BLADDER CALCULUS FORMATION AND RECURRENT STRESS INCONTINENCE SUBSEQUENT TO STAMEY’S OPERATION

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Introduction

Anti-incontinence treatments include anterior colporrhaphy, retropubic urethropexy, needle suspension, and the sling procedure. When a non-absorbable suture is introduced into the bladder during an anti-incontinence procedure, there are three possible outcomes: no by-product formation, calculus formation, and vesicovaginal fistula formation [1]. We present a case of bladder calculus formation and recurrent urinary stress incontinence following Stamey’s operation. Tension-free vaginal tape (TVT) was used to treat recurrent urinary incontinence in this case.

Case Report

A 59-year-old woman underwent Stamey’s operation (needle suspension of the bladder neck) for stress urinary incontinence, but there was no significant postoperative improvement. Ten years later, a bladder calculus and a non-absorbable suture stitch were found incidentally during cystoscopy prior to surgical tension-free vaginal taping. The calculus and the suture stitch were removed during the procedure. The patient’s urinary incontinence improved significantly and she had no further events after discharge.

SUMMARY

Objective: We present a case of bladder calculus formation and recurrent urinary stress incontinence following Stamey’s operation.

Case Report: A 59-year-old woman had stress urinary incontinence and underwent Stamey’s operation (needle suspension of the bladder neck). However, there was no significant postoperative improvement. Ten years later, a bladder calculus and a non-absorbable suture stitch were found incidentally during cystoscopy prior to surgical tension-free vaginal taping. The calculus and the suture stitch were removed during the procedure. The patient’s urinary incontinence improved significantly and she had no further events after discharge.

Conclusion: The present report demonstrates that recurrent urinary stress incontinence may be associated with injury to the lower urinary tract during anti-incontinence surgery. [Taiwanese J Obstet Gynecol 2005;44(3): 288–290]

Key Words: calculus, recurrence, Stamey’s operation, urinary stress incontinence

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incontinence improved significantly and she had no further events after discharge.

**Discussion**

The major operations for stress incontinence can be classified into seven categories, which offer the surgeon an enormous array of potential procedures. Stamey’s operation is a procedure that provides suture fixation using Dacron bolsters at the level of the bladder neck [1]. Needle suspension offers many advantages over open retropubic bladder neck surgery. It is a simple procedure (even in obese patients) with low morbidity and short operative time (< 30 minutes). However, disadvantages of this surgery include a high recurrence rate, difficult adjustment of the tension of the sutures, trauma to the retropubic area, urinary tract injury, and postoperative discomfort. Overall, needle suspension has a much lower success rate than open retropubic suspension [2].

Non-absorbable sutures are used to provide long-term support for the bladder neck and anterior vaginal wall. They improve the long-term success rates of urethral suspension for stress incontinence, and are recommended as part of the surgical treatment of stress incontinence and vaginal prolapse. The rate of urinary tract injury during needle suspension surgery varies from 2.6% to 3.3% [3,4]. When non-absorbable suture material passes into the bladder lumen intraoperatively, there are three possible outcomes. First, the suture epithelializes, causing no symptoms and remaining undetected. Second, it may act either as a nidus for calculus formation or cause a chronic inflammatory reaction in the wall of the bladder, resulting in pelvic pain, urinary tract infection, and urinary frequency and urgency. Third, the placement of permanent sutures in the bladder can lead to vesicovaginal fistula.

Damage to the lower urinary tract can go unrecognized in complex urogynecologic surgery. The suture line can act as a foreign body and a nidus inside the bladder, giving rise to calculus formation. Intraoperative surveillance cystoscopy may prevent further lower urinary tract injury during anti-incontinence surgery [5] and should be considered as part of similar procedures to prevent delayed morbidity associated
with increasing incidences of unrecognized injury [6]. Sonography can also be a useful diagnostic tool for the detection of a suspected foreign body inside the bladder [7].

The vaginal wall sling operation is not recommended for the treatment of recurrent stress incontinence after traditional surgery [8]. TVT is a relatively new surgical procedure that was introduced into clinical practice in 1994–5 for the treatment of recurrent urinary incontinence. The procedure differs significantly from conventional sling plasties. In a prospective long-term follow-up study of 34 female patients with recurrent stress urinary incontinence who had undergone TVT surgery after the failure of previous traditional surgical procedures, 82% of patients were completely cured and 9% had significant improvement, while treatment failed in 9% [9].

The present report demonstrates that recurrent urinary stress incontinence may be associated with injury to the lower urinary tract during previous anti-incontinence surgery. The unrecognized bladder injury in this case occurred 10 years before this presentation and no symptoms except recurrent incontinence were noticed by the patient. The suture line acted as a foreign body and a nidus inside the bladder, which resulted in calculus formation. Pre- and intraoperative surveillance cystoscopy should be considered as part of all anti-incontinence procedures [10]. It is important not to damage the lower urinary tract during anti-incontinence surgery, to prevent further complications. Urinary incontinence, urinary analysis, urodynamic study, and preoperative cystoscopy may be considered for routine follow-up. Sonography is another useful diagnostic tool for the detection of a suspected foreign body inside the bladder [7]. Urinary analysis, sonography, and preoperative cystoscopic examination of the bladder may assist the clinician, provide clues to the underlying causes of recurrent urinary stress incontinence, and improve the outcome of future anti-incontinence surgery such as TVT.

References