

## **A COMPARISON OF THE TRANSOBTURATOR TAPE AND TRANSABDOMINAL TENSION FREE VAGINAL TAPE PROCEDURES FOR THE SURGICAL TREATMENT OF STRESS URINARY INCONTINENCE.**

### Hypothesis / aims of study

Treatment options for female stress urinary incontinence include behavioural, medical and surgical approaches. The minimally invasive surgical approach of the transabdominal tension free vaginal tape (TVT) has gained widespread acceptance given its low morbidity, short term success rates, and its ability to be done as an outpatient procedure under a local anaesthetic. The transobturator tape (TOT) procedure has been described to minimize the potential complications associated with transabdominal approach through the retropubic space. To date, there has only been one study comparing these two surgical approaches (1). The goal of this study was to compare the surgical outcomes of the TOT approach with the TVT approach.

### Study design, materials and methods

Since the introduction of TOT at our institution, a total of 35 TOT procedures and 40 TVT procedures were done by one surgeon during an 18 month period. All patients were evaluated pre-operatively with multichannel videourodynamics, cystoscopy, and surveys, intra-operatively with cystoscopy, and post-operatively with interviews and surveys.

### Results

There was no significant difference in the mean age (59.6 vs 58.9) or the number of previous incontinence procedures (18 vs 20) in the TOT and TVT group respectively. In the TOT group there were no intra-operative complications while 3 (2 bladder and 1 urethral perforation) occurred in the TVT group. Postoperative short term catheterization was required in 3 patients in the TOT group and 10 patients (excluding the perforations) in the TVT group ( $p=0.062$ ). With a mean follow-up of  $10.4 \pm 4.9$  and  $8.6 \pm 4.6$  months ( $p>0.05$ ), the rates of cure (79 vs 81%), improvement (9 vs 11%), and failure (12 vs 8%) were similar between the TOT and TVT groups respectively ( $p>0.05$ ). De novo urgency occurred in 11.8% of the TOT and 13.5% of the TVT patients ( $p>0.05$ ). In the TOT group there were no vaginal or urethral erosions while there was one of each in the TVT group. Tape excision occurred in 1 TOT and 2 TVT patients. Subsequent tightening of the tape at a later date for persistence incontinence occurred in 2 patients in each group.

### Interpretation of results

Our results are similar to the only published study comparing TOT and TVT where there were no differences in the success rates or complications (1). The short term subjective rate of cure in the TVT group in this study is similar to the published 7-year success rates for TVT (2). Currently, long term studies are not available for the TOT group but in this study the short term success rates were similar to the TVT group. Although not statistically significant, TVT in this study had higher rates of intra-operative and post-operative complications. The complication rates in both groups were low. Prior to the introduction of TOT at our institution, approximately 200 TVT procedures were performed by the same surgeon. This could have biased the complication and success rates in favour of the TVT approach however no significant differences were seen. Longer follow-up is required to compare these 2 approaches.

### Concluding message

TOT and TVT have similar short term efficacy in the surgical treatment of stress urinary incontinence. No significant differences were seen in the complication rates between these 2 approaches.

### References

- (1) Prospective randomized trial comparing tension-free vaginal tape and transobturator suburethral tape for surgical treatment of stress urinary incontinence. *Am J Obstet Gynecol.* 2004; 190(3): 602-8

(2) Seven- year follow-up of tension-free vaginal tape procedure for treatment of urinary incontinence. *Obstet Gynecol.* 2004; 104: 1259-62