The incidence of recurrent pelvic organ prolapse: A cross – sectional study

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Abstract

Introduction: Pelvic organ prolapse is a common condition that occurs in parous women and affects the quality of life of women. The present study aimed to evaluate the incidence of recurrent prolapse.
Materials and methods: In a cross-sectional study evaluated 365 women attending two public centers of Ilam, West of Iran. Sampling was done by the simple random sampling method. All women participated in the study except for single, pregnant, lactate and women receiving hormone replacement therapy. Subjects evaluated according to the Pelvic Organ Prolapse Quantification technique. SPSS software Package 14 was used to analyze the data.
Results: Overall, 18.35 % of all participants have a history of pelvic operation for prolapse of the pelvic organs. There was a significant association between the history of anterior and posterior repair and current prolapse (P=0.013). The correlation between previous hysterectomy and prolapse not significant (P=0. 243).
Conclusion: This study indicates that pelvic organ prolapse surgery does not always prevent recurrent POP. Therefore, the gynecologist must be considering the recurrent risk of pelvic organ prolapse during preoperative patient counseling, particularly when surgery has been performed just to improve the women´s quality of life.

Keywords: Pelvic Organ Prolapse Quantification (POP-Q), Prolapse grade, Prolapse severity

Introduction

Pelvic organ prolapse (POP) is defined as a condition that muscles and ligaments supporting a woman's pelvic organs, stretch or weaken, causing these organs to slip out of place (1). POP is a common condition that occurs in 50% of parous women. POP affect the quality of life of women (2).Women with POP may be experience several symptom including urinary, bowel and sexual symptoms (3).
However 30-50% of parous women have lost pelvic floor support resulting in POP, but also, only 10- 20% of women seek medical treatment for their symptoms (4).
Kegel exercise, pessaries and surgery are the main treatments for POP. Surgery is the only real definitive treatment for prolapse. About 11.9% of all women undergoing an operation for POP surgical correction (5).
About 25% of all women with the POP operation experience some complications such as pelvic pain and dyspareunia (2). Recurrence following surgery is one of the most challenging problems facing specialists in managing women with prolapse (6). Vaginal hysterectomy with or without colporrhaphy is reported as the

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most common primary operation for POP (7).

However estimate the true incidence of recurrence POP is difficult, but the recurrence rates have been reported, ranging from 10-30% (8).

Recurrence of POP may result from direct surgical failure. Therefore, in elderly women undergoing POP surgery, it will be important to be able to give them reliable information as to the risks of requiring further surgery for recurrent prolapse in the future.

Other studies has been reported the long-term recurrence rate of POP in 29 - 30% of patients (6, 9). Therefore, in the some causes, a mesh has been used in the anterior vaginal wall repair because of reduced the risk of recurrent anterior vaginal wall prolapse (3). The present study aimed to evaluate the incidence of recurrent prolapse among women attending two public centers of Ilam, West of Iran, in 2006.

Materials and methods

This research was a cross-sectional study that was done on 365 women attending two public centers of Ilam, West of Iran, in 2006. The participants were selected by the simple random sampling method. All women participated in the study except for single, pregnant, lactate and women receiving hormone replacement therapy. Overall, in this research 365 women participated.

Data collection carried out in face to face interviews by a researcher. Demographic information and anthropometrics data were recorded by trained research midwives. Clinical measures: The summary of the patient's obstetrician included data on pregnancy, delivery mode, delivery operative, delivery position, maximum birth weight (MBW), medical and surgical histories, POP type and stage collected by observation, interview/ and examination. All subjects were evaluated in the dorsal lithotomy position according to the Pelvic Organ Prolapse Quantification (POP-Q) technique after emptying their bladders. Stages and position of prolapse were determined using the standardized system of the International Continence Society (10).

Participants were divided into two groups for comparison: (1) with prolapse (2) without prolapse. SPSS software Package 14 was used to analyze the data of this project. Differences were regarded statistically significant with an alpha error of 0.05.

The Ethics Committee of Ilam University of Medical Sciences approved the study design. Written informed consent was obtained from the participants after comprehensive explanation of the procedure involved.

Results

In all, 365 women participated in the vaginal examination. The mean age of participants was 36 ± 9 years. Overall, 19.2 % of the participants had no prolapse and 80.8% have the varying severity of the prolapse. Distribution of prolapse severity is presented in Table 1.

Table 1. Distribution absolute and relative severity of prolapse in the studied samples.

Severity of prolapse	Frequency	
	N	%
Grade 0	70	19.2
Grade I	73	20
Grade II	214	58.6
Grade III	8	2.2
Grade IV	0	0
Total	365	100

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The posterior wall prolapse was the most common prolapse type among the study population. Distribution of prolapse types is presented in Table 2.

Table 2. Distribution of absolute and relative location of the prolapse of the studied samples.

Location of prolapse	Frequency	
	N	%
Anterior wall	70	19.2
The top of the vagina	73	20
Posterior wall	214	58.6
Anterior wall and The top of the vaginal	8	2.2
Anterior and the posterior wall	0	0
Total	365	100

Overall, 67 cases (18.35 %) of all participants have a history of pelvic operation for POP. The main causes of pelvic operation were included; 50 cases, anterior and posterior repair, 14 cases hysterectomy and 3 cases for pelvic masses. However 19 cases (28.35%) of participants with a history of pelvic operation have not currently prolapse, but also, 48 (70.14%) had varying severity of the prolapse. Distribution the location of prolapse based the history of pelvic surgery is presented in Table 3.

Table 3. Distribution of the location of prolapse based the history of pelvic surgery of the studied samples.

