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Management of a patient with recurrent prolapse after laparoscopic lateral suspension with laparoscopic sacrocolpopexy

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ABSTRACT

Pelvic organ prolapse (POP) is a pelvic floor disorder characterized by the protrusion of the anterior, posterior, or apical compartments of the pelvic floor into the vaginal lumen, along with adjacent organs such as the cervix, uterus, bladder, or rectum. Treatment options vary based on the severity of POP, the patient's age, sexual status, and any comorbid conditions. Laparoscopic sacrocolpopexy (LSC) is regarded as the gold standard for apical prolapse surgery, with a success rate ranging from 78% to 100%. Laparoscopic lateral suspension (LLS), which has a similar success rate and is less complex, offers a good alternative to LSC. However, long-term studies are still ongoing. LSC remains a viable option in cases where LLS initially succeeds but is followed by recurrences over time. In this case report, we present the management of a case with recurrence 40 months after LLS due to uterine prolapse.

Keywords: Laparoscopic sacrocolpopexy; laparoscopic lateral suspension; pelvic organ prolapse

INTRODUCTION

Pelvic organ prolapse (POP) is a pelvic floor disorder characterized by the protrusion of the anterior, posterior, or apical compartments of the pelvic floor into the vaginal lumen, along with adjacent organs such as the cervix, uterus, bladder, or rectum.[1,2] Its prevalence tends to increase with age, peaking at 1.5-1.8/1000 in women aged 60-69 years,[3] with 19% of women undergoing POP surgery by the age of 85.[4] Treatment options vary based on the severity of POP, the patient's age, sexual status, and any comorbid conditions.[5-7] Laparoscopic sacrocolpopexy (LSC) is regarded as the gold standard for apical prolapse surgery, with a success rate ranging from 78% to 100%.[8] LSC is a complex surgical technique that requires deep pelvic dissection, advanced laparoscopic suturing techniques and associated rare but serious complications (e.g., vascular injury, sacral nerve injury, etc.).[9,10] Therefore, there has been a search for simpler and

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less complicated surgical options. Recently, laparoscopic lateral suspension (LLS) with mesh has emerged as a viable alternative for apical prolapse surgery, as it avoids potential damage from sacral promontory preparation and extensive pelvic dissection. With this surgical technique, a T-shaped mesh is prepared by dissecting the vesicovaginal space. The anterior vaginal wall is then sutured to the cervix and isthmus. The lateral arms of the mesh are used to position the the external oblique muscle and over, peritoneum, and mesh is sutured to the anterior abdominal wall.[11,12]

In this case report, we present the patient with a case with recurrence 40 months after LLS due to uterine prolapse. We performed LSC, by creating a tunnel from the promontory to the rectovaginal space. Post-operative examination revealed that the prolapse regressed.

CASE REPORT

A 44-year-old woman presented with pelvic pain and a feeling of fullness in the vagina. She had a history of three vaginal deliveries. Ultrasound records revealed that the patient's uterus size was 80x50x40 mm due to a 60x62 mm intramural myoma located in the posterior corpus. POP-Quantification (POP-Q) staging was C point at -3 cm and D point at -2 cm before the LLS due to medical records. The patient had undergone LLS surgery four years prior. On vaginal examination, POP-Q staging showed C point at -2 cm and D point at -1 cm. Ultrasound evaluation revealed that the patient's uterus size had increased to 80x50x40 mm due to a 60x62 mm intramural myoma located in the posterior corpus, same as previous surgery. Intraoperatively, the LLS mesh was observed to be densely adherent to the anterior surface of the cervix (Figure 1). After the complete dissection of the hysterectomy and mesh, the vaginal cuff LLS mesh was re-fixed. Subsequently, LSC was performed by creating a tunnel from the promontory to the rectovaginal space (Figure 2). Post-operative examination revealed that point C and D were -6 according to POP-Q stage. In the third month follow-up, point C and D were observed at -8 cm.

DISCUSSION

LLS is a viable alternative to LSC, offering a similar postoperative success rate, fewer complications, and a shorter learning curve. In this case report, we discuss the management of a woman with recurrent prolapse after LSC and examine the advantages and disadvantages of LLS in comparison to LSC.

