

Stres üriner inkontinans olan bayan hastalarda dıştan içe yöntemiyle transobturator teyp tekniği

Transobturator tape "outside-in" technique in surgical treatment of female stress urinary incontinence

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Özet

Amaç: Stres üriner inkontinans tedavisinde kullanılan transobturator teyp (TOT) uygulaması ile ilgili deneyimlerimizi ve kısa dönem sonuçlarımızı paylaşmayı amaçladık.

Gereç ve Yöntemler: Kliniğimize Temmuz 2011-Eylül 2013 tarihleri arasında stres üriner inkontinans (SÜİ) nedeniyle başvuran ve TOT uygulanan 58 hasta retrospektif olarak değerlendirildi. TOT, dışarıdan içeriye olacak şekilde I-Stop kiti ile uygulandı. Olguların demografik özellikleri, muayene bulguları, öksürük stres testi, ameliyat verileri, postoperatif komplikasyonlar ve yaşam kalite anket sonuçları kaydedildi.

Bulgular: Ortalama yaşları 37-70 yıl arasında değişen toplam 58 hasta çalışmaya alındı. Ortalama ameliyat süresi 30,3±7,4 dakika, hastanede kalma süresi 2,06±1gün olarak saptandı. Olguların 8'inde (%13,7) komplikasyon görüldü. Majör komplikasyon olarak 1 olguda (%1,7) mesane perforasyonu görüldü. 2 olguda (%3,4) bacak/kasık ağrısı, 2 olguda (%3,4) idrar yolu enfeksiyonu, 3 olguda (%5,1) da denovo urgency gelişti. Ortalama takip süresi 6,2±3,4 ay idi. Objektif kür oranı %86,2 olarak bulundu. Kontroller sonunda, yaşam kalite değerlendirmesinde ameliyat öncesine göre istatistiksel olarak anlamlı düzelme saptandı (p<0,05).

Sonuç: TOT, uygun endikasyonlarda kolay uygulanabilirliği, ameliyat başarısı ve yaşam kalitesini artırma açısından etkin, düşük komplikasyon oranları ile güvenilir bir yöntemdir.

Anahtar Kelimeler: stres inkontinans, transobturator tape, stres teyp.

Abstract

Objective: We aimed to share our experience and short-term outcomes related to transobturator tape (TOT) application in treatment of stress urinary incontinence.

Materials and Methods: In this study, 58 patients who applied to our clinic between July 2011-September 2013 due to stress urinary incontinence (SUI) and who underwent operation for TOT were evaluated retrospectively. TOT were placed outside-in with I-STOP kit. Demographical properties, examination findings, cough stress test results, operation data, postoperative complications and life quality survey scores were recorded in each case.

Results: Totally 58 patients were included in the study. Their age varied between 37-70 years. Mean operation time was 30.3±7.4 minutes, mean hospital stay was 2.06±1 days. Eight (13.7%) patients had complications. As a major complication, 1 patient (1.7%) had bladder perforation. Two (3.4%) patients developed leg/groin pain, 2 (3.4%) patients developed urinary tract infection and 3 (5.1%) patients developed de novo urgency. Mean follow-up time was 6.2±3.4 months. Objective cure rate was calculated as 86.2%. At the end of controls, according to evaluations of life quality assessment survey results, statistically significant improvement was found compared to preoperative period (p<0.05).

Conclusion: TOT is an effective treatment method in terms of easy applicability in appropriate indications, operation success and life quality improvement, and is safe with low complication rates.

Key Words: stress urinary incontinence, transobturator tape, stress test.

