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Title: TO PUSH OR PULL? TRANSVAGINAL TAPE VERSUS PROLENE SLING

Aims of Study:

To compare two different techniques for the introduction of a minimally invasive vaginal sling. In particular the pushing of the transvaginal tape (TVT) from the vagina, versus the pulling of the prolene sling (PS) from two suprapubic incisions.

Methods:

Eighty six women with urodynamically proven genuine stress incontinence were prospectively studied. The women were allocated to either TVT introduced vaginally with a trochar (n=46), or a PS introduced suprapubically with a stamey needle (n=40). The choice of route was determined by the hospital in which the woman was operated upon. Those women having surgery in a Private hospital had the TVT procedure, whilst owing to budgetary constraints those women in the Public Hospital had the PS operation. There were no significant differences between the groups with regard to age (57.3 vs 60.8 years), weight (76.9 vs 76.1 kgs), or parity (2.7 vs 3.2).

Follow up was reported at six months for 72 women. Cure was defined as no leaks/week on bladder diary, whilst improvement was defined as a greater than 50% improvement in leaks/week on bladder diary.

Results:

	TVT (n _o =46, n ₆ =34)	PS (n _o =40, n ₆ =34)	P
Leaks/week- 0	14.1	19.1	NS
Leaks/week- 6	4.9	3.8	NS
Other Surgery	12 (26%)	17 (42%)	NS
Theatre Time (sling only)	31.2	47.8	<0.0001
EBL (sling only)	69	102	0.003
Intra-op complications	10	4	NS
Hosp. (days) (sling only)	3.3	5.6	0.0008
Duties (weeks)	3.2	2.8	NS
Cured/Improved	28/34 (82%)	32/38 (84%)	NS
Post- op complications	12/34 (33%)	19/38 (50%)	NS

Duties= time until normal duties, EBL= estimated blood loss, Hosp= hospital, NS= not significant, P= probability, PS= prolene sling, TVT= transvaginal sling

The PS had the advantage of pulling the sling upward from the suprapubic incisions and resulted in a trend towards less bladder perforations (4 vs 10). The main intraoperative complication was trochar/stamey needle perforation of the bladder, which was simply repositioned. The Stamey needle left a small 2mm hole and did not require post operative catheterisation, however the TVT trochar left a 5mm hole and an

indwelling catheter was left in-situ for 3 days.

Both procedures had a similar success rate at 6 months. The main postoperative complications were voiding difficulty (6 vs 7) treated by self catheterisation and with cutting of the sling in 1 TVT and 2 PS women. The interesting cost implication of this study was that the prolene sling was made from a square of prolene mesh and created 10 slings/mesh square with a cost of A\$20 per sling, as compared to A\$750 per TVT.

Conclusions:

The TVT has been recently introduced (1) and has been demonstrated to be effective in comparison to Burch colposuspension (2). The two main concerns regarding the TVT are the use of a moderately large trochar aimed into the abdominal cavity and its relative cost. The PS has been shown in this study to have a trend towards less bladder damage (and potentially large intra-abdominal blood vessels), to be equally effective at six months, and to have 1/30th the device cost.

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