

VOIDING DYSFUNCTION AFTER TENSION-FREE VAGINAL TAPE (TVT) SLING INSERTION

Hypothesis / aims of study

Voiding dysfunction is a recognised complication of continence surgery and tension-free vaginal tape (TVT) sling is no exception. However, the duration to normal voiding was described in a number of ways in various reports on the technique. This lack of agreed definition makes it difficult to establish the incidence of voiding dysfunction after insertion or work out the best way to deal with the condition.

The aim of this study was to describe voiding dysfunction after the insertion of tension-free vaginal tape (TVT) sling for urodynamic stress incontinence. It looked at the incidence, duration as well as the management of the condition, so as to provide an insight into its pattern and how to deal with it.

Study design, materials and methods

The study was a retrospective one that included 95 cases who had tension-free vaginal tape (TVT) inserted for urodynamic stress incontinence between 2002 and 2005. Data about voiding dysfunction as well as other features were obtained from the notes. Outcome was based on subjective assessment at 6 weeks follow up appointment.

Results

A total of 22 (23.2%) patients had high residual urine upon removing their catheters. A comparison of background features and operative data between those who had high residual upon removing the catheter and those who did not is shown in table 1.

	No high residual (73)	High residual (22)	P value
Age	54.9 ± 13.9	66 ± 8.3	2 sample 2 test 0.00
Parity *	2 (2-3)	3 (2-3)	Mann Whitney 0.24
Medical problems	43 (58.9%)	13 (59.1%)	X ² 1.00
- cardio-pulmonary	25 (34.2%)	9 (40.9%)	X ² 0.75
- bone-joint	9 (12.3%)	3 (13.6%)	X ² 1.00
Previous hysterectomy	30 (41.1%)	7 (31.8%)	X ² 0.59
Previous prolapse surgery	13 (17.8%)	5 (38.5%)	X ² 0.84
Previous continence surgery	18 (24.7%)	5 (38.5%)	X ² 1.00
Mixed incontinence	4 (5.5%)	0 (0%)	Fisher's exact 0.57
Surgeon			
- Gynaecologist	62 (84.9%)	17 (87.3%)	X ² 0.61
- Urologist	11 (15.1%)	5 (22.7%)	
Anaesthesia			
- Spinal/epidural	65 (89%)	17 (87.3%)	X ² 0.29
- General	8 (11%)	5 (22.7%)	
Concomitant surgery	20 (21.1%)	7 (31.8%)	X ² 0.89
Bladder perforation	1 (1.4%)	0 (0%)	Fisher's exact 1.00
Subjective outcome at 6 weeks			
- Dry	54 (74%)	20 (91%)	Mann Whitney test 0.09
- Improved	5 (6.8%)	1 (4.5%)	
- No change	3 (4.1%)	0 (0%)	
- Overactive bladder symptoms	11 (15.1%)	1 (4.5%)	

*Median (inter-quantile range)

Table 1: A comparison of outcome at 6 weeks follow up between those who had high residual upon removing the catheter and those who did not.

Of the 22 patients who had high residual urine upon first removing the catheter, 7 (31.8%) had tape stretching under anaesthesia. A comparison between those who required tape stretching and those who did not is shown in table 2.

Feature	No tape stretching (15)	Tape stretching (7)	P value
Duration of high residual urine	5.5 ± 3.6	12.9 ± 7.9	2 sample t test 0.01
Age	58.2 ± 13.8	68.1 ± 7.2	2 sample t test 0.09

Parity	2.3 + 1.3	4.8 + 4.3	2 sample t test 0.06
Medical problems	8 (53.3%)	5 (71.4%)	Fisher's exact 0.64
- Cardio-pulmonary	5 (33.3%)	3 (42.9%)	Fisher's exact 1.00
- Bone-joint	2 (13.3%)	1 (14.3%)	Fisher's exact 1.00
Previous hysterectomy	5 (33.3%)	2 (28.6%)	Fisher's exact 1.00
Previous prolapse surgery	3 (20%)	2 (28.6%)	Fisher's exact 1.00
Previous continence surgery	3 (20%)	2 (28.6%)	Fisher's exact 1.00
Surgeon			
- Gynaecologist	13 (86.7%)	4 (57.1%)	Fisher's exact 0.27
- Urologist	2 (13.3%)	3 (42.9%)	
Anaesthesia			
- Spinal	12 (80%)	5 (71.4%)	Fisher's exact 1.00
- General	3 (20%)	2 (28.6%)	
Concomitant surgery	5 (33.3%)	2 (28.6%)	Fisher's exact 1.00
Outcome at 6 weeks follow up			
- Dry	13 (86.6%)	7 (100%)	Mann Whitney test 0.32
- Improved	1 (6.7%)	0 (0%)	
- No change	0 (0%)	0 (0%)	
- Overactive bladder symptoms	0 (0%)	0 (0%)	
- Overactive bladder symptoms	1 (6.7%)	0 (0%)	

Table 2: A comparison between those who required tape stretching and those who did not, amongst those who had high residual urine when their catheter was first removed.

Interpretation of results

Age was the only significant difference between those who have high residual upon having their catheter removed after tension-free vaginal tape sling (TVT) insertion and those who do not. The decision to go for tape stretching appears to be based on duration of having high residual only. The procedure does not seem to adversely affect the outcome of continence surgery.

Concluding message

More research is required to define and understand voiding dysfunction after tension-free vaginal tape (TVT) sling insertion so as to establish the best way to manage the condition.

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DISCLOSURES: NONE

HUMAN SUBJECTS: This study did not need ethical approval because Retrospective study based on data from patient notes but followed the Declaration of Helsinki Informed consent was not obtained from the patients.