

Vaginal Cuff Dehiscence with Small Bowel Evisceration 14 Months after Total Abdominal Hysterectomy

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ABSTRACT

Introduction: Vaginal cuff dehiscence is a rare complication following hysterectomy. The condition coexisting with intraabdominal organ evisceration occurs even rarer. Nevertheless this should not be neglected owing to high morbidity and mortality.

Case presentation: The reported case is a 48-year-old widow presenting with vaginal cuff dehiscence and small bowel evisceration after undergoing a total abdominal hysterectomy (TAH) in the past 14 months due to myoma uteri. She denied having a history of sexual intercourse after the operation. The exposed bowel, 60 cm in length, appeared viable and no peritoneal sign was observed. There was a vaginal cuff defect approximately 3 cm in length. An exploratory laparotomy was then carried out. Eviscerated bowel was reduced back in the abdominal cavity and the vaginal cuff defect was repaired. No complications such as recurrent dehiscence were observed during one year follow-up.

Conclusion: To minimize the incidence of vaginal cuff dehiscence after hysterectomy, surgical techniques should be of concern. Patient instructions, including delaying sexual intercourse and avoiding all possible causes of increased intra-abdominal pressure should be provided postoperatively.

Keywords: Bowel evisceration; vaginal cuff dehiscence; hysterectomy (Siriraj Med J 2017;69: 391-394)

INTRODUCTION

Vaginal cuff dehiscence (VCD) is a rare complication following hysterectomy. It varies in different populations and approaches of hysterectomy, at 0.14-4.1%.^{1,2} Previous studies have shown that the incidence is higher in robotic hysterectomy and total laparoscopic hysterectomy (1-4.1%) than abdominal and vaginal approaches (0.14-0.27%).¹⁻³ Furthermore, VCD with intraabdominal organ evisceration such as small bowel, omentum, fallopian tube or appendix is even hardly found. However, because of high morbidity and mortality⁴, this condition should not be ignored.

CASE PRESENTATION

The patient was a 48-year-old healthy, widow. She had three children by spontaneous vaginal delivery. Her medical history was unremarkable except that she had persistent low back pain from daily carrying a 30-kg coconut basket. She underwent total abdominal hysterectomy (TAH) due to myoma uteri over the past 14 months. Continuous locking stitch by Vicryl 1-0 was used for vaginal stump closure. She had an uneventful operation and no abnormal symptom had been reported until 14 months post-operation. Following an effort of defecation, she felt something bulged out from introitus.

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On examination, her vital signs were unremarkable. The abdomen was assessed and found soft with mild tenderness at suprapubic area. External genitalia examination showed 60 cm in length of small bowel protruding from her introitus. The bowel appeared bright red with some peristalsis (Figs 1 and 2). Her laboratory tests were as follow: hemoglobin 15 mg/dl, white blood cell 20,070 cell/mm³, platelet count 428,000/uL and normal electrolytes. For the initial management, she was placed in the Trendelenburg position and the exposed bowel was covered with sterile saline-soaked gauzes. Intravenous fluid was administered and intravenous empirical antibiotics (ceftriaxone and metronidazole) were initiated. She was transferred to the operating theater for thorough evaluation. After careful lavage, the prolapsed bowel was unsuccessfully reduced via vaginal approach. An exploratory laparotomy was therefore carried out. The bowel was manually reduced and meticulously examined. The exposed bowel segment exhibited peristalsis and erythema without area of ischemia. Vaginal examination reviewed vaginal cuff defect 3 cm in length with absence of necrotic tissue. Moderate cystoectocele was noted. The vaginal cuff defect was repaired using 4 interrupted figure-of-eight stitches of 1-0 Vicryl sutures. Her abdominal cavity was copiously irrigated with 1,500 mL of warm saline solution. Jackson-Pratt Drain was placed in cul-de-sac. The drain was removed on day 2 post-operation. She was discharged on the fourth day after surgery. At one-month follow-up visit, pelvic examination revealed a well-healed vaginal cuff. No complications occurred at the one- year follow-up visit.

