

# American Urogynecologic Society Best Practice Statement: Evaluation and Counseling of Patients With Pelvic Organ Prolapse

*This document was developed by the American Urogynecologic Society (AUGS) Guidelines and Statements Committee with assistance of Cassandra L. Carberry, MD, Paul K. Tulikangas, Beri M. Ridgeway, Sarah A. Collins, and Rony A. Adam. This peer-reviewed document reflects clinical and scientific advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Its content is not intended to be a substitute for professional medical judgment, diagnosis or treatment. The ultimate judgment regarding any specific procedure or treatment is to be made by the physician and patient in light of all circumstances presented by the patient.*

**Abstract:** Women with prolapse should have an examination to quantify the loss of anatomic support and should be evaluated for associated bladder, bowel, and prolapse symptoms as well as associated bother. Treatment options should be tailored to meet the patient's medical health and personal functional goals. In most cases, women should be informed of the range of treatment options including observation as well as nonsurgical and surgical management.

**Key Words:** POP, pelvic organ prolapse

(*Female Pelvic Med Reconstr Surg* 2017;23: 281–287)

**P**elvic organ prolapse (POP) is a common pelvic floor disorder resulting in the loss of support of 1 or more compartments (anterior, apical, and/or posterior) of the vagina.<sup>1</sup> The prevalence of POP varies by definition. In the National Health and Nutrition Examination Survey data, 3% to 6% of US community-dwelling women report bothersome vaginal bulge symptoms.<sup>2–4</sup> Defining POP based on physical examination with the Pelvic Organ Prolapse Quantification System (POP-Q), yields higher prevalence rates. In an ancillary study of the Women's Health Initiative trial, 65% of participants had a prolapse of stage II or greater, of which, 25% had prolapse to or beyond the hymen.<sup>5</sup>

A range of treatment options exists for POP, including expectant management, the use of a vaginal pessary, pelvic floor physical therapy, and surgery. According to a random sample of beneficiaries of the Centers for Medicare and Medicaid Services, 12% of women treated for POP receive pessaries and 14% to 15% undergo surgery. Many women diagnosed with POP choose to forego treatment.<sup>6</sup> An analysis of US insurance claims data

indicates that the lifetime risk of surgery for POP by the age of 80 years is 12.6%.<sup>7</sup> Using US hospital discharge data and Medicare reimbursement numbers, the direct cost of POP surgery was more than \$1 billion in 1997.<sup>8</sup> These numbers are expected to increase as the population ages.<sup>9</sup>

This document provides guidance on the evaluation and counseling of women with POP.

## PATIENT HISTORY

Eliciting prolapse-related symptoms and the effect they have on quality of life is the primary goal of taking a history from a woman presenting for POP. A patient reporting a vaginal bulge that she can see or palpate is the most specific symptom for POP observed on examination.<sup>10–12</sup> Other causes of the sensation of a vaginal mass should be considered in the differential diagnosis. A full discussion of vaginal masses is beyond the scope of this document, but a summary of possible causes is provided in Table 1.

A detailed history of vaginal symptoms to be elicited from the patient includes vaginal bulging, pelvic pressure and discomfort, bleeding, discharge, splinting/digitation, and low backache. In addition, urinary symptoms should be obtained, including increased daytime urinary frequency, nocturia, urinary incontinence, difficulty voiding (hesitancy, slow stream, intermittency, straining to void, and position-dependent micturition), and the sensation of incomplete bladder emptying. The timing of the onset of symptoms is important. For example, a history of stress urinary incontinence, which was marked before the prolapse worsened, is helpful in determining the potential for stress urinary incontinence after prolapse treatment. Inquiries should be made to uncover any symptoms of bowel dysfunction including constipation, diarrhea, fecal urgency, straining to defecate, feeling of incomplete bowel evacuation, and anal, fecal, or flatal incontinence. A history of splinting or digitation to empty the bladder or rectum should also be elicited. Many of these complaints can be associated with medical conditions not related to POP. For example, although POP can be associated with urinary incontinence, urinary urgency, increased daytime urinary frequency, nocturia, and the feeling of incomplete bladder emptying, other known etiologies should also be considered. Anorectal dysfunction may be contributed to by POP, but constipation, diarrhea, anal incontinence, feeling of incomplete bowel evacuation, and rectal bleeding should be evaluated for other causes. Many women with POP may experience bowel and bladder dysfunction that is not correlated with compartment-specific defects.

Condition-specific pelvic floor questionnaires that are responsive to changes in POP are summarized in Figure 1. In addition to

From the American Urogynecologic Society, Silver Spring, MD.

The author has declared that there are no conflicts of interest.

This document was developed by the American Urogynecologic Society Guidelines and Statements Committee with the assistance of Cassandra L. Carberry, MD, Paul K. Tulikangas, Beri M. Ridgeway, Sarah A. Collins, and Rony A. Adam. This peer-reviewed document reflects clinical and scientific advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Its content is not intended to be a substitute for professional medical judgment, diagnosis or treatment. The ultimate judgment regarding any specific procedure or treatment is to be made by the physician and patient in light of all circumstances presented by the patient.

Copyright January 2017 by the American Urogynecologic Society. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, posted on the Internet, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission from the publisher.

Copyright © 2017 Wolters Kluwer Health, Inc. All rights reserved.

