

COMPREHENSIVE ANALYSIS OF 1000 TENSION FREE VAGINAL TAPES: SINGLE INSTITUTIONAL EXPERIENCE

Hypothesis / aims of study

We compared complication rates associated with the use of retropubic tension-free vaginal tape (TVT) vs. transobturator tension-free vaginal tape (TVT-O) for the management of stress urinary incontinence (SUI)

Study design, materials and methods

A total of 1081 patients were treated with mid-urethral slings. Patients who suffered from recurrent or mixed urinary incontinence were excluded (Figure 1).

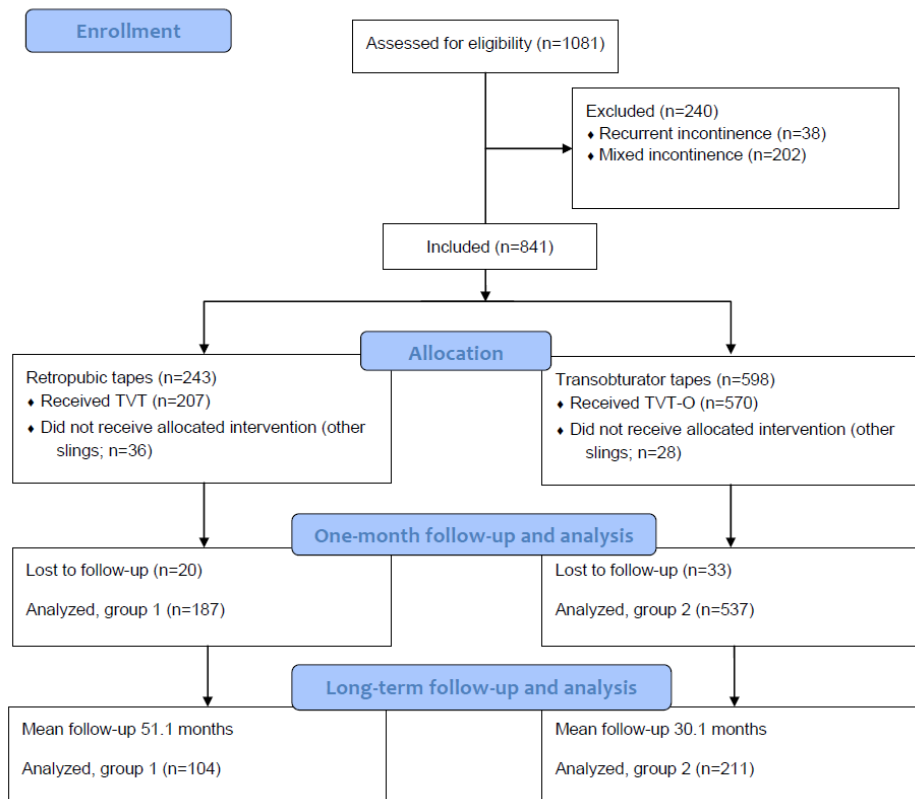


Figure 1. Patients' flowchart

Results

Group 1 included the SUI patients treated with TVT (207, age 54.14±9.31) and Group 2 included those treated with TVT-O (570, age 55.33±8.97). The mean follow-up periods were 51.1±7.6 months and 30.1±3.0 months, respectively. There was increased risk of bladder perforation (5.35% vs. 0.56%; p=0.001) and hematoma formation (9.09% vs. 1.48%; p=0.001) among patients undergoing TVT as compared to those undergoing TVT-O. There was higher risk of vaginal wall perforation among the patients in Group 2 (0.00% vs. 3.79%; p=0.044). The intraoperative complication rates for both groups were not related to patients' age, BMI, or parity. 90.86% of the patients who did not leak urine during a cough test 1 month after surgery still had a negative cough test at their long-term follow-up

	Group 1 (TVT) (n=187)	Group 2 (TVT-O) (n=537)	P value ^a
Intraoperative			
Hematoma	17 (9.10)	8 (1.5)	0.001
Bladder trauma	10 (5.4)	3 (0.6)	0.001
Postoperative pain	4 (2.1)	11 (2.1)	0.823
Vaginal laceration	0	15 (3.8)	0.044
Postoperative			
Tape extrusion	1 (0.5)	8 (1.5)	0.420
De novo overactive bladder	15 (8.0)	26 (4.8)	0.151
De novo urgency incontinence	4 (2.1)	8 (1.5)	0.790
Recurrence	16 (8.6)	33(6.2)	0.336
Sling incision	4 (2.1)	3 (0.6)	0.142
Post void residual urine >100 mL	11 (5.9)	16 (3.0)	0.114

Abbreviations: TVT, retropubic tension-free vaginal tape; TVT-O, transobturator tension-free vaginal tape.

^a Values are given as number (percentage).

^b Yates-corrected χ^2 test.

Table 1. Complication rates associated with the use of TVT versus TVT-O

	Intra-operative complications	No complications	P value
Group 1 (TVT)			
Total no of patients	31	176	
Age	53.4 ± 9.0	54.3 ± 9.4	0.614 ^b
BMI	26.2 ± 4.7	25.2 ± 2.4	0.238 ^b
Parity			
0	4 (12.9)	24 (13.6)	1.000 ^c
1	18 (58.1)	84 (47.7)	0.333 ^c
2	5 (16.1)	53 (30.1)	0.132 ^c
3 or more	4 (12.9)	15 (8.5)	0.497 ^c
Group 2 (TVT-O)			
Total no of patients	37	533	
Age	54.6 ± 8.7	55.5 ± 9.0	0.425 ^b
BMI	26.6 ± 4.0	26.5 ± 4.5	0.838 ^b
Parity			
0	6 (16.2)	61 (11.4)	0.372 ^d
1	16 (43.2)	273 (51.2)	0.185 ^d
2	10 (27.0)	146 (27.4)	0.924 ^d
3 or more	5 (13.5)	53 (9.9)	0.316 ^d

Abbreviations: BMI, body mass index (calculated as weight in kilograms divided by the square of height in meters); TVT, retropubic tension-free vaginal tape; TVT-O, transobturator tension-free vaginal tape.

^a Values are given as number (percentage) or mean ± SD.

^b By *t* test.

^c By 2-tailed Fisher exact test.

^d By Yates-corrected χ^2 test.

Table 2. Comparison of patients in Groups 1 and 2 who developed intraoperative complications with those who did not

Interpretation of results and Concluding message

TVT-O is superior to TVT with regard to the risk of bladder perforation and hematoma formation, but it results in more vaginal wall injuries.

The frequency of intraoperative complications for both TVT and TVT-O insertion was not related to patient age, BMI, or parity. Although patients in group 2 (TVT-O) had a higher BMI than those in group 1, there was no significant difference in BMI between group 2 patients who developed intraoperative complications and those who did not (P=0.838).

Disclosures

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