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TENSION FREE VAGINAL TAPE: DOES THE TYPE OF ANAESTHETIC INFLUENCE OUTCOME?

Aims of Study

The Tension-Free Vaginal tape is now recognised as an effective treatment for patients with Genuine Stress Incontinence. It was first described by Ulmsten and Petros, of Sweden, as a procedure performed under local anaesthesia (1). This was to allow more precise adjustment of the tape, using the intra-operative cough test.

However, cultural differences between Scandinavia and other countries have resulted in many surgeons performing the TVT procedure under spinal or general anaesthesia, these being more familiar to both doctors and patients. Adamiak et al. compared the use of local and spinal anaesthesia and concluded that there is no difference in efficacy between these two anaesthetic modes (2).

The aim of our study was to compare the outcome in TVTs performed under general anaesthesia with those performed under spinal anaesthesia.

Methods

In a retrospective analysis, all patients who underwent a TVT procedure, from its introduction to the department in June 2000, until September 2002, were included in the study. All of these patients had Genuine Stress Incontinence, confirmed by urodynamic studies. For approximately the first year after the procedure was introduced to the unit, it was performed under a spinal anaesthetic. Subsequently, most patients underwent a general anaesthetic for the operation.

The primary outcome measure, the success or failure of the procedure, was determined at the initial follow-up visit, three to six months post-operatively, when the patient was asked to report whether she was wet or dry.

The secondary outcome measure was the rate of complications, including de-novo bladder instability and de-novo voiding difficulties.

A logistic regression analysis was used to compare the success rates in the two anaesthetic groups. To investigate whether other factors might have confounded the comparison, the logistic regression model was extended to include the anaesthetic group and each of the following confounding factors: age, body mass index, duration of symptoms, menopausal status, concurrent urinary pathology and concurrent procedure.

Results

105 women underwent a TVT during the study period. 53 were performed under general anaesthesia and 52 under spinal anaesthesia.

There was no significant difference between the two groups, with respect to age, body mass index, duration of symptoms, menopausal status, concurrent urinary pathology and concurrent procedure performed at the time of the TVT.

The outcomes are shown in Table 1.

Table 1 - Outcomes

	Anaesthetic type	
	General Frequency (proportion)	**Spinal** Frequency (proportion)
Primary Outcome:		
Dry	43 (0.81)	49 (0.94)
Not dry	2 (0.04)	2 (0.04)
Unknown	8 (0.15)	1 (0.02)
Secondary Outcome:		
De novo urgency	3 (0.06)	7 (0.13)
Catheter in-situ at first visit	1 (0.02)	1 (0.02)
Unknown	8 (0.15)	1 (0.02)

The logistic regression analysis showed that there was no significant difference in outcome between the two anaesthetic groups (Chi squared statistic=0.27; 1 d.f. p>0.2). There was also no significant difference in the complication rate between the two groups.
The estimate (95% confidence interval) for the odds ratio of success on the general anaesthetic relative to the spinal was approximately 0.07 (0.39, 2.90).
The logistic regression model was extended to include each of the possible confounding factors and the anaesthetic type. There was no difference in the conclusion about the anaesthetic used from any of these analyses.

Conclusions

This study shows that the outcome after TVT performed under general anaesthesia is comparable to the outcome when performed under spinal anaesthesia.

References

1. Ulmsten U, Petros PE. Intravaginal slingplasty (IVS): An ambulatory sling procedure for treatment of female urinary incontinence. Scandinavian J Urol Nephrol 1995; 29:75-82
2. Adamiak A et al. The efficacy and safety of the Tension-Free Vaginal Tape procedure do not depend on the method of analgesia. European Urology 2002; 42:29-33