



A Rare Presentation of Bowel Evisceration Through Vaginal Cuff Dehiscence

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Received: Nov 30, 2022

Accepted: Dec 15, 2022

Published Online: Dec 19, 2022

Journal: Journal of Case Reports and Medical Images

Publisher: MedDocs Publishers LLC

Online edition: <http://meddocsonline.org/>

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Abstract

Bowel evisceration is a rare complication of hysterectomy with only 100 cases reported so far. The evisceration occurs through the vaginal cuff dehiscence, which is found in 0.24-0.39% of all hysterectomies. This is a surgical emergency where bowel injury and peritonitis can occur if not treated promptly. Some studies report increased rate of the vaginal cuff dehiscence associated with minimally invasive techniques of hysterectomy. We present a 70-year old female patient who presented with eviscerated bowel through the vaginal cuff dehiscence and the vaginal vault on background of robotic-assisted hysterectomy. Eviscerated bowel segment was resected and the vaginal cuff dehiscence was repaired via emergency laparotomy. Laparoscopy or laparotomy should be considered when assessment of intra-abdominal contents is required.

Case report

Bowel evisceration through vaginal vault is an unusual complication of hysterectomy with 100 cases reported since 1864 [1]. Evisceration of bowel occurs through the Vaginal Cuff Dehiscence (VCD), which is defined by full-thickness or partial separation of the vaginal cuff edges [2]. This is a surgical emergency where bowel injury and peritonitis can occur from direct trauma, mesenteric injury or strangulation [3]. We present an interesting case of small bowel evisceration through the vagina vault and its management.

A 70-year-old female presented with sudden onset abdominal pain, vomiting, and a 5-day history of having a lump in the vagina. Six months prior, she had a robotic-assisted hysterectomy. On examination, her vitals were normal but had generalised abdominal tenderness. Perineal examination revealed an eviscerated loop of small bowel from the vagina with patchy areas of haemorrhagic changes (**Figure 1**). She had a lactate of

3.3 mmol/L with white cell count (WCC) of $11.9 \times 10^9/\text{L}$. Computed Tomography (CT) of the abdomen showed a lymphocele in the right lower quadrant arising adjacent to small bowel, and another separate small bowel loop prolapsing into the vaginal canal (**Figure 2a and 2b**).

She then underwent an emergency laparotomy which confirmed mid-jejunum evisceration through the 4cm vaginal cuff defect, into the vaginal canal. This loop of small bowel was dusky, and was continuous with the loop of small bowel involving the lymphocele. An en-bloc resection was performed removing the lymphocele with adjacent dusky prolapsed small bowel (**Figure 3**). The vaginal cuff was repaired by the gynaecology team. The patient made an unremarkable recovery and was discharged on Day 9 post-operatively.

Vaginal cuff dehiscence has been reported to range between 0.24-0.39% of all hysterectomies [4]. Evisceration of intraperitoneal structures is found in approximately 35% of VCD, and is

Cite this article: Park S, Chen MZ, Stewart KM, Albayati S. A Rare Presentation of Bowel Evisceration Through Vaginal Cuff Dehiscence. *J Case Rep Clin Images*. 2022; 5(2): 1123.



diagnosed clinically where there is bowel visible through the vaginal canal [5]. Common precipitating factors include sexual intercourse, increased abdominal pressure or Valsalva manoeuvres [6]. Some studies report increased rate of VCD associated with minimally invasive techniques [7]. This was consistent with our patient's recent history of robotic-assisted hysterectomy. Although there is paucity of evidence in how minimally invasive surgery could predispose to higher rates of VCD, it is postulated that thermal energy and suturing techniques are the main contributing factors [7].

The status of the eviscerated bowel and clinical appearance of the patient should dictate the surgical approach. Transvaginal repair of the VCD may be considered if the bowel can be easily reduced and there is no clinical evidence of bowel injury or peritonitis [3]. Laparoscopy or laparotomy is indicated when assessment of intra-abdominal contents is required [3]. VCD can generally be closed with interrupted or figure-of-eight absorbable sutures involving the full thickness of the vagina [8].

In our case, laparotomy was essential due to concerns of the viability of the eviscerated small bowel. VCD was repaired by interrupted suture closure via the same incision. In conclusion, VCD with bowel evisceration is a surgical emergency where meticulous pre-operative assessment of the patient and anatomy is essential to guide the operative approach and achieve optimal outcome.



Figure 3: En-bloc resection of small bowel with lymphocele. (blue arrow = lymphocele, red arrow = small bowel).

Conflict of interest and sources of funding: None declared.

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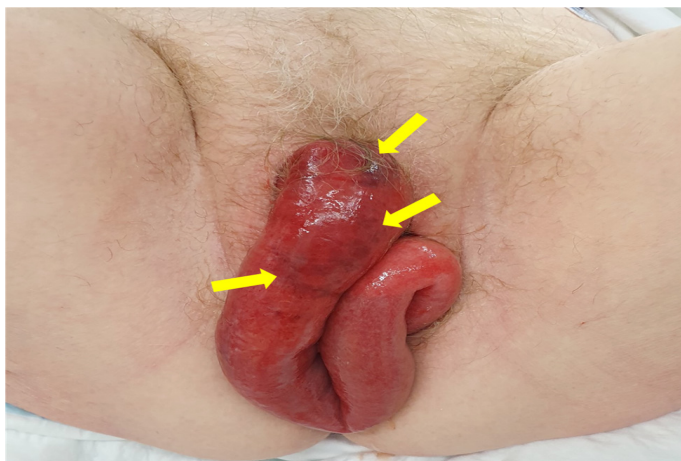


Figure 1: Loop of small bowel eviscerating from the vagina with patchy areas of haemorrhagic changes (yellow arrows).

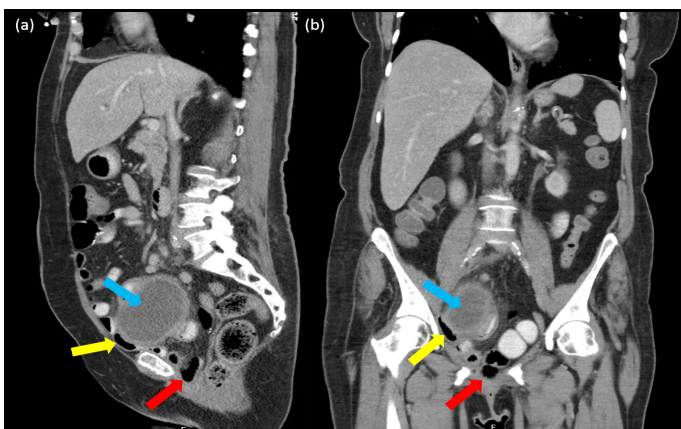


Figure 2: (a) Sagittal view of computed tomography (CT) showing lymphocele (blue arrow), small bowel adjacent to the lymphocele (yellow arrow) and small bowel entering vaginal canal (red arrow). (b) Coronal view of CT showing lymphocele (blue arrow), small bowel adjacent to the lymphocele (yellow arrow) and small bowel entering vaginal canal (red arrow).