URINARY INCONTINENCE

What to do about occult incontinence in women who have pelvic organ prolapse

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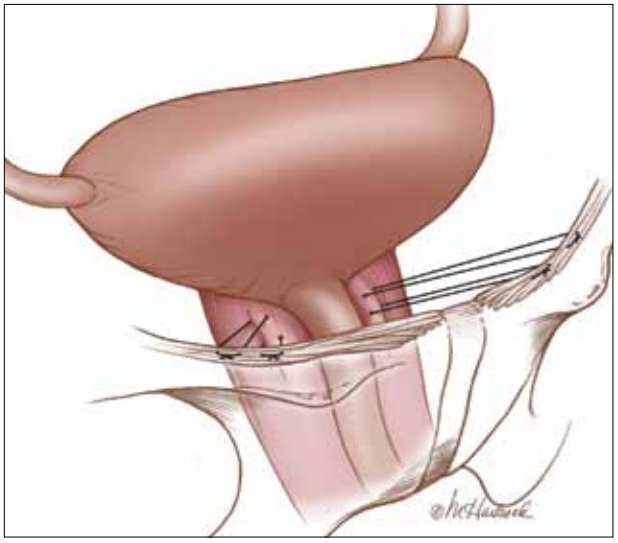
IN THIS ARTICLE

Pelvic organ prolapse (POP) is no small problem. With a prevalence thought to range as high as 30%, the condition challenges us to manage resources in a way that is mindful of cost—both financial expense and cost to the patient in terms of recovery and quality of life.

Although a large percentage of women who have POP also complain of symptomatic incontinence, a substantial number of *continent* women who have severe POP become incontinent after surgical repair. One reason may be that advanced POP sometimes causes urethral kinking and external urethral compression, fixing a hypermobile urethra in place. Once normal anatomy is restored and the urethra is no longer kinked, the urinary incontinence is "unmasked."

FIGURE Burch urethropexy



Sutures are placed at the level of the bladder neck and passed through the Cooper's ligaments to support the urethra and eliminate stress urinary incontinence.

Women who develop de novo incontinence after POP repair are thought to have "occult" urinary incontinence. Occult stress incontinence is urinary leakage that is prevented by POP and becomes symptomatic only after restoration of pelvic anatomy.[1] It has been reported that 36% to 80% of continent women who have POP will develop stress urinary incontinence once the prolapse is reduced, either preoperatively with a pessary or vaginal pack, or after surgical correction.[2]

This information prompts important questions: If a woman who has POP is continent at the time of her surgical repair, should she undergo a concomitant incontinence procedure "just in case"? Or should she be reevaluated

MARCIA HARTSOCK FOR OBG MANAGEMENT

postoperatively for a possible continence procedure at a later time?

The colpopexy and urinary reduction efforts (CARE) trial concluded that postoperative stress incontinence in continent women is significantly reduced when sacrocolpopexy is combined with Burch urethropexy (**FIGURE,** page 16).[3] When women who underwent a concomitant Burch procedure were compared with those who didn't, de novo stress incontinence after prolapse repair occurred in 24% and 44% of women, respectively.[3,4] This finding suggests that Burch urethropexy provides a protective benefit for continent women when it is performed at the time of abdominal sacrocolpopexy, eliminating the need for an additional procedure in the future.

Publication of the CARE findings sparked debate among pelvic surgeons. According to a recent survey of pelvic surgeons, only 50% changed their practice as a result of the CARE trial.[5] Some argue that the addition of a continence procedure adds unnecessary surgical risk when the patient lacks subjective or objective evidence of stress incontinence. Besides the surgical risks—which, one might argue, are low—continence surgery may lead to new symptoms of urinary dysfunction, such as urinary obstruction or new-onset urge incontinence. The development of such symptoms can create significant dissatisfaction in a patient who was previously asymptomatic.

This article explores the issue in more depth, focusing on two recent studies:

- analysis of CARE trial data to determine the positive predictive value of preoperative prolapse reduction and urodynamic testing among continent women who have POP
- a retrospective comparison of women who had urodynamically confirmed occult incontinence with those who didn't, along with their response to different interventions.

What's the best way to assess women for occult stress incontinence?

Visco AG, Brubaker L, Nygaard I, et al; for Pelvic Floor Disorders Network. 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.

Elser DM, Moen MD, Stanford EJ, et al. Abdominal sacrocolpopexy and urinary incontinence: surgical planning based on urodynamics. Am J Obstet Gynecol. 2010;202(4):375.e1–5.

Preoperative urodynamic testing is often used to evaluate women undergoing pelvic and continence surgery. For adequate evaluation, the prolapse must be reduced sufficiently to simulate the support achieved with the planned surgery. The techniques used to reduce the prolapse during the testing are variable, as is the predictive value of the urodynamic evaluation.

