



**Service Priorities and Programmes**  
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**Long term results of Tension- free Vaginal Tape insertion for Urodynamic Stress Incontinence in Chinese women at Eight years follow-up**

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**Introduction**

Urinary incontinence is defined as involuntary loss of urine which has a negative impact on social, physical and psychological wellbeing of female population. The reported prevalence of urinary incontinence in Hong Kong ranges between 21 and 40%, of which 40% of women complained of stress incontinence. The best mean of cure for stress urinary incontinence is surgery which will only be considered after failure of conservative treatment. The tension free vaginal tape is the best studied & documented procedure with excellent short- term & long-term outcomes.

**Objectives**

The aim of the study is to assess subjective & objective successful rate at 8 years after tension free vaginal tape by pre-designed questionnaire, pad test & standard urodynamic investigations as there is lack of long term data in local Chinese population.

**Methodology**

Seventy three consecutive patients had been included in this study from 1999 to 2004 in QEH. All patients undergoing TVT would be assessed pre-operatively and postoperatively with standardized protocol for at least 8 years after operation. The principle outcome measures were the subjective & objective cure rate and operation related complications. All patients were evaluated preoperatively by means of a detailed patient history with documentation on severity of stress incontinence symptom, urodynamic testing including uroflometry, filling/voiding cystometry, 1-hour pad test and quality of life questionnaire. Urodynamic stress incontinence diagnosis was based on findings of urodynamic investigations. Diagnosis of detrusor overactivity was on cystometric findings. Patients with previous continence surgery or voiding difficulty were excluded from the study. All patients signed an informed consent. All patients would be asked to have regular follow-up in 1year, 3year & 8year after procedure with 1-hour pad test, urodynamic testing & completion of standardized

preset questionnaire. Post-operative complications such as bladder injury, voiding difficulty, tape erosion, urinary tract infection (with positive culture), wound infection, fever were also recorded. Objective outcomes were assessed by urodynamic testing and 1 hour pad test, while subjective outcome was defined by patient's perception: satisfied (great improvement without urine leakage); not satisfied (no change or worst). Statistical analysis was performed for variables following normal distribution with student's T-test for independent samples and for variables not following normal distribution with Mann-Whitney test for independent samples. It was estimated that, for a type 1 error-  $\alpha$  0.10 and a type II error-  $\beta$  0.10 (power of the study 90%) and an 82% success rate for TVT at 8 year follow- up, null hypothesis value to detect a success rate of 65% required a sample size of at least 54 patients. P value <0.05 was considered statistically significant.

### **Result**

At 3-year follow-up, the objective cure rate was 84.9% and subjective cure rate was 95.9%. At 8-year follow-up, the objective cure rate was 90.4% and subjective cure rate was 98.6%. De novo detrusor overactivity was seen in 27.7% and 44.6% of patients at 3-year and 8-year follow up respectively. Similar objective & subjective cure rates were seen in TVT-only group & TVT with concomitant surgery group. There were 3 (4.1%) patients suffering from bladder injury which was identified intraoperatively during checked cystoscopy. 2 (2.7%) patients suffering from voiding dysfunction required tape incision.