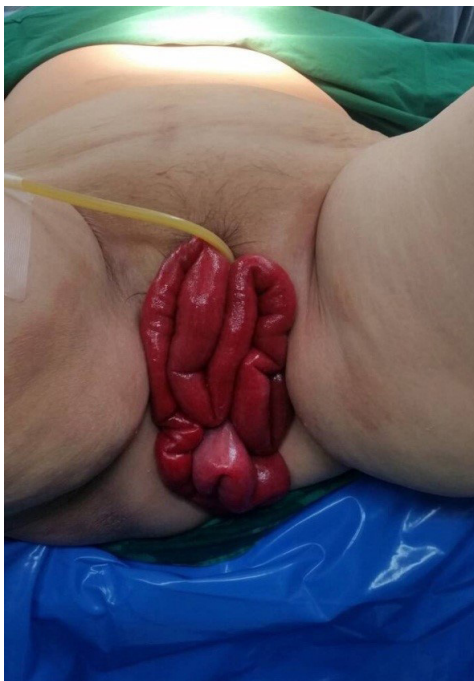


Fig 1. 60 cm of small bowel prolapsed through vagina



Fig 2. The eviscerate intestine appear erythema and no ischemia

DISCUSSION

VCD is a severe, but rare complication following hysterectomy. A large retrospective study of 12,398 patients demonstrated incidence rate of 0.64%, 0.21% and 0.13% after laparoscopic (LH), abdominal (AH) and vaginal hysterectomy (VH), respectively.⁵ The reported case underwent abdominal hysterectomy which is the most common operation performed among all gynecologists. Risk factors of VCD include age, poor surgical technique, postoperative infection, hematoma, early resumption of sexual intercourse, radiotherapy, corticosteroid use, trauma, previous vaginoplasty, valsava maneuver (defecation, cough or sneeze), poorly controlled diabetes and chronic renal failure.^{4,6} Our case had experienced only persistent increased intra-abdominal pressure because of the daily lifting of a 30 kg coconut basket as she was the owner of a coconut farm.

VCD with bowel evisceration is even rarer. Compatible with a previous study that the distal ileum appeared to be the most common eviscerated organ⁷, 60 cm-long small bowel, including distal ileum, protruded from the VCD. The bottle-neck nature of VCD might have caused bowel ischemia in the case of delayed surgical correction. The early approach in this case protected eviscerated bowel from this condition. A general surgeon was immediately consulted and invited to the operating theatre for the multidisciplinary team approach. After examination, exploratory laparotomy was set up and the bowel was successfully reduced with gentle care.

To minimize the incidence of VCD after hysterectomy, surgical techniques should be of concern, including vaginal cuff incision technique by using monopolar cutting mode or sharp cut, with less hemostasis by electrocoagulation, long-absorbable suture material and adequate tissue coverage.⁸ Post-operatively, a practical discharge planning should be instructed to each patient. At Siriraj Hospital, all patients are informed that coitus must be delayed for at least three months. In addition, bleeding per vagina should instigate patients for further appropriate treatment. An aspect that may be defective is occupation-related issue. This case report suggests that VCD could have been prevented if the patient had no daily lifting of 30 kg basket of coconuts.

This condition requires prompt initial management which includes adequate hydration, empirical antibiotics, placing the patients in the Trendelenburg position and keeping the exposed bowel moist during the transfer to an operating room.^{9,10} Emergency surgery is the definite treatment. Currently, there is no sufficient evidence to support which surgical approach is better than the others for VCD or evisceration. American College of Obstetricians and Gynecologists (ACOG) recommends

copious lavage to exposed bowel, sufficient debridement of the separate edge before re-suture, full-thickness interrupted sutures and approximation of the VCD edge. In our case, a Jackson-Pratt drain was also placed in CDS and removed within 24-48 hours postoperatively.

Table 1 demonstrates the characteristics of 11 cases of VCD at Siriraj Hospital during 2009-2015. They were all in elderly group. Four cases presented with bowel evisceration. Four cases underwent hysterectomy due to malignancy. Laparoscopic hysterectomy is the most common approach in VCD cases. This reported case appeared to have the longest period from surgery to VCD, at 14 months. Vaginal bleeding is the most common presenting symptom. Most of them were repaired transvaginally.

CONCLUSION

Vaginal cuff dehiscence with bowel evisceration, despite its rarity, is a potential life threatening condition. Precipitating factor can undoubtedly be occupation-related. Our reported case shows that apart from routine advice on delaying sexual intercourse resumption, all possible causes of increased intra-abdominal pressure should be explored.

TABLE 1. Characteristic of 11 cases of vaginal cuff dehiscence at Siriraj hospital during 2009-2015

No.	Age (year)	BE	Cancer case	Route of hysterectomy	Onset after hysterectomy	Chief complaint	Precipitating event	Route of VCD repair
1	44	No	No	TLH	6 months	Vaginal bleeding	Sexual intercourse	Transvagina
2	45	No	No	TLH	21 days	Vaginal bleeding	Unknown	Transvagina
3	46	Yes	Yes	TLH	4 years	Vaginal bleeding	Sexual intercourse	Transvagina
4	47	No	No	TAH	13 days	Vaginal bleeding	Unknown	Transvagina
5	47	No	No	TAH	33 days	Vaginal bleeding	Unknown	Transvagina
6	49	No	No	TLH	11 days	Vaginal bleeding	Unknown	Secondary intention
7	50	Yes	No	TAH	14 months	Vaginal evisceration	Defecation	Transvagina
8	54	Yes	Yes	TAH	45 days	Routine check up	Unknown	Transvagina
9	57	Yes	No	TAH	35 days	Vaginal evisceration	Unknown	Transabdomen
10	58	No	Yes	TAH	4 years	Routine check up	Unknown	Transvagina
11	64	No	Yes	TLH	1 month 15 days	Vaginal bleeding	Unknown	Transvagina

Abbreviations: BE= bowel evisceration, TAH= Total abdominal hysterectomy, TLH= Total laparoscopic hysterectomy, VH= Vaginal hysterectomy

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