz II is important; some patients will remain incontinent.

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Caecocystoplasty for intractable interstitial cystitis – long-term results

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*Sandwell General Hospital, West Bromwich, UK***OBJECTIVE**

To evaluate the role of substitution caecocystoplasty in intractable interstitial cystitis refractory to conservative measures, by assessing the long-term follow-up results.

PATIENTS AND METHODS

Eleven patients underwent trigone-preserving orthotopic substitution caecocystoplasty for intractable interstitial cystitis. All patients had received conservative treatment for a mean of 3 years. They were followed for a mean of 9 years, with evaluation of symptoms,

biochemistry, ultrasonography and flexible cystoscopy.

RESULTS

All patients had symptomatic relief, with an increase in bladder capacity to normal. There was no mortality and morbidity was minimal. Two patients had to use intermittent self-catheterization because of high residual volumes. Two had a cystectomy after 4 and 6 years, respectively, for recurrent trigonal disease and urethrotrigonal hypersensitivity after intermittent self-catheterization. One patient developed advanced adenocarcinoma

in the caecal segment 7 years later. None had significant reflux or metabolic complications.

CONCLUSION

Trigone-preserving orthotopic substitution caecocystoplasty is efficient in relieving symptoms in intractable interstitial cystitis in the long-term, with low morbidity. It is much simpler than a cystectomy and orthotopic neobladder, and should be considered before cystectomy in such patients. However, it is not appropriate in patients with urethrotrigonal disease or hypersensitivity.

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A review of the long-term outcome for continence in cystoplasty patients

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*Institute of Urology, UCL, London, UK***INTRODUCTION**

In an earlier study we showed that the short-term outcome for continence after augmentation cystoplasty is excellent. The subsequent course is, at least partly, controlled by the underlying diagnosis. This review aims to see whether these short-term results are sustained.

PATIENTS AND METHODS

In a specialised cystoplasty follow-up clinic, 100 consecutive patients (44 male and 56 female, age range 17–73 years) with augmentation cystoplasty for > 10 years were

recruited. Their details were extracted from the notes. They were questioned about their continence and need for clean intermittent self-catheterization (CISC).

RESULTS

A third of the patients had spina bifida and about another third had exstrophy/epispadias as their underlying diagnosis, with the remaining third having a variety of other conditions. Most of these patients had undergone other procedures, e.g. bladder neck reconstruction or artificial urinary sphincter, either before, at the time of surgery or

subsequently. Ninety-four patients used CISC, 38 via a Mitrofanoff channel; in 66 this was their sole means of emptying their bladder. In all, 75 patients were completely dry, needing no pads at all, six had occasional accidents and nine were 'socially continent', giving a continence rate of 90%.

CONCLUSIONS

The long-term outcome of augmentation cystoplasty is excellent, with 90% of patients continent. There was a high rate of CISC, related to the percentage with neurological bladder dysfunction.

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Augmentation cystoplasty and neobladders: no evidence of malignancy after a 10-year follow-up

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*Institute of Urology, and *University College London Hospitals, London, UK***INTRODUCTION**

Augmentation cystoplasty and neobladder construction have been practised for > 15 years. Concerns about the long-term risk of malignancy have prompted annual check cystoscopy in some centres. Justification for this follow-up is tenuous, based on case reports and values extrapolated from the risk established in uretero-sigmoidostomies, a similar but not identical situation. We assessed the cystoscopic and microscopic evidence of malignancy in a prospective study.

PATIENTS AND METHOD

As part of their routine follow-up, flexible or rigid cystoscopy was used in 80 patients who

had either augmented or neobladders for > 10 years. Ethical committee approval was obtained for biopsy and 39 patients gave consent. Biopsies were taken from the intestinal segment, anastomotic line and native bladder of augmented bladders (according to cystoscopic definition), and a random biopsy from the neobladders. The specimens were assessed for tissue type and reactive, premalignant and malignant changes.

RESULTS

Eighty patients (35 male, 45 female, aged 17–73 years) with a follow-up of ≥ 10 years were examined. There was no cystoscopic evidence of malignancy. In 39 patients no microscopic features of pre-invasive or invasive carcinoma

were noted in either urothelium (27 biopsies) or intestinal mucosa (38 biopsies). Chronic or mixed inflammation was present in 25 biopsies and atrophy was identified in 13 small intestinal biopsies.

CONCLUSION

There is no current evidence of malignancy or premalignancy in augmented or neobladders with a minimum 10-year follow-up. The presence of chronic inflammation and atrophy in some cases prompts a longer follow-up on a larger series.