

Does minimally invasive hysterectomy add benefit for patients undergoing transobturator tape procedure

Transobturator tape prosedürü ile birlikte yapılan minimal invazif histerektominin ürolojik sonuçlara bir faydası var mıdır?

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Abstract

Objectives: Stress urinary incontinence is a severe problem needs to be addressed especially in elder patient population. Usually pelvic relaxation is an accompanying issue either corrected alone or concomittant with incontinence treatment. This study aimed to find out whether concomittant hysterectomy makes any difference in transobturator tape incontinence surgery outcomes.

Material and Methods: This study included 66 patients with isolated stress urinary incontinence. Two groups formed either with transobturator tape placement alone or transobturator tape placement with minimally invasive hysterectomy. Treatment outcomes evaluated with UDI-6 and IIQ-7 questionnaires.

Results: It is found that there is no additional benefit to urinary incontinence treatment with hysterectomy performed in same session with transobturator tape placement.

Conclusion: Minimally invasive hysterectomy for pelvic relaxation surgery can be performed safely and knowing that it won't change the outcomes of transobturator tape placement.

Keywords: Transobturator tape, Hysterectomy, Minimally invasive surgery, Stress urinary incontinence

Özet

Amaç: Stress üriner inkontinans özellikle yaşlı popülasyonda değinilmesi gereken önemli bir sorundur. Genellikle inkontinansa eş zamanlı veya başka bir operasyon ile düzeltilmesi gereken pelvik relaksasyon eşlik etmektedir. Bu çalışmada Trans Obturator Tape (TOT) uygulanması ile eş zamanlı yapılan minimal invazif histerektominin inkontinans üzerine bir fark oluşturup oluşturmayacağını görülmesi planlanmıştır.

Gereç ve Yöntemler: Yalnızca stress inkontinansı olan 66 hasta çalışmaya dahil edilmiştir. Hastalar sadece TOT uygulaması veya histerektomi ve TOT uygulaması şeklinde gruplara ayrılmıştır. İnkontinans değerlendirilmesinde UDI-6 ve IIQ-7 testleri kullanılmıştır.

Bulgular: TOT uygulaması sırasında yapılan minimal invazif histerektominin stress inkontinans üzerine ek bir faydası veya zararı görülmemiştir.

Sonuç: Minimal invazif histerektomi TOT uygulamasına güvenle eşlik edebilir ancak TOT başarısına herhangi bir artış getirmemektedir.

Anahtar Kelimeler: Transobtüratör bant, Histerektomi, Minimal invazif cerrahi, Stres idrar kaçırma.

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Introduction

Stress urinary incontinence (SUI) is the involuntary leakage of urine as a response to the increase in intra-abdominal pressure. Although prevalence of SUI is around one in six women, especially in elder population, presentation of these patients with this specific complaint is relatively low because of embarrassment, depression and social isolation it can cause [1].

Until today there are a couple of treatment methods defined for SUI including Burch colpo-suspension, tension free vaginal tape, peri-urethral bulking agent injection. Trans-obturator tape (TOT) procedure is one of them and a commonly used mid urethral sling operation first described by Delorme for SUI [2]. There are lots of studies showing results up to 5-10 years, for its safety and success for the treatment of SUI [3].

Pelvic relaxation and accompanying pelvic organ prolapse is another frustrating problem for women especially for elder ages. Treatment for prolapse can be done either surgically such as correction of cystocele, rectocele and even hysterectomy or medically such as pessary in-

sertion, physical therapy for muscle strengthening [4].

In this study we aim to find if there are any differences between placing TOT alone for SUI and placing TOT with minimally invasive hysterectomy (either laparoscopic or vaginal).

