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Case Report

A rare case of omental evisceration through the vaginal vault post hysterectomy

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ABSTRACT

Vaginal vault perforation and evisceration of abdominal contents is a rare but well recognised complication of hysterectomy. We presented a rare case of a 40-year-old female with isolated omental prolapse 10 months post open abdominal hysterectomy after penile-vaginal intercourse. Early identification, initiation of antibiotics and operative management are critical to sepsis source control.

Keywords: Omental prolapse, Vaginal perforation, Hysterectomy

INTRODUCTION

Evisceration of abdominal contents through the vaginal vault is a rare but recognised consequence of hysterectomy, it represents a gynaecological emergency with significant risk of complications.[1] A published literature review highlighted only 59 case reports over the last century documenting this important complication.[2] To our knowledge this is the first case report describing isolated omental evisceration through the vaginal vault.

CASE REPORT

A 40-year-old female attended the emergency department after noting a mass protruding from her vagina with associated vaginal bleeding. The patient reported mild lower abdominal pain ongoing for 10 hours which had started post coitus on the same day. Post coitus she had noted small volume vaginal bleeding.

A few hours after the pain started the patient strained on the toilet feeling evacuation of her bowels may help the pain, at this point she developed a mass bulging from the vagina and immediately called an ambulance. No recent vaginal instrumentation had occurred, the patient had undergone an open trans-abdominal hysterectomy 10 months prior for a fibroid uterus. She was otherwise well with two previous C sections but no other gynaecological or surgical history. On presentation there were no symptoms or clinical signs of bowel obstruction. On examination the abdomen was soft with mild tenderness in the lower quadrants, no abdominal distention or peritonitis. On vaginal examination there was 10 cm of omentum protruding from her vulva with small volume purulent exudate surrounding.

On a limited vaginal exam, no bowel was palpable. Biochemical investigations revealed a WCC count of 14.6 with neutrophilia and a CRP of 0.5, a venous blood gas showed a normal lactate and pH. The decision was made to take the patient to theatre for a diagnostic laparoscopy and vaginal examination under anaesthesia. Computerised topography (CT) with intra-venous contrast was performed while awaiting theatre availability. On CT imaging a 3.9×2.3 defect at the level of the levator ani through the vaginal vault with herniation of omental fat outside the body cavity was noted.

The omentum contained enhancing mesenteric vessels with no evidence of incarceration or ischemia. There was no evidence of bowel involvement or compromise but widespread pneumoperitoneum. The patient was taken to

theatre jointly with gynaecology and general surgery teams. Vaginal EUA showed omentum protruding from the vagina that was congested. Purulent peritoneal fluid drained during the examination and was sent to microbiology for microscopy, culture and sensitivities. Exploratory laparoscopy was performed. Purulent peritoneal fluid was present perihepatic, in the paracolic gutters and in the pelvis, there were small bubbles of air around the abdomen also.

A 4 cm defect in the vaginal vault was identified with omentum eviscerating through. Local small bowel appeared hyperaemic but viable and within the abdominal cavity. The decision was made to amputate the omentum proximal to the defect to reduce her burden of infection. The amputated omentum was left within the vagina during the laparoscopy to maintain pneumoperitoneum and removed at the end of the procedure. The edges of the ruptured vaginal vault were freshened to healthy bleeding tissue. The vaginal vault defect was sutured laparoscopically with a continuous V-loc suture. An extensive laparoscopic washout was performed and a cystoscopy to confirm the bladder was not injured. A Blake drain was placed in the pelvis. Due to the nature of the mechanism, broad spectrum antibiotics were used to additionally cover for sexually transmitted infection both on induction of anaesthesia and post operatively. She made an uncomplicated clinical recovery and was discharged day 3 post operatively. She was discharged on a further 7 days of oral amoxycillin-clavulanate acid. Her fluid culture subsequently grew coagulase negative staphylococcus and candidida albicans. On follow up, she was systemically well and required no further antibiotics or intervention.

