

EFFICACY OF TVT-SECUR AND FACTORS AFFECTING CURE OF FEMALE STRESS URINARY INCONTINENCE: 3-YEAR FOLLOW-UP

Hypothesis / aims of study

To date, few studies have examined long-term outcomes following TVT-S procedure, and no studies have investigated which clinical factors affect the SUI cure rate (1, 2). The aim of this study was to evaluate the efficacy of the TVT-Secur procedure for the treatment of stress urinary incontinence (SUI), and to identify factors affecting cure during 3 years of follow-up.

Study design, materials and methods

We prospectively followed patients until 1 year postoperatively and contacted them to re-visit the clinic at 3 years. Ninety-six women who underwent TVT-Secur (H type: 42, U type: 54) were followed up for at least 3 years. Patients were evaluated using the Severity Index for Urinary Incontinence, the Incontinence Quality of Life questionnaire and Bristol Female Lower Urinary Tract Symptom-Short Form questionnaire at baseline and at each postoperative visit. Patient satisfaction and complications were evaluated. Surgical outcome was assessed according to the Severity Index for Urinary Incontinence. Patients were considered cured if they did not report any episodes of urine leakage on the Severity Index for Urinary Incontinence in Women at 3 years postoperatively. Improvement was defined as a reduction in the frequency and amount of urine leakage according to the Severity Index for Urinary Incontinence in Women. Success rate was defined as the sum of cure and improvement rates. Multivariate regression analysis was used to identify preoperative factors independently associated with cure.

Results

There were no differences between the H- and U-type groups with respect to demographic or clinical characteristics, or urodynamic parameters. The 3-year success rate was 91.7% (cure 72.9%, improved 18.8%). The success rate was maintained from 94.8% at 1 year to 91.7% at 3 years, but the cure rate decreased significantly from 85.4% at 1 year to 72.9% at 3 years. The patient satisfaction rate was 85.4%. The quality of life evaluation at 3 years postoperatively showed that the TVT-S procedure resulted in an improvement in total score, psychosocial impact, avoidance and limiting behavior, and social embarrassment. The Bristol Female Lower Urinary Tract Symptom-Short Form questionnaire at 3 years postoperatively showed that surgery resulted in an improvement in incontinence, filling, sexual function, and quality of life ($p < 0.05$), but not voiding. We analyzed cure rates according to clinical and urodynamic factors. We found that cure rates were not significantly different according to the presence of urgency incontinence, maximal urethral closing pressure (MUCP, <40 cmH₂O vs. ≥ 40 cmH₂O), body mass index (<25 kg/m² vs. ≥ 25 kg/m²) or SUI symptom grade. Univariate analysis showed that the cure rate was lower in patients with Valsalva leak point pressure (VLPP) <60 cmH₂O (79.5% vs. 52.2%, $p = 0.010$). Multivariate analysis showed that only low VLPP was associated with a lower cure rate. Urgency and urgency incontinence improved in 68.6% (35/51) and 60.6% (20/33) of patients, respectively. However, 13.3% (6/45) of patients developed de novo urgency, and 19.0% (12/63) developed de novo urgency incontinence.

Interpretation of results

The success rate for all patients at 3 years postoperatively was 91.7% (88/96), comprising a cure rate of 72.9% (70/96) and an improvement rate of 18.8% (18/96). The cure rate of female SUI after the TVT-Secur procedure was not sustained, but the overall success rate was maintained over time. Low VLPP predicted failure to sustain cure.

Concluding message

We found that the cure rate of female SUI after the TVT-S procedure was not sustained, but that the success rate was maintained over the long-term. The TVT-S procedure may therefore not have long-term efficacy. Low VLPP predicted failure to sustain care.

References

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Disclosures

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