

Self-management of pessary in patients with pelvic organ prolapse

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Objectives: This study aimed to evaluate the acceptance of self-management of a pessary and its associated factors in patients with pelvic organ prolapse (POP).

Methods: Patients with POP attending one of the three gynaecological outpatient clinics who planned to use or were using pessaries were invited to participate. Participants were asked to complete a six-item questionnaire: whether they had used a pessary before; whether they were aware of self-management of the pessary; whether they would opt for self-management of the pessary; what the reasons were for learning self-management; and what the reasons were for not using or stopping using the pessary, if applicable. Factors associated with their choices were evaluated.

Results: In total, 301 participants were included in the analysis. The mean age of the participants was 71.1 years, and the median parity was two. Most had stage I to II POP and were current users of pessaries. Overall, 53.5% of participants agreed to learn to self-manage the pessary; they were more likely to be younger, sexually active, and aware of self-managing a pessary.

Conclusion: Self-management of a pessary is an acceptable option for POP. Most participants agreed to learn self-management, and therefore patient education and encouragement should be aimed at.

Keywords: Pelvic organ prolapse; Pessaries; Self-management

Introduction

Pelvic organ prolapse (POP) is a common gynaecological condition worldwide, with prevalence ranging from 9% to 41%¹⁻³. It affects daily living and quality of life. The lifetime risk for women requiring surgical treatment for a POP is 11% to 19%^{4,6}. Yet, surgical treatment is associated with anaesthetic and surgical risks, and there is a long waiting time for an operation in the public sector. Thus, the use of a pessary is invaluable while awaiting definitive surgical treatment.

Conservative measures such as pelvic floor exercises and pessaries are recommended as first-line management for a POP. A pessary can relieve the symptoms of prolapse and is effective in treating prolapse in the advanced stages⁷. It has been recommended by the National Institute for Health and Care Excellence and the American College of Obstetricians and Gynecologists^{8,9}. However, pessaries may increase vaginal discharge, vaginal discomfort, bleeding, and ulceration^{7,10}. It requires long-term follow-up (every 3-6 months) to change or cleanse pessaries. This increases the burden to the public healthcare system in terms of costs and waiting time.

Self-management of a pessary by patients is cost-effective and can reduce complication rates^{10,11}. Patients are encouraged to learn to remove and insert the pessary for their daily living and schedule. Of all pessary users, 18% to 53% were offered self-management^{12,13}. Self-management is associated with the continued use of a pessary for POP, despite inconsistent evidence¹⁴.

In Hong Kong, self-management of a pessary by patients is uncommon. This study aimed to evaluate the acceptance of self-management of a pessary and its associated factors in patients with POP.

Methods

Patients with POP attending the gynaecological outpatient clinics of Alice Ho Miu Ling Nethersole Hospital, Kwong Wah Hospital, or Prince of Wales Hospital between November 2023 and April 2024 who planned to use or were using pessaries were invited to participate. Patients were

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excluded if they could not understand the questionnaire, had limited physical dexterity, were pregnant, or aged <18 years.

Participants were provided with an information sheet introducing the pessary and its self-management. Participants were asked to complete a six-item questionnaire: whether they had used a pessary before; whether they were aware of self-management of the pessary; whether they would opt for self-management of the pessary; what the reasons were for learning self-management; and what the reasons were for not using or stopping using the pessary, if applicable.

Baseline characteristics and symptoms of POP were collected by clinicians. Data collected included age, education level, past obstetric history, history of any obstetric anal sphincter injuries, menopausal status, sexual activities, body mass index, duration of symptoms, and prior use of a pessary. The stage of the POP was based on the POP quantification system.

The sample size was calculated using the formula: $n = N \times X / (X + N - 1)$, where $X = Z_{\alpha/2}^2 - p(1-p) / MOE^2$ ($Z_{\alpha/2}$ denotes the critical value of the normal distribution at $\alpha/2$; MOE denotes the margin of error; p denotes the sample proportion; and N denotes the population size). Finite population correction was applied to the sample size formula. The sample size was estimated to be >270, assuming a 5% margin of error, 90% confidence interval, and a population of around 100 000.