Figure 1: Prolapsed omentum.

Figure 2: Vaginal vault defect with omentum.

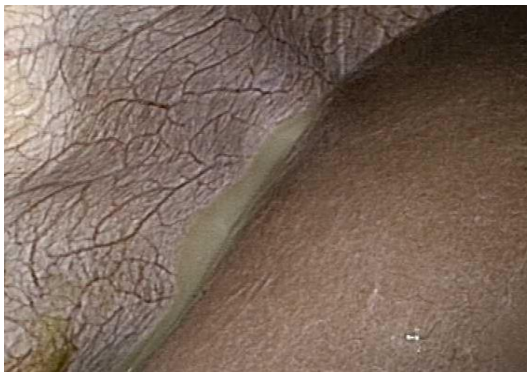

Figure 3: Turbid fluid in Morisons' pouch.

Figure 4: Bubbling below falciform ligament.

Figure 5: Defect after omental amputation.

Figure 6: Coronal view CT with visible prolapse.

Figure 7: Axial CT with large volume pneumoperitoneum.

DISCUSSION

The incidence of vaginal vault dehiscence is described in the literature between 0.64% and 5.4%, evisceration does not occur in all cases highlighting this is an uncommon but important complication of hysterectomy.[3,4] Key identified risk factors included extremes of age, post-menopausal women and trans-vaginal hysterectomy. In patients Median time frame post hysterectomy has been sighted as 34 months.[5]

Evisceration through the vaginal vault post hysterectomy has been described in the literature as a series of case reports.[6] Small bowel was the most commonly eviscerated organ in the review. Presenting complaints are typically vaginal bleeding, pelvic pain and a vaginal mass. In a 2007 observational study with 7286 hysterectomies, laparoscopic hysterectomies were observed to have the highest rate of cuff dehiscence with a rate of 4.93% compared to the 0.29% associated with a total vaginal hysterectomy.[7] Transabdominal had the lowest rate of dehiscence at 0.12%.[8] Like previous published cases, coitus was the precipitating event in our case, with presentation within 1 day in line with other cases.[9,10]

The patients vaginal vault defect was closed with a barbed suture. Recent literature has highlighted the suggestion that the use of these sutures for the initial hysterectomy may reduce the risk of vault disruption.[11] In a case series of 617 patients no dehiscences occurred in patients where the vaginal vault was closed with a barbed locking suture versus 18 patients whose vaginal vault was closed with vicryl.[12] The details of this patient's original vault closure material are unknown but this may be an important consideration in reducing the risk of this complication.

Early antibiotics and surgical management were a priority to control the patient's intraabdominal contamination and potential development of peritonitis. The authors were surprised to see the turbid fluid intraabdominally that had developed in a short time frame of only 10 hours since the vaginal vault disruption. This appearance in addition to the positive peritoneal cultures clearly demonstrates the risk of development of septic complications with vaginal vault disruption. The patient was covered with broad spectrum antibiotics including those to cover STIs and would advocate this for patients who present in this manner. A Blake drain was left post operatively for ongoing sepsis control, in line with other case reports abdominal content evisceration.[13]

This patient had an isolated evisceration of the omentum. Omental evisceration is widely described in the context of penetrating stab injuries but has not been described in regard to vaginal vault disruption as an isolated event.[14] In the stab injury setting wash and reduction of the eviscerated omentum in the context of laparotomy is an acceptable surgical management but in this setting of vaginal evisceration the reduction of the omentum was not felt to be advisable.[15] The omentum had been eviscerated a number of hours and via the vagina so was vulnerable to microbial contamination, the authors would advocate that removal of the eviscerated portion is the lowest risk options for patients in this setting and reduces the risk of subsequent intra-abdominal infection.

CONCLUSION

This case demonstrates some interesting points. Other than her previous hysterectomy, she had no risk factors for vaginal vault perforation. Early assessment, initiation of antibiotics and definitive surgical management is critical for early source control of sepsis. As seen in this case, rapid development of peritonitis can occur.

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