วารสารวิชาการสาธารณสุข
ปีที่ 24 ฉบับที่ 4 กรกฎาคม - สิงหาคม 2558

Journal of Health Science
Vol. 24 No. 4, July - August 2015

นิพนธ์ต้นฉบับ *Original Article*

Vaginal Pessary Use for Pelvic Organ Prolapse in Thai Women

Chanyapat Sarit-apirak, M.N.S.*

Jittima Manonai, M.D.**

** Department of Nursing, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Bangkok, Thailand*

*** Department of Obstetrics & Gynaecology, Faculty of Medicine Ramathibodi Hospital, Mahidol University*

Abstract This retrospective descriptive study was aimed to examine long-term continuation rates of vaginal pessary for pelvic organ prolapse (POP), determine reasons associated with discontinuation of pessary use and analyse factors associated with non-compliant pessary treatment. Medical records of patients with symptomatic pelvic organ prolapse who had pessaries fitted in the Urogynecology Clinic were reviewed. The pessary was regarded as successfully retained if it was being used without discomfort at the time of follow-up. Reasons for a patient's decision to discontinue pessary treatment were also recorded. Three hundred and twenty eight patients were found to have used a pessary and included in analysis. The continuation rate was 86.3% and the median time from insertion until the last follow- up was 19 months. The most common reason for vaginal pessary discontinuation was pessary expulsion. The most common adverse event was vaginal discharge (21.6%). Age, parity, body weight, menopausal time, urinary incontinence, voiding difficulty and prolapse stage were not associated with the pessary compliance ($p>0.05$). In conclusion, the continuation rate of vaginal pessary for POP was high. Use of pessary is not harmful and, with appropriate care, long-term complications occur infrequently.

Key words: **vaginal pessary, pelvic organ prolapse, continuation rate, complications**

Introduction

Pelvic organ prolapse (POP) is defined as the descent of one or more of the anterior vaginal wall, posterior vaginal wall, the uterus (cervix), or the apex of the vagina (vaginal vault or cuff scar after hysterectomy)[1]. POP is a common condition among postmenopausal and elderly women around the world[2,3]. The prevalence is 43% in Thai postmenopausal women attending a menopause clinic[4]. Vaginal pessary is inserted into the vagina in order to physically support the vaginal walls and the pelvic organs inside the vagina (Figure 1). It currently is the primary nonsurgical treatment of symptomatic pelvic organ prolapse. Vaginal pessary is offered as first-line treatment at the full range of severity of POP and in women of all ages[5]. Use of a pessary is a low-risk option, not difficult to learn, and can greatly enhance a woman's quality of life. Short-term results regarding the use of

vaginal pessary to treat POP demonstrate a success rate ranging from 56% to 100%[6-8]. However, very few long-term continuation rates and long-term complication rates have been published.

The objectives of this study were to examine long-term continuation rates of vaginal pessary for pelvic organ prolapsed, to determine reasons associated with discontinuation of pessary use and too analyze factors associated with non-compliant pessary treatment.

Methods

This retrospective descriptive study was conducted in the Urogynecology Clinic, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand. Institutional review board approval for the study was obtained. Subject inclusion criteria were patients who had pessaries fitted in our clinic and complete medical records. Medical records of patients with symptomatic pelvic organ prolapse (stage II or greater) were reviewed, based on the criteria of the International Continence Society Pelvic Organ Prolapse Quantification questionnaire (POP-Q)[9]:

0 No descensus of pelvic structure during straining

I The leading surface of the prolapse dose not descend below 1 cm above the hymenal ring

II The leading edge of the prolapse extends from 1 cm above the hymen to 1 cm through the hymenal ring

III The prolapse extends more than 1 cm beyond the hymenal ring, but not complete vaginal eversion

IV The vagina is completely everted

Demographic data were collected including age, parity and body weight. Urinary symptoms, defecatory symptoms, sexual status, previous surgery and medical co-morbidities were examined. The pessary was regarded as successfully retained if it was being used without discomfort at the time of follow-up. Reasons for a patient's decision to discontinue pessary treatment were also recorded. Statistical analyses were performed, using t-test to compare continuous variables between groups and chi-square or Fisher's exact test to compare categorical variables.

