

ANALYSIS OF RISK FACTORS FOR FAILED TVT PROCEDURES

Aims of Study

Tension-free vaginal tape (TVT) is a new technique for the surgical treatment of stress urinary incontinence recently introduced into clinical practice. Encouraging results have been recently reported after 5 years of follow-up, with an objective/subjective cure rate of 85% [1]. The aim of the present study was to investigate whether there are any clinical or instrumental variables that may be associated with a greater risk for failure in women undergoing a TVT procedure for the treatment of stress urinary incontinence.

Methods

Between April 1998 and September 2001, three hundred twenty-five women with a urodynamic diagnosis of stress urinary incontinence underwent a TVT procedure. All subjects were evaluated with complete history, pelvic examination, including the assessment of urethral mobility and urodynamics. The latter included simple uroflowmetry, provocative cystometry, and urethral profilometry. The cough and Valsalva provocation tests were performed in supine and standing position, at bladder volume of 150 and 300 ml. The outcome of surgical treatment was estimated both subjectively and objectively. Objective cure was defined as no leakage of urine while coughing during postoperative cystometry with at least 300 ml of saline solution in the bladder. Follow-up visits were scheduled at 6, 12 months and every year thereafter. The Statistical Package for Social Sciences (SPSS Inc., Chicago, Illinois, USA) was used for analysis of data. For univariate analysis, continuous data were reported as means \pm standard deviation (SD) and tested for statistical significance using two-tailed t tests. Categorical variables were reported as ratios and analyzed using the χ^2 test or the Fisher exact test.

Results

The mean age \pm SD of the women considered was 57 ± 9 (range 32-81), 235 subjects were postmenopausal (72%). Three hundred one subjects were available for the analysis of surgical outcome, of whom 38 (13%) were not objectively cured by the procedure. Table 1. shows the characteristics of the women that were cured by the procedure compared with those that did not. The only parameters that were significantly associated with failure were a Q-tip test $< 30^\circ$ and history of a previous anti-incontinence procedure. Other factors such as age, weight, maximum urethral closure pressure, detrusor instability or type of anesthesia were not.

Conclusions

Among the numerous recognized risk factors for failed anti-incontinence surgery only urethral hypomobility and recurrent stress urinary incontinence were significantly associated with failure of the TVT procedure in our study. However in these complicated situations a cure rate of more than 70% has been observed. Thus, although the number of patients is limited, we can conclude that TVT can be recommended even in this kind of patient.

References

1. Nilsson CG, Kuuva N, Falconer C et al. Long-term results of the tension-free vaginal tape (TVT) procedure for surgical treatment of female stress urinary incontinence. *Int Urogynecol J* 2001 (Suppl 2):S5-S8

Table 1. Characteristics of women in relation to surgical outcome

	Success n=263 (%)	Failure n = 38 (%)	P
Age (y)	56.7 ± 9	56.8 ± 9	ns
BMI (kg/h²)	25.6 ± 3.4	25.3 ± 4	ns
Postmenopausal	191 (88)	26 (12)	ns*
MUCP (cm H₂O)			
≤ 20	33 (80)	8 (20)	ns
> 20	230 (88)	34 (12)	
Detrusor instability			
Yes	22 (85)	4 (15)	ns
No	239 (88)	34 (12)	
Q-tip test			
< 30°	19 (73)	7 (27)	.02
≥ 30°	244 (89)	31 (11)	
Cystocele			
≥ 2°	79 (90)	9 (10)	ns
≤ 1°	184 (86)	29 (14)	
Previous anti-incontinence surgery			
Yes	18 (72)	7 (28)	.01
No	245 (89)	31 (11)	
Anesthesia			
Local	69 (85)	12 (15)	ns
Peridural	194 (88)	26 (12)	
Associated reconstr. pelvic surgery			
Yes	85 (89)	10 (11)	ns
No	180 (87)	28 (14)	

* When compared to premenopausal women

