

Should we use pessaries for pelvic organ prolapse?

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Introduction

The true incidence of pelvic organ prolapse (POP) is difficult to determine, however, it is a common condition reported to affect 50% of parous women over 50 years of age.¹ In their widely cited study, Olsen et al (2) found a lifetime risk of 11% (by age 80 years) for women to undergo surgery for POP and urinary incontinence. The risk of recurrent POP after surgery is reported to be between 10-30%.²⁻⁴ Although non-life threatening, POP is an embarrassing condition that has been shown to negatively impact on various quality of life domains.^{5,6} Population modeling studies have projected a population of 9 billion by 2040 and also an increase in demand for services to care for female pelvic floor disorders. Currently non-surgical treatment modalities include expectant management, pelvic floor exercises and the use of support devices i.e. vaginal pessaries. Vaginal support devices date back to at least 1550 BC, and have remained the mainstay of treatment for POP until recent advances in pelvic floor reconstructive surgery.

The ideal surgical procedure to correct POP would be a single operation that lacks morbidity and mortality and improves quality of life. Reoperation rates range from 29.2%² in a community based population, to as high as 43-56% in academic referral populations.^{7,8} Reoperation rates for anterior compartment prolapse may be as high as 20-40%, 5-20% for the posterior compartment and up to 30% for apical compartment.⁹ Currently clinicians mainly opt to use vaginal pessaries as a treatment option for those with co-morbid medical conditions, as interim relief while awaiting surgery, in women who still desire to bear children, and in those patients that decline surgical intervention. It is rarely used as a primary treatment modality for POP. Apart from its use in urogynaecology, there are case reports documenting pessary use for the treatment of cervical incompetence and for uterine prolapse in pregnancy.^{10,11}

The vaginal pessary

Earlier prescriptions to correct a bulge in the vagina included the use of honey, pomegranate, petroleum, astringent soaked devices, cupping as well as suspending a woman upside down from a ladder and moving her up and down for 3-5 minutes in the hope that the force of gravity will restore pelvic anatomy. The history and evolution of pessaries for POP is elegantly discussed in an article by Shah et al.¹²

Vaginal pessaries for prolapse are available in various shapes, sizes and materials (silicone, lucite, rubber or plastic). Silicone has several advantages over other materials in that it is relatively inert and therefore has very low allergenicity, vaginal odour is minimized as it does not absorb secretions, it is autoclavable, reusable and it is resistant to most antiseptic solutions.

Pessaries are generally divided into two groups i.e. space occupying and support pessaries.

Support pessaries

This function using a spring mechanism that rests between the posterior aspect of the pubic symphysis and the posterior vaginal fornix. Examples include: Ring, with or without support, Gehrung and Hodge

Space occupying pessaries

These create a suction effect between the device and the vaginal walls by occupying a space larger than the genital hiatus. Examples include: Gellhorn, Cube and Donut

In clinical practice the ring pessary is the most common pessary used, followed by the Gellhorn and cube pessary. A survey of the members of the American Urogynecologic Society revealed that the ring pessary was first choice in anterior defects, the donut pessary in posterior defects, the ring pessary in apical prolapse and the Gellhorn in procidentia.¹³

Evidence from clinical trials

Pessaries are used as treatment modality for POP by 98% of members of the American Urogynecologic Society (77% used them as first line therapy for POP) and 88% of Fellows of the American College of Obstetricians and Gynecologists.^{13,14} Despite this, there is a paucity of data evaluating the efficacy as

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well as patient satisfaction of pessaries in relieving symptomatic POP.

The use of pessaries for symptomatic POP has been shown to positively affect general, urinary, bowel and sexual function. Using the validated Sheffield questionnaire, Fernando et al prospectively evaluated the effect of pessaries on symptoms associated with POP (n=203). 75% (n=153) retained their pessary 2 weeks later and 48% (n=97) at 4 months. 56 patients did not complete the 4 month follow-up. Reasons included: preferred surgery (n=28); death and dementia (n=7); did not return questionnaire (n=21). The Wilcoxon signed rank test was used to assess change in symptoms from baseline. There was a statistically significant improvement in general, urinary and defecatory symptoms.¹⁵

Similarly, in a prospective study of 100 consecutive women with symptomatic POP fitted with a pessary, 73 patients retained their pessary at 2 months post insertion. 50% reported an improvement in urinary symptoms and a significant improvement in nearly all prolapse symptoms at 2 months post pessary insertion i.e. bulge, pressure, discharge and splinting. 92% of patients were satisfied with their pessary.¹⁶ Occult stress incontinence occurred in 21% of patients. In both

the studies the ring pessary was the most common pessary used. The latter study did not use a validated questionnaire to assess change in symptoms.

Using the Kings Health Questionnaire (to assess quality of life); the Sheffield questionnaire (for organ-specific symptoms), and the Female Sexual Function Index (FSFI) questionnaire (for sexual function), Kuhn et al conducted a prospective observational study between December 2005 and January 2006 to assess quality of life, prolapse symptoms and sexual function in symptomatic patients with Stage 2 or more POP.¹⁷ Only 73 women participated in this study. Questionnaires were completed at baseline and at 3 months after the cube pessary was inserted. There was a statistically significant improvement in the following: sexual desire, lubrication and satisfaction (orgasm remained unchanged); bulge feeling, stool outlet problems; and overactive bladder symptoms. At 12 months 32 (44%) patients were still using their pessary. Reasons for pessary cessation included: loss of pessary during daily activities or bowel emptying (n=10), desire for surgical correction (n=9), bothersome de novo stress incontinence (n=7), inability to insert or remove pessary (n=6), pain or feeling of discomfort (n=4) and unspecified reasons (n=5). It has been shown that a short vaginal length (<6cm), wide

Figure 1: Range of some popular vaginal pessaries



vaginal introitus (4 fingerbreadths accommodation) previous hysterectomy and prolapse surgery are predictors of unsuccessful pessary fitting¹⁸⁻²⁰, while older age and poor surgical risk are factors associated with continued use after 1 year.²¹

In a nonrandomized prospective cohort study by Hullfish et al, patients centered goals were evaluated by using a Goal Attainment Scale (GAS); a 5-point scale, with -2 assigned to the worst outcome and +2 to the best outcome; between surgically treated and nonsurgical treatment in patients with pelvic floor dysfunction.²² In this small study of 127 participants, there was a non-significant difference in overall patient goal attainment, but at 1 year surgically treated patients were 4 times more likely to report primary goal attainment than those treated with pessaries, medication, behavior modification programs and expectant management. Symptom relief and activity improvement were the two most commonly cited goals. This study included patients with urinary incontinence and the exact number of patients treated with a pessary is not mentioned. The GAS is currently unvalidated and its role as a standardized subjective outcome measure for patient centered goals may prove to be interesting.

Conclusion

With an estimated failure rate of 30% for primary repair of POP, lack of evidence about the best surgical technique and poorly defined patient outcome measures, the use of pessaries for POP is a viable, reversible and safe option. Long-term prospective studies evaluating the effect of pessaries on symptoms associated with POP and urinary incontinence in comparison to surgical intervention are needed. For many physicians, vaginal pessaries still remain a medical curiosity. This is confounded by the lack of clear guidelines addressing the general indications, choice of pessary matched for the affected compartment, and management post insertion. Since most studies evaluating the effect of pessaries on POP symptoms have reported favorable outcomes; it can be recommended that pessaries be used prior to surgical correction.

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