

EARLY EXPERIENCE OF TENSION-FREE VAGINAL TAPE (TVT), AN EFFICIENT AND SAFE SURGICAL PROCEDURE FOR STRESS URINARY INCONTINENCE

Hypothesis / aims of study

Stress urinary incontinence(SUI) is defined as an involuntary urination occurring secondary to increased abdominal pressure. Tension-free vaginal tape(TVT) is gaining popularity as a simple and effective treatment because of its simple technique and minimal morbidity. This study was performed to evaluate the effectiveness, safety and early results of TVT especially in the institution where TVT procedures are being newly established as a primary treatment of genuine stress urinary incontinence.

Study design, materials and methods

From November 2002 to December 2004, 108 patients with stress urinary incontinence underwent the TVT procedures. All cases were diagnosed as genuine stress urinary incontinence by the evidences in history, physical exam, Q-tip test and urodynamic study. The severity of SUI was divided into grade I(70.0%, n=67), grade II(23.3%, n=24), and grade III(0.7%, n=17). The mean age of the patients was 51 (range 38 to 77) years old, and the mean number of parity was 2.3. In 57 cases, associated hysterectomy was done either abdominally or vaginally. Patient selection, procedural techniques, and post-operative managements were accomplished based on observations obtained or reported from clinical experiences. Outcomes, early- and late-complications for TVT were investigated from review of medical records and interview during post-operative follow-up. Outcomes were classified as "Cured", "Improved", and "Failed". When the symptoms of SUI were eliminated, the case was classified into "Cured" and if the symptoms were decreased, it was categorized as "Improved". "Failed" means that there was no change in symptoms.

Results

All of the TVT procedure were undertaken under the spinal anesthesia and the patients were discharged on the next day unless there were associated other operation such as laparoscopy-assisted vaginal hysterectomy(LAVH) or total abdominal hysterectomy(TAH) or vaginal total hysterectomy(VTH). Febrile morbidity was the most common postoperative complications, which was noticed in 11.1% (n=12) of all cases followed by feeling of incomplete emptying 10.1% (n=11), hesitancy 8.3% (n=9), and slow stream 4.6% (n=5). Confirming with cystoscopy, we had no case with bladder perforation even though it is relatively frequent during learning phase of TVT technique. Significant intra-operative complication was documented in two cases. In one case, sinus pause developed for 6 seconds right after injecting vasopressin for the purpose of hydro-dissection and hemostasis at the timing of mucosal incision, and the arrhythmia for several minutes due to the anesthetic agent in the other case.

Interpretation of results

The overall results of operation were as follows, 64.8% in cured, 29.6% in improved, and 5.6% in failed. Success rate which defined as cured rate plus improved rate were not significantly affected by associated hysterectomy. Long term follow-ups for these patients are in need to evaluate the cumulative success rate and late complications as time goes by.

Concluding message

The early experience with TVT in newly starting institution was encouraging. The reproducible findings we could acquire with TVT are high success rate, low complication rate, an ease of technical performance. This study showed that TVT procedure for patients with SUI could be carried out efficiently and safely by highly motivated and adequately trained surgeons in a hospital with little previous experience.

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HUMAN SUBJECTS: This study did not need ethical approval because established procedure but followed the Declaration of Helsinki informed consent was obtained from the patients.