Material and Methods

This is a prospective, single institution and single surgeon experience study done between 2013-2015 in a community based hospital setting. Inclusion criteria were severe symptomatic SUI and accompanying grade 1 - 2 (Baden-Walker classification system) uterine relaxation. Grade 1 defined as cervix located midway between hymen and posterior fornix with mild traction, whereas grade 2 defined as cervix located at the level or just behind the level of hymen with mild traction. Pelvic organ prolapse quantification system (POP-Q system) was used for scoring cervix point (C point) also noted for statistical analyses. 78 patients with symptoms of pelvic relaxation and pure stress incontinence were selected for surgery. Hysterectomy offered to all patients because of their symptomatic uterine prolapse. Patients having had other possible confounding factors to stress incontinence such as uterine fibroids and adhesion forming other past abdominal surgeries were kept out from study. Cases without any uterine descent, hysterectomy performed to uterus without any descent for different indications and cases with total prolapsus excluded from study.

Patients divided into two groups as one group having TOT alone, who refused to undergo hysterectomy for various reasons, the other group having TOT concomitant with either vaginal or laparoscopic assistant vaginal hysterectomy (LAVH). All TOT procedures were performed in the outside-in manner as described previously by Delorme [2]. LAVH was performed for indicated salpingo-oophorectomies. Cystocele and rectocele repair were performed for individualized patients needs. All patients had urinary catheter in place for a night following surgery removed in the next morning (< 24 hours). There was no complaint of urinary retention. No major surgical complication occurred.

A dedicated trained nurse administered urinary distress inventory 6 (UDI-6) and incontinence impact questionnaire 7 (IIQ-7) questionnaires (both have validation for Turkish population [5]) in a face-to-face manner.

Table 1. UDI-6 Questionnaire presented to patients

UDI-6	Aşağıda belirtilen olayları yaşıyorsanız sizi ne kadar rahatsız ediyor?	Hiç	Az	Orta	Fazla
	Sık idrara çıkma?	0	1	2	3
Sıkışma hissi ile idrar kaçırması?	0	1	2	3	
Fiziksel aktiviteye bağlı (öksürme, hapşırma) idrar kaçırma?	0	1	2	3	
Az miktarda idrar kaçırma?	0	1	2	3	
İdrar kesesini boşaltmada zorluk?	0	1	2	3	
Genital bölgede rahatsızlık veya ağrı?	0	1	2	3	

Table 2. IIQ-7 Questionnaire presented to patients

IIQ-7	İdrar kaçırması veya sarkıklık sizi nasıl etkiledi?	Hiç	Az	Orta	Fazla
	Ev işleri yapma kabiliyetinizi?	0	1	2	3
Yürüme veya egzersiz yapma kabiliyetinizi?	0	1	2	3	
Eğlence aktivitelerine katılma kabiliyetinizi?	0	1	2	3	
Araba ile 30 dakikadan fazla seyahat etme kabiliyetinizi?	0	1	2	3	
Sosyal aktivitelere katılmama kabiliyetinizi?	0	1	2	3	
Duygusal sağlık durumunuzu?	0	1	2	3	
Sizi sinirli hissettiriyor mu?	0	1	2	3	

All patients consented and all appropriate permissions obtained from local ethics committee. Questionnaires administered one just before surgery and three others on the consecutive follow up visits. Total of 12 patients excluded because of missing follow up visits. Patients' demographic variables such as age, menopausal status, gravidity, parity, type of previous operations, hospitalizations were also noted.

Statistical analyses were carried out by using SPSS ver. 20.0 (SPSS Inc., Chicago, IL, USA). Students t test, Mann-Whitney U test and Friedman test were used where appropriate. A p-value of <0.05 was used to express the statistical significance.

Results

Mean age of patients was 46.93±6.88. 35 patients had TOT with hysterectomy (group A) and 31 had TOT alone (group B). Comparison of patient demographics with different variables is shown in table 1.

There was no statistically significant difference between groups on the mean day showing up for follow up visits as shown in table 2. Level of uterine descensus was similar in between groups. Group A had a mean C value of 2.95±1.75, on the other hand group B had mean value of 3.70±1.17 (p=.160)

One patient 30 years old, who had TOT alone, did not show any improvement on her symptoms also reflected as increase in UDI-6 and IIQ-7 scores. All other patients showed various kinds of improvements for their symptoms. Mean values obtained with UDI-6 and IIQ-7 scores demonstrated in table 3 and table 4 separately.

