Clinical Case

Pelvic organ prolapse management with laparoscopic sacrocolpopexy: a case report


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Abstract Pelvic organ prolapse refers to loss of support of the uterus, bladder, colon, or rectum that leads to the prolapse of one or more of these organs through the vagina. It is common in women between the ages of 20 and 60 years, with an incidence of approximately 30%. The known risk factors are age, obesity, and hysterectomy. The goals of vaginal prolapse treatment are to adequately restore the vaginal anatomy and maintain its function (sexual, urinary, intestinal) and durability. Sacrocolpopexy is considered the criterion standard in pelvic prolapse treatment. Laparoscopic sacrocolpopexy has shown the same results as open surgery, with less morbidity. We present herein the case of a woman with pelvic organ prolapse managed with laparoscopic hysterectomy plus laparoscopic transperitoneal sacrocolpopexy, obtaining favorable results in both vaginal support and voiding.

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Introduction

Pelvic organ prolapse (POP) is a common condition that affects almost half the female population. It is related to aging, as well as to hysterectomy, which is the main long-term complication, occurring in approximately 0.2-43% of the cases.1 2

It is estimated that one in 9 women will undergo hysterectomy in the course of their lives, and 10% of these women will need surgical repair.3 In the United States, the risk for requiring surgical repair is estimated at 11-19% for 80-year-old women.4

There are various management options for POP, including colporrhaphy, colpopexy (vaginal or sacrocolpopexy), as opposed to nonsurgical management that includes pessaries. In the last 10 years in the United States, an increase in surgical management of POP has been observed, with both the vaginal and abdominal approaches through laparoscopy or robotic surgery.5

The goals of any surgical management of vaginal prolapse are to restore the vaginal anatomy, maintain sexual function, and provide durability.3

Sacrocolpopexy was first described in 1950 by Huguier and Scal1.6 It is considered the criterion standard for apical support provided by the cardinal ligaments, or Delancey level 1.2 The success rate has been reported at 93-100% with this type of surgical procedure, with a 74% long-term success rate.2,8

In 1994 Nezhat et al. reported on the first case series of laparoscopic sacrocolpopexy.9 Laparoscopic surgery combines the advantages of open surgery with the characteristic advantages of minimally invasive procedures and the clinical results are comparable between the two procedures. It also enables multiple treatments for pelvic floor dysfunction, such as stress incontinence, uterine prolapse, vaginal prolapse, rectocele, and enterocele.2,10

Case presentation

A 52-year-old woman had a past history of multiple abdominal surgeries (laparoscopic cholecystectomy, umbilical hernioplasty, gastric sleeve surgery). Onset of her current illness presented after a sudden weight loss due to bariatric surgery with the sensation of a foreign body at the level of the vagina. She did not complain of urinary incontinence. Physical exploration revealed pelvic organ prolapse (grade II uterine prolapse and grade I cystocele).

Due to the presence of pelvic organ prolapse, the decision was made to perform laparoscopic hysterectomy (fig. 1), after which sacrocolpopexy was carried out with the Nezhat technique using a polypropylene mesh (fig. 2). Surgery duration was 2 h and blood loss was 50 cc.

The patient had adequate progression and was walking and eating a normal diet on the first postoperative day. Hospital stay was 2 days. At follow-up, complete correction of the cystocele and adequate voiding were observed.

Discussion

Pelvic organ prolapse refers to the loss of support of the uterus, bladder, colon, or rectum and leads to the prolapse of one or more of these organs through the vagina.11 When it is related to hysterectomy, it is caused by the detachment of the pubocervical fascia and the rectovaginal fascia from the apical support provided by the cardinal ligaments, or DeLancey level 1.2

The prevalence of POP, based on the sensation of a vaginal foreign body, is from 5-10%, and is most common in Caucasian and Hispanic women, and less common in Afro-American women.11

The treatment of choice is sacrocolpopexy, which has been shown to be superior to vaginal sacrospinous colpopexy, with a lower recurrence rate.12 Laparoscopic sacrocolpopexy has shown the same results as open surgery, with less morbidity, but it is associated with a higher cost and a longer surgery duration, depending on the skill of the surgeon.10

Adequate support has been shown with the use of synthetic materials, as well as a lower failure and reintervention rate compared with the use of xenografts.13

The incidence of intraoperative complications related to sacrocolpopexy is low and includes bladder injury, ureteral injury, and hemorrhage secondary to presacral venous plexus injury. Postoperative complications are lower urinary symptomatology, urinary infection, intestinal alterations, and mesh exposure.14
Our patient did not present with intraoperative or postoperative complications and there was adequate correction of the pelvic organ prolapse. The laparoscopic technique reduced the morbidity of the procedure, despite the patient’s history of multiple abdominal surgeries.

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Conflict of interest
The authors declare that there was no conflict of interest.

References
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