Technical Update on Pessary Use

Abstract

Objective: To review the use, care, and fitting of pessaries.

Options: Pessaries are an option for women presenting with prolapse and/or urinary incontinence.

Outcomes: Pessaries can be successfully fitted in the majority of women with excellent satisfaction rates and minimal complications.

Evidence: PubMed and Medline were searched for articles published in English to September 2010, using the key words pessary, prolapse, incontinence, fitting, and complications. Results were restricted to systematic reviews, randomized control trials/controlled clinical trials, and observational studies. Searches were updated on a regular basis, and articles were incorporated in the guideline to May 2012. Grey (unpublished) literature was identified through searching the websites of health technology assessment and health technology assessment-related agencies, clinical practice guideline collections, clinical trial registries, and national and international medical specialty societies.

Values: The quality of evidence was rated with use of the criteria described by the Canadian Task Force on Preventive Health Care. Recommendations for practice were ranked according to the method described by the Task Force (Table 1).

Benefits, harms, and costs: Women may choose a pessary for management of their prolapse and/or stress incontinence rather than opt for surgery. Major complications have been seen only with neglected pessaries. Minor complications such as vaginal discharge, odour, and erosions can usually be successfully treated.

SUMMARY STATEMENTS AND RECOMMENDATION

Summary Statements
1. Most women can be successfully fitted with a pessary when they present with prolapse. (II-2)
2. Complications of pessary use are usually minor, and vaginal discharge is the most common complaint. (II-3)
3. Vaginal erosions can be treated with removal of the pessary and optional vaginal estrogen supplementation. (II-2)
4. Satisfaction rates with pessary use are very high. (II-2)

Recommendation
1. Pessaries should be considered in all women presenting with symptomatic prolapse and/or urinary stress incontinence. (II-1A)

Key Words: Pessary, prolapse, incontinence, fitting, complications

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Pelvic organ prolapse is seen in up to 50% of parous women. Although often asymptomatic, it may present with symptoms of bulging, pelvic pressure, and occasionally backache. It is often associated with bladder, bowel, and sexual dysfunction. Treatment options include pelvic floor exercises, expectant management, use of mechanical vaginal devices (pessaries), and surgical correction. This technical update guides care providers on the use of pessaries.

A pessary is a device placed into the vagina to support the prolapsing vaginal walls or to provide urinary continence. Pessaries have the distinct advantage of being minimally invasive, and they provide immediate relief of symptoms. Although in the past, pessaries were reserved for the frail and elderly, they are also an excellent alternative for symptomatic women who have not finished child-bearing and for those who choose a non-surgical intervention or who wish symptomatic relief while awaiting surgery. Pessaries are experiencing a resurgence in popularity and are an option for the treatment of prolapse and incontinence for women in any age group.

Pessaries are made primarily of medical grade silicone; only the largest sizes are made of surgical steel with a covering of silicone. This has the advantage of making them inert and less likely to have an odour or cause an allergic reaction. Pessaries used for the treatment of prolapse can be classified as support pessaries or space-occupying pessaries. The support pessaries sit in the posterior fornix and generally rest above the pubic bone and/or pelvic floor. The commonly used types include ring pessaries (with or without diaphragms, Figure 1) and the Shaatz pessaries (Figure 2). The space-occupying pessaries include the cube (Figure 3), InflatoBall (Figure 4), and donut (Figure 5) pessaries. The cube works by bringing the vaginal walls towards the midline, and the others occupy a larger space than the introitus. They are most often used for more severe prolapse. The commonly used Gellhorn pessary (Figure 6) works as a combination of these 2 methods. There are many other styles to address specific defects, but their use is not often reported in the literature.

Incontinence pessaries are often designed as support pessaries with extra support anteriorly (Figure 7) to elevate and slightly constrict the urethra. The ring incontinence pessary (Figure 8) and the incontinence dish (Figure 9) are specifically designed to treat stress urinary incontinence. If a woman develops stress incontinence after being fitted with a prolapse pessary, switching to an incontinence pessary may be beneficial.

