

The TVT Procedure as Second-Line Anti-Incontinence Surgery for TVT-Obturator Failure Patients

Menahem Neuman, MD

Abstract

Aim: The aim of this study was to evaluate the effectiveness of the TVT procedure as a second-line anti-incontinence operation for TVT-obturator failure patients.

Methods: Five patients with a urodynamic-diagnosed TVT-obturator procedure therapeutic failure had a TVT operation. Follow-up periods lasted 3 to 11 months.

Results: The 5 TVT patients were completely dry, intraoperative diagnostic cystoscopies were unremarkable, and no perioperative complications were recorded.

Conclusions: The TVT procedure is a safe, easy-to-perform, and effective second-line operation for the cure of post-TVT-obturator persistent urinary stress incontinence. However, long-term data collection is required before drawing solid conclusions regarding this surgical approach for women diagnosed with TVT-obturator failure.

Key Words: TVT, TVT-obturator, therapeutic failure

(*J Pelvic Med Surg* 2006;12:000-000)

The TVT-obturator, a novel anti-incontinence midurethral sling procedure, was designed by Jean de Leval¹ against a background of TVT operative complications.² Among these complications are bladder penetration, postoperative urinary outlet obstruction, and bowel penetration.³⁻⁸ These surgical complications are the result of the fact that the TVT needle passes vertically through the retropubic area, endangering the intimately proximal bladder, bowel, and blood vessels. The newly reported TVT-obturator needle route is conducted through the relatively safe medial compartment of the obturator fossa area, well remote from the pelvic viscera and vessels. TVT failure occur-

rence was earlier reported to be more than 10%, which is on a par with the failure rate of retropubic and sling operations.⁴⁻⁸ The newly launched TVT-obturator procedure should be assumed to entail a similar failure rate. Some authors have proposed the retropubic colposuspension and sling operation as preferable therapeutic approaches for patients with anti-incontinence operative failure. This, however, was not accepted by others as a result of the well-known early and late complications and relatively protracted rehabilitation periods.⁹ Given that most of the TVT failures are attributed to inappropriate placement of the suburethral tape, TVT redo and tape readjustment procedure were reported to be 2 simple, safe, and effective options for the cure of TVT failure patients.¹⁰ The aim of this analysis was to report the efficacy and safety of the TVT procedure as second-line surgery for the TVT-obturator failure patients. This paper describes 5 women diagnosed with failed TVT-obturator who underwent the TVT procedure.

MATERIALS AND METHODS

The TVT-obturator procedure (Gynecare; Ethicon) was performed on a group that included a total of 245 women. The operations were performed by one surgeon from May 2004 to September 2005. All of the women had urodynamically diagnosed urinary stress incontinence. Ten (4.1%) women reporting postoperative urinary stress incontinence had a thorough clinical evaluation, including repeated urodynamic studies and ultrasonography of the urinary tract. Urinary

From Urogynecology, Department of Gynecology, Shaare-Zedek Medical Center, Jerusalem, Ben-Gurion University of the Negev, Assuta Medical Center, Tel-Aviv, and Urogynecology, American Medical Center, Rishon LeZion, Israel.

Reprints: Menahem Neuman, MD, Urogynecology, Department of Gynecology, Shaare Zedek Medical Center, Jerusalem, Israel. E-mail: neuman@szmc.org.il; mneuman@netvision.net.il.

Copyright © 2006 by Lippincott Williams & Wilkins

ISSN: 1542-5983/06/1203-0001

DOI: 10.1097/01.spv.0000217380.23552.22

stress incontinence persistence was confirmed by clinical provocation of urinary incontinence and demonstration of urine leakage on coughing. Those considered to be TVT-obturator failures and having persistent urinary stress incontinence were offered a choice between a course of physical therapy and a TVT procedure according to Ulmsten. Before surgery, informed consent was obtained, including uncertainty regarding the potential problems related to having 2 approximate synthetic slings at the pelvic floor. The follow up on reoperated patients included first- and third-month interviews and pelvic examination with provocation of cough to rule out residual urinary stress incontinence. No additional women subsequently reported this phenomenon at later checkups.