In prolapse surgery, as with all surgeries, a low incidence of preoperative complications can be a reason for preference. In a prospective randomized controlled study by Malanowska-Jarema

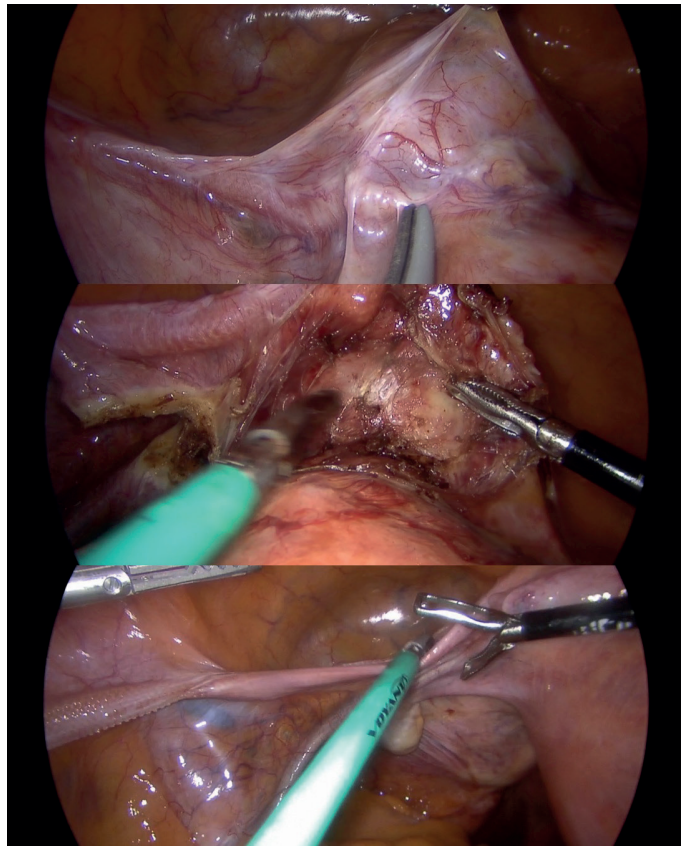

Figure 1. Dissection of lateral suspension mesh

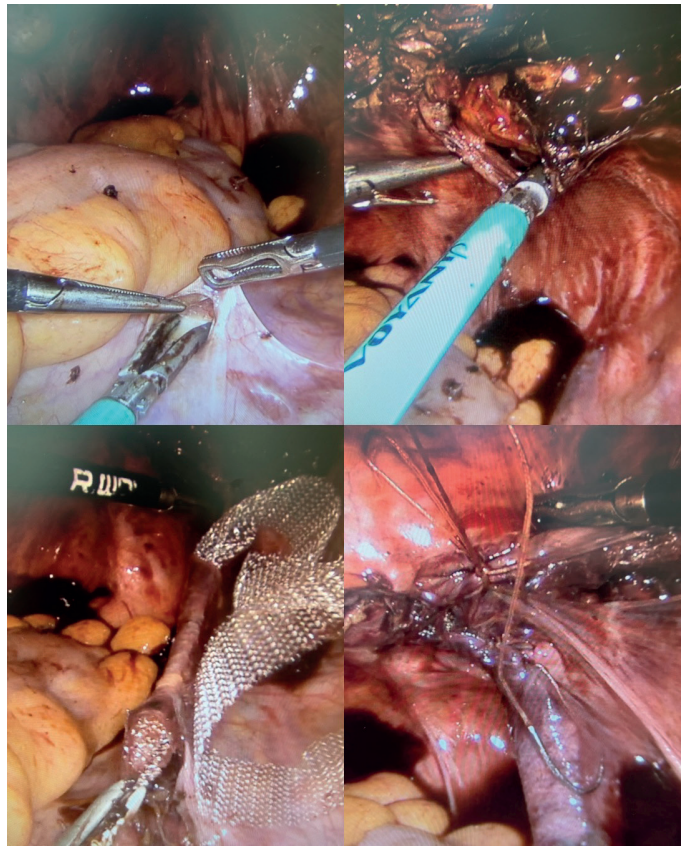

Figure 2. Preparation and placement of sacrocolpopexy mesh

et al.[13], the short-term outcomes of LSC and LLS were examined in a cohort of 93 patients. At the 12-month postoperative mark, anatomical results were compared with preoperative complications and parameters. The success rate of LSC for apical prolapse was reported as 81%, for anterior prolapse as 95%, and the success rate of LLS for apical and anterior prolapse was reported as 90-92%. The average operation time was reported as 160 minutes for LLS and 168 minutes for LSC. The average blood loss was reported as 100 mL for both procedures, and no preoperative complications were reported for either group included in the study.[13] In our case, LLS was preferred for several reasons: the initial complaint of prolapse, its less invasive and less complicated nature compared to LSC, a shorter hospitalization period, and a faster return to daily activities. The procedure was successful in post-operative period. But, we do not have enough data and time to talk about early and late term results.

In the study by Mancini et al.,[14] perioperative and postoperative results of cases that underwent LSC and LLS due to POP surgery were compared. In the preoperative evaluation of women participating in this study, advanced stage prolapse in the anterior compartment, apical compartment defect and recurrent POP cases were more in the LSC group. POP persistence was found to be better in all 3 compartments and in terms of *de novo* POP in the posterior compartment with LSC group. However, postoperative constipation was found to be increased in the LSC group. As a result of the study, it was found that the long-term results of LSC were successful compared to LLS.

Long-term outcomes of the surgical method used in the treatment of prolapse are one of the most important factors. Criteria for evaluating long-term success may include recurrence, method-related complications, sexual functions, and pelvic floor functions.[15] Studies on the long-term outcomes of the lateral suspension adapted to L/S by Dubuisson et al.[12] in 1997 are ongoing. In a study by Veit-Rubin et al.