

# Transvaginal evisceration after laparoscopic hysterectomy: a case report

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**Abstract:** Transvaginal evisceration is a rare condition characterized by the externalization of abdominal viscera through the vagina. Menopause and hysterectomy are the primary risk factors. A postmenopausal woman presented to the emergency department with evisceration of the small intestine through the vagina three hours post-coitus. She had a history of laparoscopic hysterectomy performed three years prior. The patient underwent prompt laparotomic repair of the vaginal cuff. The diagnosis of transvaginal evisceration is primarily clinical, and immediate treatment aims to maintain intestinal viability and repair the vaginal cuff. The surgical approach is based on the surgeon's experience, the patient's clinical condition, and resource availability.

**Keywords:** Emergency Medicine; Hysterectomy; Small intestine; Visceral prolapse

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## 1. Introduction

Transvaginal evisceration (TE) is the prolapse of intraperitoneal structures through a defect in the vaginal cuff. It is a surgical emergency requiring immediate resolution due to the risk of visceral necrosis, infection, and death. The first case was described by Hyernaux in 1864, with just over 100 cases documented since then (1,2). The incidence varies between 0.032% and 4.1% following abdominal and vaginal hysterectomy, and despite its rarity, it carries a high morbidity and mortality rate (3,4).

TE primarily affects postmenopausal, multiparous women with a history of hysterectomy (5). The distal ileum is most commonly involved, though cases involving the omentum, sigmoid, appendix, and fallopian tubes have been reported (1). The rise in TE cases in recent decades may be attributed to the advent of new therapeutic modalities, notably laparoscopic and robotic hysterectomy, which present a ninefold increased risk for TE (6,7). The time interval between hysterectomy and evisceration is associated with the hysterectomy surgical method (7). Diagnosis is clinical, with initial management focusing on hemodynamic stabilization, preservation of intestinal viability, antibiotic therapy, and prompt surgical intervention (8).

No standard surgical approach exists; the surgical route, whether laparotomic or laparoscopic, depends on the patient's clinical condition and the surgeon's expertise (9). Morbidity and mortality relate to the eviscerated organ, rupture

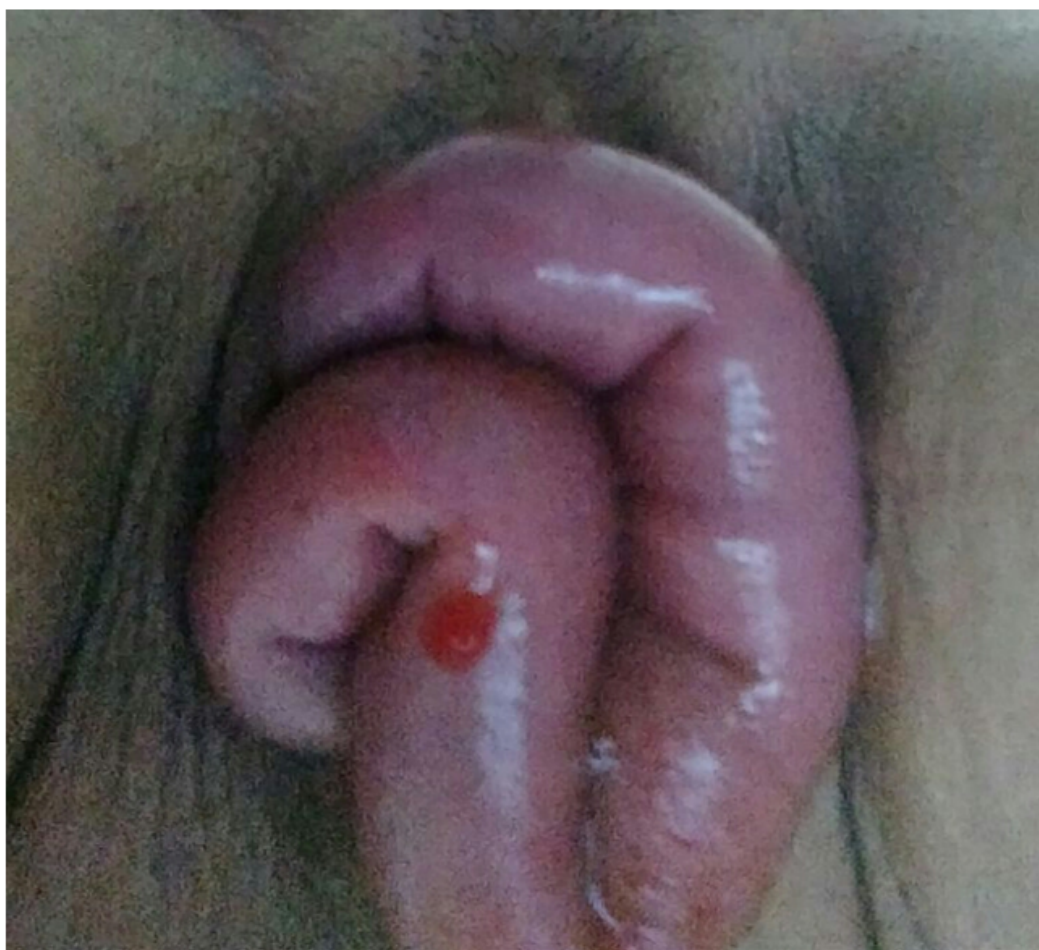
degree, and evolution time (10).

