

TENSION-FREE VAGINAL TAPE RETROPUBIC SLING FOR RECURRENT STRESS URINARY INCONTINENCE AFTER TRANSOBTURATOR TAPE FAILURE

Montero-Armengol A, Sabadell J, Salicrú S, Rodríguez-Mías N Gil-Moreno A, Poza J L
Unit Floor Department . Hospital Vall d'Hebron . Barcelona. Spain

Hypothesis/aims of study

Assess the long term effectiveness and perioperative safety of retropubic slings (TVT) after a failed primary transoburator sling (TOT) for stress urinary incontinence (SUI).

Study design, material and methods

Descriptive longitudinal Study was performed on women treated with a TVT between January 2006 and December 2016, for recurrent urinary incontinence after primary TOT. Women with pure stress urinary incontinence or stress predominant mixed urinary incontinence were included. Intrinsic sphincter deficiency (ISD) was defined as a maximal urethral closure pressure (MUCP) of 20 cmH₂O or less. De novo urgency was diagnosed by the apparition of overactive bladder symptoms. The first sling was not routinely removed. Surgery for pelvic organ prolapse (POP) correction was associated when needed. Patients were postoperatively scheduled for evaluation at 1, 6 and 12 months and yearly thereafter. Outcomes were classified as cured, improved or failed defined by combined objective and subjective criteria. The Odds of failure at 1, 2 and 3 years was analyzed by means of a multivariable logistic regression model. Failure incidence was analyzed by the Kaplan-Meier survival functions. Complications were also reported.

Results

41 women underwent a TVT after a TOT failure. Only 7 women (17.1%) fulfilled the criteria for ISD, but 27 (65.9%) had borderline low urethral pressures (defined as MUCP <40 cmH₂O) before the TVT. The first sling was partially removed in 7(17.1%) cases owing to vaginal tape erosion or voiding dysfunction. Only 4 cases (9.7%) of bladder perforation were recorded during TVT procedure, 1 case was misdiagnosed during intraoperative cystoscopy and was diagnosed 48hours later. No other intraoperative complications were observed. The median follow-up was 49.3 months (range 4.2-124.7). Only one woman was considered as a missing follow-up owing to the diagnosis of a neurogenic urinary incontinence secondary to Alzheimer's disease diagnosed 30 months after the TVT and who was regarded as improved 5 months before. Outcomes at 12 to 84 months are detailed in Table 2. The multivariate analysis has neither shown a relationship between any variable included and the likelihood of failure nor between the time interval between both sling surgeries and failure rates. The cure rate decreases at 12 months and then maintains stable until 8 years post TVT and the 75% of patients are cured beyond 48 months (Figure). Postoperative complications were observed in 16 women (39%) Table3. De novo urinary urgency occurred in 10cases (24.4%), 3 of them were severe enough to be regarded as a failure. One case was regarded as a failure at the third year of follow-up, owing to the appearance of a bladder lithiasis. The stone was removed by cystoscopy and the patient was cured again

Table 1. Preoperative characteristics and concomitant surgery

Age at TVT (years), median [range]	62.3 [52-81]
Parity, median [range]	2 [0-7]
Body mass index g/m ² , median [range]	29.59 [22-45]
Postmenopausal	87.8% (n=36)
Gynecologic surgery concomitant TVT	22% (n=9)
Vaginal hysterectomy	3
Anterior vaginal mesh	4
Posterior colporrhaphy	1
IVS	2
Anterior colporrhaphy	1

Table 2. Outcomes after TVT procedure for recurrent SUI

	12mo. (n=39)	24mo. (n=37)	36mo. (n=36)	48mo. (n=19)	60mo. (n=9)	72mo. (n=9)	84mo. (n=8)
Cured	19 (48.7%)	20 (54.1%)	13 (46.4%)	12 (63.2%)	8 (88.9%)	7 (77.8%)	7 (87.5%)
Improved	10 (25.6%)	10 (27%)	8 (28.6%)	4 (21.1%)	1 (11.1%)	1 (11.1%)	1 (12.5%)
Failed	10 (25.6%)	7 (18.9%)	7 (25%)	3 (15.8%)	0	1 (11.1%)	0

Table 3. Postoperative complications of TVT procedure

Complications	Cases (%)	Evolution
Urinary tract infection (UTI)	6 (14.6%)	1 case of severe recurrent UTI
High postvoid residual	7 (17.1%)	Normalized between 4rt and 30 days 1 case of tape section at day 7 due to the impossibility of micturation
Pain	1 (2.4%)	Solved espontaneously in 1 month
Thigh Numbness	1 (2.4%)	Solved espontaneously in 1 month
Retzius Hematoma	1 (2.4%)	No intervention was required
De novo urgency	10 (24.4%)	3 of them were severe

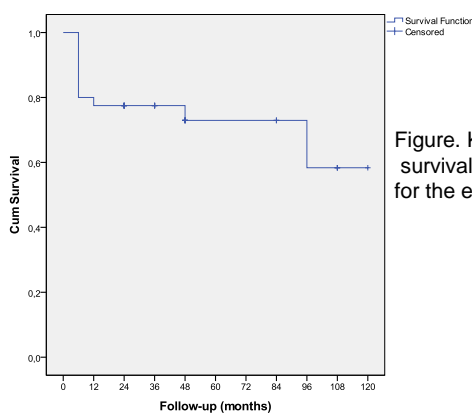


Figure. Kaplan-Meier survival functions for the effectiveness of TVT

Interpretation of results

In the present series, TVT has been found to be long term effective to treat recurrent SUI or stress predominant mixed urinary incontinence after TOT failure, with slight and self-limited complications. De novo urgency occurred in 10 patients (24.4%). Only 1 case of tape section due the impossibility of micturation and 1 case of severe recurrent urinary tract infection.

Concluding message

Repeat mid-urethral TVT sling for recurrent female stress urinary incontinence after TOT seems to be long term successful. Since the optimal management has not yet been established, long-term, prospective, randomized trials are warranted.

No conflict of interest