DOI: 10.1097/SPV.0000000000000424

TABLE 1. Differential Diagnosis of Vaginal Bulging/Pelvic Pressure

Condition	Appropriate Diagnostic Evaluation
Urethral diverticulum	Physical examination, urethroscopy, MRI
Skene duct cyst	Physical examination
Anterior vaginal cysts (Gartner, etc.)	Physical examination, MRI
Ureterocele	Cystourethroscopy
Urethral mucosal prolapse	Physical examination
Rectal prolapse	Physical examination, dynamic proctography, or MRI
Fibroids	Physical examination, pelvic ultrasonography
High-tone pelvic floor dysfunction	Physical examination

providing important details of the patient history, they provide standardized tools for following a patient's progress through treatment. Sexual function, and whether POP affects it, should be evaluated because POP is known to negatively affect body image and sexual function.<sup>13</sup> Some patients describe dyspareunia, vaginal laxity, or obstructed intercourse. If women are not sexually active, they should be asked whether or not they desire the option for vaginal intercourse in the future and whether or not prolapse is a significant barrier to their sexual activity. The POP/Incontinence Sexual Questionnaire, International Urogynecological Association–Revised<sup>14</sup> evaluates sexual function in women with POP and has been validated in both sexually active and inactive women.<sup>15</sup> In women of reproductive age, ask about plans for future childbearing.

A complete past medical, surgical, obstetric, social, and family history should be documented. The history may reveal risk factors for POP such as obesity, advancing age, vaginal parity, vaginal delivery, hysterectomy status, conditions that chronically increase intra-abdominal pressure, and family history of pelvic floor disorders.<sup>16</sup> Gynecologic history is particularly important, especially if removal of the uterus and/or adnexa is being considered. If cervical screening is not current, cervical cytology and high-risk human papillomavirus testing should be performed according to current guidelines. History of adnexal and uterine masses should be elicited, and, if indicated, additional imaging

should be obtained. A history of abnormal or postmenopausal uterine bleeding should prompt an appropriate gynecologic evaluation before surgical management of POP can be considered. Previous treatments for prolapse should be noted, including when they occurred, and if a graft was used. Operative reports of previous surgery for prolapse and/or incontinence are useful to help direct management and should be actively sought out, reviewed, and documented.

PHYSICAL EXAMINATION

A physical examination is the next step in the evaluation of the patient with POP. Observing gait and mobility provides information about the patient's functional status and gross neurological deficits. Patient positioning during pelvic examination for POP may affect findings; positioning the patient at a 45-degree angle in a semirecumbent position may allow a more accurate assessment of the extent of the prolapse, whereas dorsal lithotomy may mask the severity of some support defects.<sup>17</sup> If the patient reports symptoms of more severe prolapse than is appreciated on examination, the examination should be repeated in a standing position. The degree of bladder fullness may also affect the findings, and it has been suggested that anatomic prolapse assessment should be done with an empty bladder.<sup>18</sup>

Pelvic examination begins with inspection of the perineal and vulvar skin, its architecture, and the appearance of the urethra and vaginal introitus. The speculum examination allows evaluation of the vaginal canal and cervix, if present. If the prolapse is advanced, the vaginal epithelium may be examined without a speculum. Inspect thoroughly for areas of keratinization and ulceration. Each compartment of the vagina, such as anterior, posterior, and apical, must be evaluated. A “split speculum” examination is performed by separating the blades of a bivalve speculum and using a single blade to retract the posterior vaginal wall while evaluating the anterior wall and vice versa. This allows the examiner to isolate each compartment and assess its defects separately.

The POP-Q should be used to record the stage of prolapse. The POP-Q is recommended by the American Urogynecologic Society, the Society of Gynecologic Surgeons, the International Urogynecological Association, and the International Continence Society.<sup>19,20</sup> The 9-item POP-Q (Fig. 2) is a topographical assessment of vaginal support that describes and measures the location of specific points on the vaginal surface in relation to the hymen on maximal strain, and thus the degree of prolapse.<sup>19</sup> There is also

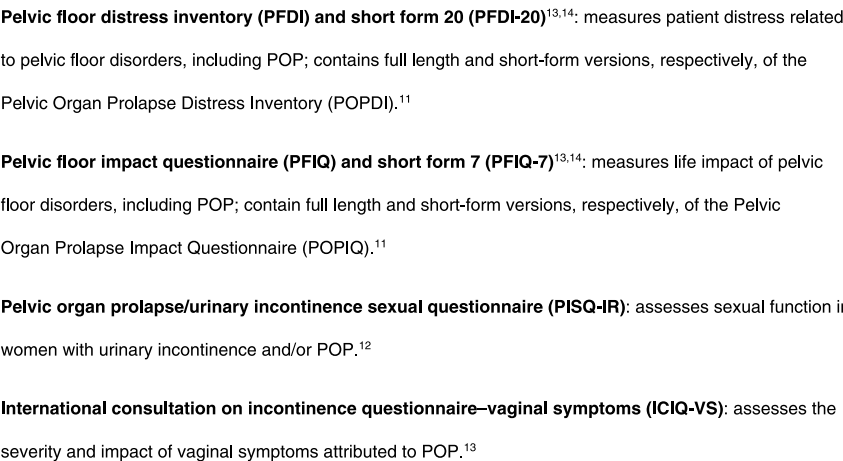


FIGURE 1. Validated questionnaires to assess POP.

