

TENSION FREE VAGINAL TAPE PROCEURE IN URINARY INCONTINENCE WITH LOW VALSALVA LEAK POINT PRESSURE

Hypothesis / aims of study

We evaluated the outcome of the tension free vaginal tape (TVT) procedure in stress urinary incontinence with low Valsalva leak point pressure (VLPP), and identified factors predicting the outcome.

Study design, materials and methods

A total of 221 women 29 to 80 years old (mean 55.2) was included in the study. The TVT procedure was performed mostly under local anesthesia. The mean followup time was 10.5 months (range 6-52). Patients were divided as patents with low VLPP (< 60 cmH₂O, n = 61) and higher VLPP (≥60 cmH₂O, n = 160). Cure of incontinence was defined as the absence of a subjective complaint of leakage and the absence of objective leakage on stress testing.

Results

The overall cure rate was significantly lower in patients with low VLPP than in those with higher VLPP (82.0% versus 93.1%, p = 0.013). In women with low VLPP, multivariate analysis indicated that urge symptom and low maximal urethral closure pressure (MUCP) were independent factors for the treatment failure: (odds ratio, 15.12; 95% confidence interval, 1.90-120.61; p = 0.010) for urge symptom and (odds ratio, 0.92; 95% confidence interval, 0.86-0.99; p = 0.018) for MUCP.

Interpretation of results

There are few data on factors predicting the outcome in patients with low VLPP. In our series, low MUCP was an independent factor for the treatment failure in women with low VLPP. Rezapour et al [1] found that of patients with MUCP at rest less than 20 cmH₂O, older patients (>70 years) with a very low resting urethral pressure and an immobile urethra seemed to constitute a risk group where the TVT surgery was less successful. These findings may reflect the role of low MUCP on the cure rate of the TVT procedure in patients with sphincteric impairment (low VLPP or MUCP). Based on these results, we believe that the more MUCP decreases in women with sphincteric impairment, the more the treatment failure after the TVT procedure increases.

With regard to urge symptom, it is difficult to clarify the underlying mechanisms involved but a hypothesis may be proposed. Several authors have indicated that unstable detrusor activity is actually a reflex stimulated by urine leakage into the urethra [2,3]. this "urethrogenic" theory has also been supported by observations that patients with detrusor instability have significantly lower maximal urethral closure pressures on urethral pressure profilometry. Thus, in our patients, urge symptom may represent an event of fall in MUCP.

Concluding message

The cure rate after the TVT procedure is lower in women with VLPP less than 60 cmH₂O, when compared to those with higher VLPP. Our findings suggest that urge symptom and low MUCP should be considered to be at high risk of the failure after the TVT procedure in these patients.

References

1. Rezapour, M., Falconer, C. and Ulmsten, U.: Tension-Free vaginal tape (TVT) in stress incontinent women with intrinsic sphincter deficiency (ISD): a long-term follow-up. *Int Urogynecol J Pelvic Floor Dysfunct*, 12(suppl 2): S12, 2001
2. Webster, G. D., Sihelnik, S. A. and Stone, A. R.: Female urinary incontinence: the incidence, identification, and characteristics of detrusor instability. *Neurourol Urodyn*, 3: 235, 1984
3. Petros, P. E. and Ulmsten, U.: Bladder instability in women: a premature activation of the micturition reflex. *Neurourol Urodyn* 12: 235, 1993.