Statistical analysis was performed using SPSS (Windows version 24.0; IBM Corp, Armonk [NY], United States). Associations between variables and acceptance of self-management were assessed using Fisher's exact test or Chi-squared test for qualitative variables and Student's t test for quantitative variables. A p value of <0.05 was considered statistically significant.

Results

Of 461 patients invited, 333 (72.2%) agreed to participate. Of these, 32 were excluded owing to incomplete questionnaire ($n=22$), duplicated recruitment ($n=2$), use of donut or Gellhorn pessaries ($n=6$), or the absence of POP at the time of recruitment ($n=2$). The remaining 301 participants were included in the analysis (Table 1).

The mean age of the participants was 71.1 ± 8.9 years, and the median parity was two. Most had stage I to II POP and were current users of pessaries. Overall, 53.5% of

Table 1. Acceptance of self-management of a pessary among participants

Variable	Self-management of a pessary*		p Value
	Agree (n=161)	Disagree (n=140)	
Age, y	69.0±9.2	73.5±8.1	<0.001
Body mass index, kg/m ²	24.5±3.0	24.4±3.2	0.334
Parity			0.485
0	1 (0.6)	0	
1	23 (14.3)	16 (11.4)	
≥2	137 (85.0)	124 (88.6)	
History of instrumental delivery			0.62
No	147 (91.3)	130 (92.9)	
Yes	14 (8.7)	10 (7.1)	
History of any obstetric anal sphincter injuries			0.317
Yes	2 (1.2)	4 (2.9)	
No	159 (98.8)	136 (97.1)	
Menopausal status			0.876
Menopausal	148 (91.9)	128 (91.4)	
Premenopausal	13 (8.1)	12 (8.6)	
Current status of sexual activity			0.012
Active	30 (18.6)	12 (8.6)	
Inactive	131 (81.4)	126 (90.0)	
Education level			0.07
Unknown	32 (19.9)	39 (27.9)	
Nil	11 (6.8)	14 (10.0)	
Primary	58 (36.0)	55 (39.3)	
Secondary	57 (35.4)	29 (20.7)	
Tertiary	3 (1.9)	3 (2.1)	
Stage of prolapse			0.123
I	38 (23.6)	38 (27.1)	
II	88 (54.7)	78 (55.7)	
III	28 (17.4)	13 (9.3)	
IV	5 (3.1)	9 (6.4)	
Missing data	2 (1.2)	2 (1.4)	
Duration of symptoms of prolapse, y			0.44
<1	6 (3.7)	2 (1.4)	
1-2	34 (21.1)	23 (16.4)	
3-5	50 (31.1)	43 (30.7)	
6-10	36 (22.4)	32 (22.9)	
>10	35 (21.7)	40 (28.6)	
Have you used pessary before?			0.16
Never	16 (9.9)	7 (5.0)	
Current use	140 (87.0)	131 (93.6)	
Ever user	5 (3.1)	2 (1.4)	
Duration of pessary use, y			0.196
0-1	57 (35.4)	33 (23.6)	
>1-2	23 (14.3)	23 (16.4)	
3-5	35 (21.7)	30 (21.4)	
6-10	27 (16.8)	33 (23.6)	
>10	19 (11.8)	21 (15.0)	
Do you know about self-management of a pessary?			0.03
Yes	69 (42.9)	43 (30.7)	
No	92 (57.1)	97 (69.3)	

* Data are presented as mean ± standard deviation or No. (%) of participants

participants agreed to learn to self-manage the pessary; they were more likely to be younger, sexually active, and aware of self-managing a pessary. Table 2 shows the reasons for agreeing or disagreeing to practise self-management of a ring pessary.

