

TENSION FREE VAGINAL TAPE AND INTRINSIC SPHINCTER DEFICIENCY: ARE THEY COMPATABLE?

Aims of Study

To evaluate the effectiveness of the tension-free vaginal tape (TVT) procedure in patients with stress urinary incontinence (SUI) secondary to intrinsic sphincter deficiency (ISD).

Methods

79 patients with SUI (mean age of 61.4 years) underwent the TVT procedure and were followed prospectively for a mean 11.9 months (median 12 months, range 6-24 months). 36 patients with evidence of ISD (Leak Point Pressure: LPP < 90cm) and minimal hypermobility were compared to 43 patients with SUI associated with hypermobility and LPP >90cms (Non-ISD Group). Pre operatively, patients were evaluated with physical exam, videourodynamics and a disease-specific quality of life questionnaire (King's College Health Questionnaire). Patients were followed at 6-month intervals post-operatively with physical examination and questionnaire. Success was defined as 1) Cure: complete resolution of the patients' symptom score for stress incontinence (SUI score= 0) or 2) Significant improvement: >50% improvement in SUI score from before surgery to last follow-up. Associated improvement in irritative symptom scores and all quality of life domains were also recorded. Statistical analysis was performed using a Student's t-test for significance.

Results

Patient pre-operative quality of life and stress incontinence symptom scores were similar between both groups. However, pre-operative frequency ($p=0.015$) and urge incontinence ($p=0.042$) were more common in the ISD group. There was a statistically significant improvement ($p<0.05$) in all quality of life domains dealing with urinary symptoms as compared to pre-operative values in both groups. The ISD group had a 72% cure rate and an additional 19% significantly improved from stress incontinence. The non-ISD group demonstrated an 84% cure rate with 12% of patients significantly improved. Combining both the patients who were cured and significantly improved, gave an overall success rate of 91% and 96% in the ISD and non-ISD groups, respectively (figure 1). Success was lowest (62.5%) in a subset of eight patients with leak point pressures (LPP) less than 25 cmH₂O. None of these patients reported cure, but all were significantly improved. Improvement in urge symptoms from pre-operative values was statistically significant at all points of follow-up in both groups. *De novo urgency* was reported in 5.6% of ISD patients and 11.6% of non-ISD patients, for an overall rate of 8.9% in our population. Bladder perforation was the most common complication in 9.3% of patients and was successfully managed with re-positioning of the mesh tape and urinary drainage for 48 hours.

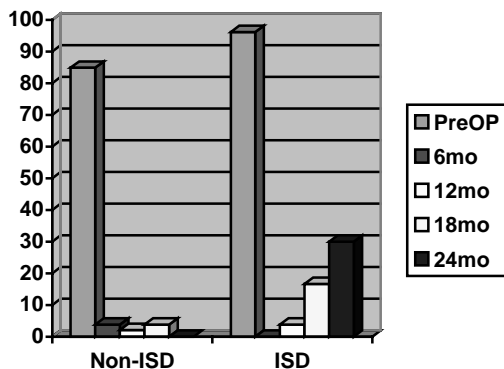


Figure 1. Pre- and post-operative stress incontinence symptoms score in non-ISD and ISD groups. All values $p<0.05$ as compared to pre-operative values.

Conclusions

TVT is a safe, effective and durable procedure for the treatment of SUI in most patients with evidence of ISD, with success rates similar to patients without evidence of ISD, as measured by LPP. Measurement of LPP allows the identification of those patients with the poorest urethral function who may not derive as much benefit from this procedure. In light of these findings, our concepts of intrinsic urethral function and its management may need to be re-evaluated.