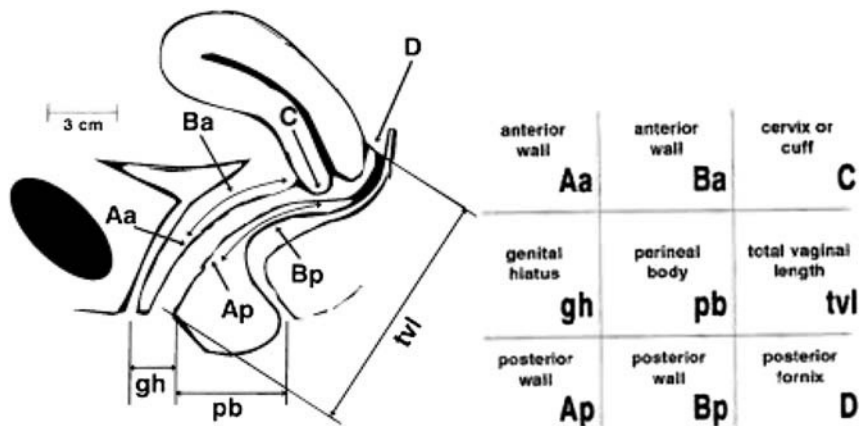


FIGURE 2. Pelvic Organ Prolapse Quantification System.

a validated 4-item “simplified” POP-Q, which closely approximates the original 9-item system.<sup>21</sup>

Other common findings noted on the physical examination include perineal descent. Anterior vaginal wall prolapse can be described as having transverse (apical), central (midline), or lateral (paravaginal) defects.<sup>22</sup> However, the interobserver and intraobserver reliability for identifying these anterior wall defects are poor.<sup>23</sup> Some clinicians might find these additional descriptions of prolapse helpful, but recording the extent of POP with the POP-Q is most important.

A focused neurologic examination of the pelvis assesses sensory perception in the lumbosacral dermatomes and evaluates

TABLE 2. Ancillary Testing		
Test	Possible Indications	Potential Findings
Urinalysis, urine culture	<ul style="list-style-type: none"><li>•Urinary incontinence</li><li>•Urinary urgency, increased daytime urinary frequency, or nocturia</li></ul>	<ul style="list-style-type: none"><li>•Infection</li><li>•Microscopic hematuria</li><li>•Glucosuria</li></ul>
PVR volume	<ul style="list-style-type: none"><li>•POP (anterior vaginal wall prolapse, vaginal vault prolapse, and uterine/cervical prolapse)</li><li>•Voiding symptoms</li><li>•Urinary incontinence</li></ul>	<ul style="list-style-type: none"><li>•Incomplete bladder emptying</li></ul>
Bladder testing including the following: uroflowmetry, pressure-flow studies, filling cystometry, and reduction cough stress test	<ul style="list-style-type: none"><li>•Urinary incontinence</li><li>•Urinary retention</li><li>•Voiding symptoms</li><li>•POP (anterior vaginal wall prolapse, vaginal vault prolapse, and uterine/cervical prolapse)</li></ul>	<ul style="list-style-type: none"><li>•Incomplete bladder emptying</li><li>•Stress incontinence on prolapse reduction (occult stress urinary incontinence)</li><li>•Bladder outflow obstruction</li><li>•Detrusor underactivity</li><li>•Detrusor overactivity</li><li>•Abnormal bladder compliance</li><li>•Abnormal maximum cystometric capacity</li></ul>
Ultrasound	<ul style="list-style-type: none"><li>•Fecal incontinence</li><li>•Mesh complication</li><li>•Desire for information on specific muscle defects</li></ul>	<ul style="list-style-type: none"><li>•Anal sphincter injury</li><li>•Pelvic floor/levator defects</li><li>•Abnormalities of the uterus and ovaries</li><li>•Visualization of mesh</li></ul>
MRI (for imaging prolapse)	<ul style="list-style-type: none"><li>•Examination inconsistent with symptoms</li><li>•Desire for information on dynamic function of pelvic floor</li><li>•Desire for information on specific muscle defects</li></ul>	<ul style="list-style-type: none"><li>•Abnormalities of muscles (pelvic floor), viscera, and soft tissue</li><li>•Relationship of structures during various maneuvers (Valsalva, Kegel)</li></ul>
Defecography (fluoroscopic or MRI)	<ul style="list-style-type: none"><li>•Defecatory dysfunction</li><li>•Desire for information on dynamic function of pelvic floor</li></ul>	<ul style="list-style-type: none"><li>•Visualization of rectum +/- colon defined by contrast</li><li>•Relationship of structures during defecation and various maneuvers (Valsalva, Kegel)</li><li>•Normal or abnormal rectal emptying</li></ul>

MRI, magnetic resonance imaging; POP, pelvic organ prolapse; PVR, postvoid residual.

pelvic floor muscle function. Important sensory dermatomes to examine include the perineum and perianal skin (S2–4) and the mons pubis and anterior labia majora (L1–2).<sup>24</sup> To assess levator muscle strength, the examiner palpates the levator muscles transvaginally as the patient contracts their pelvic floor musculature. The International Continence Society describes 4 conditions of the musculature of the pelvic floor, these are as follows: normal pelvic floor muscles that voluntarily relax and contract, overactive pelvic floor muscles that do not relax, underactive pelvic floor muscles that cannot voluntarily contract, and nonfunctioning pelvic floor muscles in which there is no pelvic floor muscle activity noted. It may be helpful to grade the strength of the muscle contraction using a system such as the Brink Scale, which assigns a score from 0 to 5 based on the strength, duration, and effectiveness of the contraction.<sup>25</sup>