Discussion

Of the participants, 53.5% agreed to self-manage a pessary after receiving adequate explanation and education, and only 37.2% had heard of self-management before this survey. Participants with higher acceptance of self-managing the pessary were those who had knowledge about self-management or were younger or sexually active. Thus, promoting self-management, as early as possible, to all patients requiring pessaries is crucial to increase its acceptance.

Participants who were sexually active had higher acceptance of self-managing a pessary. This is likely due to the benefit of being able to remove the pessary before coitus. Acceptance of self-managing a pessary was not associated with education level, parity, history of instrumental delivery, history of obstetric anal sphincter injuries, severity and duration of POP, or duration of pessary use. This suggests that self-management of a pessary can be promoted at any time during the patient's journey. Self-management can reduce both short-term and long-term pessary-related complications and is cost-effective¹¹.

Participants who agreed to self-manage a pessary were largely those who wanted autonomy over use and care, and/or decreases in the number of follow-ups and complications such as per vagina bleeding and discharge, whereas participants who declined self-management were mainly as a result of lack of confidence, fear of failure to learn and/or fear of hurting the vagina, pessary malposition, or bleeding; they perceived self-management as troublesome and preferred clinic-based management. Patient education and encouragement may promote self-management of a pessary.

Our findings provide perspectives on the promotion of self-managing a pessary for POP. Early education on self-management should be provided at the initial presentation. Patients, especially young, sexually active patients, should be counselled on the advantages of self-management in reducing the number of follow-ups and complications. Patients should be empowered to learn self-management for the benefit of patient autonomy. The misconception of self-management being troublesome should be clarified. Adequate support should be provided so that patients can be confident when handling minor complications.

There were limitations to the present study. Only views on acceptance were explored, but the success rate of self-replacement was not assessed. Patients' ability to learn self-management has been shown to be high in Caucasian

Table 2. Reasons for agreeing/disagreeing self-management of a pessary

Reason	No. (%) of participants*
Agree to practise self-management	n=161
Able to self-manage	139 (86.3)
Can reduce the number of clinic follow-ups	91 (56.5)
Can reduce the occurrence of vaginal bleeding/discharge	63 (39.1)
Can rest vaginal mucosa	57 (35.4)
Can remove before coitus	13 (8.1)
Others: less painful (n=3), less risk of infection (n=6), can avoid a clinical procedure (n=6), undergoing chemotherapy (n=1)	16 (9.9)
Disagree to practise self-management	n=140
Lack confidence	97 (69.3)
Fear of learning failure	60 (42.9)
Prefer clinic-based management	55 (39.3)
Fear of hurting vagina, pessary malposition, or bleeding	51 (36.4)
Sounds troublesome	50 (35.7)
Fear of touching vagina	28 (20.0)
Only planned for short-term use	23 (16.4)
Other: pessary is expensive (n=1)	1 (0.7)

* Multiple reasons are allowed

populations¹⁵. There could be selection bias because the views of patients who refused to participate were not included. The views of patients who opted for conservative or surgical management may not be included, because they had been preoccupied with alternative options before acquiring knowledge about self-managing a pessary.

Conclusion

Self-management of a pessary is an acceptable option for POP. Most participants agreed to learn self-management, and therefore patient education and encouragement should be aimed at.

Contributors

All authors designed the study, acquired the data, analysed the data, drafted the manuscript, and critically revised the manuscript for important intellectual content. All authors had full access to the data, contributed to the study, approved the final version for publication, and take responsibility for its accuracy and integrity.

Conflicts of interest

As an editor of the journal, SCSC was not involved

in the peer review process. Other authors have no conflicts of interest to disclose.

Funding and support

This study was funded by a grant from the Kowloon Central Cluster. The funder had no role in study design, data collection/analysis/interpretation, or manuscript preparation.

Data availability

All data generated or analysed during the present study are available from the corresponding author on reasonable request.

