Transvaginal evisceration after vaginal surgery: a case report

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Abstract

We present a case of 72-year-old patient, who underwent a 10 years ago a total vaginal hysterectomy, was admitted for transvaginal bowel evisceration. This affection is an exceptional complication of pelvic surgery. There is no gold standard surgical approach but exploratory laparotomy is mandatory in case of bowel necrosis.

TRANSVAGINAL EVISCERATION AFTER VAGINAL SURGERY

A CASE REPORT

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This manuscript has not been published and is not under consideration for publication elsewhere. If accepted, the paper will not be published elsewhere in the same form, in English or in any other language, without written consent of the copyright holder. We have no conflicts of interest to disclose. I attest that this work has been approved by all co-authors. Written informed consent was obtained from the patient for the publication of this case report and its accompanying images. We declare no financial support.

INTRODUCTION:

Transvaginal evisceration relates the extrusion of intra-abdominal viscera through the vaginal vault. It is a rare event, and a potentially serious complication of pelvic surgery [1]. Relatively few cases have been published in the medical literature, and the exact incidence is difficult to determine. The small intestine is

the most commonly eviscerated organ [2]. It is typically diagnosed by clinical history and pelvic exam, but its low incidence can make the diagnosis overlooked in the emergency department, and radiologic features may help the diagnosis in selected patients. [3] It requires a prompt surgical and medical intervention to guarantee an optimal medical care [4]. Due to its rarity, transvaginal evisceration has no surgical gold standard approach. The surgical approach depends on the viability of the eviscerated bowel and the presence of peritoneal signs. [5]

Case report:

A 72-year-old patient, who underwent a 10 years ago a total vaginal hysterectomy for a mild disease, was admitted for abdominal pain with a loop of bowel prolapsed from her vagina, after an uplifting effort (Figure1).

The physical examination showed an evisceration of small bowel with satisfying vitality due to dehiscence of the vaginal cuff. Multiple loops of the small bowel and abdominal mesentery were involved. A digital rectal exam confirmed that there was no involvement of the rectum. We did not complete any radiological examination. We decided to operate on the patient in an emergency context. The preoperative blood tests were normal.

Under general anesthesia and after administration of intravenous antibiotics, the patient was placed in Trendelenburg position, and the loop of bowel was integrated into the abdominal cavity with a manual reduction (Figure 2 and 3) through the vaginal defect and the defect was repaired with a non-absorbable running suture (Figure 4). Post-operative period was uncomplicated; the patient was discharged on the 8^{th} post-operative day and was addressed to the genecology team to fix the vaginal cuff dehiscence.

Discussion:

Transvaginal evisceration is a rare complication that was reported the first time in 1907 by Mc Gregor [1]. The incidence was estimated from 0.034% to 0.28% [4, 6], but it may be probably higher.

The average intervals reported between evisceration and surgery are 20 months after vaginal hysterectomy, 6 months after abdominal hysterectomy and 4 months after laparoscopic hysterectomy [5].

Many factors risk have been noted, there is a strong correlation between age and tansvaginal evisceration, in the premenopausal period, sexual trauma is the principal cause of evisceration, and in postmenopausal period, devascularisation and foreshortening of the vaginal tissue facilitate the spontaneous rupture [5].

There are also haematoma, premature resumption of sexual activity after surgery, pelvic floor defects, prior radiation therapy, chronic steroid administration, malnutrition that contributes to the reliability of the vaginal apex [5- 8].

Total laparoscopic hysterectomy may be related with an increased risk of vaginal cuff dehiscence compared with other techniques of total hysterectomy, however, prospective randomized trials are needed to support this hypothesis. [4]

For minimal invasive surgeries, transvaginal cuff repair was associated with a lower incidence (0.18%) %) than for both laparoscopic (0.64%) and robotic procedures (1.64%) [9]. This is probably due to high technical demand for laparoscopic and robotic suturing and knotting, magnifying effect of the scope causing insufficient amount of tissue during suturing, magnification of small vessels, and excessive thermocoagulation that impedes blood supply and healing [4]. Furthermore, the tension of the suture and the knot is more reliable when directly maintained by hands [9]. Whether running suture or interrupt suture for transvaginal cuff closure has a lower incidence of vaginal cuff dehiscence justifies further research.

Several surgical methods such of bilateral vaginal uterosacral ligament suspension, vertical suturing, conserving the length of the vaginal apex, and cutting with minimal coagulation have been reported to prevent vaginal dehiscence. [10, 11]

In the present case, the predictive factors of evisceration were post menopausal period, history of pelvic surgery and increased intra-abdominal pressure caused by carrying of heavy loads.

Vaginal cuff dehiscence can cause evisceration of the bowel, adnexa, and omentum, which can be strangulated. Transvaginal evisceration requires a prompt diagnosis and emergency surgery to prevent a serious complications such of bowel ischemia, bowel necrosis, ileus, bacteremia, peritonitis and sepsis .Therefore, early diagnosis is critical. [12]

The diagnosis of vaginal cuff dehiscence in mainly based on the clinical history and pelvic examination. However, because of its low incidence the diagnosis may be ambiguous and delayed patient management. [13]

Transvaginal evisceration is a gynecological emergency and immediate recognition and surgical repair are crucial, the medical management initially begins with resuscitation: early antibiotic therapy and fluid therapy [14- 16].

The surgical approach depends on the viability of the eviscerated intestine, it can be managed by a vaginal approach and/or laparoscopic approach [18], in case of unsuccessful reduction or any suspicion regarding the viability of the bowel, a laparotomy is obligatory to explorate the abdominal cavity and to achieve the resection of the ischemic bowel [14, 15].

In this case, the eviscerated bowel was viable, pink, with peristalsis, and the patient was stable, the vaginal approach was appropriated, and the bowel was reduced back into abdominal cavity through the vagina, and repair attempted vaginally. [16]

Successful repair of the vaginal cuff defect necessitate well-vascularized and healthy tissue. The vaginal cuff edges should be sharply debrided until bleeding edges are achieved. The surgeon should be attentive to any adherent loops of bowel or omentum that require sharp dissection to permit a full-thickness cuff closure. For suture selection, we recommend using delayed absorbable monofilament suture such as 0-Polydioxanone instead of braided suture owing to the theoretically lower risk of infection. [14] Early absorbable sutures was realted with increased risk of vaginal cuff dehiscence (2.5%) compared with the delayed absorbable sutures (0.7%). [17] Full-thickness interrupted sutures are placed to re-approximate but not strangulate the cuff edges. If there is any doubt for a vaginal cuff abscess or hematoma, a vaginal drain can be sutured in place and removed in 24–48 hours. [14]

Conclusion:

Vaginal cuff dehiscence can be life-threatening therefore an early diagnosis can reduce morbidity and mortality. Sexual intercourse before complete healing of the vaginal cuff after hysterectomy is the primary precipitating event in younger patients, whereas evisceration occurs as a spontaneous event in older patients. Due to its rarity, transvaginal evisceration has no surgical gold standard approach, however we should keep in mind that suspicion of bowel necrosis impose explorative laparotomy. Finally, more delicate procedures and good post-hysterectomy care must be applied to minimize the risk of vaginal cuff dehiscence.

Conflict of interest:

No conflict of interest to declare.

Consent:

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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Figure legends:

Figure 1 : Transvaginal evisceration of small bowel

Figure 2: Striction of the loop of bowel prolapsed

Figure 3: Manual reduction of the small bowel through vaginal defect

Figure 4 : The vaginal vault repaired