Geliş tarihi (Submitted): 03.08.2015

Kabul tarihi (Accepted): 09.09.2015

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Introduction

SUI is unintentional leakage of urine during activities such as coughing, sneezing and laughing, which affects social, psychological and sexual lives of approximately 16% of women (1,2). Although the etiology of SUI is not very clear yet, advanced age, pregnancy, giving birth, obesity and impaired collagen turnover are major factors (2). One study that is performed in urology and gynecology-obstetrics clinics in Turkey indicates female stress urinary incontinence is a common condition with a rate of 35% (3). This rate is similar to what is seen in European countries (4). Main purpose of the surgical treatment in SUI is to maintain continence with minimal morbidity. New and minimal invasive surgical methods for the treatment of SUI are being introduced continuously. As one of these techniques, TVT (tension-free vaginal tape) was described in 1995 by Ulmsten (5). Although the success rates of this method vary between 84%-95%, there are some issues regarding the safety of operation (6,7). These concerns are related with the blind passage of the trocar through retropubic space during TVT procedure (8,9). Because of these complications, tension-free obturator tape, TOT was described in 2001 by Dolermo (10). In this technique, the tape is passed through obturator foramen and placed on middle urethra.

We aimed to present operative and functional outcomes in the first cases, in whom TOT were placed after diagnosis of SUI.

Material-Method

Fifty eight patients who underwent TOT operation in our clinic between July 2011- September 2013 for the diagnosis of SUI were investigated retrospectively. All patients were informed about the procedure in detail, and their consent were obtained. Medical history, physical examination, urinalysis, measurement of residual urine after urination, cough-stress test were performed at the preoperative evaluation; VAS (visual analog scale), UDI-6 (Urinary Distress Inventory short form), IIQ-7 (Incontinence Impact Questionnaire short form) surveys were used for life quality assessment. Cough-stress test was performed in semi-lithotomy position by making the patient cough after filling the bladder with 200-300 ml serum physiological. Urodynamic examination was not performed in any patient since there was no indication in any of them. Patients who had

vaginitis and growth in their urinary culture were operated after their infection had been treated. Patients who had post-voiding residual volume greater than 100 cc, who had accompanying pelvic organ prolapse, who had history of previous pelvic surgery, who had radiotherapy to pelvic region were excluded from the study. Operations were performed under spinal or general anesthesia. Surgical prophylaxis was performed with quinolone class antibiotics. Operation technique was outside-in, as described by Delorme. As tape, monofilament macropore propylene mesh (I-STOP, CL, medical) was used in all patients. Following operation, mesh was placed in vagina as tampons. On the postoperative 1st day, transurethral catheters and vaginal tampons were withdrawn. Evaluation at the postoperative controls was made by clinical course, cough-stress test and life-quality assessment surveys (VAS, UDI-6, IIQ-7). Patients were called for controls at 1st and 3rd months postoperatively, and urogynecological examinations were made. Operation success and perioperative complications were evaluated and recorded. During postoperative controls, patients with negative cough-stress test who did not have complaints of incontinence were accepted as "objective cure", and patients with positive stress test who did not have complaints of incontinence however, were accepted as "subjective cure". If patients' complaints of incontinence persisted, it was accepted as "failure". Statistical analyses were carried out on SPSS 18.0 statistics software. Statistical significance was analyzed using Wilcoxon signed rank test.

Results

Totally 58 patients aged between 37-70 years were included in the study. Mean age was 52.2 ± 6.6 years. Mean hospital stay length, mean operation time and mean follow-up time are presented in Table 1.

Perioperative and postoperative complications were observed in totally 8 (13.7%) patients. Perioperative and postoperative complications are shown in Table 2. As a major complication, bladder perforation was observed in 1 (1.7%) patient. Diagnosis was confirmed with inspection and cystoscopy, and primary repair was performed via intravaginal approach; bladder catheterization was performed for 4 days. Two (3.4%) patients developed leg/groin pain, and it resolved without any intervention. Three (5.1%) patients developed urgency, and it was corrected with anti-cholinergic treatment. Two (3.4%) patients had

Table 1. Demographical properties of patients.

	$\bar{X} \pm SD$	$X_{min} - X_{max}$
Age (years)	52.2±6.6	37-70
Operation time (min)	30.3±7.4	20-42
Hospital stay length (day)	2.06±1	1-4
Mean follow-up (month)	6.2±3.4	2.3-12

Table 2. Perioperative and postoperative complications.