Ethics approval

This study was approved by the Kowloon Central/Kowloon East Cluster Research Ethics Committee (reference: KC/KE-23-0126/ER-1) and the Joint Chinese University of Hong Kong – New Territories East Clinical Research Ethics Committee (reference: 2023.603). The patients were treated in accordance with the tenets of the Declaration of Helsinki. The patients provided written informed consent for all treatments and procedures and for publication.

References

- Hendrix SL, Clark A, Nygaard I, Aragaki A, Barnabei V, McTiernan A. Pelvic organ prolapse in the Women's Health Initiative: gravity and gravidity. *Am J Obstet Gynecol* 2002;186:1160-6. [Crossref](#)
- Samuelsson EC, Victor FT, Tibblin G, Svärdsudd KF. Signs of genital prolapse in a Swedish population of women 20 to 59 years of age and possible related factors. *Am J Obstet Gynecol* 1999;180:299-305. [Crossref](#)
- Pang H, Zhang L, Han S, et al. A nationwide population based survey on the prevalence and risk factors of symptomatic pelvic organ prolapse in adult women in China: a pelvic organ prolapse quantification system based study. *BJOG* 2021;128:1313-23. [Crossref](#)
- Olsen AL, Smith VJ, Bergstrom JO, Colling JC, Clark AL. Epidemiology of surgically managed pelvic organ prolapse and urinary incontinence. *Obstet Gynecol* 1997;89:501-6. [Crossref](#)
- Smith FJ, Holman CD, Moorin RE, Tsokos N. Lifetime risk of undergoing surgery for pelvic organ prolapse. *Obstet Gynecol* 2010;116:1096-100. [Crossref](#)
- Chan SS, Cheung RY, Yiu AK, et al. Chinese validation of Pelvic Floor Distress Inventory and Pelvic Floor Impact Questionnaire. *Int Urogynecol J* 2011;22:1305-12. [Crossref](#)
- Cheung RY, Lee JH, Lee LL, Chung TK, Chan SS. Vaginal pessary in women with symptomatic pelvic organ prolapse: a randomized controlled trial. *Obstet Gynecol* 2016;128:73-80. [Crossref](#)
- NICE Guidance - Urinary incontinence and pelvic organ prolapse in women: management. *BJU Int* 2019;123:777-803. [Crossref](#)
- Pelvic Organ Prolapse. ACOG Practice Bulletin, Number 214. *Obstet Gynecol* 2019;134:e126-e142. [Crossref](#)
- Daneel L, te West NI, Moore KH. Does monthly self-removal of vaginal ring pessaries for stress incontinence/prolapse reduce complication rates? A 5 year audit. Accessed 1 October 2024. Available from: <https://www.ics.org/Abstracts/Publish/326/000576.pdf>
- Hagen S, Kearney R, Goodman K, et al. Clinical effectiveness of vaginal pessary self-management vs clinic-based care for pelvic organ prolapse (TOPSY): a randomised controlled superiority trial. *EclinicalMedicine* 2023;66:102326. [Crossref](#)
- Bugge C, Hagen S, Thakar R. Vaginal pessaries for pelvic organ prolapse and urinary incontinence: a multiprofessional survey of practice. *Int Urogynecol J* 2013;24:1017-24. [Crossref](#)
- Cundiff GW, Weidner AC, Visco AG, Bump RC, Addison WA. A survey of pessary use by members of the American Urogynecologic Society. *Obstet Gynecol* 2000;95:931-5. [Crossref](#)
- Dwyer L, Dowding D, Kearney R. What is known from the existing literature about self-management of pessaries for pelvic organ prolapse? A scoping review. *BMJ Open* 2022;12:e060223. [Crossref](#)
- Paulussen E, Börger R, van Eijndhoven H, Engberts M, Steures P, Weemhoff M. The role of self-management in pessary therapy for pelvic organ prolapse: a retrospective cohort study. *Int Urogynecol J* 2024;35:1797-805. [Crossref](#)