INDICATIONS

Pessaries can be used for diagnostic or therapeutic purposes. Pessaries are often used to relieve symptoms...
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Figure 1. Ring pessary with support

Figure 2. Shaatz pessary

Figure 3. Cube pessary

Figure 4. Inflatoball pessary

Figure 5. Donut pessary

Figure 6. Gellhorn pessary
of prolapse\textsuperscript{6} and of urinary stress incontinence. They are cost-effective in the treatment of prolapse.\textsuperscript{7} Women choosing pessary for the treatment of prolapse are as likely to be satisfied and to have improved pelvic floor function as those selecting surgery.\textsuperscript{8}

Pessaries can also be used for the preoperative evaluation of women with prolapse by unmasking latent stress incontinence\textsuperscript{9} and providing information on postoperative voiding dysfunction.\textsuperscript{10,11} This could be revealed during the use of a pessary, or during the performance of urodynamic testing with and without pessary. Although urodynamic testing has poor sensitivity, its specificity is high (93\%), and the absence of occult incontinence has an excellent negative predictive value (91\% to 98\%) for postoperative continence.\textsuperscript{12,13}

Pessaries can also be used as a temporary treatment of symptoms while patients are waiting for surgery, and they can help to heal vaginal ulcers that result from erosions due to a large prolapse. They may also play a role in preventing progression of prolapse.

Prolapse

Women can be successfully fitted with a pessary 71\% to 90\% of the time.\textsuperscript{14-15} Symptoms of bulging and pressure are relieved in 70\% to 90\% and 29\% to 49\% of women, respectively.\textsuperscript{15,16} When pessaries are successful at the 4-week point, most women continue to use them at 5 years.\textsuperscript{20}

Ring pessaries are the most commonly used and widely available, followed by Gellhorn and cube or donut
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Pessaries. In a randomized crossover trial, there was no difference in patient satisfaction or symptom relief between those using the ring and those using the Gellhorn pessary. Ring pessaries may be open or covered (also referred to as “with support” or “with diaphragm”). The purpose of the covered ring pessary is to support the cervix; perforations allow the escape of vaginal secretions. Open and covered ring pessaries are best used in POP-Q (pelvic organ prolapse quantification) stage I and II prolapse (mild to moderate prolapse), although they often work well with a more advanced degree of prolapse if there is an adequate perineal body to ensure the pessary is retained. It has the advantage of ease of insertion and removal, and comfort.

If the pessary fails to remain in position or there continues to be protrusion, a stiffer pessary such as a Shaatz or a Gellhorn, or a space-occupying pessary such as a cube or a donut may be used. Cube pessaries have been successfully used in severe prolapse. However, they may be more prone to erosion, and they require frequent removal, nightly in some cases. Patients can learn to remove and re-insert a cube pessary.

Successful use of a pessary is dependent on both adequate fit and patient satisfaction.

The most common reasons women choose to use a pessary are to improve lower urinary tract symptoms secondary to pelvic organ prolapse, such as bulging, and to improve activity and general health. Pessary use can also alleviate other symptoms, including difficulty with bladder emptying, urinary urgency symptoms, and defecatory symptoms. Contrary to common belief, sexual activity is not a predictor for discontinued pessary use; in fact, pessary use may enhance sexual activity and satisfaction. Table 2 shows the change in symptoms after pessary fitting.

Predictors for unsuccessful fitting include a short vagina (< 6 cm), a wide introitus (> 4-finger breadth), the presence of a rectocele, previous vaginal surgery, and coexisting stress urinary incontinence.

Predictors of discontinuation include posterior wall prolapse, younger age (< 65 years old), urinary incontinence, and discomfort. However, in one study, women who had previously undergone pelvic reconstructive surgery were more likely to continue pessary use.

