

CLINICAL MANIFESTATIONS IN SURGICAL PATIENTS WITH SEVERE UTEROVAGINAL PROLAPSE AND OCCULT URINARY INCONTINENCE

Hypothesis / aims of study

The purpose of the current study was twofold: to assess the clinical, urodynamic and cystoscopic findings of severe pelvic organ prolapse and to demonstrate the effectiveness of tension-free vaginal tape (TVT) among women with severe pelvic organ prolapse and coexistent occult stress urinary incontinence (SUI).

Study design, materials and methods

Between November 2000 and October 2002, the patients with International Continence Society staging system stage III or IV severe pelvic organ prolapse and without symptoms of SUI were recruited, while those that were symptomatic were excluded. A total of 80 patients entered into this prospective study, which was approved by ethical committee. All patients underwent meticulous urogynecological evaluations, including a detailed history, urogynecological questionnaire, micturition diary, 1-hour pad test, urinalysis or urine culture, pelvic examination, urodynamic studies and urethrocytoscopy. The urodynamic studies were done in the sitting position with reduction of the prolapse with a properly fitting vaginal ring pessary.

The patients were divided into two groups. In group 1, 32 patients had positive pessary tests and underwent vaginal hysterectomy, anterior and posterior repair and TVT. In group 2, 48 (17 had positive pessary tests) patients underwent vaginal hysterectomy and anterior and posterior repair alone. Postoperative follow-up examinations were done by the same surgeon through out the whole period, at one month, 3 to 6 months and one year after surgery. All Patients were followed postoperatively for a median of 20 months (range 12-40). Comparison in terms of surgical outcome and clinical manifestations was made between these two groups of patients after operation.

Results

The most common preoperative clinical symptoms were voiding irritation and a bulge or protrusion in the vaginal area followed by other urinary problems, prolapse symptoms and defecation difficulty. Upon urodynamic testing, 29 patients had no detectable abnormality, whereas the remaining 51 had abnormal urodynamic findings that could cause urinary incontinence or urgency. After surgery, small proportion of patients had *de novo* idiopathic detrusor overactivity (7.5%), urinary tract infections (7.5%), mild recurrent prolapse (5%) and urinary retention (3.8%). Three patients later developed mild urine leakage, taking the subjective cure rate to 90.6%.

Interpretation of results

Of the 51 patients with abnormal urodynamic findings, 30 in group 1 and 17 in group 2 had only genuine stress incontinence, two in group 2 had only idiopathic detrusor overactivity, and two in group 1 had mixed urinary incontinence. Of the 49 patients with uterine prolapse and coexistent occult SUI, who had a positive pessary test, 32 underwent prophylactic TVT, while 17 did not. Eleven of the 17 (64.7%) patients with a positive pessary test who did not undergo concomitant TVT had urine leakage after vaginal hysterectomy and nine (52.9%) had urine leakage detected in urodynamic testing. Of the 32 patients with occult SUI that received prophylactic TVT, none had urodynamic evidence of SUI, during 3-6 month follow-up, resulting in 100% objective cure rate. Continuing follow-up, three patients later developed mild urine leakage, taking the subjective cure rate to 90.6%. None of the 31 patients with a negative pessary test had *de novo* stress or urge urinary incontinence postoperatively. Idiopathic detrusor overactivity developed in 16% of patients with occult SUI that received prophylactic TVT in contrast with 5.9% that did not. In order to find the risk factors causing postoperative detrusor overactivity, we assessed several preoperative variables. Our results showed a clear correlation of detrusor overactivity with grade of trabeculation in patients who underwent vaginal hysterectomy and concurrent TVT; while those who underwent vaginal hysterectomy alone did not exhibit any risk factor causing detrusor overactivity after surgery.

This means that if a woman has a more severe grade of bladder trabeculation, there is a higher likelihood that idiopathic detrusor overactivity will be induced after anti-incontinence surgery such as TVT.

Concluding message

In several previous studies, those asymptomatic women with severe pelvic organ prolapse may be at increased risk of manifesting SUI after the prolapse has been reduced with a vaginal pessary or speculum. (1) Nonetheless, the wisdom of performing concomitant incontinence procedures on all women with severe prolapse is controversial, regardless of the presence or absence of demonstrable incontinence.(2) We and others believe that this approach exposes many women to unnecessary morbidity.⁷ If women with a high-risk of occult SUI could be identified before surgery, then a prophylactic anti-incontinence procedure performed during prolapse repair might prevent the possible development of postoperative SUI. (3)

In conclusion, women with severe pelvic organ prolapse need a preoperative urodynamic evaluation to rule out coexistent SUI. Patients without occult SUI do not need prophylactic anti-incontinence surgery after prolapse repair. Continent patients with a positive stress test were considered at high risk of developing postoperative SUI during this medium-range follow-up study.

References

- 1.The mechanism of urinary incontinence in women with severe uterovaginal prolapse: results of barrier studies. *Obstet Gynecol* 1988; 72:291-5.
- 2.Urodynamic outcome after surgery for severe prolapse and potential stress incontinence. *Am J Obstet Gynecol* 2000; 182:1378-81.
- 3.Urodynamic evaluation of voiding in women with cystocele. *J Reprod Med* 1992; 37:162-6.