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REVIEW ARTICLES

TRANSOBTURATOR APPROACH FOR THE PLACEMENT OF SUBURETHRAL TAPES (TOT) FOR FEMALE STRESS URINARY INCONTINENCE

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INTRODUCTION

The tension free vaginal tape (TVT), described in 1995 by Ulmsten[1] has initiated a dramatic revolution in the management of stress urinary incontinence in the female by using two concepts totally different from the common wisdom; it is a synthetic polypropylene mesh, placed under the distal urethra. It is now almost 10 years since the first tapes were implanted, and during this time thousands of patients suffering from stress urinary incontinence have been implanted and cured by suburethral tapes. Undoubtedly, this technique has become the most popular way to treat stress urinary incontinence in Western Europe.

Furthermore, it has been shown in a randomized clinical trial[2] to be equivalent to the procedure until now considered the gold standard, the Burch retropubic colposuspension.

However, the TVT tape is not devoid of complications: indeed, it requires a blind passage of large needles from the vaginal incision to the suprapubic area so that a number of complications can occur and, in fact, have been reported[3]. These include bladder perforations, vascular and bowel injuries, some of which have been lethal to the patients, not to mention obstructed voiding requiring division of the tape.

The use of the transobturator approach, while not reducing the risk of obstructed voiding, circumvents almost completely the risk of major injury to intra abdominal organs[3-5].

SURGICAL TECHNIQUE

The TOT can be done as a day case under spinal or general anesthesia which is much more comfortable than local anesthesia. The patient is placed in an exaggerated lithotomy position so that the plane of the perineum is almost parallel to the ceiling of the operating theater.

After careful preparation of the skin (lower abdomen, labia, genito-crural groove, interior aspect of the thighs) as well as the vagina, a 16 Fr. urethral catheter is inserted and a midline vertical 2 cm vaginal incision is made one centimeter behind the urethral meatus. The internal aspect of the vaginal mucosa is dissected with the tip of the Metzenbaum scissors until reaching the inner aspect of the ischio-pubic ramus. The dissection should be wide enough so that the surgeon can pass his (her) index finger in order to palpate the inner aspect of the ischio-pubic ramus. Once this has been done on each side, a short incision is made with the knife in the genito-crural groove 1 cm above the level of the urethral meatus.

The inserter (Emmet needle or Elikal) is introduced into the incision to perforate the obturator membrane until it reaches the tip of the index finger of the surgeon. It is then pushed into the vaginal incision. One of the tape ends is introduced into the eye of the introducer (needle) and the tape is brought out of the cutaneous incision. The same maneuver is done on the other side. Once the tape is below the urethra, the tip of the Metzenbaum scissors is

placed between the urethra and the tape. The tension of the tape is then adapted so that the tape just touches the urethra without any compression.

The vaginal incision is closed with a running 3.0 vicryl suture. The tape ends are transected at the level of the skin incision, and the skin incisions are sutured with one stitch of non-absorbable monofilament 3.0 suture.

A vaginal packing is placed for six hours. The catheter can be removed after eight hours, and, before discharging the patient, the absence of obstructed voiding is checked by measuring the post-void residual.

There is no need to use any kind of post-operative antibiotics.

RESULTS

Several hundreds of patients have undergone the TOT procedure[4-6], and in one randomized clinical trial it was shown that there was absolutely no difference as far as obstruction was concerned, but a significant difference in morbidity in favor of the transobturator tape[4-7].

However, it is of the utmost importance:

1. To check that the patient has sterile urine before surgery.

2. To perform a very energetic preparation and disinfection of the genito-crural areas; two cases of perineal suppuration with vaginal discharge, vaginal erosion and secondary extrusion of the tape have recently been reported.

CONCLUSION

The transobturator approach is a simple and effective way to place the suburethral tape for stress urinary incontinence. It avoids the necessity for peroperative cystoscopy. It is totally devoid of the risk of major intra-abdominal complications. It should therefore be considered as the preferred way of placing suburethral tapes, particularly in patients who have undergone previous pelvic surgery.

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