Perform a bimanual pelvic examination for any pelvic mass or unusual tenderness with the prolapse reduced; a palpation of the urethra should also be conducted. Rectovaginal examination can be helpful in the diagnosis of rectocele or enterocele, and a rectal examination may be needed to assess for masses/lesions and anal sphincter tone and strength.<sup>26</sup>

## TESTING

Ancillary testing in women with POP should be based on pelvic floor symptomatology (Table 2). If the patient has urinary symptoms concerning for infection or irritative voiding symptoms, a urinalysis should be performed. Additional work-up may include urine microscopy, urine culture, or cystoscopy, depending on symptoms and urinalysis results.

Hypermobility of the anterior vaginal wall should be assessed. Point Aa on the POP-Q examination correlates with the cotton-swab (Q-tip) straining angle. A cotton-swab straining angle of greater than 30 degrees is considered urethral hypermobility. In women with prolapse stage II or greater, urethral hypermobility is usually observed.<sup>27</sup> Because of this, most practitioners do not routinely use the cotton-swab test to assess urethral mobility. A cotton-swab test may be helpful in women who have had previous urinary incontinence surgery or with stage 0 or I prolapse.<sup>27</sup>

For women with abnormal voiding symptoms (feeling of incomplete emptying, hesitancy, intermittency, straining to void, and position-dependent micturition) and for those with prolapse beyond the hymen, evaluating bladder emptying with a postvoid residual (PVR) volume measurement is recommended. In general, a PVR of less than one third of the total voided volume is considered adequate emptying. Additional suggested parameters include a PVR of less than 50 mL as normal and a PVR greater than 200 mL as abnormal.<sup>28,29</sup> If the PVR measurement is elevated or the patient notes other bothersome voiding symptoms, urodynamic testing may provide additional information. Treatment of prolapse may be considered even in asymptomatic patients if they have persistent voiding symptoms.<sup>30</sup> Because 30% of women with advanced prolapse (Aa, Ba, or C measurements of +1 or greater) have hydronephrosis, imaging of the upper urinary tracts may be helpful in select patients.<sup>31</sup>

An important consideration before prolapse treatment is the risk of stress urinary incontinence after prolapse reduction (occult stress urinary incontinence [OSUI]). In women with anterior and apical POP, prolapse may lead to urethral kinking that obstructs the urethra and masks incontinence. When the patient is treated with a pessary or surgery, the obstruction is alleviated, and the patient may develop stress urinary incontinence symptoms. Although the predictive value is limited, a cough stress test with the prolapse in the native, neutral, and reduced position (at a

bladder volume of 300 mL or capacity, whichever is less) is commonly used to identify women at risk of developing OSUI. Approximately 40% of women with negative testing will develop postoperative stress incontinence if an anti-incontinence procedure is not performed, whereas 60% of women with a positive test will have postoperative stress urinary incontinence.<sup>32</sup>

In women who do not have symptoms of stress urinary incontinence and who plan to undergo surgery for POP, a prediction model that evaluates the risk of OSUI after surgery is available.<sup>33</sup> The model significantly outperforms the preoperative cough stress test and expert judgment in predicting postoperative stress urinary incontinence; it is available as an online calculator (<https://apervita.com/community/clevelandclinic>) or by mobile phone application ([www.augs.org/augsnow](http://www.augs.org/augsnow)). Using this model may be helpful in counseling patients before POP surgery.

For patients with significant anorectal dysfunction, testing may help to further evaluate symptoms. For women suffering from fecal and anal incontinence, an anal ultrasound can be used to identify anal sphincter injuries. For women with incomplete bowel evacuation or when the examination does not correlate with symptoms, defecography and/or dynamic magnetic resonance imaging (MRI) can be used.<sup>34</sup> Bowel transit studies can help distinguish between slow transit and obstructive defecatory dysfunction.

Pelvic ultrasound can be used to identify pelvic organ abnormalities, levator ani defects, and mesh located in the pelvis. Although ultrasound to evaluate the anatomic defects in POP is currently being investigated, it is unclear if this imaging modality will be useful in clinical practice.<sup>35</sup>

The risk of gynecologic pathology at the time of prolapse surgery is approximately 3%.<sup>36</sup> Prolapse surgery should not be undertaken without appropriate evaluation of abnormal cervical cytology, postmenopausal bleeding, or pelvic masses.

## COUNSELING

Factors to consider when selecting treatment include the patient's symptoms and bother, history of previous treatments, medical comorbidities, severity of prolapse, sexual concerns, and goals for treatment. After completing the history and physical examination, the patient should be counseled about examination findings and treatment options. Visual aids, such as diagrams or computerized illustrations, may help patients understand the anatomy and explain their symptoms. Patients should be offered both nonsurgical and surgical options, when appropriate.

