Perineal Hernia in a Previously Operated Patient of Prolapse: A Case Report

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Abstract

Perineal hernia can occur in patients after abdominal or pelvic surgeries, especially in those who are immunosuppressed, have a history of laparoscopy, or are of the female sex. Patients with a perineal hernia may be asymptomatic or complain of urinary or bowel disturbance or pain. Our patient was a 63-year-old symptomatic female with a history of vaginal hysterectomy and laparoscopic sacrospinous fixation. She presented with heaviness in the lower abdomen and increased stooling frequency. She was found to have a perineal hernia up to the right ischioanal fossa, with grade four vaginal vault prolapse. Laparoscopic sacrocolpopexy with levator ani plication with perineal hernia repair was performed. We used a T-shaped mesh composed of monofilament polypropylene with a combination of synthetic sutures to plicate the levator ani bilaterally and repair the vault prolapse. The postoperative course has been favorable. As of 12 months postoperative, there are no fresh complaints. The use of mesh (e.g., polypropylene) is important for levator ani repair for reinforcement. Laparoscopic repair is generally preferred, as it provides better access with a lesser risk of complication. Almost all cases of perineal hernia in literature have been after colorectal surgery and with no specific protocol for management. A standardized surgical approach with a scope for individualization would be helpful.

Introduction

Perineal hernia, the protrusion of intra-abdominal viscera through the pelvic floor, could be asymptomatic or present with urinary, bowel or perineal symptoms. The most common predisposing factors are female sex,
immunosuppression, pelvic radiation, hysterectomy, extensive resection of the levator ani [1], and perineal wound infections. Previous laparoscopic surgery may also predispose to it [2-3].

We report a case of perineal hernia in a female with a history of vaginal hysterectomy and laparoscopic sacrospinous fixation. Almost all cases of perineal hernia in literature have been after colorectal surgery and with no specific protocol for management. Through this case, we hope to provide useful insight into the minimally invasive management of perineal hernia, especially in the setting of a gynecological condition.

Case presentation

A 63-year-old female presented to the OB/GYN outpatient department with the chief complaint of heaviness in the lower abdomen for 15 days. This was associated with an increased frequency of passing stools, as well as fecal incontinence. Her history included a vaginal hysterectomy performed in 2003 and a laparoscopic sacrospinous fixation performed in 2010. She had one full-term normal delivery in 1985. Her family history and medical history were insignificant.

MR Defecogram done five days before surgery showed significant thinning on the left side of the levator ani muscle, with bulging of the peritoneum and small bowel (Figure 1).

Figure 1: MR Defecogram done pre-operatively showed bulging of the peritoneum and small bowel

There was a defect in the right levator ani muscle, with herniation of the peritoneum containing small bowel loops and mesentery up to the ischioanal fossa, and lateral rectocele during maximum strain (anorectal junction was seen 6.6 cm below the pubococcygeal line with maximal strain). Levator hiatus measured 8.4 cm on the maximal strain,
indicating moderate hiatal enlargement. Urethral hypermobility was also present. Moderate vaginal descent was seen, with the apex of the vagina 3.7 cm below the pubococcygeal line.

Her vitals were stable. The systemic examination was unremarkable. Per vaginal examination showed vault prolapse. No cystocele or rectocele was observed. The right lateral perineum corresponding to the ischiorectal fossa showed a bulge, which became more prominent on coughing. It was easily reducible. No drainage was observed. General surgery was consulted in view of the perineal hernia. The patient was admitted for laparoscopic sacrocolpopexy with levator ani plication with perineal hernia repair.

Under general anesthesia, the patient was put in the modified lithotomy position. On local examination under anesthesia, there was maximum descent of the vault, indicating grade four vault prolapse. A primary umbilical port of 10 mm and three accessory ports of 5 mm were used. Intraoperatively, evidence of bilateral levator ani defect was seen, with the defect on the right being approximately 3X4 cm, and on the left being approximately 2X2 cm.

The peritoneum was dissected off the hernial sac, raising a peritoneal flap. The rectovaginal space was dissected to reach the pelvic floor bilaterally, and the bowel was dissected posteriorly. The peritoneum over the vault was dissected anteriorly, posteriorly, and laterally. A retroperitoneum was opened over the sacral promontory, and a retroperitoneal tunnel was created. T-shaped mesh (monofilament polypropylene) was placed over the hernial sac and fixed with a non-absorbable nylon suture, after obliterating the hernial defect on either side (Figure 2).

