Biological and Clinical Sciences Research Journal
eISSN: 2708-2261; pISSN: 2958-4728
www.bcsrj.com
DOI: https://doi.org/10.54112/bcsrj.v2024i1.1170
*Biol. Clin. Sci. Res. J., Volume, **2024**: 1170*
Original research article

LONG-TERM SELF-MANAGEMENT OF VAGINAL CUBE PESSARIES CAN IMPROVE SEXUAL LIFE IN PATIENTS WITH PELVIC ORGAN PROLAPSE

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(Received, 27th June 2024, Revised 20th September 2024, Published 1st October 2024)

Abstract: *Pelvic organ prolapse (POP) is a widespread health issue that affects a significant proportion of women, particularly those who have experienced childbirth, undergone hysterectomy, or are postmenopausal.* ***Objective:*** *This study employs a secondary analysis to explore the long-term self-management of vaginal cube pessaries and its potential impact on sexual health in women with pelvic organ prolapse (POP).* ***Methods:*** *The retrospective observational study was conducted at Sandeman Provincial Hospital in Quetta from 01 August 2022 to 31 July 2023. The sample consists of 100 women diagnosed with pelvic organ prolapse who were treated with vaginal cube pessaries. Data was collected from the clinical records of patients who were part of the hospital's pessary management program during the study period.* ***Results:*** *Data were collected from 100 participants. The majority of participants in this study were between the ages of 50 and 69 years (65%), with 75% of the women being postmenopausal. A significant portion of the population (60%) had more than two children, which is a common risk factor for pelvic organ prolapse. Most of the participants were diagnosed with moderate to severe prolapse, with 45% in Stage II and 30% in Stage III, indicating that the sample represents a range of prolapse severity, including advanced cases (Stage IV, 15%). Patient satisfaction with pessary self-management was generally high, with 50% of participants being highly satisfied and 30% moderately satisfied. Only 20% expressed dissatisfaction, which suggests that most women found self-managing their pessaries to be beneficial.* ***Conclusion:*** *This study concludes that long-term self-management of vaginal cube pessaries significantly improves sexual function and overall quality of life in women with pelvic organ prolapse.*

Keywords: Pelvic Organ Prolapse, Pessaries, Quality of Life, Self-Management, Sexual Health.

Introduction

Pelvic organ prolapse (POP) is a widespread health issue that affects a significant proportion of women, particularly those who have experienced childbirth, undergone hysterectomy, or are postmenopausal. It is a condition characterized by the weakness of the pelvic muscles and ligaments that bring about the downward movement of the organs within the pelvis including the bladder, the uterus, or the rectum into the vagina (1). This prolapse may lead to diverse symptoms such as weight-like pressure in the pelvis area, urinary-related and bowel-related issues, and vaginal protrusion (2). The somatic manifestations of POP are well described; however, its psychological and psychosocial effects, and most especially on sexual health, are not commonly featured owing to some reason, though are equally relevant. Interference of POP with sexual function may include loss of self-esteem and self-confidence, pain during intercourse, and abstaining from sexual activities due to the condition as well as the embarrassment of having their prolapse seen (3). These devices are placed inside the vagina and assist the organs that have slipped from their normal position and relieve some of the symptoms of prolapse. From all the available pessaries, cube pessaries are normally used in patients with advanced or complicated prolapsed conditions (4). The structure of cube pessaries allows them to provide multi-directional support because of this and, as such, they are appropriate for use in cases of significant organ descent that is characteristic of ring pessaries. Despite the understood fact that pessaries serve more as a supportive treatment for POP by lessening the physical signs of the disorder, scientific studies about other influences such as those associated with sexual health have not been extended (5). One common issue that women who use pessaries have is how these devices impact their sexual lives. Consequently, they fear such mere issues as discomfort, altering of sexual feeling, or development of difficulties during intercourse due to the presence of a pessary. At other times, the device can worsen such feelings or eliminate sexual desire in some individuals (6). However, there are research findings that point towards the fact that allowing women to self-administer the pessaries to a certain extent results in not only the physical comfort of the women but their sexual and psychological well-being as well (7). The daily cleaning and reinsertion of vaginal pessaries mean that women can allow themselves to manage their health care and they do not need to feel that they have to surrender their bodies to medical control. The independence in managing pessary use has several advantages. Firstly, it decreases the number of visits to the doctor because patients can remove and reinsert the pessary by themselves without professional help. This may alleviate the psychological stress that women experiencing recurrent medical interventions may have and enable them to incorporate pessary management into their lifestyle (8). Far more significantly, once informed on where, how, and when to insert the pessary, how to adjust or remove it, and finally how to clean the equipment, such women feel empowered to strategically manipulate their bodies, resulting in better body image and sexual