Results

Between January 2005 and July 2013, 328 patients were found to have used a pessary and included in analysis. Mean age was 70.3 ± 9.6 (range 34-97) years, median parity was 3 (range 1-8), mean body weight was 57.2 ± 9.3 (range 35.9-90.9), and 322 patients (98.2%) were postmenopausal. Prolapse was stage II in 48 (14.6%), stage III in 184 (56.1%) and stage IV in 96 (29.3%) patients. The pessaries that were used included ring with/without support, dish with/without support, Gellhorn and donut: with the sizes ranging from one to seven.

Good compliance was achieved in 283/328 (86.3%) patients who continued treatment for longer than 2 months. Failure was considered in 45 (13.7%) patients who discontinued use of the pessary. The median time (range) from insertion until the last follow- up was 19 months (range 2-99) among all the 283 patients who continued with pessary use during follow-up. Among good compliant patients, 188/283 (66.4%) patients had been using pessary at 1-year follow-up.

Twenty-eight patients (8.5%) discontinued use within 2 months of insertion. Reasons for failure of continuation are shown in Table 1. They included vaginal discharge and erosion in 2/28 and severe de novo urinary incontinence in 2/28. 8/28 patients failed to obtain an adequate fit after at least 3 attempts.

Among 17 patients who discontinued pessary use at 2 to 36 months after insertion, 6 chose to undergo surgery and 11 decided not to have any further treatment. None of the patients presented with major complications. Pain was reported in 2 (0.6%), excoriation or bleeding was seen in 4 (1.2%), and de novo urinary incontinence and constipation were reported in 4 (1.2%). The most common adverse event was vaginal discharge (21.6%).

None of these factors accounted for non-compliant pessary treatment: age, parity, body weight, menopausal time, urinary incontinence, voiding difficulty and POP-Q stage (Table 2).

Table 1 Reasons for failure to use vaginal pessaries to treat pelvic organ prolapse (N=28)

Reasons	No (%)
Vaginal discharge/erosion/bleeding	2 (7.1)
Severe de novo urinary incontinence	2 (7.1)
Pain/discomfort	1 (3.6)
Pessary expelled after at least 3 attempts	8 (28.6)
Personal reasons	15 (53.6)

Discussion

This retrospective descriptive study considered whether vaginal pessary is feasible and safe in Thai women. It was reported that approximately 86% of women offered a pessary would continue with the treatment in the long term regardless of which device they used. This is comparable with previous studies, which reported high success rates with ring and Gellhorn

Table 2 Characteristics of patients who continued pessary usage for more than 2 months compared to women who discontinued pessary usage

Factors	Continued pessary usage (N=283)	Discontinuation of pessary (N=45)	p-value
Age (yrs); mean ± SD	70.4 ± 8.9	69.9 ± 10.5	0.735
Parity; median (range)	3 (1-8)	3 (1-8)	0.938
Body weight (kg); mean ± SD	57.2 ± 9.4	57.2 ± 7.9	0.903
Menopausal time (yrs); mean ± SD	19.7 ± 9.2	19.8 ± 10.3	0.991
POP-Q stage; N (%)			0.064
- Stage II	39 (81.3)	9 (18.8)	
- Stage III	166 (90.2)	18 (9.8)	
- Stage IV	78 (86.3)	18 (13.7)	
Stress urinary incontinence; N (%)	139 (49.1)	21 (46.7)	0.760
Urgency urinary incontinence; N (%)	133 (47.0)	22 (48.9)	0.813
Voiding difficulty; N (%)	154 (54.4)	27 (60.0)	0.484

pessaries[10,11]. Based on this finding and our earlier experience in the Urogynecology clinic, most POP patients have a favorable outcome in terms of satisfaction with the pessary use and continue to use pessaries[12]. The successful fitting and a high continuation rate in this study may by explained by an adequate patient education, a commitment of patient or caregiver to proper care of pessary, local estrogen use in postmenopausal women and specially trained gynecologists and nurses in our clinic.