Prolapse may be reduced using a large cotton swab, ring forceps, pessary, or split speculum. When these methods and the utility of urodynamics were evaluated as part of the CARE trial, Visco and colleagues demonstrated that reduction of the prolapse with a large swab yielded the highest positive predictive value. Women who had urodynamically confirmed stress incontinence after the prolapse was reduced with a swab were more likely to develop symptomatic stress incontinence after sacrocolpopexy.

In this study, 35% of women who did *not* demonstrate occult incontinence during preoperative testing with the swab also went on to develop postoperative incontinence. Overall, urodynamic testing was not helpful in the evaluation of women who had POP. However, asymptomatic women who leaked during preoperative evaluation were more likely to experience incontinence postoperatively, even if they underwent Burch urethropexy.

Another study finds urodynamic assessment to be handy

Other studies have concluded that urodynamic testing is useful in diagnosing occult incontinence and deciding whether to offer a continence procedure to a patient who is asymptomatic at the time of sacrocolpopexy. In their retrospective multicenter study, Elser and colleagues compared two groups of women:

- those who had urodynamically confirmed occult stress incontinence and who underwent a continence procedure during sacrocolpopexy
- those who did not have stress incontinence confirmed and who, therefore, did *not* undergo a continence procedure.

A majority of patients in both groups reported no incontinence postoperatively—specifically, 87.1% of those who had urodynamically confirmed occult stress incontinence and 92.8% of those who did not. These findings suggest that the great majority of patients who did not demonstrate urodynamically confirmed occult stress incontinence did *not* develop incontinence postoperatively and therefore avoided what, for them, would have been the additional comorbidity of an unnecessary procedure.

So what is the bottom line?

The data are conflicting. Preoperative urodynamic confirmation of occult stress incontinence is associated with postoperative incontinence, especially if no anti-incontinence procedure is performed. However, the data also suggest that concomitant continence surgery at the time of sacrocolpopexy may not prevent future incontinence.

What about slings and vaginal surgery?

Since the CARE trial was conducted, practice patterns have shifted as midurethral slings

FAST TRACK

35% of women who did not demonstrate occult incontinence during preoperative testing went on to develop postop incontinence

WHAT THIS EVIDENCE MEANS FOR PRACTICE

Until more information becomes available, women who have severe prolapse without symptomatic incontinence have three options:

- **Undergo a concomitant continence procedure at the time of sacrocolpopexy.** Extrapolation of the findings of the CARE trial to midurethral slings and vaginal surgery is not justified by the data. The decision to offer a prophylactic treatment that may lead to undesired side effects should be made only after a careful and informed discussion with the patient.
- **Conduct preoperative urodynamic assessment** and offer a prophylactic incontinence procedure only if there is evidence of occult incontinence after prolapse reduction. The evidence for this approach is limited, and the patient needs to be counseled about the risks of additional surgery and the risk of incontinence despite negative urodynamic testing.
- **Wait and see.** Once again, it is crucial to have a discussion with the patient regarding her expectations and the possibility that de novo, postoperative incontinence will necessitate another surgery.

Many practitioners advocate a conservative approach of postoperative evaluation and decision-making.[2]

effectively replaced Burch urethropexies as the standard of care for surgical correction of stress urinary incontinence. The tension-free vaginal tape (TVT) has been shown to be equivalent to the Burch procedure.[6] There is also evidence that the transobturator approach (TOT) to the midurethral sling is not inferior to the TVT.[7] Although it is tempting to extrapolate the findings of the CARE trial to suggest that a "prophylactic" midurethral sling would fulfill a role similar to that of the Burch procedure in treating occult incontinence, there is no evidence to support such extrapolation.

It also is risky to extrapolate CARE trial outcomes to other surgeries for prolapse. Each surgical approach to the reduction of prolapse has its particular effect on the vaginal axis and, possibly, the mobility and angle of the urethra. Further prospective studies are needed to evaluate the utility of urodynamic testing in continent women and the use of prophylactic midurethral slings at the time of vaginal surgery for prolapse.

Future directions

A randomized trial is under way—the outcomes following vaginal prolapse repair and midurethral sling (OPUS) trial—that may give us insight into the treatment of continent women who have severe prolapse. It will help us determine whether symptom-specific treatment of incontinence after prolapse surgery is as effective as prophylactic treatment with a sling procedure at the time of prolapse correction. Some surgeons recommend the use of single-incision slings, such as MiniArc, for occult incontinence, perhaps to minimize surgical risk, but there are no data to support this premise.[8]

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