Comparison of Performing and Not-Performing the Prophylactic Surgery for Urinary Incontinence in Advanced Pelvic Organ Prolapse

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Abstract

Objectives: To compare the performing and not-performing of prophylactic surgery for urinary incontinence in women with pelvic organ prolapse.

Materials and Methods: In a randomized controlled clinical trial that performed in department of Gynecology and Obstetrics of Tabriz University of Medical Sciences on women with advanced pelvic organ prolapse without history of urinary incontinence. The effects of performing and not-performing of prophylactic surgery for urinary incontinence in women with advance pelvic organ prolapse evaluated.

Results: Mean age of patients was 53.83±5.52 years in the range of 41-66 years. Mean ICIQ-SF questionnaire scores at the first three questions in patients with pelvic organ prolapse with prophylactic surgery was 0.50±1.54 and in patients with pelvic organ prolapse without prophylactic surgery was 0.86±2.02. Significant difference was not found at the answers to the first question (P=0.507), the second question (P=0.415) and to the third question (P=0.445) ICIQ-SF questionnaire of in the patients advance pelvic organ prolapse underwent surgery for pelvic organ prolapse with and without prophylactic surgery.

Conclusion: As regards, a significant difference was not found in the prevention of urinary incontinence between groups with and without prophylactic surgery. Therefore, prophylactic surgery is not recommended routinely for all patients and only we will attempt to do this surgery in symptomatic patients and reduced the additional costs and complications associated with prophylactic surgery in other patients who actually did not need to do this surgery.

Keywords: Pelvic Organ Prolapse, Prophylaxis, Urinary Incontinence
year cure rate of 84% for this method (16). In the conducted survey, we found only few studies evaluating the results of preventive surgery for the treatment of urinary incontinence associated with prolapse, with regard to the importance of the prevention of SUI and its treatment, we designed this study to evaluate the results of preventive surgery for urinary incontinency in women with advanced pelvic organs prolapse.

Materials and Methods
In a controlled randomized trial in the gynecology department of Tabriz University of Medical Sciences on the women suffering the advanced prolapse of pelvic organs the effect of preventive surgery for urinary incontinency was evaluated.

Sample size and Sampling method
A total number of 60 patients with advanced prolapse of pelvic organs who had no history of urinary incontinency, patients were randomly assigned into two groups, the first group underwent the preventive surgery for urinary incontinency and no intervention was done on the patients in the other group. The results of examinations and ICIQ-SF questionnaires was recorded for all patients before and after the surgery and the follow up was done in order to check the SUI occurrence and the complications by telephone or by attending in the clinic.

Inclusion criteria
Women with advanced prolapse of pelvic organs without symptoms of urinary incontinency.

Exclusion criteria
Women with advanced prolapse of pelvic organs with symptoms of urinary incontinency; women who were not candidates for surgery due to illnesses (cardiac, pulmonary, etc.). The variables included age and SUI occurrence after the surgery.

Ethical considerations
All the diagnosis and treatments were based on the or follow-up and treatment guidelines so it did not impose any additional costs on patients. The patients were ensured that all the data are kept confidential and they were free to leave the study in any time during the study.

Statistical analysis
We used descriptive analysis (frequency, percent, mean ± SD), and Chi-Square and the mean difference tests for comparing the data between two groups. All the analysis was done using SPSS 16 statistical software. The P value considered meaningful in less than 0.05.

Results
The study, conducted on 60 women aged 41 to 66 years with mean age 53.83±5.52 years (Figure 1). None of the patients had suffered from urinary incontinence preoperatively. The answers of patients for ICIQ-SF questionnaire after pelvic organ prolapse surgery in patients with prophylactic surgery:

First question: How often did you have urine leak?
27 patients (90%) had no urine leak, 1 patient (3.33%) had urine leak once a week, and 2 patients (6.66%) had urinary leakage 2 or 3 times a week. In 25 patients (83.33%) patients had no history of urine leak in 4 patients (13.33%) had urine leak as frequent as once a week and 1 patient (3.33%) had urine leak 2 or 3 times a week. The difference in the two groups of study (prophylactic surgery group and control group) in response to this question was not statistically significant (P=0.507).

Second question: How much is the urine leakage?
The response of patients in prophylactic surgery group was: in 27 patients (90%) no urine leakage, in 1 patient (3.33%) mild and in 2 patients (6.66%) moderate. The response of patients in control group was: in 25 patients (83.33%) no urine leakage, and in 5 patients (16.66%) moderate. The difference in the two groups of study (prophylactic surgery group and control group) in response to this question was not statistically significant (P=0.415).

Third question: In general, how much does urine leakage interfere with your daily life?
The response of patients in prophylactic surgery group was: no interference in 27 (90%) and 3 patients reported a 20% interference of urine leakage in their daily lives. In patients without prophylactic surgery: 25 (83.33%) patients reported no interference, 2 patients (6.66%) reported a 10 % interference, 2 patients (6.66%) stated a 20% interference and 1 (3.33%) estimated the interference of urine leakage as much as 40%.

Pelvic organ prolapse surgery in responding patients without prophylactic surgery in 25 patients (33.83%) of these patients had urinary leakage does not interfere in any way in their everyday lives, in two cases (6.66%) interference 10% of patients, 2 patients (6.66%) and in 20% of cases of interference 1 (3.33%) of the patients was 40% interference. Significant differences between

Figure 1. Age distribution of patients
the results of postoperative pelvic organ prolapse surgery in patients with and without prophylactic surgery in response to the above question, there was no (P=0.445). The difference in the two groups of study (prophylactic surgery group and control group) in response to this question was not statistically significant (P=0.445). Mean ICIQ-SF questionnaire responses score in patients with pelvic organ prolapse surgery for the first three questions who undergone prophylactic surgery also was 0.5±1.54 and in patients without prophylactic surgery was 0.86±2.02 (Figure 2).

