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CLINICAL ARTICLE

A 5-year prospective study of vaginal pessary use for pelvic organ prolapse

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ABSTRACT

Objective: To evaluate prospectively the use of vaginal pessaries for pelvic organ prolapse (POP) and to identify complications and reasons for discontinuing pessary use over a 5-year period. *Methods:* A prospective observational study was conducted among all women with POP referred to the urogynecology clinic of a UK hospital between June 2002 and June 2005 who opted to use a vaginal pessary. Patients were followed-up for 5 years. *Results:* Of the 246 women who chose to use a vaginal pessary, 187 successfully retained the pessary 4 weeks after insertion. Over a 5-year period, 36 (19.3%) of the 187 women were lost to follow-up. Of the 151 women included in the analysis, 21 (13.9%) discontinued use at some point after 4 weeks, whereas 130 (86.1%) used the pessary successfully over 5 years. Overall, 12.1% of the women experienced minor complications (6.9% pain or discomfort, 3.2% excoriation or bleeding, and 2.0% disimpaction or constipation). Most failures (73.8%) occurred within 4 weeks of pessary insertion. After cessation of pessary use, 70 (28.5%) of the 246 women chose surgery and 10 (4.1%) chose no further treatment. *Conclusion:* If treatment of POP with a vaginal pessary is successful at 4 weeks, most women will continue to use the pessary over 5 years without a concomitant increase in complications.

1. Introduction

Pelvic organ prolapse (POP) affects approximately 50% of parous women over 50 years of age; the lifetime prevalence risk of POP is 30%–50% [1,2]. Although surgery is frequently performed for POP [3–5], non-surgical treatment options include pelvic floor exercises [6–8] and the use of vaginal pessaries [1,8]. Traditionally, pessaries have been used as a temporary measure to control symptoms while awaiting surgery, or as a permanent alternative to surgery for women who are medically unfit and those who have declined surgery or who wish to have children [9,10]. However, it has been shown that vaginal pessaries are a viable treatment option for any woman with POP [11–13]. Kapoor et al. [13] reported that nearly two-thirds of women with symptomatic POP chose a vaginal pessary rather than surgery as the initial treatment.

Short-term results regarding the use of vaginal pessaries [11] to treat POP demonstrate a success rate ranging from 56% [14] to 100% [15]. Retrospective studies on the long-term use of vaginal pessaries have been published [16], although there is limited prospective information on long-term use and on the factors that influence continuity or discontinuity over time. We hypothesized that most women would discontinue pessary use in the long term.

The aim of the present study was to establish prospectively the long-term outcome of vaginal pessary use for the treatment of POP and to ascertain the reasons for discontinuation where applicable.

2. Materials and methods

All women who were referred to a specialist urogynecology clinic at Croydon University Hospital, Croydon, UK, with POP and who requested treatment were offered a choice of pessary or surgery as the first-line treatment. Women who opted for pessary treatment between June 8, 2002, and June 30, 2005, were included in the study. Those who opted for surgical treatment were excluded. All patients provided written informed consent and the study was approved by the Croydon Local Research and Development Committee.

A detailed history of the women was taken, and demographic data were collected, including age, parity, body mass index (calculated as weight in kilograms divided by the square of height in meters), prolapse symptoms, urinary symptoms, sexual status, previous surgery, medical comorbidities, use of hormone replacement therapy, presence of constipation or chronic cough, and smoking status. All patients were examined and the degree of POP was determined using the Baden–Walker system or the International Continence Society POP quantification system [17]. The type and size of the vaginal pessary inserted were also recorded.

The ring pessary was the treatment of choice, and in some patients different sizes of pessary were tried before comfortable retention was obtained. If the ring pessary was unsuccessful and the patient was sexually active, a cube pessary was used. If the ring pessary was

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unsuccessful and the patient was not sexually active, a gellhorn or a doughnut pessary was used. Women were seen at intervals of 6 months to have their pessary changed. At each visit, the patient was asked about any untoward symptoms such as vaginal bleeding, abnormal vaginal discharge, pain or discomfort, extrusion of the device, new-onset urinary incontinence, or disorders of defecation. Abnormal vaginal discharge was defined as profuse, discolored, malodorous, or mucopurulent discharge. In such cases, the pessary was removed for 2–3 weeks. After removal of the pessary, examination with a vaginal speculum was performed to check for ulceration, excoriation, or other abnormal findings. In the case of excoriation or ulceration, a pessary-free rest period of 4 weeks was undertaken and the patient was advised to use topical estrogen cream. Thereafter, the pessary was replaced if healing had occurred. If bleeding failed to resolve, further investigations were conducted to rule out other causes.

Information was collected on duration of use, type of pessary, and complications experienced. Details regarding discontinuation of pessary use were documented—that is, duration when usage was stopped, whether use had been temporary, whether the patient had decided to undergo surgery, and any other reason for not using the pessary (e.g. complications). The pessary was regarded as successfully retained if it was being used without discomfort at 4 weeks after insertion. The pessary was considered to be successful for 5 years if there was a reduction in prolapse symptoms and the woman wished to continue its use, if the pessary was used as an interim measure before surgery (temporary measure), or if the woman had died (owing to unrelated causes) with the pessary in situ. Patients were considered lost to follow-up if they successfully retained the pessary at 4 weeks but did not attend further appointments.

3. Results

Over the 5-year study period, 427 women with POP symptoms were referred to the clinic. Of these, 246 chose to use vaginal pessaries. The median age of the women at the time of pessary insertion was 70 years (range, 22–98 years), and the median parity was 2 (range, 0–8). Overall, 231 (93.9%) women were Caucasian, 11 (4.5%) were Asian, and 4 (1.6%) were Afro-Caribbean. In total, 124 (50.4%) women had previously undergone a hysterectomy, 32 (13.0%) had experienced a previous prolapse, and 31 (12.6%) had undergone surgery for incontinence. Of the 187 women who continued to use a pessary after 4 weeks of insertion, 21 (11.2%) had stage I POP, 112 (59.9%) had stage II POP, 44 (23.5%) had stage III POP, and 10 (5.3%) had stage IV POP.