RESULTS

The leak point pressure range was found to be 75 to 110 cm of water, and bladder overactivity was not observed with all of the patients with TVT-obturator failure. Five of the 10 unsuccessful operation group requested to be reoperated. All of these 5 women had the TVT-obturator as a primary corrective surgery for urinary incontinence. Vaginal examination revealed no relaxation of the vaginal walls or tape erosion and the previously placed polypropylene tapes, easily palpated passing horizontally approximately 1 to 2 cm distally to the center of the current surgical field, were not dissected or removed. TVT operations² were performed on these 5 women under general anesthesia, whereas the former tapes caused no surgical difficulties. The procedure lasted 13 to 19 minutes and the women were discharged 6 to 13 hours later. No intraoperative or postoperative complications such as bleeding, infections, tape rejection, tissue erosion, or voiding difficulties were noted. In 3 to 11 months of follow up (average, 7.4 months), none of the 5 women reported either dyspareunia or signs of bladder overactivity, and all were subjectively continent.

DISCUSSION

Surgical failures have previously been reported for earlier types of anti-incontinence operations as well for the TVT procedure.³⁻⁸ Accordingly, one should expect the novel TVT-obturator procedure to have a similar failure rate and should prepare an effective mode of cure for such occurrence. Retropubic colposuspension and sling operations, as a cure for the TVT-obturator failure patients, involve well-known early and late potential complications with a long recovery period.⁵ The TVT procedure, which is well accepted worldwide as a gold standard for the surgical cure of female urinary stress incontinence,¹¹ is a tempting solution for patients with persistent urinary stress incontinence after a failed TVT-obturator operation. Given that the nature of the hammock provided by those 2 midurethral tape operations differs—vertical support with the TVT and horizontal with the TVT-obturator—it is obvious that unintended overcorrection is much more likely to occur with the latter than with the former. Acknowledging that the TVT has a higher potential of causing postoperative outlet obstruction than the TVT-obturator,¹² the author presumed that the TVT entails a higher potential for anti-incontinence than the TVT-obturator. The TVT procedure was therefore chosen as the second-line surgical therapy for TVT-obturator failures. This article reports 5 women diagnosed with USI after a TVT-obturator procedure, in which TVT was used to cure the persistent urine leakage on stress. This appeared to be a simple, safe, and effective approach for dealing with this not infrequent situation.

CONCLUSIONS

On the basis of previously reported data concerning former types of anti-incontinence surgery, TVT-obturator failure should be expected to occur in 10% or more of operations performed. This article reports a safe and simple surgical measure, successfully under-

taken in 5 women, addressing this challenging issue. More experience is needed before widespread use of the technique.

REFERENCES

1. De Leval J. Novel surgical technique for the treatment of female stress urinary incontinence: transobturator vaginal tape inside-out. *Eur Urol.* 2003;44:724-730.
2. Ulmsten U, Henriksson L, Johnson P, et al. An ambulatory surgical procedure under local anesthesia for treatment of female urinary incontinence. *Int Urogynecol J.* 1996;7:81-86.
3. Bodelsson G, Henriksson L, Osseer S, et al. Short-term complications of the tension free vaginal tape operation for stress urinary incontinence in women. *BJOG.* 2002;109:566-569.
4. Kuuva N, Nilsson CG. A nationwide analysis of complications associated with the tension-free vaginal tape (TVT) procedure. *Acta Obstet Gynecol.* 2002;81:72-77.
5. Ward KL, Hilton P. United Kingdom and Ireland Tension-Free Vaginal Tape Trial Group. A prospective multicenter randomized trial of tension-free vaginal tape and colposuspension for primary urodynamic stress incontinence: two-year follow-up. *Am J Obstet Gynecol.* 2004;190:324-331.
6. Neuman M. Tension-free vaginal tape bladder penetration and long-lasting transvesical Prolene material. *J Pelvic Med Surg.* 2004;10:307-309.
7. Grise P, Lobel B, Grall J. Les complications du TVT. *Prog Urol.* 2003;13:144-146.
8. Cody J, Wyness L, Wallace S, et al. Systemic review of the clinical effectiveness and cost-effectiveness of TVT for the treatment of urinary stress incontinence. *Health Technol Assess.* 2003;7:1-189.
9. Nygaard IE, Heit M. Stress urinary incontinence. *Obstet Gynecol.* 2004;104:607-620.
10. Neuman M. Transvaginal tape readjustment after unsuccessful tension-free vaginal tape operation. *Neurourol Urodyn.* 2004;23:282-283.
11. Paraiso MFR, Muir TW, Sokol AI. Are midurethral slings the gold standard surgical treatment of primary genuine stress incontinence? *J Am Assoc Gynecol Laparosc.* 2002;9:405-407.
12. Neuman M. Post tension-free vaginal tape voiding difficulties—prevention and management. *J Pelvic Med Surg.* 2004;10:19-21.

AUTHOR QUERIES

AUTHOR PLEASE ANSWER ALL QUERIES

1