Determining a patient's goals for treatment is important because goals and expectations for treatment vary.<sup>37</sup> One study found that the relief of urinary symptoms was the most common patient goal of women undergoing surgery for POP, regardless of their stage of prolapse.<sup>38</sup> Realistic counseling regarding success in achieving treatment goals is important because unmet goals are associated with patient dissatisfaction after treatment.<sup>39</sup> Significantly, women who choose surgery are more likely to achieve their goals than women who choose a pessary.<sup>37</sup>

## CONSERVATIVE MANAGEMENT

Expectant management may be an option for women who are not bothered by their prolapse. Women can generally be reassured that with observation, prolapse is not likely to worsen quickly. Studies that have followed women with POP without intervention for up to 2 years have found that 10% to 20% of women will have an increase in prolapse stage.<sup>40,41</sup> An analysis of the Women's Health Initiative data showed that, in postmenopausal women, only 11% had an increase in maximal vaginal descent by 2 cm or more in 3 years. Pelvic organ prolapse stage was dynamic on the examination of individual women, so patients and their

clinicians can expect prolapse stage to both increase and decrease over time.<sup>42</sup> Home pelvic floor muscle exercises and pelvic floor physical therapy may be helpful for some women. A 2013 review of conservative management of incontinence and POP from the *5th International Consultation on Incontinence* cited 4 trials that revealed symptom improvement as well as improvement in anatomical defects of prolapse with physical therapy.<sup>43</sup> This review included a multicenter trial of 447 women with symptomatic prolapse randomized to an individualized program for pelvic floor muscle training or an educational pamphlet. The pelvic floor muscle training group had significantly greater reduction of prolapse symptoms.<sup>44</sup> Another study found women with stages I to III prolapse who were randomized to pelvic floor muscle training, and 19% of these women improved 1 POP-Q stage compared with only 8% of controls.<sup>45</sup>

## PESSARY

For women who proceed with treatment, a pessary should be considered.<sup>46</sup> If possible, patients should be taught how to remove and insert the pessary themselves. Patients who do not wish to change their own pessary or are physically unable to do so should be seen regularly for removal and cleaning of the pessary and a vaginal examination. The best time interval between visits is not known, but many experts recommend 3 months. Pessaries have been shown to be effective. In a randomized control trial comparing ring and Gellhorn pessaries that used validated questionnaires to measure outcomes, pessaries were found to reduce prolapse symptoms significantly for 60% of women without differentiation between the 2 types.<sup>47</sup> A recent trial noted an improvement that is greater than 90% in bulge symptoms and an improvement of 50% in urinary symptoms; however, 20% of women developed stress incontinence.<sup>48</sup> Given this information, it is important to counsel patients on the possibility of OSUI.

Patients who desire a pessary will undergo a fitting process. Characteristics that have been found to be associated with unsuccessful fittings include a larger genital hiatus and shorter vaginal length.<sup>49,50</sup> Patients with an isolated rectocele are also less likely to be successful with a pessary.<sup>51</sup> Patients with these findings can be counseled that pessary placement may not be successful, but fitting can still be attempted.

Women may wonder if using a pessary is an option for long-term POP management. Women aged 65 years and older are more likely to continue use of the pessary at 1 year. Women who wanted surgery at their initial visit, women with advanced posterior wall prolapse, and those with shortened vaginas from previous surgery were less likely to continue with their pessary.<sup>52</sup> It has been found that women who achieved their patient-selected goals were more likely to continue pessary use.<sup>53</sup> Although elderly women may be more likely to continue use of a pessary, this population may face more challenges with pessary self-care. Family members or caretakers should be aware of the presence of the pessary to ensure that elderly women receive ongoing maintenance and care.

## SURGICAL TREATMENT

When considering surgical options, the patient's age, medical problems, functional status, and treatment goals should be considered. Perioperative management of active medical issues is essential. The American College of Surgeons National Surgical Quality Improvement Program has created a surgical risk calculator that is available online ([www.riskcalculator.facs.org](http://www.riskcalculator.facs.org)), and surgeons can consider using this calculator to estimate perioperative morbidity and mortality. Nearly 1.5 million patients including gynecology and urology patients were used in the development of the calculator.<sup>54</sup>

Before surgical treatment of POP, patients should be counseled regarding the expected effect on bulge symptoms, urinary and bowel symptoms, as well as sexual function. This will include a discussion of possible need for further testing and types of concomitant treatment that may be offered. Patients may incorrectly assume that correcting their prolapse will address all urinary and bowel symptoms. Limitations of surgery should be discussed, including that symptoms may not resolve completely even if anatomy is corrected. It may be reasonable to offer stress urinary incontinence surgery to women with anterior vaginal wall prolapse without stress urinary incontinence, but there are additional risks associated with these procedures, which the patient should understand before reaching a decision.<sup>55–57</sup>

When counseling patients on their surgical options, the following 2 broad categories can be considered: obliterative versus reconstructive surgeries. Obliterative surgery is only an option for women who are certain that they will not desire vaginal intercourse in the future because the surgery significantly shortens and narrows the vagina and should be considered irreversible. Obliterative surgery has several advantages including a high level of efficacy while being associated with fewer complications and less blood loss.<sup>58–64</sup> It can also be performed under regional or, in some cases, local anesthesia.<sup>60</sup> These features make it desirable for women with serious medical comorbidities. This procedure can be performed with the uterus left in place (LeFort colpocleisis) or in patients with a previous hysterectomy (colpectomy). A concomitant hysterectomy can be performed if required, although this may increase the risk of complications.<sup>61,64</sup>

If obliterative surgery is not desired by the patient, native tissue or graft-augmented repair reconstructive surgery should be discussed. Patients may have strong preferences when it comes to use of graft, and this should be discussed. If synthetic mesh is considered, the 2011 FDA safety communication on transvaginal mesh should be discussed.<sup>65</sup> Patient preference is also important when considering hysterectomy versus uterine preservation for women with uterine prolapse. The choices of procedures provide optional use of native tissue and/or grafts, retention or removal of the uterus, and vaginal or abdominal (open, laparoscopic, and robotic-assisted) approaches. Surgeons offering various surgical treatments should be aware of the data on efficacy and complications of those procedures and offer these data to the patient during counseling.