### Urinary Incontinence

Some pessaries have been specifically designed to treat urinary stress incontinence. These include the ring pessary with support and knob (Figure 7), the incontinence ring (Figure 8), the incontinence dish (Figure 9) and the Uresta device (Figure 10). They appear to stabilize the urethra and increase urethral resistance. Initial successful fitting varies between 60% and 92% with an incontinence ring. Continued use drops to 55% by 6 months. By 1 year, the overall continuation may be as low as 16%, but this finding was from a study in which an incontinence ring pessary with diaphragm was used, and most women discontinued use because of lack of efficacy. In a retrospective chart review of 100 women successfully fitted with pessaries, 59% were continent or mostly continent at 11 months. Reasons for discontinuation included persistent incontinence, pessary falling out, or pain and bleeding. One crossover study showed that the incontinence ring was more effective than no treatment for the management of stress urinary incontinence, significantly decreasing the number of incontinence episodes and improving quality of life. Eighty percent of women saw an improvement of their incontinence, and 20% were dry.

Using the new Uresta device, continuation rates at 1 year were 50%. In that case series (n = 32), continence was obtained by 31% of women, and incontinence was improved in a further 34%. There is insufficient evidence to state that pessaries are more effective in treating urinary incontinence than other devices or other treatments, including pelvic floor exercises.

| Table 2. Change in symptoms after pessary fitting |
|--------------------------------------|-----------------|
| Stress urinary incontinence | Improved, % | Worsened, % |
| Urge urinary incontinence | 22 to 45 | 17 to 21 |
| Voiding difficulties | 28 to 46 | 6 to 13 |
| Incomplete evacuation of bowel | 39 to 53 | 4 to 14 |
| Fecal urgency | 27 | 18 |
| Fecal incontinence | 19 | 9 |
| Frequency of sexual activity | 6 | 3 |
| Satisfaction of sexual activity | 1 | 5 |

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Pregnancy

Women who develop prolapse\textsuperscript{3,38,39} during pregnancy or who develop urinary retention because of an incarcerated uterus\textsuperscript{40} can be fitted with a pessary, although not always successfully.\textsuperscript{41} By 18 weeks, when the uterus lifts out of the pelvis, symptoms often resolve, and pessary use can be discontinued. The use of an incontinence pessary in pregnancy has not yet been described.

In small cohort studies, pessaries placed around the cervix, such as the Arabin pessary,\textsuperscript{42} have been shown to have some benefit in preventing preterm birth in women with cervical incompetence.\textsuperscript{43,44} Multiple randomized clinical trials, some international and multicentre, are ongoing.\textsuperscript{45} An RCT by Goya et al.,\textsuperscript{46} published in 2012, found that the use of the Arabin pessary was associated with a significant reduction of premature birth (< 34 weeks) from 27% to 6% in women identified as having a short cervix (< 25 mm) on ultrasound at 22 weeks, as well as with a decrease in premature rupture of membrane (9% to 2%) and a decrease in composite neonatal severe outcomes from 16% to 3%, mostly for sepsis and respiratory distress syndrome. However, until the results of this trial are reproduced, the use of pessary for prevention of premature birth cannot be recommended, as its safety for this indication remains to be established.\textsuperscript{47}

GUIDELINES FOR FITTING

Successful fitting and continued use is dependent on adequate patient education (Appendix). It is imperative that the woman and/or her caregiver commit to proper care of the pessary.\textsuperscript{38}

As part of the history, health care providers should inquire about symptoms of prolapse, bladder and bowel dysfunction, and sexual activity. This is followed by a comprehensive examination: assessing vaginal mucosal health; assessing the degree and compartment of prolapse, including genital hiatus and vaginal length; and measuring pelvic floor strength. It is common but not essential\textsuperscript{48} to begin vaginal estrogen therapy in postmenopausal women to improve the health of the vaginal epithelium.\textsuperscript{3,4}