[16] involving 417 patients, the long-term outcomes of LLS were examined, with anatomical success rates found to be 91% for the anterior compartment, 93% for the apical compartment, and 85% for the posterior compartment. Mesh erosion rate has been reported as 4.3%, and the recurrence rate as 7.3%. 85% of patients were asymptomatic in the long term and reported satisfaction with their surgical procedure. In a study by Kumbasar et al.[17] involving 62 patients who underwent uterus-preserving LLS, a recurrence rate of 6% was observed during postoperative follow-up. The recurrence rates were reported as 3.2% for apical prolapse, 1.6% for anterior prolapse, and 4.8% for posterior prolapse.[15] In our case, although short-term success was achieved after the LLS procedure, the patient's prolapse recurred approximately three years after the operation. As demonstrated in other studies, the recurrence in our case is also thought to be due to multifactorial causes (such as age, weight, number of childbirths, socioeconomic status, comorbidities, constipation, etc.) in the long term. These studies also did not discuss the management of recurrence cases. In managing our recurrence case after LLS, we applied LSC surgery, which is considered the gold standard in pelvic organ prolapse surgery. The long-term follow-up of our case, in which we achieved successful short-term results, is ongoing.

CONCLUSION

Although the use of LLS surgeries, which are more successful in terms of complications and easier in terms of surgical technique, has increased today, it should not be overlooked that sacrocolpopexy surgeries, which are among the most reliable methods, still remain the gold standard. In cases where success is achieved with LLS, but recurrences occur in the long term, LSC is a reasonable choice. Personalized treatment, considering factors such as age, sexual status, and comorbidities in women undergoing recurrent POP surgery, will increase the chance of success and reduce the risk of recurrence.

ETHICS

Informed Consent: Consent was obtained or waived by all participants in this study.

FOOTNOTES

Contributions

Surgical and Medical Practices: A.G.K., E.T., Concept: S.Ç., Y.K.A., Design: B.K.K., Data Collection or Processing: B.K.K., Analysis or Interpretation: K.A.P., Y.K.A., Literature Search: K.A.P., Writing: K.A.P., S.Ç.

DISCLOSURES

Conflict of Interest: No conflict of interest was declared by the authors.

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