## CONCLUSIONS AND RECOMMENDATIONS

Women with prolapse should have an examination to quantify the loss of anatomic support and should be evaluated for associated bladder, bowel and prolapse symptoms, as well as associated bother. Treatment options should be tailored to meet the patient's medical health and personal functional goals. In most cases, women should be informed of the range of treatment options including observation as well as nonsurgical and surgical management.

For patients presenting with POP,

1. Determine the duration and severity of pelvic symptoms and associated bother.
2. Ask specifically about urinary, bowel, sexual symptoms, and previous treatments.
3. Obtain a medical and surgical history including previous pelvic surgery.
4. Perform a physical examination including a POP-Q examination and assessment of pelvic floor muscle function.
5. Quantify the extent of the prolapse using the POP-Q examination and confirm that the examination findings reflect the patient's experience.
6. Assess for abnormal vaginal bleeding.
  - a. Document the patient's denial of vaginal bleeding.

- b. Evaluate symptoms of vaginal bleeding to rule out premalignant or malignant conditions.
7. Assess bladder function.
  - a. Continence: Consider cough stress test with the prolapse in the native, neutral, and reduced position (at bladder volume of 300 mL or capacity, whichever is less). If considering surgery, assess risk of occult stress urinary incontinence using available risk prediction models.
  - b. Emptying: Evaluate PVR urine volume in patients with anterior vaginal wall prolapse beyond the hymen or abnormal voiding symptoms.
8. Asymptomatic women without evidence of urinary retention can be offered expectant management.
9. Asymptomatic women should be offered an appropriate range of interventions based upon their medical histories and treatment goals, including vaginal pessary and surgery.