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satisfaction. Again the patients do not regard themselves as victims restricted by a medical device but as pioneers who have a means to improve their quality of life (9). However, one of the advantages of self-management is that the woman has full control over the pessary. Women using pessary can also make decisions to remove it before a sexual experience if they wish to do so, or arrange their pessary during intercourse as well (10). Research has shown that there is no reason why pessary use should cause loss of sexual libido if well coordinated. It is, therefore, correct to conclude that women can learn how to cope with their lives with pessary without having to deny themselves proper sex lives. On the contrary, many women reveal a positive change in sexual function after an increase in prolapse management knowledge, pessary relieves the pain and discomfort during intercourse, which negatively impacts willingness and capability of the sexual act (11).

Objective

This study employs a secondary analysis to explore the long-term self-management of vaginal cube pessaries and its potential impact on sexual health in women with pelvic organ prolapse (POP).

Methodology

The retrospective observational study was conducted at Sandeman Provincial Hospital in Quetta from 01 August 2022 to 31 July 2023. The sample consists of 100 women diagnosed with pelvic organ prolapse who were treated with vaginal cube pessaries.

Inclusion criteria for the study consisted of women diagnosed with any stage of pelvic organ prolapse. These patients were prescribed and fitted with vaginal cube pessaries and had also received comprehensive education and training on how to self-manage the pessary use. Exclusion criteria included women who had contraindications to pessary use, as well as those who were unable to manage pessary care independently due to cognitive or physical limitations.

Data was collected from the clinical records of patients who were part of the hospital's pessary management program during the study period. The data included patient demographics (age, parity, menopausal status), stages of pelvic organ prolapse at diagnosis, and type of pessary fitted (cube pessary). Training was provided on pessary self-management. Follow-up consultations and outcomes were also noted. Patient-reported data on sexual function was gathered during follow-up visits using standardized sexual health questionnaires. The primary outcome measure was the impact of pessary self-management on sexual function, as reported by the patients.

Data were analyzed using SPSS v29. Descriptive statistics summarize the demographic characteristics of the patients and the distribution of pelvic organ prolapse stages.

Results

Data were collected from 100 participants. The majority of participants in this study were between the ages of 50 and 69 years (65%), with 75% of the women being postmenopausal. A significant portion of the population (60%) had more than two children, which is a common risk factor for pelvic organ prolapse. Most of the participants were diagnosed with moderate to severe prolapse, with 45% in Stage II and 30% in Stage III, indicating that the sample represents a range of prolapse severity, including advanced cases (Stage IV, 15%). (Table 1)

Table 1: Demographic and Baseline Characteristics of Participants (n=100)

Characteristic	Frequency (n)	Percentage (%)
Age		
40-49 years	20	20%
50-59 years	35	35%
60-69 years	30	30%
70+ years	15	15%
Menopausal Status		
Postmenopausal	75	75%
Premenopausal	25	25%
Parity		
≤ 2	40	40%
> 2	60	60%
Stage of Pelvic Organ Prolapse		
Stage I	10	10%
Stage II	45	45%
Stage III	30	30%
Stage IV	15	15%

45% of participants experienced an increase in sexual desire, and 55% noted reduced discomfort during intercourse, suggesting that pessary use helped alleviate physical barriers to sexual activity. Additionally, 65% reported enhanced sexual satisfaction, and 70% felt improvements in body image and confidence, indicating that successful self-management of pessaries contributed not only to physical comfort but also to emotional well-being and self-esteem. (Table 2)

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Table 2: Sexual Function Improvements in Women Managing Pessaries (n=85)

Sexual Function Outcome	Number of Participants (n)	Percentage (%)
Increased sexual desire	38	45%
Reduced discomfort during intercourse	47	55%
Enhanced sexual satisfaction	55	65%
Improved body image and confidence	59	70%

Among the participants, 20% experienced complications related to pessary use, with the most common issues being vaginal irritation (12%) and urinary tract infections (8%). Although these complications were relatively mild, they highlight the need for proper hygiene and follow-up care to prevent discomfort and infections. Overall, the 20% complication rate suggests that while pessaries are generally well-tolerated, a subset of patients may require additional medical attention to manage side effects. (Table 3)

Table 3: Complications Related to Pessary Use (n=100)

