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Urgent Surgical Management Of Enterocele With High Risk Of Bowel Ischemia: A Case Report

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Abstract: Purpose: To describe the urgent surgical management of an enterocele associated with a high risk of bowel ischemia. Methods: We present the case of a 43-year-old woman who presented to the emergency department of the First University Clinic at TSMU with severe perineal pain that began in the morning after sexual intercourse. A diagnosis of vaginal cuff insufficiency with enterocele was established, and urgent surgical intervention was performed. The repair was carried out via an abdominal approach. Results: The surgical intervention resolved the patient's clinical condition and prevented potential small bowel ischemia. Conclusion: Advanced enterocele with risk of bowel obstruction or ischemia is a rare but potentially life-threatening condition. Prompt recognition and immediate surgical management are crucial to prevent vaginal rupture, bowel necrosis, and systemic complications.

Keywords: enterocele, hysterectomy, vaginal cuff dehiscence, bowel obstruction, hernia

Introduction

An enterocele is defined as a herniation of the pelvic peritoneum containing small bowel loops and/or omentum. It occurs due to thinning or disruption of the rectovaginal and/or pubocervical fascia, allowing the peritoneum to descend toward the vaginal mucosa. The most common mechanism involves overstretching of the rectouterine pouch (Douglas pouch), leading to descent of the posterior vaginal fornix and, in severe cases, prolapse beyond the vaginal introitus [1].Most cases reported in the literature describe enterocele associated with vaginal vault prolapse following hysterectomy [2]. Clinically, patients commonly report a sensation of pelvic pressure or a vaginal bulge. Pain, ulceration, or bleeding may occur when prolapsed tissue extends beyond the introitus [2]. Associated urinary symptoms may include incontinence, urgency, and dysuria, while gastrointestinal symptoms may include obstructed defecation or difficulty emptying the rectum [3]. Management aims to correct the prolapse and improve quality of life. Surgical repair typically involves excision of the hernia sac and correction of the fascial defect by approximating the pubocervical and rectovaginal fascia to close the hernial defect [3]. Urgent surgical intervention is rarely required; however, emergency treatment is indicated when enterocele is associated with bowel obstruction or strangulation.

Case Report

A 43-year-old woman presented to the emergency department of the First University Clinic at TSMU with severe perineal pain that began the same morning after sexual intercourse. She also reported generalized weakness and mild confusion. Because the pain persisted, she sought emergency care. Her obstetric history included two cesarean sections in 2013 and 2015 and recent medical history was significant for breast cancer treated in February 2025 with breast resection followed by hormonal and radiation therapy (including goserelin/Zoladex). Several months later, she underwent a planned radical hysterectomy. The postoperative course was uncomplicated, and she was discharged on postoperative day three in stable condition with appropriate

recommendations. After abstaining from sexual intercourse for two months, she resumed sexual activity for the first time, after which her symptoms developed.

Upon admission, the patient was hemodynamically stable. The abdomen was soft, with hypogastric tenderness. Vaginal examination revealed an open posterior vaginal fornix with a defect allowing finger insertion. Soft tissue structures were palpable along the vaginal canal. Speculum examination revealed a visible intestinal loop within the vagina. The bowel appeared pink and viable, with minimal serous discharge. A diagnosis of vaginal cuff insufficiency with enterocele was established, and urgent surgical management was indicated. Under general anesthesia, a transabdominal approach was performed. Intraoperative findings included vaginal cuff dehiscence measuring approximately 3–4 cm and a freely protruding loop of small intestine through the vaginal defect. The bowel loops were carefully reduced into the abdominal cavity and repositioned cranially. The small intestine was examined along its entire length and showed no signs of ischemia or pathology. The edges of the vaginal defect were excised within healthy tissue margins. The vaginal cuff was closed in two layers. Posterior cul-de-sac obliteration (Moschowitz technique) and uterosacral ligament vaginal vault suspension were performed to restore pelvic support. The abdominal wall was closed in two layers, and skin closure was achieved with metal clips.

Discussion

This case describes a patient with enterocele associated with prior radical hysterectomy, successfully managed via open transabdominal repair with posterior cul-de-sac obliteration (Moschowitz technique) and uterosacral ligament suspension.The incidence of enterocele after gynecologic surgery ranges from 0.1% to 16% [4]. Small bowel obstruction or ischemia secondary to enterocele is rare but potentially life-threatening.Surgical management depends on multiple factors, including patient age, comorbidities, sexual activity, and type of prolapse [5]. Prognosis depends on symptom severity, extent of prolapse, surgical expertise, and patient expectations [6]. Recurrence rates after surgery are estimated at approximately 30% [5,6], highlighting the importance of selecting an appropriate surgical approach.In this case, urgent surgery was mandatory due to the risk of bowel strangulation and necrosis, vaginal rupture, evisceration, and systemic infection. Posterior cul-de-sac obliteration combined with uterosacral ligament suspension was essential to restore pelvic support and reduce recurrence risk.

Conclusion

Advanced enterocele with risk of bowel obstruction or ischemia is a rare but potentially life-threatening condition. Delayed diagnosis may result in bowel necrosis, sepsis, or vaginal evisceration.

Immediate recognition and urgent surgical management are critical to achieving favorable outcomes. In our case, prompt intervention allowed preservation of bowel viability and successful anatomical restoration.

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