Figure 2: The T-shaped mesh was placed over the hernial sac and fixed with a non-absorbable nylon suture

The levator defect was repaired with a non-absorbable nylon suture. A bridging suture was placed, thus plicating levator ani bilaterally. The vertical limb of the mesh was fixed with a non-absorbable polypropylene suture and a barbed suture on the vaginal vault anteriorly posteriorly and laterally, passed through the retroperitoneal tunnel, and
fixed over the sacral promontory with titanium screws. Retroperitoneum was closed over the sacral promontory to keep the mesh retroperitoneally, with a delayed absorbable suture.

The immediate postoperative course was favorable. With the restoration of micturition and defecation, she was discharged two days postoperatively. At the six-week follow-up, the MRI pelvis showed features consistent with the postoperative repair of the levator ani muscle (Figure 3).

![MRI pelvis done post-operatively](https://example.com/mri_pelvis.png)

**Figure 3: MRI pelvis done post-operatively was consistent with the repair of the levator ani muscle and resolution of the perineal hernia**

No obvious herniation of the small bowel loops or the mesentery was seen, indicating resolution. Mild urethral hypermobility was seen. The patient reported a complete resolution of her chief complaints. She was counseled about pelvic floor strengthening exercises for her mild urinary incontinence. As of 12 months postoperative, there have been no fresh complaints and no recurrence of her perineal hernia or vault prolapse.

**Discussion**

This is a case of posterior perineal hernia, secondary to the removal of a pelvic organ. However, most secondary perineal hernias occur within 1 year of the surgery [4,5]. Her hysterectomy was performed in 2003. Laparoscopic surgery is said to predispose to perineal hernia due to lesser adhesions and more room for abdominal organs to herniate [2,3] although this association has been observed with laparoscopic abdominoperineal resection/excision [6]. Our patient had a laparoscopic sacrocolpopexy in 2010. Another predisposing factor in this patient could be her female sex.
Reportedly, the incidence of perineal hernia ranges from 0.6% to 7%, after abdominoperineal resection or pelvic exenteration [7]. There has been no standardized surgical management defined for perineal hernias [8]. This may be due to low incidence. Laparoscopic repair is generally considered to be superior to the perineal approach because it allows for better exposure and access to the hernia sac and its boundaries, as well as mesh positioning. Bowel injury can be avoided during dissection. It also allows for omentoplasty, wherein the pelvic defect can be covered. Overall, recurrence and complication rates after laparoscopic surgery have been reported to be low [9].

Attempting to approximate the edges of the levator ani defect with suturing is not very useful [10], because the pelvic organs are dynamic. Over time, these sutures may loosen. The use of a polypropylene mesh helps the repair to be long-lasting.

A systematic review by Mjoli et al (2012) reported that mesh repair led to fewer recurrences than non-mesh repair. Dahan et al (2021) used a two-sided mesh, with the collagen side in contact with the viscera and the polyester side in front of the bladder. No statistically significant difference has been found between biological and synthetic meshes in terms of recurrence [11].

De-epithelized myocutaneous flaps have been used effectively, as reported by Douglas et al (2013) who used gracilis flap. The dermis helps maintain the strength of the flap over a long period. As per their study, autogenous repair is a good option for patients with recurrent hernia, infected surgical sites, or irradiated tissue.

The ability to make a concrete conclusion is limited to a single report. Further studies, especially in the gynecological setting, would be helpful to define a standardized surgical approach, including the type of mesh. Individualization may be sought based on the site of the hernia. Patient quality of life post-surgery may also be evaluated.

**Conclusion**

The use of mesh (e.g., polypropylene) is important for levator ani repair for reinforcement. Laparoscopic repair is generally preferred, as it provides better access with a lesser risk of complication. Almost all cases of perineal hernia in literature have been after colorectal surgery and with no specific protocol for management. A standardized surgical approach with scope for individualization would be helpful.

**Declaration of Patient Consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his/her consent for his/her images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published, and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.
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References