## 2. Case presentation

A 60-year-old woman with a history of Chagas disease, hypothyroidism, and a total laparoscopic hysterectomy performed two years prior presented to the emergency department with transvaginal evisceration of three hours duration, which had occurred abruptly following coitus. Initial assessment revealed stable vital signs. Physical examination showed viable and intact small intestine loops protruding through the vagina (Figure 1). The intestinal loops were preserved with a moist compress, and antibiotic therapy was initiated. An infraumbilical median laparotomy was performed, with reduction of the small intestine loops, which showed peristalsis without ischemic signs. A 10 cm defect was noted in the vaginal cuff (Figure 2). The anterior vaginal wall, adhered to the bladder, was dissected, and the vaginal cuff repair was completed in two layers using absorbable sutures (Figure 3). The postoperative period was uneventful, and the patient was discharged on the second day after the procedure.

## 3. Discussion

TE is an extremely rare condition characterized by the extrusion of intraperitoneal contents through a defect in the vaginal cuff. The vaginal cuff dehiscence rate ranges from



**Figure 1** Exteriorized loop of small bowel through the vagina.

0.14% to 4.1% (3,4). Studies on laparoscopic and robotic hysterectomy report higher incidences (1% to 4.1%) compared to studies encompassing all hysterectomy types (0.14% to 0.27%) (9,10).

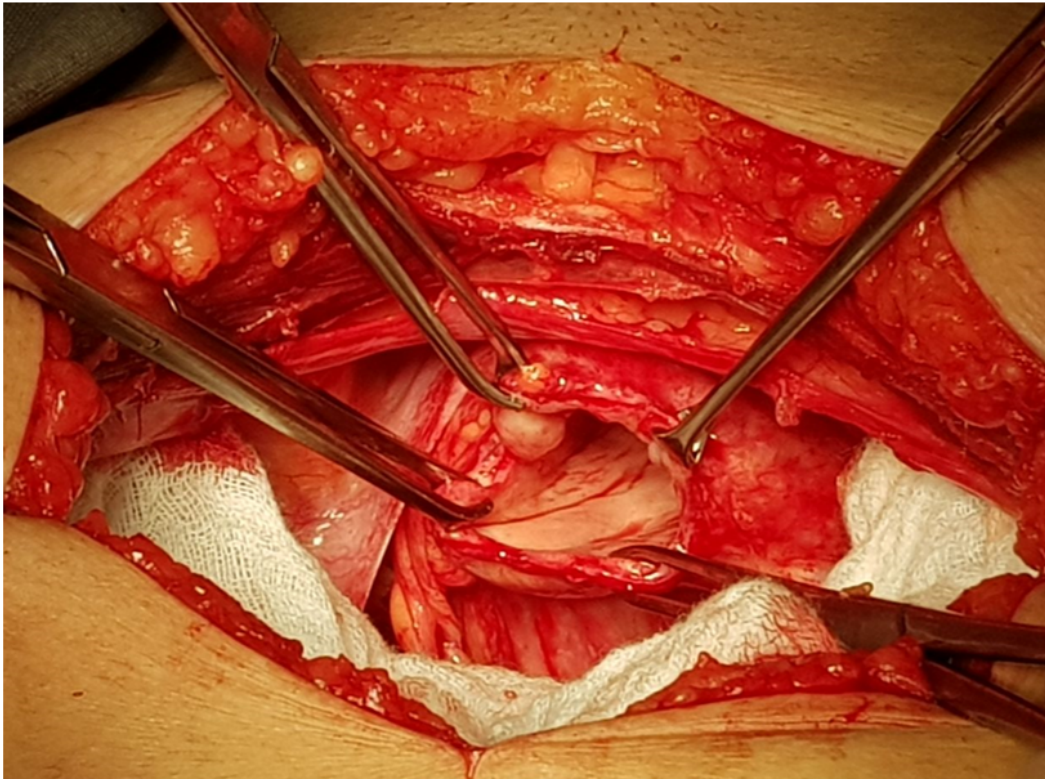
With the advent of minimally invasive surgery, approximately half of TE cases occur after laparoscopic or robotic hysterectomy. The incidences of 1.1% to 4.9% after laparoscopic hysterectomy and 3% after robotic hysterectomy contrast with rates of 0.29% and 0.12% after vaginal and abdominal hysterectomy, respectively. Laparoscopic and robotic approaches carry a ninefold increased risk, attributed to the use of hemostatic and cutting current, type of suture knot, magnified visualization, and early return to sexual activity (1,3,7). The time interval between surgery and evisceration varies with the hysterectomy surgical route. For laparoscopic hysterectomy, the interval ranges between 4 and 7 weeks, significantly shorter than the time presented in this case. This interval is longer for abdominal and vaginal approaches, varying between 13 and 22 weeks for the abdominal route and 52 to 116 weeks for the vaginal route. The median time to evisceration following pelvic surgery is 20 months (3,7,10).

