

IS TRANS-OBTURATOR TAPE (TOT) EFFECTIVE IN TREATMENT OF STRESS URINARY INCONTINENCE WITH INTRINSIC SPHINCTER DEFICIENCY?

Hypothesis / aims of study

Slings have become the preferred surgical method for treatment of stress urinary incontinence (SUI) secondary to intrinsic sphincter deficiency (ISD)(1). ISD has different grades that may impact the choice of procedure and outcome (2). Synthetic slings made of polypropylene, like Tension-free Vaginal Tape (TVT) and SPARC proved to be effective and less morbid than traditional slings. However TVT supporting the mid-urethra showed the lowest success rate in patients with ISD (3). Trans obturator Obtape™ provides a backboard support to the mid and proximal urethra and seems to be less obstructive than TVT questioning its effectiveness in treating ISD. The primary aim of the study is to evaluate the outcome of TOT in patients with ISD. Secondary aims include study of the role of urethral hypermobility and impact of TOT on quality of life and patients' satisfaction.

Study design, materials and methods

This is an ongoing prospective study of 20 consecutive female patients with SUI/ISD who underwent TOT procedure. The mean age of patients was 66 year and mean of parity 2.2. Four patients had recurrent SUI and previous anti-incontinence procedures. All patients were evaluated pre-operatively by history, physical examination, quality of life questionnaires and multichannel urodynamic investigations. The short forms of the urogenital distress inventory (UDI-6) and incontinence impact questionnaires (IIQ-7) questionnaires were used. Urethral mobility was assessed by the Q- tip test, and hypermobility was defined as straining angle $\geq 30^\circ$. Fifteen patients out of the 20 had hypermobility with mean of 52.3° on Q-tip test. The abdominal leak point pressure (ALPP) ranged between 18 and 70 cm of H₂O with mean of 47.4 cm H₂O. The Obtape™ sling, which is made of a non-woven, thermally bonded polypropylene, was placed at mid urethra using the trans obturator approach. TOT and colporrhaphy were performed in 14 patients. TOT and periurethral mass excision in 2 and TOT only in 2 patients. Two patients with recurrent incontinence underwent urethrolisis and TOT. Cystoscopy was performed after the procedure in all cases.

Post operative evaluation was performed at 1, 3 and 6 months with the same pre operative protocol in addition to the patient global impression (PGI) for satisfaction and cure using a visual analogue scale (VAS).

Results

Sixteen out of the twenty patients (80%) became dry or their symptoms improved. Nine patients cured (45%) and 7 (35%) improved. The baseline of UDI-6 and IIQ-7 decreased from 55.6% and 27% to 19.5% and 8.5% after TOT, respectively. The difference between the mean results of pre and postoperative questionnaires was statistically significant ($p= 0.002$ for UDI-6, and $p= 0.004$ for IIQ-7). For all patients, PGI for satisfaction is 85% and for cure is 79.8%.

Four patients (20%) had no improvement. Two of them received collagen injections and improved (18 out of 20) with overall success rate of 90%. No urinary injury or other intraoperative complications occurred with the transobturator approach. Post operatively, one patient had vaginal erosion 7 months after the TOT and treated with local excision and simple closure.

Interpretation of results

Good outcomes were obtained especially in patients with hypermobility and ISD. Three out of the four failed cases had immobile urethra. Also three of these four cases had previous anti-incontinence procedures including MMK, pubo vaginal slings and bulking agents.

Concluding message

Our initial results suggest that TOT is effective for treating SUI / ISD with good subjective cure rates and patient satisfaction. Most failures were related to immobile urethra and previous anti

incontinence procedures. In those patients, combining TOT and bulking agents resulted in a higher success rate.

References

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