Location of prolapse	Frequency (N)			
	Previous anterior and posterior repair		Previous hysterectomy	
	Have current Prolapse	Have not current prolapse	Have current Prolapse	Have not current prolapse
Anterior wall	24	26	11	3
The top of the vagina	20	30	7	7
Posterior wall	12	38	8	6

Distribution of recurrent prolapse was included; grade I (28.25%), grade II (4.29%), grade III (2.89%). There were no grade IV prolapse. There was not a significant association between previous hysterectomy and prolapse (P=0. 243). But the association of anterior and posterior repair was statistically significant (P=0. 013).

Discussion

In the present study, we have evaluated the incidence of recurrent prolapse among women attending two public centers using the POPQ system. The researchers used this system as the standard system for evaluation of the pelvic organ prolapsed (5, 11). Based on the results of the present study, almost two-third of all women with a history of pelvic operation for POP has recurrent prolapse. Women with a history of anterior and posterior repair have the highest rate of recurrent prolapse. However, previous studies has been reported the recurrence POP (6, 9), but also, their recurrence rate was lower in comparison to our population (20-30% Vs 70%).

To confirm our results, a previous study reported recurrent prolapse in 31.3% of women five years after surgery (5). Long et al (2012) reported that 6.2% of their population have recurrent prolapse of the pelvic organs after a mean follow-up time of 30 months (12). A Chinese study compared the recurrence of POP among 173 patients with severe POP. Population study was divided into three groups. Group A included 86 patients that treated by MPFR with the polypropylene mesh application. Group B included 58 patients that treated by TVH-APC, and group C included 29 patients that treated by TVH-LC-SSLF-VBR-EP. The results of this study indicated that, the MPFR has a better

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curative effect and lower recurrence rate in patients with POP (13).

A Cochrane Incontinence Group investigated 22 randomized controlled trials including 2368 participants. This study aimed to evaluate the effects of different surgeries in the management of POP. The result of this study demonstrated that abdominal sacrocolpopexy is associated with a lower rate of recurrent vault prolapse and dyspareunia than the vaginal sacrospinous colpopexy (14). A retrospective cohort study evaluated the recurrent POP among 114 women who had traditional vaginal hysterectomy. The results of this study show that 16% of participants have recurrent POP for the mean follow up period of 9.18 years (4).

This study indicates that POP surgery does not always prevent recurrent POP. Therefore, the gynecologist must be considering the recurrent risk of POP during preoperative patient counseling. Particularly, when surgery has been performed just to improve the women´s quality of life .

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References

1. Baessler K, Maher C. Pelvic organ prolapse surgery and bladder function. Int Urogynecol J. 2013;24(11):1843-52.
2. Alvarez J, Cvach K, Dwyer P. Complications in pelvic floor surgery. Minerva Ginecol. 2013;65(1):53-67.
3. Maher C, Feiner B, Baessler K, Schmid C. Surgical management of pelvic organ prolapse in women. Cochrane Database Syst Rev. 2013;4:CD004014.
4. Costa J, Towobola B, McDowel C, Ashe R. Recurrent pelvic organ prolapse (POP) following traditional vaginal hysterectomy with or without colporrhaphy in an Irish population. Ulster Med J. 2014;83(1):16-21.
5. Diez-Itza I, Aizpitarte I, Becerro A. Risk factors for the recurrence of pelvic organ prolapse after vaginal surgery: a review at 5 years after surgery. Int Urogynecol J Pelvic Floor Dysfunct. 2007;18(11):1317-24.
6. Fialkow MF, Newton KM, Weiss NS. Incidence of recurrent pelvic organ prolapse 10 years following primary surgical management: a retrospective cohort study. Int Urogynecol J Pelvic Floor Dysfunct. 2008;19(11):1483-7.
7. Denman MA, Gregory WT, Boyles SH, Smith V, Edwards SR, Clark AL. Reoperation 10 years after surgically managed pelvic organ prolapse and urinary incontinence. Am J Obstet Gynecol. 2008;198(5):555 e1-5.
8. Clark AL, Gregory T, Smith VJ, Edwards R. Epidemiologic evaluation of reoperation for surgically treated pelvic organ prolapse and urinary incontinence. Am J Obstet Gynecol. 2003;189(5):1261-7.
9. Fialkow MF, Newton KM, Lentz GM, Weiss NS. Lifetime risk of surgical management for pelvic organ prolapse or urinary incontinence. Int Urogynecol J Pelvic Floor Dysfunct. 2008;19(3):437-40.
10. Bump RC, Mattiasson A, Bo K, Brubaker LP, DeLancey JO, Klarskov P, et al. The standardization of terminology of female pelvic organ prolapse and pelvic floor dysfunction. Am J Obstet Gynecol. 1996;175(1):10-7.
11. Barber MD, Maher C. Epidemiology and outcome assessment of pelvic

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organ prolapse. Int Urogynecol J. 2013;24(11):1783-90.
12. Long CY, Lo TS, Wang CL, Wu CH, Liu CM, Su JH. Risk factors of surgical failure following transvaginal mesh repair for the treatment of pelvic organ prolapse. Eur J Obstet Gynecol Reprod Biol. 2012;161(2):224-7.
13. Hu CD, Chen YS, Yi XF, Ding JX, Feng WW, Yao LQ, et al. [Comparison outcomes of three surgical procedures in treatment of severe pelvic organ prolapse and analysis of risk factors for genital prolapse recurrence]. Zhonghua Fu Chan Ke Za Zhi. 2011;46(2):94-100.
14. Maher C, Baessler K, Glazener CM, Adams EJ, Hagen S. Surgical management of pelvic organ prolapse in women: a short version Cochrane review. Neurourol Urodyn. 2008;27(1):3-12.

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