

Conversion from abdominal sacrocolpopexy to vaginal surgery with transobturator mesh placement in the treatment of vaginal vault prolapse

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Abstract: Vaginal vault prolapse may be treated by laparoscopic or abdominal sacrocolpopexy or by vaginal suspension procedures. Laparoscopic sacrocolpopexy that prove to be too complex can be completed via an abdominal approach. This is the first report in the literature of conversion from abdominal sacrocolpopexy to vaginal surgery with synthetic mesh insertion via the transobturator route.

Key words: Pelvic organ prolapse; Vaginal vault prolapse; Transobturator mesh; Sacrocolpopexy; Conversion.

INTRODUCTION

Pelvic organ prolapse affects an estimated one-third of women,¹ of whom 0.5% have clinically significant post-hysterectomy prolapse.² Treatment may be administered via the laparoscopic, abdominal, or vaginal approach. Laparoscopic or abdominal sacrocolpopexy is preferred because of the low morbidity and high success rate.³⁻⁵ The reported rate of intraoperative conversion from laparoscopic to abdominal sacrocolpopexy is about 2%.⁶ The main reasons for conversion are organ laceration, bleeding, or severe pelvic adhesions.

We report, for the first time, conversion from abdominal sacrocolpopexy to vaginal surgery with transobturator mesh placement for the treatment of vaginal vault prolapse.

CASE REPORT

A 71-year-old woman presented with a bulge from the vagina of 5 years' duration. Her medical history revealed 3 previous vaginal deliveries. She had undergone vaginal hysterectomy with posterior and anterior colporrhaphy 6 years previously for the treatment of uterine prolapse and anterior and posterior wall prolapse. She was also receiving medical treatment for high blood pressure and diabetes type 2. She had never smoked or received hormonal replacement therapy.

The suspected recurrent pelvic organ prolapse was evaluated according to the Pelvic Organ Prolapse quantification (POP-Q) system, as recommended by the International Continence Society [7]. Findings revealed stage 2 apical prolapse, stage 3 anterior wall prolapse, and stage 3 posterior wall prolapse. There was no stress incontinence on reduction of the prolapse. After receiving a detailed explanation of the treatment protocol, the patient provided written informed consent to undergo abdominal sacrocolpopexy with abdominal mesh placement combined with bilateral salpingo-oophorectomy and posterior colporrhaphy.

The surgical team was led by an experienced surgeon in abdominal sacrocolpopexy procedure. Preoperative antibiotic prophylaxis consisted of cephazolin 1 g and metronidazole 500 mg. The operation was performed under general anesthesia via an abdominal median longitudinal incision from the umbilicus to the symphysis pubis. After the peritoneum was opened, severe adhesion of the omentum and small bowel to the pelvis was noted. Meticulous adhesiolysis was performed, including bilateral salpingo-oophorectomy. However, the severe bowel adhesions and the excessive bleeding from the adhesion site necessitated careful hemo-

stasis and prevented the completion of abdominal sacrocolpopexy. Following consultation with the main author, (H.K.), it was decided to convert to a vaginal procedure with placement of the mesh implant via the trans-obturator route in order to overcome the severe adhesions. Anterior and posterior mesh kits (Prolift™, Ethicon, USA) were used for this purpose. Vaginal prolapse repair with transobturator kits has been performed in our unit since 2006. The surgery was conducted by the first author (H.K.) applying the technique described by Fatton et al. [8], a midline incision was made which included the full thickness of the vagina. There were no significant vaginal adhesions. The vagina was closed after mesh placement with a continuous running Vicryl 2.0 suture, without resection of any vaginal tissue. The postoperative course was uneventful. At the 2-year follow-up, vaginal examination revealed no apical or posterior wall prolapse and asymptomatic stage 1 posterior cystocele. The patient had no urinary symptoms. She complained of constipation that she managed successfully with natural fiber.

DISCUSSION

Pelvic organ prolapse is a common problem in women and may cause significant morbidity and a decreased quality of life. The incidence of posthysterectomy vaginal vault prolapse repair after hysterectomy is 0.5%.⁹

Abdominal sacrocolpopexy is a definitive treatment option for vaginal vault prolapse, with durable success rates. It is associated with fewer recurrences and less dyspareunia than vaginal sacrospinous fixation,⁴ although morbidity is higher than with vaginal repair. Many of the complications of abdominal surgery are related to the presence of severe abdominal and pelvic adhesions from previous abdominal surgery. The most common intraoperative complications are bleeding from an injured medial sacral artery, cystotomy, enterotomy and ureterotomy. Early postoperative complications include wound infection, ileus, and urinary tract infection, and late complications, stress urinary incontinence, anterior or posterior vaginal wall descent, recurrence of vaginal vault prolapse, and mesh erosion through vaginal wall. Laparoscopic sacrocolpopexy provides the same outcome for abdominal sacrocolpopexy, with less morbidity. The conversion rate from laparoscopic to abdominal sacrocolpopexy is about 2%.⁶ Most surgeons prefer to use polypropylene mesh as the suspension structure because of its low rates of infection and other complications compared with other materials.

New vaginal mesh kits have been recently introduced to surgically treat apical, anterior, and posterior wall prolapse. Their use makes it easier for the surgeon to avoid the pre-sacral vessels intraoperatively. Compared to conventional prolapse repair, vaginal transobturator mesh placement is associated with higher cure rate, fast recovery time, and rapid return to activities of daily living although the clinical significance of the improved anatomical results is still unclear.⁹⁻¹¹ A randomized controlled trial yielded fewer anatomic failures at 12 months after vaginal-mesh insertion than after standard vaginal surgery. However, the decrease in symptoms and improvement in quality of life were equal in both groups.¹¹ Nevertheless, the main disadvantage of using a standardized, trocar-guided mesh kit for prolapse repair is a higher short-term rate of surgical complications and postoperative adverse events.¹⁰⁻¹²

In the patient described here, abdominal prolapse surgery had to be completed by a vaginal approach with the mesh kit because of severe pelvic adhesions that included the small and the large bowels. This successfully prevented adhesiolysis and intestinal damage. The vaginal surgery itself was relatively uneventful and not significantly different from primary vaginal procedures for prolapse repair. The severe abdominal adhesions had no effect on the vaginal dissection. We performed a full-thickness wall incision so that the mesh could be inserted under the fascia, thereby lessening the risk of erosion. We routinely recommend the regular use of vaginal estrogen cream to all patients after mesh insertion.

In conclusion, vaginal surgery for vaginal vault suspension with the use of a trans-obturator mesh kit should be considered when abdominal or laparoscopic approach are suspected to be difficult because of severe abdominal or pelvic adhesions.

ACKNOWLEDGMENTS

Funding: There was no funding for this paper.

Conflict of Interest: The authors have no conflicts of interest to report.

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