

TREATMENT OF FEMALE STRESS URINARY INCONTINENCE WITH THREE DIFFERENT TAPES – A FOUR-YEAR EXPERIENCE

Hypothesis / aims of study

Surgery is the primary treatment for stress urinary incontinence (SUI) in women. Minimally invasive midurethral slings have appeared in the last years to improve quality of materials, reduce surgical time and complications, and have become a well-accepted method.

The aim of this study was to evaluate the safety and efficacy of three different techniques of mid-urethral tension free vaginal sling procedures: Tension Free Vaginal Tape (TVT), Transobturator vaginal tape inside-out (TVT-O) and Secur Tension Free Vaginal Tape (TVT-S)

Study design, materials and methods

Retrospective study including 128 patients with SUI or Mixed Urinary Incontinence (MUI) who underwent a surgical procedure with a mid-urethral sling (TVT-O, TVT or TVT-S) from January 2004 to December 2007.

All the surgeries were performed under general/regional anaesthesia and by the same team that includes gynaecologists and an urologist.

We reviewed the following parameters: age, parity, overweight, constipation, menopause state, urodynamic studies, operation time, perioperative and post-operative complications, recovery time, follow-up time, recurrent SUI.

We performed data analysis with Statistical Package for the Social Sciences version 16.0 (SPSS 16.0).

This work was not supported by any industry.

Results

128 patients were included in the study. Ninety-five (74.6%) had SUI and 33 (25.4%) had MUI. The mean patients age was 61.3 years old (min=27 and max=88). 108 women (84.4%) were post-menopause. Only 5 women (3.9%) were nullipara. Sixty women (46.9%) were overweight and 51 (39.8%) had constipation. Fifty-five women (42.9%) had other benign gynaecologic conditions (42 had uterus prolapse, 51 had cystocele, 11 had rectocele and 2 had vaginal vault prolapse). There were no significant statistic differences in those parameters between the three groups.

All patients had positive urinary stress test. Urodynamic studies were performed in 84 cases (65.6%), 15 of them had involuntary detrusor contractions, 4 had intrinsic urethral sphincter deficiency, 1 had reduced bladder capacity and 1 had reduced bladder compliance.

Eighty-two patients (64.1%) underwent a TVT-O procedure, 37 (28.9%) underwent a TVT-S ("hammock" configuration) procedure and 9 (7.0%) underwent a TVT.

Mean time of surgery was 17.4 minutes with TVT-O (min=10 and max=26), 17.5 minutes with TVT-S (min=10 and max=35) and 35 minutes with TVT. Recovery mean time was 3.1 days with TVT-O (min=1 and max=7), 2.5 days with TVT-S (min=2 and max=4) and 4.3 days with TVT (min=3 and max=6).

Perioperative and post-operative complications were noted in 10 patients (12.2%) in TVT-O group (6 cases of hip pain, 4 cases of *de novo* urgency), in 6 patients (16.2%) in TVT-S group (2 cases of hip pain, 1 case of minor haemorrhage, 1 case of urinary infection, 1 case of vaginal haematoma and 1 case of *de novo* urgency). In TVT group was reported only 1 case (11.1%) of *de novo* urgency.

Follow-up mean time was 23.4 months in TVT-O group (min=5 and max=39), 9.7 months with TVT-S (min=4 and max=15) and 40.6 months in TVT group (min=12 and max=47).

No SUI recurrence was referenced in TVT group, 2 cases in TVT-O group (2.4%) and 1 recurrence was noted with TVT-S (2.7%)

Interpretation of results

There were no significant statistic differences in population characteristics (age, menopause state, parity, overweight, constipation and presence of other benign gynaecologic pathology) between the three groups. Surgical and recovery mean time were longer in the TVT group. No significant difference was reported in complications and recurrence rates between the three groups. However, the TVT group was significantly smaller than other groups because since the introduction of TVT-O (Mars 2004) the team decided to change to this new technique, and the TVT-S group has had a shorter follow-up time due to its recent implementation.

Concluding message

Similar to what is described in literature, these results show that TVT, TVT-O and TVT-S are effective for the treatment of SUI. However, TVT-O and TVT-S procedures are faster and easier than TVT. TVT-S needs less recovery time than TVT-O and TVT.

All techniques have similar complications and recurrence rates.

Follow-up time with TVT-S must be longer to allow stronger conclusions.

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Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Obstetrics and Gynaecology Ethics committee of our institution
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes