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VOIDING PATTERN AFTER 'U-METHOD' TVT-SECUR: IS IT OBSTRUCTIVE?

Hypothesis / aims of study

Stress urinary incontinence (SUI) is a common problem affecting women of all ages. The last generation of midurethral slings, the tension-free vaginal tape system (TVT-Secur™, Gynecare, Ethicon, NJ, USA) was introduced in 2005 in an attempt to lower the complication rates. There are two surgical techniques currently used either the 'hammock' or the 'U-method' technique. With the latter, the sling is tightened as to create a 'pillowing effect' on the urethra until obtaining a negative stress test. Short term current results of this surgical option seem promising, however, no study ever reported on the voiding function after its implantation. This is a retrospective, clinical study in which the main objective is to evaluate if this method creates an obstructive pattern on pressure-flow study 12 months after the surgery.

Study design, materials and methods

The population consisted of 33 women operated between October 2007 and April 2009. The implantation of the TVT-Secur™ system was done under local anesthesia by a single surgeon, using the 'U-Method' technique. Patients were evaluated before and 12 months after the surgery with regard to different urodynamic findings including uroflowmetry (UFM), postvoiding residual volume (PVR), filling cystometry (CMG), pressure-flow studies and valsalva leak point pressures (VLPP).

Results

To date 29 out of 33 patients have completed their 12-month urodynamic evaluation. The mean (± standard deviation [SD]) age of the population was 63 (± 9) years old, 21.2 % (7/33) complained of genuine SUI and 18.2 % (6/33) had undergone a previous anti-incontinence surgery. At 12 months post-op, median satisfaction rate was 98.5% (range 0-100), the overall subjective improvement rate (defined as an amelioration of more than 50% of symptoms) was 93.8% (30/32) while 71.9% (23/32) reported being cured (defined as no leakage at all). The objective cure rate (defined as no leakage at all during the VLPP) was 58.6% (17/29) while 37.9% (11/29) of the subjects were objectively improved (defined as leakage which occurred at a higher volume or higher bladder pressure than the preoperative VLPP). UFM and PVR were not affected by the surgery. The pressure-flow studies weren't obstructed in all evaluated subjects (28/28). No patients developed de novo urge incontinence at 12 months.

Interpretation of results

The subjective and objective success rates in our study (93.8% and 96.5% respectively) are higher than those described in the previous litterature. [1,2] Perhaps this is because we used the 'U-method' technique while the other studies mostly used the 'hammock' technique.

Our results are comparable to the success rate of the other conventional slings currently on the market. [3] These results confirm that even though the TVT-Secur™ sling is tighten in such a manner it does not result in an obstructive flow study nor a significant long term postvoiding residual volume.

Concluding message

Midurethral TVT-Secur™ slings represent an appropriate option for patients suffering from SUI. They are not associated with any significant bladder obstruction nor long term urinary retention while having very similar cure rate as the other midurethral slings. To our knowledge, this is the first study comparing preoperative and postoperative urodynamic findings in patients with 'U-method' TVT-Secur™ midurethral sling.

References

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
Is this a Randomised Controlled Trial (RCT)?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Le comité d'éthique de la recherche en santé chez l'humain du CHUS et de l'Université de Sherbrooke (the Ethical Comity on human health research of the CHUS and Sherbrooke University)**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**