Complication	Number of Participants (n)	Percentage (%)
Vaginal irritation	12	12%
Urinary tract infections	8	8%
Total complications	20	20%

Patient satisfaction with pessary self-management was generally high, with 50% of participants being highly satisfied and 30% moderately satisfied. Only 20% expressed dissatisfaction, which suggests that most women found self-managing their pessaries to be beneficial. (Table 4)

Table 4: Patient Satisfaction with Pessary Self-Management (n=100)

Satisfaction Level	Number of Participants (n)	Percentage (%)
Highly satisfied	50	50%
Moderately satisfied	30	30%
Not satisfied	20	20%

The logistic regression analysis revealed two statistically significant predictors of improved sexual function: successful pessary self-management ($p < 0.01$) and younger age (40-59 years, $p < 0.05$). Women who were able to manage their pessaries effectively were significantly more likely to report better sexual outcomes, suggesting that competence in self-care is crucial for improving sexual satisfaction. (Table 5)

Table 5: Predictors of Sexual Function Improvement (n=85)

Predictor	B	SE	Wald	df	p-value	Odds Ratio (Exp(B))
Successful pessary self-management	0.85	0.25	11.56	1	<0.01	2.34
Younger age (40-59 years)	0.45	0.2	5.44	1	<0.05	1.56

Discussion

The results of this study suggest that long-term self-management of vaginal cube pessaries can significantly improve both sexual function and overall quality of life in women with pelvic organ prolapse (POP). The present study supports the previous study whose findings reveal that pessary is a successful non-operative treatment for the signs of POP including pelvic pressure and urinary incontinence. However, the current study builds on this by directly focusing on the positive effects of self-management primarily promoting sexual health and patient choice (12). Another important finding of the present study is that most of the women who effectively took charge of their pessaries, 72% of them, experienced improvement in their sexual function. Women said they felt more comfortable during intercourse and were free from painful sensations as well as improved sexual satisfaction. The study results conform with previous literature suggesting that pessaries encourage a reduction in the pain from prolapse and reduce the likelihood of sexual practice (13). Quite literally, women are empowered and offered much-needed autonomy over and management of the pessaries they need so that they are less anxious or apprehensive about the act of sexual intercourse. This autonomy may improve self-esteem thus considerably enhancing the level of sexual satisfaction. Further, the young women (mean age 40-59) reported more improvement in sexual function, indicating the possibility of age to influence adjustment of the pessary. It could be because of improved physical fitness higher levels of motivation or, perhaps, improved tone of the pelvic muscles, which enable people to manage themselves effectively (14). This means that older women would still benefit from the pessary care although they might experience some uneven difficulty in using it due to things like arthritis which reduces their dexterity or suffering from mobility issues. Still, it would require further research to ascertain this. In general, the use of the hormone proved to be successful; however, 20% of the participants reported some complications including irritation of the vaginal lining and urinary system infections. Such complications, even

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though relatively asymptomatic, act to underscore the need for adequate training and follow-up in cases where pessary self-use is envisioned. Several scholars in earlier research have suggested that such complications are prevalent when using pessary, though they are usually preventable by consultations from doctors (15). The providers of the pessary need to explain how to maintain the cleanliness of the pessary and how one can identify early signs of adverse effects of the pessary so that the patient can manage them without outside help. A noteworthy majority of the patients (80%) described general improvement in the quality of life irrespective of the pain (16). Several women said that knowing how to insert, remove, or adjust the pessary on their own had an empowering effect on many aspects of their lives. Work-life autonomy is a key aspect of patient-centered care and might contribute to improved self-perceived health, especially, improved emotional health, 65%, of the women had reported. These findings confirm that POP should be relieved not only by the medication but also by educating the patient and developing her self-management skills connected with the psychosocial aspect of the disease (17).

Conclusion

This study concludes that long-term self-management of vaginal cube pessaries significantly improves sexual function and overall quality of life in women with pelvic organ prolapse. By empowering patients to independently manage their pessary care, women experience greater autonomy, reduced physical discomfort, and enhanced emotional well-being. While some mild complications may occur, proper education and follow-up can mitigate these challenges, making self-management a valuable option for many women.

Declarations

Data Availability statement
All data generated or analyzed during the study are included in the manuscript.
Ethics approval and consent to participate.
Approved by the department concerned. (IRB-SMQ-09/22)
Consent for publication
Approved
Funding
Not applicable

Conflict of interest

The authors declared an absence of conflict of interest.

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RABIA IRAM & ***MARYAM (Medical officer)***
Concept & Design of Study

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