The etiology of this condition is multifactorial. In younger patients, sexual intercourse before complete cuff heal-

ing is the primary cause, with earlier onset of events. In postmenopausal women, hypoestrogenism and post-hysterectomy surgical changes, such as suboptimal vascularization and alteration of the vagina's normal anatomical axis, are the main causes of this severe complication. Additional risk factors include advanced age, multiparity, enterocele repair, conditions associated with increased intra-abdominal pressure, and factors impairing proper wound healing, such as corticosteroid administration, infections, abscesses, poor surgical technique, and early return to sexual activity (1,3,7). The typical clinical presentation of TE is lower abdominal pain and abrupt externalization of intra-abdominal contents through the vaginal introitus. Patients may also present with vaginal bleeding or discharge, signs of bowel obstruction, and peritonitis. In the present case, the patient showed externalization of small bowel loops without signs of ischemia or obstruction (2,5,6).

In this case, the distal ileum was eviscerated, the organ most commonly involved in TE cases. Literature also documents cases involving the omentum, sigmoid, appendix, and fallopian tubes (1). Morbidity impact depends on the eviscerated organ, rupture degree, and evisceration duration. Diagnosis is clinical, and once established, treatment involves hemo-





**Figure 2** Intraoperative finding showed a defect in the vaginal cuff.



**Figure 3** Intraoperative findings showed a repaired defect in the vaginal cuff

dynamic stabilization, intestinal viability preservation with moist compresses, antibiotic therapy, and immediate surgi-

cal intervention (8).

There is no standard therapeutic approach for treating

TE. The approach may be performed via laparotomy, laparoscopy, transvaginal, or combined (abdominal and transvaginal) routes. The transvaginal route is preferable in TE when no signs of vascular compromise are present, allowing for manual reduction followed by vaginal cuff repair via the transvaginal route. When intestinal viability is uncertain, assessing the intestinal loops via an abdominal cavity inventory, whether by laparotomy or laparoscopy, is essential (1,2,3).

Current evidence does not highlight the superiority of any surgical modality. The decision should be individualized, considering the patient's clinical condition, available resources, and the surgeon's expertise (2,3).

## 4. Conclusion

TE is a rare complication of hysterectomy with high morbidity and mortality. Good surgical technique and management of modifiable risk factors are essential to prevent this condition. Early diagnosis and immediate treatment of TE are crucial.

## 5. Declarations

### 5.1. Acknowledgement

None.

### 5.2. Authors' contribution

All authors contributed the manuscript equally.

### 5.3. Conflict of interest

None.

### 5.4. Funding

None.

### 5.5. Consent for publication

The case report was approved by the Research Ethics Committee, and the patient provided consent for the publication of the article without the disclosure of personal data.

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