Vaginal pessaries are now generally made of medical grade silicone to prevent odors and absorption of vaginal secretions. There are currently many shapes and sizes of pessaries available to suit individual needs: supportive or space occupying in nature. There are very few contraindications to pessary use, which allows clinicians to offer pessaries to almost all patients presenting with prolapse. Women who are able to remove and reinsert the pessary on their own convenience have the choice to remove it weekly, possibly even nightly for cleaning. Reasons given in the literature for discontinuation of pessary use include inability to retain the device, recurrent vaginal discharge or erosion and demonstration of occult stress incontinence [5]. The present study highlighted the fact that vaginal pessaries are not harmful and long-term complications occur infrequently with appropriate care. Most women who have successfully retained their pessary at 2 weeks will continue to use it[13].

Characteristics that determine the likelihood of a successful pessary fitting have been previously studied[14,15]. Predictors of discontinuation included posterior wall prolapse, younger age (<65 years old), urinary incontinence and discomfort[6,8,16]. On the other hand, older age at pessary insertion was a strong predictor of continued use. However, there was no predictive factor of long-term pessary use in this study.

The strength of our study was large sample sizes for analysis but there was limitation in design as a retrospective chart review. Also, some of the data were inconsistent and certain documented variables were not available to evaluate.

Conclusions

The continuation rate of vaginal pessary for pelvic organ prolapse was high. Use of pessary is not harmful and infrequenthy occurs long-term complications with apropliate care.

References

1. Haylen BT, de Ridder D, Freeman RM, Swift SE, Berghmans B, Lee J, et al. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction. Int Urogynecol J 2010;21:5-26.
2. Tegerstedt G, Maehle-Schmidt M, Nyren O, Hammarstorm M. Prevalence of symptomatic pelvic organ prolapse in a Swedish population. Int Urogynecol J Pelvic Floor Dysfunct 2005;16:497-503
3. Woodman PJ, Swift SE, O'boyle AL, Valley MT, Bland DR, Kahn MA, et al. Prevalence of severe pelvic organ prolapse in relation to job description and socioeconomic status: a multicenter cross-sectional study. Int Urogynecol J Pelvic Floor Dysfunct 2006;17:340-5
4. Chuenchompoonut V, Bunyavejchevin S, Wisawasukmongchol W, Taechakraichana N. Prevalence of genital prolapse in Thai menopausal women (using new standardization classification). J Med Assoc Thai 2005;88:1-4.
5. Bugge C, Adams EJ, Gopinath D, Reid F. Pessaries (mechanical devices) for pelvic organ prolapse in women (Review). Cochrane Database of Systematic Reviews

2013,2:CD004010.DOI:10.1002/14651858.CD004010.pub3. Hoboken, NJ: John Wiley & Sons; 2013.

6. Fernando RJ, Thakar R, Sultan AH, Shah SM, Jones PW. Effect of vaginal pessaries on symptoms associated with pelvic organ prolapse. Obstet Gynecol 2006; 108:93-9.
7. Komesu YM, Rogers RG, Rode MA, Craig EC, Gallegos KA, Montoya AR, et al. Pelvic floor symptom changes in pessary users. Am J Obstet Gynecol 2007;197: 620.e1-6.
8. Clemons JL, Aquilar VC, Tillinghast TA, Jackson ND, Myers DL. Patient satisfaction and changed in prolapse and urinary symptoms in women who were fitted successfully with a pessary for pelvic organ prolapse. Am J Obstet Gynecol 2004;190:1025-9.
9. Bump RC, Mattiasson A, Bø 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;175:10-7.
10. Ko PC, Lo TS, Tseng LH, Lin YH, Liang CC, Lee SJ. Use of a Pessary in Treatment of Pelvic Organ Prolapse: Quality of life, compliance, and failure at 1 year follow-up. J Minimal Invas Gynecol 2011;18:68-74.
11. Hanson LAM, Schulz JA, Flood CG, Cooley B, Tam F. Vaginal pessaries in managing women with pelvic organ prolapse and urinary incontinence: patient characteristics and factors contributing to success. Int Urogynecol J 2006;17:155-9.
12. Sitavarin S, Wattanayingcharoenchai R, Manonai J, Sarit-apirak S, Chittacharoen A. The characteristics and satisfaction of the patients using vaginal pessaries. J Med Assoc Thai 2009;92:744-7.
13. Lone F, Thakar R, Sultan AH, Karamalis G. A 5-year prospective study of vaginal pessary use for pelvic organ prolapse. Int J Gyn Obstet 2011;11:56-9.
14. Geoffrion R, Zhang T, Lee T, Cundiff GW. Clinical characteristics associated with unsuccessful pessary fitting outcomes. Female Pelvic Med Reconstr Surg 2013; 19:339-45.
15. Friedman S, Sandhu KS, Wang C, Mikhail MS, Banks E. Factors influencing long-term pessary use. Int Urogynecol J 2010;21:673-8.
16. Maito JM, Quam ZA, Craig E, Danner KA, Rogers RG. Predictors of successful pessary fitting and continue use in a nurse-midwifery pessary clinic. J Midwifery Womens Health 2006;51:78-84.