Complication	f	%
Bladder perforation	1	1.7
Urinary tract infection	2	3.4
Urgency	3	5.1
Leg/groin pain	2	3.4
Total	8	13.7

Table 3. Preoperative and postoperative 3rd month life quality assessment survey results.

	Preoperative	Postoperative	p
VAS	8.2±1.1	1.8±1.2	0.001*
UDI-6	11.8±1.6	3.4±1.7	0.001*
IIQ-7	15.5±1.8	2.7±2.5	0.001*

p<0.05* Wilcoxon signed rank test

Table 4. Cure and failure rates after operation.

	f	%
Objective cure	50	86.2
Subjective cure	6	10.3
Failure	2	3.5
Total	58	100.0

urinary tract infections and it was treated with medical treatment.

According to preoperative and postoperative evaluations of patients with life quality assessment surveys, there was significant improvement in survey results. Life quality assessment survey results are shown in Table 3.

Postoperative objective cure was calculated as 86.2%, subjective cure was determined as 10.3%, failure was calculated as 3.4% in patients (Table 4).

Discussion

Although there are many surgical techniques described in literature for treatment of SUI, TOT has gained popularity among minimal invasive methods due to its easy applicability, high treatment success and lower rates of complications (11). Göynümer et al. reported objective cure rate as 86% and failure as 9.5% (12). According to review of literature, cure rates after TOT operations range between 84% to 93% (13,14). We had similar objective cure rate (86.2%) in our study, and failure rate was 3.4%. There is a good correlation between objective cure and degree of

satisfaction (15). However, life quality assessment surveys are more sensitive for evaluation of subjective cure and long-term outcomes (16). Among life quality assessment surveys, UDI-6 evaluates urinary symptoms, whereas IIQ-7 evaluates daily life activities (1). In our study, there was significant improvement in VAS, UDI-6 and IIQ-7 scores compared to preoperative values (p<0.05).

Perioperative complications such as bladder perforation, vascular and intestinal injury, neural damage, hematoma development can be observed during TOT operation. Postoperative complications include urinary tract infections, bleeding, dysuria, leg and groin pain, voiding disorders, urgency, dyspareunia and complications related to mesh erosion. Arrabal-Polo et al. reported complication rate as 12% (17). In our study, this rate was found as 13.7%, which is consistent with other reports in literature. Bladder injury rates in TVT vary between 0-23%. In one multi-centric study conducted in France that involved 12280 cases, bladder injury rate was reported as 7.3% (18). Various rates have been reported in TOT procedure. Spinosa et al. reported there was no bladder injury in their 117 case series (18). Wang et al. reported 1 bladder injury in their 70 case series (16). In our study, bladder injury was detected in only 1 patient.

The most serious complication that occurs after TOT operations is bleeding. In our study, there was no bleeding requiring transfusion. De novo urge incontinence which is rarely observed following TOT operations shows that obstructive effect of TOT operation is minimal. In our study, rate of de novo urge affecting life quality was determined as 5.1%, which is in consistent with other reports (19-20). The most common early postoperative complication is urinary retention. It is usually transient and recovers without need for any intervention. While urinary retention is observed in 8-17% of cases in TVT, this rate is 0-15% in TOT (1-20). In our study, none of the patients developed urinary retention. Mean follow-up time was 6.2±3.4 months. Patients were called for control at 1st and 3rd months. Ratio of leg/groin pain observed at the early period ranges between 2.3-30% (21-22). Occurrence of this pain can be explained by exit region of the tape being in close proximity to the origin of gracilis and adductor muscles (21-23). In our study, leg/groin pain was observed in 3.4% of the cases. Vaginal tape erosion is observed in 3.6-15% of cases following TOT operation (5-24). The most accepted reason for tape erosion

is the property of the tape that is used. It has been proposed that tapes with pores smaller than 50 µm prevent migration of macrophages and fibroblasts, resulting in erosion of the tape (17). We used I-STOP tapes with 75µm pore size in our cases. We did not detect vaginal tape erosion in any patient during controls.

In conclusion, we think TOT is efficient, reliable and easily applicable method that improves life quality in treatment of urinary incontinence.

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