

# TVT abbrevo: a retrospective study of efficacy and outcomes at 5 years follow up at a tertiary centre in Singapore



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## Introduction

Midurethral sling system is the most common surgical treatment for female stress incontinence. TVT abbrevo is a 12cm transobturator midurethral sling with the postulated advantage of reduced post-operative groin and thigh pain, while maintaining similar efficacy to its predecessors (TVT-O). We aim to assess the efficacy of TVT abbrevo, and the outcomes at 5 years follow-up at our centre.

## Methods

A retrospective study was conducted on all patients who underwent TVT abbrevo only from 1 September 2011 – 30 September 2013. Patients were reviewed for satisfaction, recurrence of symptoms, and post-operative side effects at 1 month, 6 months, 12 months and yearly till 60 months.

## Results

A total of 93 patients underwent TVT abbrevo during the 25 months. 91.4% had previous vaginal or instrumental deliveries. The average BMI was 26.8 kg/m<sup>2</sup>. The patient characteristics of our study are summarised in Table 1.

Parameters	n = 93
Age (years) (Mean ± SD; range)	49.4 ± 8.7 (32 – 73)
Parity (Mean ± SD; range)	2.3 ± 0.9 (0 – 6)
Nulliparous (n: %)	2 (2.2)
Vaginal Delivery (n: %)	81 (87.1)
Pure Instrumental Delivery (n: %)	4 (4.3)
Vaginal / Instrumental Delivery (n: %)	85 (91.4)
LSCS only (n: %)	6 (6.5)
BMI (kg/m <sup>2</sup> ) (n = 90) (Mean ± SD; range)	26.8 ± 4.4 (17.7 – 43.6)
Menopause (n: %)	23 (24.7)
HRT (n: %)	0
Previous Surgery for SUI (n: %)	0
Previous Surgery for POP (n: %)	1 (1.1)
	• 1 underwent anterior repair
Previous Hysterectomy (n: %)	4 (4.3)
(a) Laparoscopic	3
(b) Abdominal	1
Physiotherapy tried (n: %)	15 (16.1)

Table 1: Patient demographic profile

46.2% had concomitant urinary urge incontinence. 100% had demonstrable stress incontinence, with an average of 12.9 gm of urine leaked on erect stress test. The pre-operative symptoms are summarised in Table 2.

Parameters	n = 93
Stress Urinary Incontinence (SUI) (n: %)	93 (100)
Urgency/Urge Incontinence (n: %)	43 (46.2)
Frequency/nocturia (n: %)	24 (25.8)
Voiding difficulty (n: %)	19 (20.4)
Lump (n: %)	9 (9.7)
EST/supine cough stress test (demonstrable) (n = 92) (n: %)	61 (65.6)
EST/supine cough stress test (demonstrable) (g) (n = 60) (Mean ± SD; range)	12.9 ± 19.8 (0.2 – 103)

Table 2: Summary of pre-operative symptoms

The mean operating duration was 14.3 minutes. There were 3 cases of bladder perforation and 4 cases of vaginal perforation. The mean hospitalization stay was 1.1 days, and mean catheterization duration was 0.8 days. No patient had prolonged catheterization (> 7 days) post-operatively.

Parameters	n = 93
Duration (min) (Mean ± SD; range)	14.3 ± 6.3 (5 – 40)
Anesthesia (n: %)	
(a) GA	69 (74.2)
(b) RA	24 (25.8)
Bladder perforation (n: %)	3 (3.2)
Vaginal perforation (n: %)	4 (4.3)
Significant blood loss >100 (n: %)	0
Estimated blood loss (ml) (n = 85) (Mean ± SD; range)	11.1 ± 11.2 (0 – 50)
Hospital stay (day) (Mean ± SD; range)	1.1 ± 0.5 (0.5 – 3)
Catheterization (day) (Mean ± SD; range)	0.8 ± 0.6 (0 – 3.5)
Prolonged catheter ≥ 7 days (n: %)	0
Nil Catheterization (n: %)	27 (29.0)
Fever (n: %)	2 (2.2)
UTI within 1 month of operation needing Abx (n: %)	2 (2.2)

Table 3: Operative details

At time of writing, a total of 87 patients completed their 48 months follow up, and 45 patients completed their 60 month follow up. Three patients had wound pain at 6 months, which resolved at 12 months.

Post TVT abbrevo at 6 months, only one patient had demonstrable leak of urine. Three patients had mesh extrusion to the vaginal wall at 6 months, and one patient had mesh extrusion at 12 months. Objective cure rate was up to 100% at 36, 48 and 60 months. Patient satisfaction persistently achieved above 95% across all 5 years. The outcomes are summarised in Table 4.

	6 months (n=93)	1 year (n=89)	2 years (n=80)	3 years (n=80)	4 years (n=80)	5 years (n=80)
Follow up (n: %)	89 (95.7)*	88 (94.6)*	88 (94.6)*	88 (94.6)*	87 (93.5)*	45 (84.9)*
SUI (n: %)						
Cured	82 (92.1)	82 (93.2)	81 (92.0)	80 (90.0)	79 (90.8)	40 (88.9)
Improved	6 (6.7)	3 (3.4)	5 (5.7)	6 (6.8)	6 (6.9)	4 (8.9)
No Change	1 (1.1)	3 (3.4)	2 (2.3)	2 (2.3)	2 (2.3)	1 (2.2)
UUI (n: %)						
Cured	n = 42	n = 41	n = 42	n = 42	n = 42	n = 23
Improved	28 (66.7)	25 (61.0)	23 (54.8)	27 (64.3)	26 (61.9)	17 (73.9)
No Change	12 (28.5)	14 (34.1)	18 (43.1)	14 (33.3)	15 (35.7)	5 (21.7)
New Onset	2 (4.8)	2 (4.9)	2 (4.8)	1 (2.4)	1 (2.4)	1 (4.3)
0	0	0	1 (2.3)	0	0	0
Wound pain (n: %)	3 (3.4)	0	0	0	0	0
EST/supine cough stress test (demonstrable) (n: %)	1 (1.1)	2 (2.3)	1 (1.1)	0	0	0
Mesh extrusion to vagina wall (n: %)	3 (3.4)	1 (1.1)	0	0	0	0
Patient satisfaction (n: %)	88 (98.9)	85 (96.6)	85 (96.6)	84 (95.5)	83 (95.4)	n = 44 42 (95.5)
Subjective cure rate (n: %)	82 (92.1)	82 (93.2)	81 (92.0)	80 (90.0)	79 (90.8)	40 (88.9)
Objective cure rate (n: %)	88 (98.9)	86 (97.7)	87 (98.9)	88 (100)	87 (100)	45 (100)

Table 4: Outcome of patients who have undergone TVT abbrevo

## Conclusion

TVT abbrevo is an excellent alternative for female stress incontinence.