The approximate size of pessary required is determined by assessing the width of the vaginal canal by separating the 2 examining fingers at the vault in a sagittal plane and estimating their separation distance. A ring pessary is usually fitted initially, as it is easy to use and tends to be more comfortable. The pessary is folded, and the leading edge is lubricated. It is inserted by directing it towards the sacrum, and it is unfolded above the pelvic floor, with the anterior edge just behind the symphysis. There should be a finger’s breadth between the pessary (edge) and the symphysis anteriorly and between the side of the pessary and the lateral vaginal wall. The ring pessary should be turned one quarter turn in either direction following placement to ensure the foldable edge is not placed in front of the introitus, thus potentially limiting spontaneous expulsion. Once the pessary has been fitted, the patient should ambulate in the clinic and perform activities such as squatting and Valsalva manoeuvre to ensure it will not fall out. It is necessary to ensure that patients are able to void and that they are given appropriate education before leaving the clinic with their new pessary (Appendix). A post-void residual can be done to rule out the possibility of obstruction. Dental floss can be attached to aid in removal of difficult pessaries.

An incontinence ring is fitted by assessing the distance between the posterior cul-de-sac and the mid urethra. Because the incontinence ring is more flexible, it will adapt to the configuration of the vagina. The health care provider must ensure that the knob is centred underneath the mid-urethra and that the proximal ring is placed in the posterior cul-de-sac and not in front of the cervix in the anterior fornix.\textsuperscript{50}

A ring pessary with incontinence knob is placed like a regular ring, but once it is opened, the knob will be facing the sidewall: it must therefore be rotated one quarter turn to place the knob under the mid-urethra.\textsuperscript{50}

If the vaginal introitus is more than the width of 3 or 4 fingers, a space-occupying pessary is the most likely to be successful. A Shaatz pessary is fitted similarly, with the convex portion placed anteriorly. A Gellhorn pessary is fitted by folding of the disc as above when possible with the stem folded down for ease of insertion. The stem will be directed caudally (pointing out), and it should be possible to pass a finger between the disc and the vaginal side wall. Because of its shape, a cube pessary need not be as large as the width of the vagina (as measured with the examining fingers spread apart), but approximately one half that width. Insertion simply involves compressing the edge that is introduced into the vaginal opening, and pushing it up and back. Donut pessaries also require compression for insertion.

Follow-up Pessary Care

Following a successful fitting, the woman is seen again within 2 to 4 weeks to see if she is satisfied or whether another size or style is required. If possible, instruction on removal and care should be given.\textsuperscript{3} Although there are no clear guidelines for pessary care, women who are able to perform self-care are advised to remove the pessary...
once a week and to wash it with water or mild soapy water. Women who are not able to perform self-care should be followed at 3-month intervals. Maintenance of pessary care by a health care professional rather than the patient is often required with Gellhorn, cube, or donut pessaries.

Some pessaries may be difficult to remove. The Gellhorn pessary is easier to remove when the health care professional uses a ring or packing self-closing forceps on the base of the stem to apply outwards traction, and then uses one finger to break the suction and fold the round disc along the stem. A cube pessary requires removal and cleaning more often than every 3 months, because a greater amount of discharge is usually trapped within the suction cups (although the cube is available with drainage holes). The frequency of cleaning required for a cube pessary will vary among patients, from as often as every few days to every few weeks.

Once removed, the pessary should be washed using plain soap and water. The perforations of the Gellhorn and Shaatz pessaries are best cleansed using a cytobrush or a small cotton swab. The vaginal epithelium should be inspected for erosions or ulcerations, and special attention should be paid to the posterior and lateral fornices of the vagina. This is best accomplished using a large cotton swab to displace the cervix to the contralateral direction.

If no complications arise and the patient is able to perform self-care, the interval between visits can be increased to 6 months or 1 year.30 Women can be sexually active with the ring or Shaatz pessary in place. A cube, donut, or Gellhorn pessary must generally be removed before intercourse.

**COMPLICATIONS**

Published complication rates vary, which likely reflects a difference in reporting. In a study by Hanson et al. 88.5% of 1216 women did not develop complications.17 Common complications included erosions (8.9%) and vaginal infections (2.5%).17 This is in contrast to the study by Bai et al., in which 73% of women had complications, including bleeding, erosions, or foul odour.51 Despite this relatively high rate, over 70% reported being satisfied with the pessary and wanted to continue its use,51 suggesting that these complications are minor.

