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ORIGINAL ARTICLE

Impact of transobturator vaginal tape on female stress urinary incontinence and sexual function

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KEYWORDS

TOT;
Stress urinary incontinence;
Female sexual function;
FSFI;
Menopause

ABBREVIATIONS

FSD, female sexual dysfunction;
FSFI, Female Sexual Function Index;
ICIQ-SF, International Consultation of Incontinence Questionnaire-Short Form;

Abstract ***Objective:*** To evaluate the effect of vaginal transobturator tape (TOT) on female stress urinary incontinence (SUI) and sexual function.

Patients and methods: In all, 145 patients with SUI underwent TOT repair using the 'outside–in' technique. All patients had been sexually active in the previous 6 months. Patients were evaluated by history, routine laboratory investigations, cough stress test, abdominopelvic ultrasonography, and full urodynamic studies. The preoperative data assessed included: age, parity, body mass index, menopausal status, and Stamey grade of SUI. The intraoperative data assessed included: operative time, blood loss, and hospital stay; intra- and postoperative complications were also assessed. At 2 weeks after discharge, patients were followed-up with a routine examination and cough stress test. After 6 months' patients were assessed by urodynamic studies, maximum urinary flow rate, post-void residual urine volume. The following questionnaires were completed before and at 6 months after TOT insertion: International Consultation of Incontinence Questionnaire-Short Form (ICIQ-SF), Urogenital Distress Inventory-Short Form (UDI-6), and Female Sexual Function Index (FSFI).

Results: All sociodemographic data of the 145 patients were collected. According to ICIQ-SF scores, 122 patients were cured, 19 had improved, and four failed. There

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PPIUS, Patient Perception of Intensity of Urgency Scale;
PVR, post-void residual urine volume;
Q_{max}, maximum urinary flow rate;
UDI-6, Urogenital Distress Inventory-Short Form;
(S)UI, (stress) urinary incontinence

were significant improvements in the UDI-6 and FSFI scores, indicating that the women had significant improvement in their sexual life. There were six cases of urinary tract infection, five cases had a fever, and eight patients complained of groin or thigh pain postoperatively.

Conclusions: Correction of SUI using TOT appears to have a positive effect on female sexual function.

Introduction

Urinary incontinence (UI) is a common problem affecting women and 25–45% of adult women have UI, with ~50% of them having stress UI (SUI) [1]. UI frequently negatively impacts on the sexual function of the patients whatever the type of UI [2]. This may be explained by various reasons, e.g. diminished libido, dyspareunia, recurrent dermatitis, and it may also affect lubrication and orgasm [3]. Additionally, urine leakage during intercourse indirectly diminishes sexual function [4].

Over many years, various procedures have been introduced for the treatment of SUI, with modifications to minimise associated morbidity [5]. Transobturator tape (TOT) 'outside–in' or (TVT-O) 'inside–out' became popular procedures, focusing on managing the UI regardless of its effect on female sexual function [6]. Different views have been reported on the issue of SUI surgery on the sexual function of the women [7]. In literature, the effect of surgery varies between improvement, no change, or even deterioration of female sexual function [8].

TOT, using synthetic tape, for the repair of SUI is a procedure that has become controversial, especially with respect to its effect female sexual function. Some report that it worsens sexual function due to narrowing of the vagina, increases pain and dyspareunia, and also partners can feel the tape during intercourse [9,10]. Others report that it improves sexual function, as it is considered a minimally invasive procedure that stops urine leakage during intercourse, decreases dermatitis, and thus increases sexual desire [11].

There is still a paucity of data on the role of TOT and its effect on female sexual function [3]. Thus, in the present study we evaluated the TOT procedure for the treatment of SUI and its effect on female sexual function.

Patient and methods

In all, 145 female patients with SUI were included in this prospective study after approval of the local ethics committee, from April 2013 to April 2015. All the included patients had SUI and were sexually active in the 6 months before TOT insertion. Women with detrusor overactivity; mixed UI, in which urgency was predominant; Grade 3 or 4 pelvic organ prolapse; previous UI or prolapse surgery; neurological disorders; active vaginal infection; female genital system malignancy; and previous pelvic irradiation were excluded from the study.

Preoperatively the patients were routinely evaluated with a medical and surgical history, physical and neurological examination, routine laboratory investigations, abdominopelvic ultrasonography (for exclusion of any other pathology), cough stress test with the bladder semi-full, and full urodynamic studies [flowmetry, cystometry, Valsalva leak-point pressure (VLPP)]. Grading and severity of SUI was assessed according to Stamey grading system [12]. Patients were evaluated before and at 6 months after TOT insertion using the following questionnaires: the Arabic versions of the International Consultation Of Incontinence Questionnaire-Short Form (ICIQ-SF) [13]; Urogenital Distress Inventory Questionnaire-Short Form (UDI-6) [14,15]; and the Female Sexual Function Index questionnaire (FSFI) [16] to evaluate sexual activity, the score is obtained from six domains and the final score calculated by multiplying the sum by the domains, a score of <26 is considered as impaired sexual function [17]. Also, the Patient Perception of Intensity of Urgency Scale (PPIUS) [18] was used.

Procedure

For the TOT procedure a transobturator mid-urethral sling system (Johnson & Johnson Co., New Brunswick, NJ, USA) was used. Under spinal or general anaesthesia (when there was contraindication to spinal anaesthesia) patients were positioned in dorsal lithotomy, a urethral catheter was inserted and then a 1.5-cm vertical incision in the anterior vaginal wall 1 cm below the external meats was made. Then, the left and right lateral vaginal walls were dissected until the level of the obturator membrane, with another two right and left incisions were made in the inguinal crease at level of the clitoris.

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