

Improvement of concomitant symptoms of pelvic organ prolapsed with applied pessary

N. Danandeh Osgui¹, P. Bastani¹

¹Obstetrics and Gynecology Department, Al-Zahra Hospital, Faculty of Medicine, Tabriz University of Medical Sciences, Tabriz (Iran)

Summary

Introduction: A common disorder among elderly ladies which causes urinary, gastrointestinal, sexual, and local symptoms is pelvic organ prolapse (POP). Two methods that include surgical and non-surgical (conservative) for POP treatment are recommended. Pessary is a advantageous and effective conservative treatment for POP. In this research the purpose was to assess the effect of pessary on concomitant symptoms of POP. **Materials and Methods:** In this paper randomized clinical trial (before and after), 120 patients had pessary implanted and completed study. In order to evaluate side effects following pessary use, especially urinary symptoms and their type and treatment, primary symptoms' improvement and patients' satisfaction were recorded with SPSS software version 17. For this purpose descriptive statistical methods such as abundance, median, ratio, standard deviation were applied. Paired Samples *t*-test for quantity comparison before and after data results and for quality comparison intervention before and after data results were also applied using the McNemar Statistical test. A *p*-value of ≤ 0.05 was considered to be statistically significant. **Results:** Complications after embedment pessary occurred in 50.8%, with vaginal infection being the more prevalent and constipation and stress incontinence as the lower prevalence ones. Most complications occurred from the first trimester. **Conclusion:** Pessary application for improvement of POP accompanied with significant treatment of urinary sign and mass bulging increases the quality of life and patients' satisfaction. Along with improvement of symptoms, pessary application has limited lower complications, indicative of advantageous and effectiveness of this device.

Introduction

The pessary has been recommended by obstetricians for treatment of symptoms of pelvic organ prolapse (POP). It is a chronic intra-pelvic organs disorder with a high prevalence among elderly ladies.

Approximately 16% of women in fourth and fifth decades of life have mild prolapse and 3% suffers from the severe type [1]. Factors that contribute to its occurrence are as following: inheritance, white ethnicity, female gender, pregnancy and parturition, hysterectomy, pelvic surgery, and myopathy and neuropathy diseases also are related with susceptibility for POP [2].

The American Urogynecologic Society reported that approximately 66% of physicians would choose the vaginal pessary over surgery as the first-line treatment for POP diseases [3]. Pessary is an inexpensive, simple, soft, biologically inert, non-carcinogenic, silicon, and effective conservative treatment for POP. Pessary are of the following two types: space-occupying and support. Therefore, in this study compared the treatment of POP with very low use of pessary method which has not been performed, and similar studies on this topic have not yet been published in Iran. In this study the authors also attempted to investigate effect of pessary use in treatment of concomitant symptoms of POP.

Materials and Methods

In this study, patients with symptom POP referring to Clinics of Al-Zahra and Taleqani hospitals of Tabriz University of Medical Sciences between February to July of 2017, and included 127 women. Seven women preferred other treatment methods and experts in this study.

Follow up visits were performed after seven days, at first trimester, and sixth months of pessary embedding. Patients answered questions regarding complications of pessary, cleansing it and before re-embedding it, complications of pessary including urinary and intestinal symptoms, infection, vaginal bleeding, deposition of pessary, were also considered for more than two months of use. After failure in attempting pessary embedding, after three times, the patient was not included in this study.

In this paper evaluation of total data was performed with SPSS software version 17. For this purpose applied, the descriptive statistical methods included abundance, median, ratio, and standard deviation). Paired Samples *t*-test for quantity comparison before and after data results and for quality comparison intervention before and after data results were also applied using the McNemar Statistical test. A *p*-value of ≤ 0.05 was considered to be statistically significant.

Results

Of the 120 females with POP, ten (8.3%) cases were in reproductive stage and the remaining 110 (91.7%) cases were in menopause. Descriptive information of patients are

Table 1. — Descriptive information of patients.

	Average
Age (years)	10.53 ± 70.51
Gravid	3.29 ± 5.86
Para	2.66 ± 4.98
Number of normal parturition	2.69 ± 5.03
Number of cesarean	0.01 ± 0.03

described in Table 1.

History of pelvic surgeries was observed in 19 patients that includes seven cases of abdominal total hysterectomy, four cases of colporrhaphy, five cases of vaginal hysterectomy, and three cases of bladder prolapse repair.

Urinary post-void residual (PVR) was normal in 20 (16.6%) cases and in 83 (69.2%) cases it was mild and severe in 17 (14.2%) cases. All cases had a desirable PVR under 50 years of age at six months after embedding pessary.

Table 2 explains pessary embedment complications and expresses times of the same. Complications were seen in 61 cases after pessary embedment, with signs of vaginal infection and constipation; stress incontinence was seen in limited number of patients compared to others. Maximal signs of expression were reported during first week and third month. In the patient with vaginal bleeding and fornix erosion, pessary was removed and estrogen therapy was done for two weeks, and then the pessary was reinserted.

Patients with repeated pessary displacement for more than three times, surgery indication was offered in eight (11.3%) patients. Among cases without primary signs, vaginitis infection occurred in 18 (14.9%) patients that where then prescribed antibiotic therapy and attained complete improvement.