บทคัดย่อ: การใช้อุปกรณ์พยุงช่องคลอดเพื่อแก้ไขภาวะกระบังลมหย่อนในสตรีไทย

ชัญญาพัทธ์ สฤษดิ์อภิรักษ์ พย.ม.(การพยาบาลมารดาและทารกแรกเกิด)*; จิตติมา มโนนัย พ.บ.**

** งานการพยาบาลผู้ป่วยนอก ศูนย์การแพทย์สมเด็จพระเทพรัตน์ คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล; ** ภาควิชาสูติศาสตร์-นรีเวชวิทยา คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล*

Journal of Health Science 2015;24:793-8.

การศึกษาครั้งนี้เป็นการศึกษาอัตราการคงใช้อุปกรณ์พยุงช่องคลอดเพื่อแก้ไขภาวะกระบังลมหย่อน รวมทั้งศึกษาปัจจัยที่เกี่ยวข้องกับการหยุดใช้อุปกรณ์โดยศึกษาย้อนหลังจากเวชระเบียนของผู้รับบริการกลุ่มตัวอย่างเป็นผู้รับบริการที่ใส่อุปกรณ์พยุงช่องคลอดเพื่อแก้ไขภาวะกระบังลมหย่อนในคลินิกนรีเวชทางเดินปัสสาวะและอวัยวะสืบพันธุ์ คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี การใส่อุปกรณ์สำเร็จหมายถึงผู้รับบริการยังคงใส่อุปกรณ์ต่อเนื่องจนถึงวันนัดตรวจติดตามครั้งต่อไป และมีการเก็บข้อมูลเหตุผลที่ผู้รับบริการหยุดใช้อุปกรณ์ด้วย กลุ่มตัวอย่างมีทั้งสิ้น 328 ราย มีอัตราการคงใช้ทั้งสิ้น ร้อยละ 86.3 ระยะเวลาใส่เฉลี่ย 19 เดือน เหตุผลที่หยุดใช้มากที่สุดคือ อุปกรณ์หลุด อาการผิดปกติที่พบมากที่สุดได้แก่ ตกขาว (ร้อยละ 21.6) อายุ จำนวนครั้ง ของการคลอด น้ำหนักตัว ระยะเวลาของการหมดประจำเดือน ภาวะปัสสาวะเล็ด การถ่ายปัสสาวะลำบาก และระดับของการหย่อนของกระบังลมไม่มีความเกี่ยวข้องกับอัตราการคงใช้อุปกรณ์พยุงช่องคลอด โดยสรุป มีอัตราการคงใช้อุปกรณ์พยุงช่องคลอดเพื่อแก้ไขภาวะกระบังลมหย่อนสูง และถ้ามีการดูแลที่เหมาะสม อัตราการเกิดภาวะแทรกซ้อนพบได้น้อย

คำสำคัญ: **อุปกรณ์พยุงช่องคลอด, ภาวะกระบังลมหย่อน, อัตราการคงใช้, ภาวะแทรกซ้อน**