

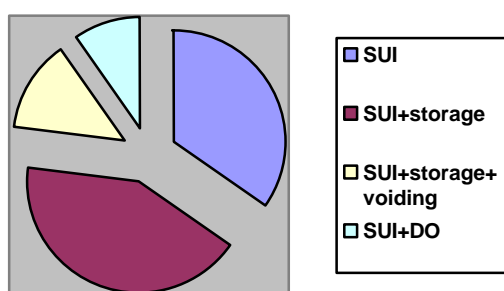
## URINARY MORBIDITY AFTER TVT: A CONSERVATIVE APPROACH OFTEN WORKS

### Hypothesis / aims of study

Stress urinary incontinence (SUI) is common among women. Over 150 operations have been described, but none is entirely satisfactory. Tension free vaginal tape (TVT) today is the procedure of choice for SUI. In the evaluation of any operation, the analysis of complications is as important as the rate of success. This is especially true of a procedure meant to address a quality of life issue such as incontinence. The published literature has focused mainly on the efficacy of TVT in correcting SUI with few reports of complications. We report our experience with the first 52 cases of TVT, assessing post-operative bladder dysfunction.

### Study design, materials and methods

Between April 2001 and June 2003, fifty-two women underwent TVT procedure. All had stress incontinence demonstrated on urodynamics (UDS). Seven (14%) patients reported co-existent voiding and storage symptoms. Twenty-two (42%) patients had storage symptoms alone with or without detrusor overactivity (DO) on UDS, while 5 (10%) had DO on UDS but denied storage symptoms (Figure 1).



**Figure 1:** Pre-operative symptom-profile of 52 patients with SUI.

Urethral catheters were routinely inserted post-operatively and removed within 12 hours. Following successful urination, they were discharged and followed up as outpatients.

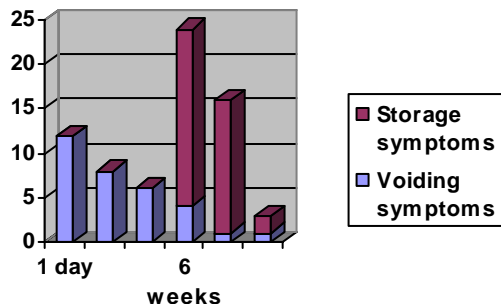
Data from patients' case-notes were recorded on a computer spreadsheet and analyzed. Information included pre-operative history and physical examination findings, results of urodynamic evaluation, post-operative catheterization, voiding and storage symptoms, their duration, management and outcome.

### Results

Twelve of the 52 patients (23%) failed to void spontaneously following the initial trial without catheter and needed re-catheterisation. A third of them voided successfully within a week. Of the remaining 8 requiring catheterization for longer periods, 7 women had their urethral catheter changed to suprapubic. One woman did not want any further intervention and asked for her sling to be removed within 4 weeks of having the procedure. In 4 women, the residual urine drained through the suprapubic catheter decreased successively. Two of them had their catheters removed within 4 weeks and the other two within 3 months. Another two women underwent urethral dilatation followed by spontaneous voiding within 3 months. One patient continued to drain significant residues beyond 3 months and is on long term clean intermittent self-catheterisation (CISC).

Twenty (38%) patients complained of storage symptoms post-operatively, of whom 5 (25%) were cured within 3 months with (n=1) or without (n=4) anticholinergics. Of the remaining 15 (75%) patients whose storage symptoms lasted longer than 3 months, 2 (10%) were not bothered enough to seek any treatment and 11 (55%) benefited from anticholinergics with (n=2) or without (n=9) bladder drill. One patient (5%) who did not respond to these measures and another one (5%) who had her sling removed are awaiting further management.

Of these 20 patients, 12 already had storage symptoms pre-operatively, while TVT unmasked the symptoms in one patient who had DO on UDS, but no storage symptoms pre-operatively, leaving 7 (13%) who developed de novo urgency and urge incontinence. The duration of post-operative urinary symptoms in relation to the time since operation is shown in figure 2.



**Figure 2:** The number of patients with voiding and storage symptoms in relation to the time since TVT.

### **Interpretation of results**

In our study, the incidence of retention after TVT, defined as an inability to pass urine spontaneously after the initial removal of urethral catheter was 23%. Ten of them (83%), however, were able to resume spontaneous voiding within 3 months.

Only one of the 12 patients with post-operative urinary retention had complained of pre-operative voiding difficulties. This means that pre-operative symptoms are a poor predictor of post-operative voiding problems, though objective demonstration of a poor flow has been shown to correlate with post-operative retention.

Co-existent symptoms of urgency and urge incontinence were cured in a third of the patients after TVT. This is in keeping with the observation of other investigators.

Sixteen of the 20 patients (80%) with post-operative storage symptoms benefited from anticholinergics with (n=3) or without (n=13) bladder drill.

Three of the 12 patients (25%) who had voiding difficulties post-operatively developed de novo storage symptoms compared to 4 out of 40 (10%) without voiding symptoms. This apparent association between post-operative voiding symptoms and de novo storage symptoms was not statistically significant ( $P > 0.2$ ,  $\chi^2 = 1.59$ ,  $df = 1$ ) in our study, although incomplete urethral obstruction may be a common link.

### **Concluding message**

Up to a quarter of patients may have voiding and storage urinary symptoms after TVT, an important factor in the pre-operative counselling of patients. However, most of these symptoms are transient and can be managed conservatively without resorting to invasive interventions such as section of the sling and urethral dilatation.