## REFERENCES

1. Haylen BT, de Ridder D, Freeman RM, et al. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction. *NeuroUrol Urodyn* 2010;29(1):4–20.
2. Nygaard I, Barber MD, Burgio KL, et al. Prevalence of symptomatic pelvic floor disorders in US women. *JAMA* 2008;300(11):1311–1316.
3. Wu JM, Vaughan CP, Goode PS, et al. Prevalence and trends of symptomatic pelvic floor disorders in U.S. women. *Obstet Gynecol* 2014;123(1):141–148.
4. Rortveit G, Brown JS, Thom DH, et al. Symptomatic pelvic organ prolapse: prevalence and risk factors in a population-based, racially diverse cohort. *Obstet Gynecol* 2007;109(6):1396–1403.
5. Nygaard I, Bradley C, Brandt D, et al. Pelvic organ prolapse in older women: prevalence and risk factors. *Obstet Gynecol* 2004;104(3):489–497.
6. Khan AA, Eilber KS, Clemens JQ, et al. Trends in management of pelvic organ prolapse among female Medicare beneficiaries. *Am J Obstet Gynecol* 2015;212(4):463–468.
7. Wu JM, Matthews CA, Conover MM, et al. Lifetime risk of stress urinary incontinence or pelvic organ prolapse surgery. *Obstet Gynecol* 2014;123(6):1201–1206.
8. Subak LL, Waetjen LE, van den Eeden S, et al. Cost of pelvic organ prolapse surgery in the United States. *Obstet Gynecol* 2001;98(4):646–651.
9. Wu JM, Hundley AF, Fulton RG, et al. Forecasting the prevalence of pelvic floor disorders in U.S. women: 2010 to 2050. *Obstet Gynecol* 2009;114(6):1278–1283.
10. Bradley CS, Nygaard IE. Vaginal wall descensus and pelvic floor symptoms in older women. *Obstet Gynecol* 2005;106(4):759–766.
11. Tan JS, Lukacz ES, Menefee SA, et al. Predictive value of prolapse symptoms: a large database study. *Int Urogynecol J Pelvic Floor Dysfunct* 2005;16(3):203–209. discussion 209.
12. Swift S, Woodman P, O'Boyle A, et al. Pelvic Organ Support Study (POSST): the distribution, clinical definition, and epidemiologic condition of pelvic organ support defects. *Am J Obstet Gynecol* 2005;192(3):795–806.
13. Zielinski R, Miller J, Low LK, et al. The relationship between pelvic organ prolapse, genital body image, and sexual health. *NeuroUrol Urodyn* 2012;31(7):1145–1148.
14. Rogers RG, Rockwood TH, Constantine ML, et al. A new measure of sexual function in women with pelvic floor disorders (PFD): the Pelvic Organ Prolapse/Incontinence Sexual Questionnaire, IUGA-Revised (PISQ-IR). *Int Urogynecol J* 2013;24(7):1091–1103.
15. Rockwood TH, Constantine ML, Adegoke O, et al. The PISQ-IR: considerations in scale scoring and development. *Int Urogynecol J* 2013;24(7):1105–1122.
16. Mant J, Painter R, Vessey M. Epidemiology of genital prolapse: observations from the Oxford Family Planning Association Study. *Br J Obstet Gynaecol* 1997;104(5):579–585.
17. Barber MD, Lambers A, Visco AG, et al. Effect of patient position on clinical evaluation of pelvic organ prolapse. *Obstet Gynecol* 2000;96(1):18–22.
18. Haya N, Segev E, Younes G, et al. The effect of bladder fullness on evaluation of pelvic organ prolapse. *Int J Gynaecol Obstet* 2012;118(1):24–26.
19. Toozs-Hobson P, Freeman R, Barber M, et al. An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for reporting outcomes of surgical procedures for pelvic organ prolapse. *Int Urogynecol J* 2012;23(5):527–535.
20. Bump RC, Mattiasson A, Bø K, et al. The standardization of terminology of female pelvic organ prolapse and pelvic floor dysfunction. *Am J Obstet Gynecol* 1996;175(1):10–17.
21. Swift S, Morris S, McKinnie V, et al. Validation of a simplified technique for using the POPQ pelvic organ prolapse classification system. *Int Urogynecol J Pelvic Floor Dysfunct* 2006;17(6):615–620.
22. Richardson AC, Lyon JB, Williams NL. A new look at pelvic relaxation. *Am J Obstet Gynecol* 1976;126(5):568–573.
23. Whiteside JL, Barber MD, Paraíso MF, et al. Clinical evaluation of anterior vaginal wall support defects: interexaminer and intraexaminer reliability. *Am J Obstet Gynecol* 2004;191(1):100–104.
24. Percy JP, Neill ME, Swash M, et al. Electrophysiological study of motor nerve supply of pelvic floor. *Lancet* 1981;1(8210):16–17.
25. Brink CA, Wells TJ, Sampsel CM, et al. A digital test for pelvic muscle strength in women with urinary incontinence. *Nurs Res* 1994;43(6):352–356.
26. Waters EG. A diagnostic technique for the detection of enterocele. *Am J Obstet Gynecol* 1946;52(5):810–812.
27. Mattison ME, Simsman AJ, Menefee SA. Can urethral mobility be assessed using the pelvic organ prolapse quantification system? An analysis of the correlation between point Aa and Q-tip angle in varying stages of prolapse. *Urology* 2006;68(5):1005–1008.
28. Nager CW, Albo ME, Fitzgerald MP, et al. Reference urodynamic values for stress incontinent women. *NeuroUrol Urodyn* 2007;26(3):333–340.
29. Al Afra T, Mahfouz W, Campeau L, et al. Normal lower urinary tract assessment in women: I. Uroflowmetry and post-void residual, pad tests, and bladder diaries. *Int Urogynecol J* 2012;23(6):681–685.
30. Fitzgerald MP, Kulkarni N, Fenner D. Postoperative resolution of urinary retention in patients with advanced pelvic organ prolapse. *Am J Obstet Gynecol* 2000;183(6):1361–1363. discussion 1363–1364.
31. Dancz CE, Walker D, Thomas D, et al. Prevalence of hydronephrosis in women with advanced pelvic organ prolapse. *Urology* 2015;86(2):250–254.
32. Visco AG, Brubaker L, Nygaard I, et al. The role of preoperative urodynamic testing in stress-continent women undergoing sacrocolpopexy: the Colpopexy and Urinary Reduction Efforts (CARE) randomized surgical trial. *Int Urogynecol J Pelvic Floor Dysfunct* 2008;19(5):607–614.
33. Jelovsek JE, Chagin K, Brubaker L, et al. A model for predicting the risk of de novo stress urinary incontinence in women undergoing pelvic organ prolapse surgery. *Obstet Gynecol* 2014;123(2 Pt 1):279–287.
34. Rao SS. Advances in diagnostic assessment of fecal incontinence and dyssynergic defecation. *Clin Gastroenterol Hepatol* 2010;8(11):910–919.
35. Barry C, Deitz HP. The use of ultrasound in the evaluation of pelvic organ prolapse. *Reviews in Gynaecological Practice* 2005;5(3):182–195.

