

IRISK FACTORS OF DE NOVO OVERACTIVE BLADDER AND STRESS INCONTINENCE FOLLOWING SURGICAL REMOVAL OF URETHRAL DIVERTICULUM

Hypothesis / aims of study

Incidence of urinary incontinence after surgical removal of urethral diverticulum is reported in a wide range from 1.7% to 20.3%. A few reports about whether it is required or not to perform a preventive surgery in patients with high risk of stress incontinence following surgical removal of urethral diverticulum are present. In this study, we would like to find out risk factors related to de novo stress urinary incontinence and overactive bladder by retrospective review of past history, and findings of pelvic MR imaging of patients with urethral diverticulum.

Study design, materials and methods

We included 28 patients who underwent surgical removal of urethral diverticulum from November 2002 to December 2007. We obtained past medical history, physical examination, pelvic MR imaging to evaluate urethral diverticulum and it surrounding structures, and also evaluated change of voiding symptom by Bristol female LUTS and occurrence of stress incontinence and overactive bladder syndrome by the definition of ICS after surgery. We also analyzed risk factors of stress urinary incontinence and overactive bladder, including age, body mass index, number of delivery, size and location of diverticulum, and history of pelvic surgery.

Results

Patients age ranged from 20 to 59 years (mean age;38). Patients complained painful mass at anterior vaginal wall in 10 (26%), dysuria in 5 (19%), urgency in 4 (14%), frequency in 4 (14%), dyspareunia in 4 (14%), and no symptom in 1 who be incidentally detected urethral diverticulum. Four patients had overactive bladder before surgery. Five of 24 patients (20.8%) occurred de novo overactive bladder and 4 of 28 (14.3%) patients occurred de novo stress urinary incontinence after removal of urethral diverticulum. One patient of them had both stress incontinence and ovactive bladder.

Interpretation of results

Incidence of stress incontinence and overactive bladder was significantly higher in patients with urethral diverticulum over 3cm in diameter and located in proximal urethra on pelvic MR imaging. Among seven patients with diverticulum over 3cm, stress incontinence occurred in three (P=0.038) and overactive bladder in five patients (P=0.000). Among 11 patients with diverticulum located in proximal urethra, stress incontinence occurred in four (P=0.016) and overactive bladder in five patients (P=0.011). Six of eight patients with urgency or frequency improved their symptom and never complained dysuria after surgery. Age, body mass index, number of delivery, and history of pelvic surgery did not statistically related to occurrence of stress incontinence and overactive bladder.

Concluding message

Urethral diverticulum is a very rare and difficult to diagnose. The results of surgical removal of it are diverse, however in case of stress urinary incontinence following surgery, surgical correction of it is necessary. In this report, although diverticulum in the proximal urethra was high risk factor to develop stress urinary incontinence after surgery, it is hard to undergo combined preventive surgery of stress incontinence. In conclusion, size of urethral diverticulum over 3cm and location in proximal urethra are significant risk factors of postoperative development of stress urinary incontinence and overactive bladder

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<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require ethics committee approval because</i>	surgical outcomes
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes