

Case Report

Post blunt trauma abdomen transvaginal omental evisceration: a rare case report

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ABSTRACT

Vaginal evisceration is a surgical emergency. It's a rare but potentially fatal disorder. Only a few examples of transvaginal omental evisceration have been reported worldwide, however no evidence of post-trauma abdominal evisceration has been found. Vaginal evisceration in premenopausal women has been recorded infrequently compared to postmenopausal women and it has been linked to sexual and obstetric trauma. We presented a case of a premenarchal female who came with transvaginal omental evisceration after a blunt abdominal trauma and discussed the treatment choices for this uncommon surgical emergency.

Keywords: Transvaginal, Evisceration, Prolapse

INTRODUCTION

Vaginal evisceration is a medical emergency that necessitates early identification and surgical treatment.¹ Hyernaux recorded vaginal evisceration in the literature as early as 1864, while Marchesi documented the first instance of omental prolapse in 1955.^{2,3} Joy et al discovered 12 cases of vaginal cuff evisceration as a result of coitus, 9 of which occurred after vaginal hysterectomy.¹ Later, McGregor went on to report minor bowel protrusion caused by a vaginal wall rupture.⁴

Vaginal evisceration following transabdominal hysterectomy in a premenopausal patient with vault rupture and small bowel prolapse during sexual intercourse is an exceptionally unusual complication that has only been recorded in a few cases in the literature.^{1,5}

Majority of the cases with vaginal vault rupture are about intestinal prolapse. Evisceration appears to be more common in premenopausal women and is often connected with sexual or obstetric trauma, but in

postmenopausal women, evisceration can occur spontaneously or more commonly, as a result of an increase in intra-abdominal pressure caused by coughing, defecating or falling.⁶ It is frequently linked to atrophic vaginal walls, which are more likely to rupture.⁷ Evisceration is generally preceded by vaginal trauma caused by rape, coitus, obstetric equipment or the insertion of foreign bodies in premenopausal individuals.^{1,8-10}

Peritonitis, intestinal gangrene and septic or neurogenic shock can all ensue from a delay in recognising or treating this illness. The diagnosis will be confirmed by a thorough clinical examination and a high index of suspicion. We presented a case of vaginal evisceration caused by forceful abdominal trauma in a pre-menarche female patient, with partial vaginal omental prolapse.

CASE REPORT

A 13 year old adolescent female of low socio-economic status, presented to the surgical casualty with complaints

of mass protruding through vagina and pain in abdomen following blunt trauma abdomen secondary to accidental fall from height 2 days ago.

The patient did not have a significant past history or any surgical history. The patient did not give any drug history or any previous admissions in the past. She did not attain menarche. No history of physical or sexual assault or any sexual activity could be elicited. No history of any gynaecology procedure or surgical illness in the past.

On general physical examination, patient was conscious, oriented and vitally stable. Patient was undernourished for age. Per abdomen examination revealed a soft non tender abdomen with no distension. No evidence of any external injury to the torso and pelvis.

Local examination revealed a mass protruding from the vagina, irregular in shape and of approximate length 10 centimetres and width 8 centimetres suggestive of omentum. It was non tender, firm in consistency, non-foul smelling and no bleeding per vaginum. Omental part outside vagina was erythematous and oedematous. Bowel was not prolapsed. Omentum was wrapped with warm, sterile, saline-soaked gauze. Digital rectal examination was normal. Per vaginal examination was not performed immediately at the time of admission.

Routine investigations were within normal limits with total leucocyte count being 5,200 and haemoglobin being 7.5 mg/dl. Patient was referred for an ultrasonography of abdomen and pelvis and a X-ray abdomen erect, both of which were within normal limits with no evidence of air under diaphragm or any air fluids levels. Following investigations, patient was posted for per vaginal examination under anaesthesia.

Under the guidance of gynaecologist, per vaginal examination was done, intraoperative findings included a 4 cm long tear in the posterior fornix of the vagina on the left side. There was no evidence of anterior vaginal wall tear. The external genitalia was normal. Decision of exploratory laparotomy taken by senior surgeons and with intra operative gynaecologist assistance the following findings were noted. Omentum of size 10×8×2 centimetres was herniating through the posterior forniceal tear. Hypoplastic uterus with normal ovaries and fallopian tubes were visualised intraabdominal with a normal appendix. The entire bowel and solid organs were normal. There was no evidence of hemoperitoneum. Partial omentectomy was done and the affected omentum was delivered through the vagina. Primary repair of the posterior fornix tear was done.

Post-operatively patient was managed in the ward. Broad-spectrum intravenous antibiotics were post-operatively given for three days followed by oral antibiotics. Oral feeds were started on postoperative day 2 after commencement of bowel sounds. Pelvic drain was removed on post-operative day 3.

The patient had a periumbilical suture line gape of size 4×1.5 centimetres, 7 days later for which regular suture line clean dressings were done and was discharged from the hospital after seven days. Histopathology report was suggestive of inflamed omental tissue suggestive of perforation peritonitis.

In a follow up examination fifteen days later, in per speculum examination, the patient exhibited complete healing of the rent without evidence of local sepsis with no evidence of recurrence and the vaginal vault had healed satisfactorily and the abdominal wound gape healed by secondary intention.



Figure 1: Omental prolapse per vaginum.

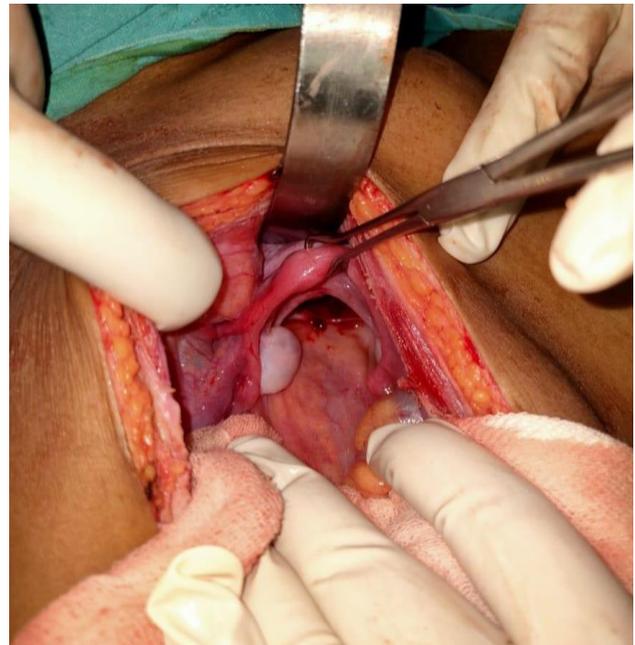


Figure 2: The vaginal defect (posterior fornix) was closed by absorbable sutures via the lower midline laparotomy incision.



Figure 3: The oedematous omentum excised and delivered per vaginally.



Figure 4: The excised omental segment.

DISCUSSION

Vaginal evisceration following hysterectomy has been documented since 1864.¹¹ Because of its rarity, this case had been reported. The mortality rate after vaginal evisceration has been reported to be 5.6 percent. When the bowel is strangulated due to a vaginal defect, the risk of morbidity is increased.¹²

73 percent of patients with vaginal evisceration had previously undergone vaginal surgery, most commonly transvaginal hysterectomies or enterocele repairs, according to Kowalski et al.⁸

The elderly, postmenopausal women and female patients undergoing vaginal or laparoscopic hysterectomy are all at risk for trans-vaginal bowel evisceration. Ramirez identified postmenopausal status, trans-vaginal hysterectomy and a rise in abdominal pressure as risk factors in a review of the literature on 59 eviscerations.¹³

The aetiology of vaginal evisceration can be divided into two categories, premenopausal and postmenopausal. Evisceration can occur spontaneously or more frequently in postmenopausal women as a result of an increase in intra-abdominal pressure caused by coughing, defecating or falling. Evisceration is generally preceded by vaginal trauma caused by rape, coitus, obstetric equipment or the insertion of foreign bodies in premenopausal individuals. Previous vaginal operations and enteroceles are also risk factors for vaginal evisceration.¹⁴

Poor technique, hematoma, coitus before healing, advanced age, irradiation, corticosteroid medication, penetrative trauma or rape, previous vaginoplasty, use of the Valsalva manoeuvre, pelvic radiation, hypoestrogenism and devascularization from previous surgery are all known risk factors.^{8,15}

Peritonitis, intestinal damage, necrosis and sepsis can all occur as a result of intestinal evisceration. Although additional organs such as the omentum, salpinx and epiploic appendices have been described, the terminal ileum is the most common projecting viscus. To avoid problems, prompt surgical and medical intervention is essential. The most common eviscerating organ is the distal ileum, though protrusion of the appendix and fallopian tubes has also been documented.^{10,16}

In our patient, there was no bleeding or free air in peritoneal cavity, supposedly because of the ruptured area of the vagina being immediately packed by the prolapsed omentum, which remained in the vagina from when the accident occurred. In the course of time, further prolapse might have developed when intra-abdominal pressure grew high at evacuation.

Stabilization, fluid therapy, covering the omentum with moist saline sponges, early antibiotic medication, radiograph to exclude foreign bodies and rapid surgical

intervention are the key interventions for vaginal evisceration.¹⁷

The need of the hour was immediate reduction and repair. Depending on the patient's health and bowel viability at the time of treatment, the procedure can be performed by a trans-abdominal (open or laparoscopic) procedure, a trans-vaginal method or a combination of the two.^{18,19}

In the present case, one of the underlying causes of the evisceration was probably the fact that the patient had a history of blunt trauma to abdomen secondary to fall but there was no other positive history. Socioeconomic and nutritional status was low in our patient which can be additional risk factor for the situation. However, the main trigger factor is trauma to the abdomen, leading to sudden increase in abdominal pressure.

Vaginal evisceration is a surgical emergency that requires prompt detection and surgical repair to be treated successfully. A careful examination of the herniated viscus and surgical correction of the vaginal defect are required for proper evisceration care. If the evisceration is linked to a viable and easily reducible bowel, a trans-vaginal technique involving a 2-layer peritoneum and vaginal closure should be considered.¹⁹

CONCLUSION

Vaginal evisceration in premenopausal women has been recorded infrequently compared to postmenopausal women, and it has been linked to sexual and obstetric trauma. To decrease morbidity and death, vigorous resuscitation and immediate surgical intervention are required. Transvaginal bowel evisceration that occurs spontaneously is a rare occurrence with very limited documentation.

Because surgeons rarely encounter such an atypical presentation, the general surgeon should be aware of this highly rare but potentially fatal consequence. Omental prolapses are less common than intestinal prolapses on their own. Prolapsed mass should be covered with sterile gauze or towel. Early antibiotic therapy should be given as well as a precaution against peritonitis.

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