The types of vaginal pessary used were as follows: 191 rings (77.6%); 40 gellhorns (16.3%); 6 cubes (2.4%); 5 incontinence rings (2.0%); and 4 doughnuts (1.6%). Overall, 187 (76.0%) women successfully retained their pessary at 4 weeks after insertion. The median duration of pessary use was 3.5 years (range, 2.5–5.0 years). The rates of failure at 4 weeks after insertion were as follows: 45/196 (23.0%) for both types of ring; 2/40 (5.0%) for gellhorns; 3/6 (50.0%) for cubes; and 1/4 (25.0%) for doughnuts. Most pessary failures over the 5-year study period (57/80 [71.3%]) occurred among women with at least POP stage II, and those who had previously undergone surgery for POP had higher rates of failure (10/15 [66.7%]).

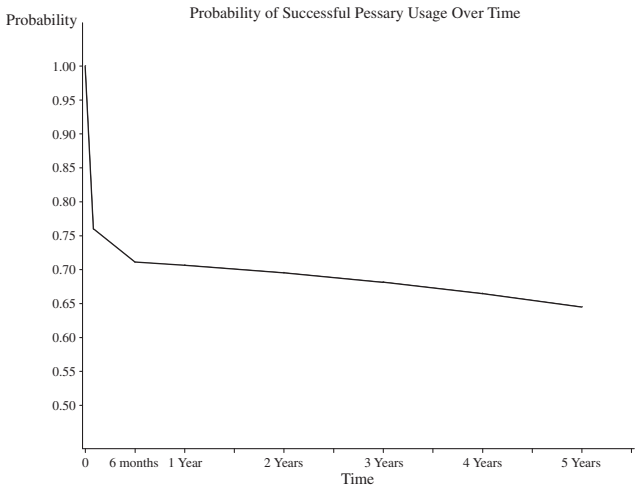

Fig. 1. Kaplan–Meier graph showing the probability of using vaginal pessaries successfully to treat pelvic organ prolapse.

Four weeks after insertion, 59 women were unable to retain their pessary (Table 1). Of the 187 women who successfully retained their pessary at 4 weeks, 36 (19.3) were lost to follow-up, so 151 (80.7%) were included in the analysis. Twenty-one (13.9%) of these women discontinued pessary use at some point after 4 weeks, whereas 130 (86.1%) successfully continued the treatment over 5 years. The rate of success at the 5-year point was 28.3% (53/187). A Kaplan-Meier graph (Fig. 1) including data from women who experienced a reduction in prolapse symptoms and wished to continue vaginal pessary use (n = 53), temporary pessary users (n = 54), those who experienced pessary failure (n = 80), and those who died with the pessary in situ (n = 23) shows that, 5 years after pessary insertion, the probability of successful pessary use was 66%.

Most failures (59/80 [73.8%]) occurred within 4 weeks after insertion of the pessary, and 71/80 (88.8%) failures occurred within 6 months of insertion (Table 1). Subsequently, the failure rate was no more than 1.1% per year. Of the 187 women who successfully retained the pessary at 4 weeks, 36 (19.3%) were lost to follow-up, which occurred most commonly between years 3 and 5 of pessary use.

In total, 168 (89.8%) successful pessary users had no complications within 4 weeks of insertion (Table 2). Most of the complications occurred within the first 6 months after insertion; for example, pain or discomfort was reported by 13 (5.3%) women, excoriation or bleeding was seen in 3 (1.2%) women, and disimpaction or constipation was reported by 3 (1.2%) women.

Table 1
Five-year follow-up of women who used vaginal pessaries to treat pelvic organ prolapse.[a]

Follow-up	Continued to use pessary	Failed to use pessary	Temporary use of pessary	Lost to follow-up	Deceased
0 week	246				
4 weeks	187 (76.0)	59 (24.0)			
6 months	152 (81.2)	12 (6.4)	18 (9.6)	5 (2.7)	0 (0.0)
1 year	126 (67.3)	1 (0.5)	20 (10.7)	2 (1.1)	3 (1.6)
2 years	101 (54.0)	2 (1.1)	9 (4.8)	3 (1.6)	11 (5.9)
3 years	81 (43.3)	2 (1.1)	5 (2.7)	10 (5.3)	3 (1.6)
4 years	68 (36.3)	2 (1.1)	1 (0.5)	6 (3.2)	4 (2.1)
5 years	53 (28.3)	2 (1.1)	1 (0.5)	10 (5.3)	2 (1.1)

[a] Values are given as number (percentage).

Table 2
Reasons for failure to use vaginal pessaries to treat pelvic organ prolapse.[a]

Follow-up	Pessary expelled	Excoriation/ bleeding	Pain/ discomfort	Disimpaction/ constipation	Total
4 weeks	40 (16.3)	3 (1.2)	13 (5.3)	3 (1.2)	59
6 months	7 (2.8)	2 (0.8)	2 (0.8)	1 (0.4)	12
1 year	0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	1
2 years	1 (0.4)	1 (0.4)	0 (0.0)	0 (0.0)	2
3 years	1 (0.4)	0 (0.0)	1 (0.4)	0 (0.0)	2
4 years	0 (0.0)	1 (0.4)	1 (0.4)	0 (0.0)	2
5 years	1 (0.4)	0 (0.0)	0 (0.0)	1 (0.4)	2

[a] Values are given as number (percentage).