36. Frick AC, Walters MD, Larkin KS, et al. Risk of unanticipated abnormal gynecologic pathology at the time of hysterectomy for uterovaginal prolapse. *Am J Obstet Gynecol* 2010;202(5):507.e501–507.e504.
37. Mamik MM, Rogers RG, Qualls CR, et al. Goal attainment after treatment in patients with symptomatic pelvic organ prolapse. *Am J Obstet Gynecol* 2013;209(5):488.e481–488.e485.
38. Adams SR, Dramitinos P, Shapiro A, et al. Do patient goals vary with stage of prolapse? *Am J Obstet Gynecol* 2011;205(5):502.e501–502.e506.
39. Hullfish KL, Bovbjerg VE, Steers WD. Patient-centered goals for pelvic floor dysfunction surgery: long-term follow-up. *Am J Obstet Gynecol* 2004;191(1):201–205.
40. Gilchrist AS, Campbell W, Steele H, et al. Outcomes of observation as therapy for pelvic organ prolapse: a study in the natural history of pelvic organ prolapse. *Neurourol Urodyn* 2013;32(4):383–386.
41. Miedel A, Ek M, Tegerstedt G, et al. Short-term natural history in women with symptoms indicative of pelvic organ prolapse. *Int Urogynecol J* 2011;22(4):461–468.
42. Bradley CS, Zimmerman MB, Qi Y, et al. Natural history of pelvic organ prolapse in postmenopausal women. *Obstet Gynecol* 2007;109(4):848–854.
43. Dumoulin C, Hunter KF, Moore K, et al. Conservative management for female urinary incontinence and pelvic organ prolapse review 2013: Summary of the 5th International Consultation on Incontinence. *Neurourol Urodyn* 2016;35(1):15–20.
44. Hagen S, Stark D, Glazener C, et al. Individualised pelvic floor muscle training in women with pelvic organ prolapse (POPPY): a multicentre randomised controlled trial. *Lancet* 2014;383(9919):796–806.
45. Braekken IH, Majida M, Engh ME, et al. Can pelvic floor muscle training reverse pelvic organ prolapse and reduce prolapse symptoms? An assessor-blinded, randomized, controlled trial. *Am J Obstet Gynecol* 2010;203(2):170.e171–170.e177.
46. Lamers BH, Broekman BM, Milani AL. Pessary treatment for pelvic organ prolapse and health-related quality of life: a review. *Int Urogynecol J* 2011;22(6):637–644.
47. Cundiff GW, Amundsen CL, Bent AE, et al. The PESSRI study: symptom relief outcomes of a randomized crossover trial of the ring and Gellhorn pessaries. *Am J Obstet Gynecol* 2007;196(4):405.e401–405.e408.
48. Ding J, Chen C, Song XC, et al. Changes in prolapse and urinary symptoms after successful fitting of a ring pessary with support in women with advanced pelvic organ prolapse: a prospective study. *Urology* 2016;87:70–75.
49. Geoffrion R, Zhang T, Lee T, et al. Clinical characteristics associated with unsuccessful pessary fitting outcomes. *Female Pelvic Med Reconstr Surg* 2013;19(6):339–345.
50. Clemons JL, Aguilar VC, Tillinghast TA, et al. Risk factors associated with an unsuccessful pessary fitting trial in women with pelvic organ prolapse. *Am J Obstet Gynecol* 2004;190(2):345–350.
51. Yamada T, Matsubara S. Rectocele, but not cystocele, may predict unsuccessful pessary fitting. *J Obstet Gynaecol* 2011;31(5):441–442.
52. Clemons JL, Aguilar VC, Sokol ER, et al. Patient characteristics that are associated with continued pessary use versus surgery after 1 year. *Am J Obstet Gynecol* 2004;191(1):159–164.
53. Komesu YM, Rogers RG, Rode MA, et al. Patient-selected goal attainment for pessary wearers: what is the clinical relevance? *Am J Obstet Gynecol* 2008;198(5):577.e571–577.e575.
54. Bilimoria KY, Liu Y, Paruch JL, et al. Development and evaluation of the universal ACS NSQIP surgical risk calculator: a decision aid and informed consent tool for patients and surgeons. *J Am Coll Surg* 2013;217(5):833–842.e831.
55. Brubaker L, Cundiff GW, Fine P, et al. Abdominal sacrocolpopexy with Burch colposuspension to reduce urinary stress incontinence. *N Engl J Med* 2006;354:1557–1566.
56. Wei JT, Nygaard I, Richter HE, et al. A midurethral sling to reduce incontinence after vaginal prolapse repair. *N Engl J Med* 2012;366:2358–2367.
57. Committee on Practice Bulletins, Gynecology and the American Urogynecologic Society. ACOG practice bulletin no. 155: urinary incontinence in women. *Obstet Gynecol* 2015;126(5):e66–e81.
58. Fitzgerald MP, Richter HE, Bradley CS, et al. Pelvic support, pelvic symptoms, and patient satisfaction after colpopoiesis. *Int Urogynecol J Pelvic Floor Dysfunct* 2008;19(12):1603–1609.
59. DeLancey JO, Morley GW. Total colpopoiesis for vaginal eversion. *Am J Obstet Gynecol* 1997;176(6):1228–1232. discussion 1232–1225.
60. FitzGerald MP, Brubaker L. Colpopoiesis and urinary incontinence. *Am J Obstet Gynecol* 2003;189(5):1241–1244.
61. Hoffman MS, Cardosi RJ, Lockhart J, et al. Vaginectomy with pelvic herniorrhaphy for prolapse. *Am J Obstet Gynecol* 2003;189(2):364–370. discussion 370–361.
62. Gutman RE, Bradley CS, Ye W, et al. Effects of colpopoiesis on bowel symptoms among women with severe pelvic organ prolapse. *Int Urogynecol J* 2010;21(4):461–466.
63. Misrai V, Gosseine PN, Costa P, et al. Colpopoiesis: indications, technique and results [in French]. *Prog Urol* 2009;19(13):1031–1036.
64. von Pechmann WS, Mutone M, Fyffe J, et al. Total colpopoiesis with high levator plication for the treatment of advanced pelvic organ prolapse. *Am J Obstet Gynecol* 2003;189(1):121–126.
65. Food and Drug Administration (FDA). FDA safety communication: update on serious complications associated with transvaginal placement of surgical mesh for pelvic organ prolapse. *U.S. Food and Drug Administration*. Available at: (<http://www.fda.gov/MedicalDevices/Safety/AlertsandNotices/ucm262435.htm>).