As shown in tables 3 and 4 there was no significant difference between placing TOT alone or with minimally invasive hysterectomy for correction of SUI. There is also no significant difference between groups when patients divided into subgroups depending on their menopausal status. Premenopausal patients comparison results with p values for IIQ-7 on first, second and third visit were (.822, .873, .392) consecutively. Postmenopausal patients comparison results with p values for IIQ-7 on first, second and third visit were (.126, .820, .846) consecutively. Differences of UDI-6 scores were also similar between groups on menopausal status.

Discussion

Transobturator tape placement for mid urethral sup-

Table 3. Comparison of means for some demographic parameters.

	TOT	TOT with Hysterectomy	P
Age	44.61±8.26	49.36±3.94	.001
Body Mass Index	27.29±2.91	28.27±3.29	.473
Parity	3.43±1.34	4.23±1.54	.290

Table 4. Follow up visit timing (days) comparison between groups.

	Group A Mean (Median)	Group B Mean (Median)	P
First visit	38.28±9.96 (33)	46.96±15.04 (18)	.393
Second visit	174.72±40.3 (179)	189.74±30.77 (98)	.467
Third visit	455±90.68 (403)	547.82±73.15 (466)	.420

Table 5. IIQ-7 scores compared between groups on follow up visits and pre operatively.

IIQ-7	Group A Mean	Group B Mean	p
Pre operative	15.05±2.26	16.74±1.91	.256
First visit	3.23±3.61	2.74±4.49	.327
Second visit	1.77±2.2	2.74±3.95	.757
Third visit	1.45±2.32	3±4.16	.290

Table 6. UDI-6 scores compared between groups on follow up visits and pre operatively.

UDI-6	Group A Mean	Group B Mean	p
Pre operative	14.5±2.48	15.26±1.96	.294
First visit	4.18±2.81	2.61±3.43	.019
Second visit	3.64±2.68	2.65±3.83	.059
Third visit	2.45±2.82	2.74±4.19	.745

port is one of the standard techniques for correction of SUI. There are some studies suggesting that TOT can be safely and effectively placed with other vaginal surgeries such as vaginal hysterectomy and cystocele, rectocele repair [6,7]. Our results showed similarity on concomitant surgery with other studies done prior to ours, such as 82 patient study for vaginal hysterectomy plus anterior – posterior colporrhaphy and another study with 59 patients underwent vaginal hysterectomy alone [7,8]. Also there are some other studies suggesting the efficiency of using similar technique tension free vaginal tape (TVT) with other vaginal and laparoscopic surgeries [9,10]. This study brought an answer to the question of whether TOT is either more effective, as evaluated from patient per-

spective, when placed right after hysterectomy surgery or not.

Although demographic parameters were mostly similar between groups, significant difference on age can be an expected result. Even though all patients were offered hysterectomy for correction of uterine relaxation, elder patients were more willing for a hysterectomy procedure than younger ones.

The reason behind using two different questionnaire techniques was to understand even the slightest difference in between IIQ-7 and UDI-6. Results were similar except UDI-6 showed a significant difference on first follow up visit when compared to second and third visit results. This difference can be attributed to the ability of UDI-6 questionnaire understanding possible short-term de novo urge incontinence better than IIQ-7.

Results showed that there was no significant difference between placing TOT alone and combining TOT with minimally invasive hysterectomy for a follow up period around 18 months. Even though there is no evidence supporting that post operative intra-abdominal adhesions can influence SUI, only minimally invasive hysterectomy patients included to study to minimize the possible effect of adhesions.

Compared to other studies done on the effectiveness of TOT this study has some drawbacks such as limited number of subjects on both groups, lack of urodynamic evaluation preceding surgery and relatively short follow up times. Even though cystocele repair was part of most operations including TOT alone or concomitant surgery, study was not designed to express its possible effect on TOT success. There are studies showing the safeness and effectiveness of concomitant surgery of cystocele repair and TOT placement in the literature (11). Only including patients with mild uterine prolapse, with no significant difference on C values, and being single surgeon experience study constitutes the stronger parts. Better comparison results can come up from long term, larger and prospective studies.

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