

Assessing the location of the transobturator sling by Ultrasound 16 years after the procedure (#25902)



Warro A., Kurkijärvi K., Ala-Nissilä S., Laurikainen E.

Department of Obstetrics and Gynecology, Turku University Hospital and University of Turku, Turku Finland

Hypothesis / aims of study

The aim of this study was to examine the position of the transobturator sling 16 years postoperatively and assess its impact with outcome. Another aim was to compare the position of the sling and subjective cure with the results of the 3 months follow-up visit.

Study design, materials and methods

This is a cohort study of 54 consecutive patients who underwent the transobturator sling operation between 2006 and 2008 in our hospital. Study inclusion criteria included patients, who suffered from stress or mixed urinary incontinence and did not response to conservative treatment, a positive cough stress test (CST) and the post void residual volume (PVR) less than 100 ml. The pre- and postoperative data and the results of 3 months control visit were retrieved from the medical records.

The position of the sling was determined by vaginal and perineal ultrasound at rest and on Valsalva. Objective cure was defined as a negative CST. To evaluate the subjective outcome the validated and standardized questionnaires were completed. UISS and the DIS questionnaires, the Urogenital Distress Inventory -short form (6 items, UDI-6) and the Incontinence Impact Questionnaire -short form (7 items, IIQ-7) were used for a condition specific assessment. Subjective cure was defined as an answer of “never” or “slightly” to the UDI-6 question “Does urine leak when you are physically active, cough or sneeze?”

Results and interpretation

At the 16 years follow-up 23 (72 %) patients had negative CST. Two (6%) of the 32 patients were found to have vaginal tape erosions, which were asymptomatic. Surgical treatment was not required. There were not any retention problems postoperatively and there was no need to cut or remove the tape. The patient characteristics and status findings at the 16 years follow-up are presented in Table 1.

Age (years) (mean ± SD; range)	70 ± 9; 57–88
BMI (kg/m2) (mean ± SD; range)	27 ± 5; 19–39
Transobturator sling	
TOT (n, %)	29 (91)
TVT-O (n, %)	3 (9)
Hormonal status	
Menopausal, with HRT (n, %)	6 (19)
Menopausal, without HRT (n, %)	26 (81)
Local estrogen (n, %)	19 (59)
Smoking (n, %)	1 (3)
Tape erosions (n, %)	2 (6)
Tape asymmetry (n, %)	3 (9)
CST negative (n, %)	23 (72)
Residual urine volume ml (mean ± SD; range)	12 ± 17; 0–62

Table 1. Demographic data and status findings of patients (n = 32) 16 years after the transobturator tape operation

Tapes were visualized on ultrasound at the 3 months postoperative visit and at the 16 years follow-up visit. At the 3 months visit the mean distance from the bladder neck to to the proximal edge of the tape (BNTD) was 20.70 mm and from the external opening of the urethra and distal edge of the tape (EOUTD) was 14.91 mm. Tape-urethra distance (TUD) was not measured at 3 months visit. At the 16 years follow-up BNTD was 17.15 mm and EOUTD was 8.35 mm and TUD was 2.76 mm.

At the 3 months postoperative visit only 18 patients had completed the UDI-6 and 17 of them were subjectively cured. At the 16 years follow-up all 32 patients had completed the UDI-6 and 21 (69 %) patients were subjectively cured.

At the 16 years follow-up visit there were no significant difference between subjectively cured vs non cured women in BNTD, BNTD Valsalva, EOUTD, EOUTD Valsalva or TUD. We couldn’t seen significant difference between objectively cured vs non cured women in BNTD, BNTD Valsalva, EOUTD, EOUTD Valsalva or TUD. The ultrasound parameters of the relation of the tape and objectively and subjectively cured vs non cured women are presented in Table 2.

	SUBJECTIVE CURE			OBJECTIVE CURE		
	Cured (n=22)	Not cured (n=10)	p- value	Cured (n=23)	Not cured (n=9)	p- value
BNTD	17.38 ± 4.53	16.64 ± 3.91	0.658	16.95 ± 4.55	17.67 ± 3.74	0.677
BNTD valsalva	16.29 ± 5.13	14.32 ± 4.16	0.296	15.98 ± 5.05	14.90 ± 4.56	0.582
EOUTD	7.95 ± 3.85	9.21 ± 2.70	0.360	7.96 ± 3.63	9.33 ± 3.26	0.331
EOUTD valsalva	7.76 ± 3.57	7.78 ± 3.24	0.990	7.53 ± 3.41	8.37 ± 3.58	0.545
TUD	2.75 ± 1.48	2.79 ± 1.18	0.934	2.63 ± 1.30	3.09 ± 1.56	0.404

Table 2. Subjective cure, was defined as an answer of “never” or “slightly” to the UDI-6 question “Does urine leak when you are physically active, cough or sneeze?”

Objective cure was defined as a negative CST. Data are presented mean ± standard deviation except for the p- values. BNTD, bladder neck tape distance; EOUTD, distance from the external opening of the urethra and distal edge of the tape; TUD, tape urethral distance

Conclusions

At the 16 years follow-up the transobturator sling is still in a good position when assessed by ultrasound. There were no long-term side effects and most of the patients were still objectively and subjectively cured. When evaluating the results, it should be taken into account that the study population in the 16 years follow-up was quite small.