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IUJ VIDEO

Total colpocleisis: technical considerations

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Abstract
Introduction We present a video describing the technical considerations for performing a total colpocleisis in the management of symptomatic post-hysterectomy pelvic organ prolapse.
Methods A 76-year old female presented with pelvic pressure and the presence of a palpable vaginal bulge. She had significant bother and had previously failed use of a pessary. She wasnot sexually active, with no plans for future sexual activity. Her medical history was significant for coronary artery disease with prior myocardial infarction. She had high-grade vaginal vault prolapse, without occult incontinence. After discussing observation, pessaries, restorative and obliterative procedures, she elected to undergo colpocleisis. Following hydrodissection with lidocaine with epinephrine, a quadrant-based dissection was performed to remove the vaginal epithelium circumferentially. Following this, serial purse string sutures were used to reduce the prolapse, with meticulous hemostasis. The vaginal epithelium was then closed transversely. Next, a perineorrhaphy was performed. The midline was plicated and the perineal body reconstructed.
Results The patient had an uncomplicated postoperative course. At six-week follow-up she had no evidence of recurrent prolapse and was voiding without difficulty.
Conclusions Colpocleisis can provide excellent anatomic and subjective outcomes. Our goal is to highlight pertinent technical considerations in order to optimize patient outcomes.

Keywords Pelvic organ prolapse · Surgery · Colpocleisis

Introduction

Pelvic organ prolapse is a highly prevalent condition, with estimates that up to 12.6 % of women will undergo surgery at some time during their life [1]. Notably, numerous surgical options exist for the management of apical prolapse (i.e. uterosacral ligament suspension, sacrospinous ligament fixation, sacrocolpopexy), with the aim of most procedures to restore functional vaginal anatomy [2]. By comparison, obliterative procedures, such as a total colpocleisis, close the vaginal canal. In one study evaluating prolapse surgery in a sample of Medicare beneficiaries, it was estimated that colpocleisis/obliterative procedures represented only 0.5 % of procedures performed (120/22,553) in the cohort in 2009 [2]. However, as the population ages, this surgical technique, which is well suited to patients with multiple medical comorbidities and no desire for further penetrative vaginal function, may be increasingly utilized.

Notably, while not commonly performed, colpocleisis has been associated with excellent, durable anatomic outcomes, improved body image scores and high patient satisfaction [3–8]. Likewise, in well-selected patients, low rates of regret over the loss of penetrative vaginal function have been reported [4–6]. Additionally, colpocleisis is associated with low perioperative morbidity [9].

Electronic supplementary material The online version of this article (doi:10.1007/s00192-016-3034-4) contains supplementary material. This video is also available to watch on http://link.springer.com/. Please search for this article by the article title or DOI number, and on the article page click on 'Supplementary Material'.

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In an attempt to highlight some of the important technical considerations for this valuable procedure, we present a video describing the technical considerations in performing a total colpocleisis in the management of symptomatic pelvic organ prolapse in a patient with a prior hysterectomy.

Method

A 76-year-old woman presented with worsening pelvic pressure and the presence of a worsening vaginal bulge over the past 6 months. She had significant bother from her discomfort, and it was impacting her daily activities. Additionally, she had previously failed management with a pessary. She had no associated urinary symptoms and was not sexually active, with no plans for future sexual activity. Her medical history was significant for coronary artery disease with a prior myocardial infarction and previous vaginal hysterectomy. She had a stage III vaginal vault prolapse, as well as stage III anterior and posterior prolapse, without overt or occult stress urinary incontinence. She also had no symptoms of urinary urgency or urge incontinence, and emptied her bladder to a low postvoid residual volume. After discussing management options, including observation, pessary use, and restorative and obliterative surgical procedures, she elected to undergo a total colpocleisis.

Following induction of general anesthesia and administration of perioperative antibiotics, the patient is positioned in the dorsolithotomy position. For this procedure, we prefer to use candy-canes for leg positioning, to allow optimal visualization and use of assistants. A sterile Foley catheter is placed and an examination under anesthesia is performed. As part of this evaluation, the bladder neck is identified and demarcated. Following this hydrodissection with injectable lidocaine with epinephrine is performed circumferentially. We utilize this solution as it aids in the dissection and in obtaining hemostasis. A quadrant-based dissection is then performed using a combination of sharp and blunt dissection to remove the vaginal epithelium circumferentially to a level of 1 cm proximal to the bladder neck. The posterior dissection is carried out to approximately 3 cm proximal to the perineal body, to allow for perineorrhaphy. We prefer this quadrant-based dissection as it allows optimal visualization during the dissection. Following this, serial purse string sutures, with absorbable sutures, are used to fully reduce the prolapse, with careful attention to hemostasis, as we feel that hematoma formation may contribute to anatomic failures in these cases. With regard to technique, the assistant reduces the prolapse while the suture is tied to allow for tissue imbrication. Then, we use the previously placed suture, as a handle to aid in manipulating the tissue while placing the subsequent purse string suture. Numerous layers of purse strings are used to minimize the potential spaces between the layers. The purse string sutures are continued until roughly 1 cm proximal to the level of the bladder neck in order to have adequate reduction of the prolapse, while allowing for a genital hiatus sufficient for voiding, and space for a concomitant placement of a midurethral sling when indicated. Prior to closure of the vaginal epithelium, cystoscopy is performed to confirm ureteral patency. The vaginal epithelium is then closed transversely. Next, an aggressive perineorrhaphy is performed with a diamond-shaped perineal resection. We carry this dissection proximally up to 3 cm distal to the previous suture line. The distal posterior vaginal wall is then plicated in the midline and the perineal body reconstructed. Notably, this patient had no overt or occult stress incontinence on examination, and no concomitant anti-incontinence procedure was performed. However, when clinically indicated, this can be performed concomitantly with colpocleisis.

It is worth noting that a partial colpocleisis can be performed in the setting where the uterus is in situ; however, modifications to preserve lateral channels that serve as outlets for any cervical/uterine discharge are needed [10].

Results

Technical considerations emphasized in the video include: (1) hydrodissection with lidocaine with epinephrine, (2) dissection of the vaginal epithelium with a four-quadrant technique, (3) meticulous hemostasis, (4) multiple layers of purse-string sutures, (5) aggressive perineorrhaphy, and (6) a concomitant anti-incontinence procedure when indicated. The patient had an uncomplicated postoperative course, had no urinary incontinence and was able to spontaneously empty her bladder with a low postvoid residual volume. At her 6-week follow-up she had no evidence of recurrent prolapse, was emptying her bladder without difficulty and was subjectively pleased with her outcome.

Conclusion

Total colpocleisis can provide excellent anatomic and subjective outcomes for symptomatic posthysterectomy vaginal vault prolapse. Here, we highlight pertinent technical considerations in order to optimize patient outcomes.

Compliance with ethical standards

Conflicts of interest None.

Consent Written informed consent was obtained from the patient for publication of this video article and any accompanying images.

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