Local pressure from the pessary can lead to focal devascularisation and cause erosions. Reported rates range from 2% to 9%.50 Erosions may present as vaginal bleeding, odour, or increased discharge, which is typically brown. A strong odour is usually present upon removal of the pessary. When such strong odour is detected during routine pessary care, careful examination of the vagina should be performed, often facilitated by the use of large swabs to push the cervix and sidewalls apart. If neglected, erosions can progress to ulcers or a fistula. Other causes of vaginal bleeding cannot be excluded in pessary users, and endometrial or ulcer biopsy may be indicated if they persist. Therapy consists of pessary removal for a period of 2 to 4 weeks and local estrogen use (tablet or cream). Resolution of erosions may also occur without local estrogen.17 For ongoing problems, more frequent visits and a change in pessary type or size may be required. Vaginal cancer is a rare association with neglected pessary use but should be considered with non-healing ulcers. Vaginal discharge is a common complaint of pessary users. It can be caused by a physiologic response to friction of the pessary on the vaginal mucosa, bacterial vaginosis, or yeast. Bacterial vaginosis can cause malodorous vaginal discharge, which can be problematic but is not related to the appearance of an ulcer.17 Alnaif and Drutz showed that in matched women, pessary users had a 32% rate of diagnosed bacterial vaginosis compared with 10% in non-users.52 The use of estrogen cream did not appear to have a protective effect. More frequent pessary removal can often alleviate this problem. The use of Trimo-San cream (Cooper Surgical) or Replens may decrease the odour and discharge.5 Antibiotic treatment with oral or vaginal metronizadole is also effective. Often simple reassurance that the problem is physiologic may be sufficient. Yeast can be treated in conventional ways. Often it is recommended to keep the pessary removed during treatment, although there is no evidence that this makes a difference.

If a pessary is repeatedly dislodged, women often discontinue use. This is best averted by preventing constipation and avoiding straining in general.

Major complications are uncommon with pessary use. In case reports documenting complications including vesicovaginal fistulae, bowel fistulae, incarcerated pessaries etc.,53 91% were related to neglected pessaries. This stresses the importance of continued and diligent follow-up.

**CONCLUSION**

Pessaries have a high success rate and minimal complication rate for the treatment of both incontinence and prolapse. When successfully fitted, they are associated with high patient satisfaction. They should therefore be considered as first-line treatment for all women presenting with pelvic prolapse and/or stress urinary incontinence.
Summary Statements

1. Most women can be successfully fitted with a pessary when they present with prolapse. (II-2)
2. Complications of pessary use are usually minor, and vaginal discharge is the most common complaint. (II-3)
3. Vaginal erosions can be treated with removal of the pessary and optional vaginal estrogen supplementation. (II-2)
4. Satisfaction rates with pessary use are very high. (II-2)

Recommendation

1. Pessaries should be considered in all women presenting with symptomatic prolapse and/or urinary stress incontinence. (II-1A)

REFERENCES

8. Abdool Z, Thakar R, Sultan AH, Oliver RS. Prospective evaluation of the incontinence dish and vaginal discharge is the most common complaint. (II-3)
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After your pessary fitting, book a follow-up appointment in weeks.

- This visit is to see if the pessary is helping you, and to examine your vagina to make sure it remains healthy looking.
- Further follow-up appointments are very important. When you are comfortable with caring for your pessary, the follow-up appointments will be less often.
- You may learn to care for your pessary yourself. If you can remove and insert your pessary yourself, then you should remove your pessary overnight at least once a week and clean it with warm water. Book regular follow-up visits to check on the health of your vaginal tissue.