Significant difference between the mean total scores on the ICIQ-SF pelvic organ prolapse surgery in patients with the first three questions with and without prophylactic surgery was observed (P=0.435). There was statistically significant difference in score of 3 first questions between the 2 groups (P=0.435).

Fourth question: when does urine leakage occur?
The response of patients in prophylactic surgery group was: 27 patients (90%) never had urinary leakage, 3 cases (10%) of patients had urine leakage when coughing or sneezing. The response of patients in control group was: 25 patients (83.33%) never had urinary leakage, 5 cases (10%) of patients had urine leakage when coughing or sneezing. There were no cases of complication in two groups of study.

Discussion
Urinary incontinence is a major health problem throughout the world. In 2000, urinary incontinence was the cause of more than 1.1 million medical visits in the United States, the direct and indirect costs arising from the same year, was over 19.5 million dollars. Risk factors for urinary incontinence include age, vaginal delivery, obesity, menopause, smoking, chronic coughs constipation and pelvic surgery. Urinary incontinence is much more common in women than in men, and its incidence in different studies was 5-72%.

Several questionnaires were used for Initial assessment of incontinence including Urogenital Distress Inventory (UDI6) Incontinence impact questionnaire-7, IIQ-7, and Pelvic floor Impact questionnaire short form 7 (17-20). ICIQ is a questionnaire in the form of a six short questions that are written by the International Association of IC and has been validated by Hajebrahimi et al. (19).

In 2001 a novel technique was introduced by Delorme that reserved the situation and effectiveness of mid urethra in tension-free vaginal tape (TVT) and was free from the complications of intervention in retro pubic area, this method was named trans-obdurate-tape (TOT) (15).

In a prospective study by Juma et al. (17) in 2007, on 130 patients who undergone TOT surgery were followed for 2 years. They examined patients’ quality of life with ICIQ questionnaire (Incontinence Impact Questionnaire), Urogenital distress inventory (UDI) and analog global satisfaction scale (GSS). Among the 117 patients (90%) had a history of SUI and 78 patients (60%) had urgency. Number of pads used per day, before surgery was 2.48±2.42, and scores of IUI, UDI and GSS, was measured 16.13±7.86, 10.95±3.4 and 1.41±1.67 respectively. The mean time of hospital stay was 0.8±0.76 days and duration of urinary catheter placement was 1.42±2.08 days. During the postoperative follow-up period, 13 patients (10%) had recurrent SUI, 21 patients (16.15%) had optional. After surgery, the number of pads used per day was 0.15±0.56, and scores of IUI, UDI and GSS, respectively, versus 1.47±5.14, 3.28±3.09 and 8.29±1.64 respectively.

In another study by Porena et al (21) which was conducted on 148 patients to compare TVT and TOT. Patients were divided were randomly into TVT (73 patients) and TOT group (75 patients). UDI and IIQ questionaire was filled for patients before surgery and one hour pad test were evaluated. Finally, they showed that both of these methods are safe - the risk of complications during and after surgery had no statistically significant difference between the two groups. In the follow-up period (mean 31 months) SUI was reported in 71.4 % in the TVT group and 77.3% in the TOT group of patients. Average satisfaction level was 9 (range 1-10).

In a study by Ennemoser and colleagues at the Department of Obstetrics and Gynecology, University of Munich, Germany in 2012 on patients with pelvic organ prolapse surgery, the rate of stress incontinence was 28.1% in the follow-up period which only 5.3% of the patients required further surgery for incontinence (22).

In our study complained of urinary incontinence in patients with prophylactic surgery in 3 patients (10%) were found in patients without prophylactic surgery of urinary incontinence after surgery, 5 patients (16.66%) were in patients with prophylactic surgery than patients without prophylactic surgery, but this difference was not significant. In our study the rate of complaint for urinary incontinence in patients in prophylactic surgery group was 10% (3 patients) but this rate was 16.66% (5 patients) in control group, although the SUI was higher in control group, the difference was not significant in two groups.
In a meta-analysis by Maher et al., on patients with pelvic organs prolapse, it was concluded that, using of Mesh in urinary incontinency surgery can significantly reduce the post-operative urinary incontinency in these patients (1).

In another study by Maher and colleagues in 2008 on patients with pelvic organ prolapse, I was stated that TOT can reduce post-operative urinary incontinency in such patients (23).

In our study, like the results of the above study, prophylactic surgery causes a decrease in the rate of urinary incontinency after surgery, but the difference was not statistically significant.

As noted in the studies above, performing the prophylactic organ prolapse (32).

In a study by Withagen and colleagues at the Department of Obstetrics and Gynecology of Nijmegen University on patients with pelvic organ prolapse that underwent the surgery it was stated that the surgery is one of the risk factors for urinary incontinency after pelvic surgery in these patients (24).

In another study by Maher and colleagues in 2008 on patients with pelvic organ prolapse, it was stated that TOT surgery is not recommended routinely for all patients and only we will attempt to do this surgery in symptomatic patients and reduced the additional costs surgery in cases where the patient is symptomatic. Moreover, reduced of the additional costs and complications associated with prophylactic surgery in other patients who actually did not need to do this surgery.

Ethical issues
All patients signed an informed consent for attending this study. Approval of the local ethics committee from “Tabriz University of medical sciences Ethics Committee” was taken before the study was begun.

Conflict of interests
Authors declare that there is no conflict of interest.

References

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