Figure 1 demonstrates life quality of patients before and after using pessary. Before using pessary, 8.3% of cases had a good life quality, according to their marked in check list and 33.3% complained of a decline in life quality. After using pessary, weak, average, and good life quality were declared by 7.50%, 17.50%, and 20.8% cases, respectively, and 54.2% cases had an excellent life quality ($p < 0.0001$).

The cases that used the pessarys were classified in three groups: ring-support (75.8%), gel-horn (20%), and donated (4.16%). Satisfaction ratio between the patients that used ring-support and the patients that used gel-horn despite of

Table 2. — Complications of pessary.

Complication	First week	First week – 3 months	3 months – 6 months	Total count
Urge incontinence	1 (1.63%)	8 (13.11%)	3 (4.91%)	12 (19.67%)
Stress incontinence	1 (1.63%)	5 (8.19%)	0	6 (9.83%)
Fornix erosion	0	9 (14.75%)	0	9 (14.75%)
Back pain	0	6 (9.83%)	1 (1.63%)	7 (9.83%)
Pessary dropping	1(1.63%)	7 (9.83%)	0	8 (13.11%)
Infection	0	10 (16.39%)	8 (13.11%)	18 (29.50%)
Constipation	0	1 (1.63%)	0	1 (1.63%)

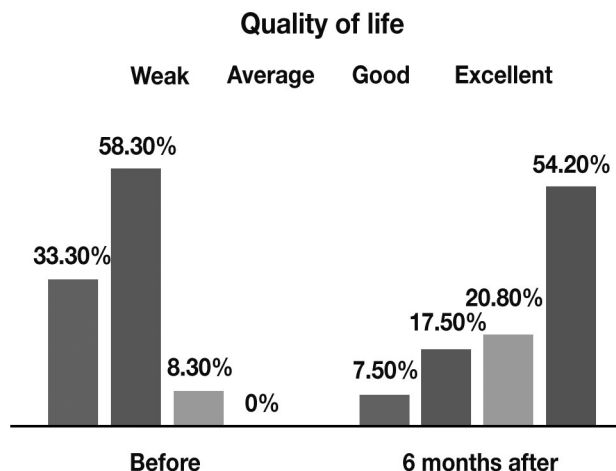


Figure 1. — Life quality before and after treatment.

the upper level of life quality in gel-horn group, was not statistically different ($p = 0.25$); however, comparing the cases with an age below and above 70 years, there was no statistical differences in terms of satisfaction ($p = 0.58$).

Grading assessment of anterior wall ($p < 0.001$), posterior wall ($p < 0.02$), and uteral prolapse before and after pessary embedding showed that a significant proportion of cases with initial grades 3 and 4 prolapse, after treatment had improved to grades 0, 1, and 2.

Bulging mass was reported in 116 cases before applying pessary and decreased to seven patients after treatment that was statistically meaningful ($p < 0.001$).

Discussion

Pessary is a conservative standard treatment for POP. Other research studies showed that pessary leads to treatment of POP attendant symptoms but this process includes special complications [4-7].

In this study the authors attempted to assess the effect of pessary applied in POP attendant signs. In this study, complications occurred in 50.8% of patients after using pessary; vaginal infection was the most common and less common were constipation and stress-associated urinary incontinence. Majority of complications occurred in first week of the first trimester. At the patient with vaginal bleeding and

fornix erosion, pessary was removed and estrogen therapy was prescribed for two weeks, and then the pessary was reinserted.

Different studies report that complications were seen in less than 10% of patients who had pessary embedded [8, 9]. In other studies vaginal secretions, fornix erosion, malodor, and bleeding were reported as frequent complications of using pessary. In rare cases, especially at patients that had forgotten the embedded pessary, death has been reported. [10, 11]. It is mentioned that vaginal secretions and infection can be happened in 33% of patients. [12] Bleeding, pain, and constipation have been reported by other studies [13, 14]. Different types of pessaries have their complications [10].

In present study it was shown that the use of pessary results in a clear improvement in grading of anterior, posterior, and uteral wall prolapse.

Ding *et al.* reported a significant improvement in prolapse and urinary symptoms three months after using pessary [15]. In another study Brazell *et al.* reported decreased gastro-intestinal complications after embedment of pessary [16]. Increased satisfaction and quality of life was also reported in the patients that used a pessary [6, 17].

Improving irritable signs of POP also improves life quality and women's perception of their body image was mentioned with pessary use [7]. However, the currently study showed that applying pessary significantly improved life quality, although, there was no differences in term of satisfaction according to variable kinds of pessary and cases age.

Conclusions

Pessary application for improvement of POP accompanied with significant treatment of urinary sign and mass bulging, increases the quality of life and patients' satisfaction. Along with symptoms' improvement, pessary application has limited and lower complications, which is indicative of advantageous and effectiveness of this device.

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Corresponding Author:

N. DANANDEH OSGUI, M.D.

Obstetrics and Gynecology Department

Al-Zahra Hospital, Faculty of Medicine

Tabriz University of Medical Sciences, Tabriz (Iran)

e-mail: nedadanandeh2000@yahoo.com