Occasional Problems and Suggestions

<table>
<thead>
<tr>
<th>Problem</th>
<th>Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pessary falls out</td>
<td>Reinsert your pessary if you are able to. Go to your scheduled appointment, and bring your pessary with you.</td>
</tr>
<tr>
<td>You have pelvic pain</td>
<td>If you feel that your pessary is the cause of the pain, remove it and bring it with you to your next appointment. If you are unable to remove your pessary, contact the clinic.</td>
</tr>
<tr>
<td>Vaginal odour and/or discharge</td>
<td>Some odour and discharge is normal. If the odour is very foul, remove the pessary if you can, and go to your scheduled appointment. If you are unable to remove your pessary, contact the clinic.</td>
</tr>
<tr>
<td>Vaginal bleeding</td>
<td>This may be a sign that the pessary is irritating your vaginal lining. Remove the pessary if you can, and go to your scheduled appointment. If you are unable to remove your pessary, contact the clinic.</td>
</tr>
<tr>
<td>Leaking urine</td>
<td>If you feel that the pessary is making your leakage worse, remove it. Go to your scheduled appointment. If you are unable to remove your pessary, contact the clinic.</td>
</tr>
</tbody>
</table>

If you are having urgent problems, phone the Pessary Clinic at:

This material is designed for information purposes only. It should not be used in place of medical advice, instruction, and/or treatment. If you have specific questions, please consult your doctor or appropriate health care professional.

Discharge and Odour

Some women find that they have an increased vaginal discharge, with or without an odour, when using a pessary. Usually this is normal. It is the body’s reaction to wearing a foreign body inside of you. This can be controlled with various creams or gels—speak to a doctor or nurse about it.

Insertion and Removal

Most women are able to insert and remove the pessary on their own. The clinic nurse will teach you some way to do this, but you may find a way that works best for you over time.

We suggest that you should try to remove your pessary at least once each week. Leave it out overnight to give your tissues a break. Some women remove it nightly and others leave it out longer. Everyone’s vaginal tissues have a different tolerance level for the pessary, in the same way that everyone’s skin varies in its sensitivity. How often you remove your pessary also depends on whether you are on hormones, and the type of pessary you wear.

Some women are unable to remove or insert the pessary due to arthritis or for other reasons. The clinic nurse can help you work out what works best for you, along with helping you find a schedule that works best for you.

Insertion of Your Pessary

Fold the pessary and insert it through the vaginal opening, aiming down towards your tailbone, and pushing down on the back of the vaginal wall.

Using your forefinger, guide the pessary as far back as you can, then push the pessary up and behind the pubic bone.
**APPENDIX. Continued**

Removing Your Pessary
Hook your forefinger under the edge of ring, or in a hole, and pull it down and out of the vagina.

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**PESSARIES: INFORMATION FOR WOMEN**

**What Are They?**
A pessary is a device that can be used to help control your leakage problem, or for support of sagging or prolapsing pelvic organs such as your bladder, uterus, or rectum. They are made of silicone and are worn inside the vagina.

- Pessaries are not a new invention. They have been used for centuries and come in many styles and sizes. They are being used more today as an effective and simple option for pelvic organ prolapse and/or urinary incontinence.
- Pessaries can be used for years.
- They should fit comfortably. If you have the right style and size, you should not be aware you are using one.
- Once fitted, they can be worn once in a while or most of the time. Pessaries are a tool used to help you, and each woman can use them differently.
- Pessaries work very well for many women, offer some help for others, and do not seem to be helpful for other women. You can try different styles and sizes to find the one that works best for you.

**Cleaning**
Use warm tap water and mild soap (for example, Sunlight dish detergent). Make sure that you rinse the pessary well. Store it in a clean, dry place. Do not boil or disinfect the pessary. Remember that your hands, and the pessary, must be clean before insertion.

**Sex**
The pessary may be left in or may be removed before intercourse, depending on your comfort level. This is a trial and error process. Some styles must be removed before intercourse.

**Bowel movements**
Most women wearing a pessary have no trouble or interference when having bowel movements. Women who tend to be constipated may have some problems. It is important that you keep your stools soft and regular. Some women may find it necessary to remove their pessary before they have a bowel movement.

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