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CONTINENCE, SATISFACTION AND REPEAT PROCEDURES AFTER URETHROLYSIS

Hypothesis / aims of study

To determine the incidence of stress incontinence and subsequent anti-incontinence procedures after urethrolysis. We also investigated perception of overactive bladder symptoms and subjective improvement in incontinence symptoms.

Study design, materials and methods

This study was a case series of all patients who underwent urethrolysis between January 2000 and October 2008 at a tertiary care center after a previous anti-incontinence procedure. Women were excluded if they had a concomitant anti-incontinence procedure at the time of urethrolysis. Outcomes were based on responses to a standardized mailed questionnaire based on their symptoms over the preceding four weeks, as well as review of the medical records. Primary outcomes were incidence of recurrent incontinence and time to subsequent anti-incontinence procedure after urethrolysis. Recurrent incontinence was defined as subsequent anti-incontinence procedure or a score >0 on the International Consultation on Incontinence Questionnaire (ICIQ) [1]. Time to event methodology (Kaplan-Meier method, Cox proportional hazards models) was utilized to evaluate the time to subsequent anti-incontinence procedure after urethrolysis. For patients with the event of interest (subsequent anti-incontinence procedure), the time interval was calculated from the date of the urethrolysis to the date of their first anti-incontinence procedure following their urethrolysis. For all other patients, their time interval was censored at their date of their last follow-up. Cox models were fit to assess the association between patient factors (age, body mass index (BMI), sling type, smoking status, prior pelvic surgery, concomitant pelvic floor repair at urethrolysis, and approach to urethrolysis) and time to subsequent anti-incontinence procedure after urethrolysis. The strength of each association was summarized by calculating the hazard ratio (HR) and 95% confidence interval (CI). All calculated p values were two-sided and considered statistically significant if $p < 0.05$.

Other outcomes were overactive bladder symptom severity and subjective global improvement. Overactive bladder symptoms were assessed using the modified overactive bladder symptom score (OABSS) [2] scored from 0 to 24 with 24 representing the most severe overactive bladder symptoms. To evaluate global improvement in incontinence, those who answered the question “Compared to before your first incontinence surgery to help keep you from leaking urine, how is your urinary condition now?” as either “A great deal better” or “Much better” were considered improved. Urinary incontinence bother was assessed by a 10 point Likert scale with 0 being no bother, 10 being a great deal of bother.

Results

A total of 235 patients undergoing urethrolysis during the study period were identified. Among these 235 patients, 131 patients responded to the questionnaire. The mean age of women at the time of their urethrolysis was 58.6 years (standard deviation (SD) 12.7). The questionnaire was completed at a mean (SD) of 4.0 (2.3) years following the urethrolysis.

Of the 131 patients, 32 (24.4%) patients had subsequent anti-incontinence procedures and 84 of the remaining 95 patients had an ICIQ score >0, yielding a recurrent incontinence rate of 91.3% (116 of the 127 with available information). Among the 32 patients with a repeat anti-incontinence procedure, the median time to the procedure was 5 months following urethrolysis. The cumulative incidence of a repeat anti-incontinence procedure was 19.0% and 24.9%, respectively, at 1 and 5 years following urethrolysis. Table 1 summarizes the factors evaluated for an association with time to subsequent anti-incontinence procedure. Although none of the factors attained statistical significance, there was a tendency for patients with a prior pelvic surgery to be more likely to have a subsequent anti-incontinence procedure compared to those without a prior pelvic surgery (HR=1.99, 95% CI 0.90- 4.40, p=0.09).
The mean score on the OABSS was 12.8 (standard deviation (SD) 5.3) and 12.6 (SD 5.1), based on all patients and the subset without subsequent anti-incontinence procedures, respectively. Among the 131 women, 27 (20.6%) reported taking overactive bladder medications at the time of the survey. Of the 99 patients without subsequent anti-incontinence procedures, 44 women (44.44%) reported overall improvement in incontinence symptoms since before their initial surgery. Nearly half of the 131 women (60, 45.8%) reported they were either completely or somewhat satisfied overall with their incontinence procedures. Bother scores were >3 for 57 (43.5%) of the 131 participants.

Table 1. Factors evaluated for an association with time to subsequent anti-incontinence procedure

Characteristic	HR (95% CI)	p value
Age (10 year increments)	1.10 (0.82, 1.46)	0.54
BMI (5 kg/m^2 increments)	0.94 (0.68, 1.29)	0.68
Sling type		
Traditional retropubic	1.00 (reference)	-
Midurethral sling	1.37 (0.47, 4.04)	0.57
Bladder neck	0.35 (0.08, 1.55)	0.17
Smoking history	0.93 (0.44, 1.99)	0.85
Prior pelvic surgery	1.99 (0.90, 4.40)	0.09

Concomitant pelvic floor repair	0.66 (0.16, 2.77)	0.57
Urethrolysis approach		
Transvaginal	1.00 (reference)	-
Retropubic	1.21 (0.36, 4.03)	0.76

Interpretation of results

Patients undergoing urethrolysis were found to have a high incidence of recurrent incontinence symptoms based on the ICIQ. Nearly half, however, found their incontinence symptoms improved since their initial anti-incontinence procedure. Overall overactive bladder symptoms were moderate after urethrolysis based on the OABSS mean scores. Patients with a history of prior pelvic surgery may be at a higher risk of needing a repeat anti-incontinence procedure after urethrolysis.

Concluding message

Although recurrent incontinence is high and overactive bladder symptoms are moderately severe, many patients see overall improvement in their symptoms after urethrolysis and are satisfied with their surgical results. A repeat procedure for incontinence may be more likely after urethrolysis in patients who have had prior pelvic procedures.

References

1. Avery K, Donovan J, Peters TJ, Shaw C, Gotoh M, Abrams P. ICIQ: a brief and robust measure for evaluating the symptoms and impact of urinary incontinence. Neurourol Urodyn. 2004;23(4):322-30.
2. Blaivas JG, Panagopoulos G, Weiss JP, Somaroo C. Validation of the overactive bladder symptom score. J Urol. 2007 Aug;178(2):543-7.

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