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A case of laparoscopy-assisted vaginal cuff suturing for vaginal cuff dehiscence after total laparoscopic hysterectomy

Tomoatsu Jimi*, Rumiko Yamamoto, Koji Seo, Mari Matsuoka, Saori Hata, Yukiko Ando, Hiromi Miyata, Yuki Kozono, Natsuki Tsuji, Akiko Okuda, Kentaro Sekiyama, Koichi Terakawa, Tadayoshi Nagano

Department of Obstetrics and Gynecology, Kitano Hospital, Tazuke Kofukai Medical Research Institute, 2-4-20 Ohgimachi, Kita-ku, Osaka, 530-8480, Japan

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ABSTRACT

INTRODUCTION: Vaginal cuff dehiscence after hysterectomy is a rare complication and occurs in less than 1% of patients. It can present with serious complications, such as bowel evisceration and peritonitis.
PRESENTATION OF CASE: A 51-year-old multigravida Korean woman underwent total laparoscopic hysterectomy for leiomyoma. Six months later, she reported lower abdominal pain and vaginal bleeding. Physical examination revealed rebound tenderness in the lower abdomen, and pelvic examination showed a small amount of vaginal bleeding with an evisceration of the small intestine through the vagina that exhibited healthy peristalsis. The eviscerated bowel, which seemed to be a part of the ileum, was carefully manually reduced transvaginally into the abdominal cavity. Laparoscopic observation revealed adhesions between the omentum, small intestine, and the peritoneum. Specifically, the small intestine was adhered around the vaginal cuff. An abdominal abscess was found in the left lower abdominal cavity. An adhesiotomy was performed and the abdominal abscess was removed and irrigated. Complete separation of the anterior and posterior vaginal cuff edges was obtained. The vaginal cuff was closed with interrupted 0-polydioxanone absorbable sutures without bowel injury. A 6-month follow-up examination revealed complete healing of the vaginal cuff.
DISCUSSION: In this case, we were able to make use of both laparoscopic and transvaginal methods to perform a successful repair with a minimally invasive and safe technique.
CONCLUSION: Laparoscopically assisted vaginal cuff suturing for vaginal cuff dehiscence after total laparoscopic hysterectomy was found to be effective, safe, and minimally invasive.

1. Introduction

Vaginal cuff dehiscence after hysterectomy is a rare complication and occurs in less than 1% of patients. Although the incidence rate is low, it can present with serious complications, such as bowel evisceration and peritonitis. There are many reports of vaginal and abdominal repair of vaginal cuff dehiscence, but few of these procedures are laparoscopic. We report a case of laparoscopically assisted vaginal cuff suturing for vaginal cuff dehiscence with peritonitis, adhesions, and small bowel evisceration after total laparoscopic hysterectomy (TLH), and highlight the merits of both laparoscopic treatment and transvaginal suturing.

This work has been reported in line with the SCARE criteria [1].

2. Presentation of case

A 51-year-old multigravida Korean woman underwent TLH for leiomyoma. She had an uncomplicated postoperative course. The details of the laparoscopic hysterectomy are unknown. She underwent TLH in a foreign country and we were unable to obtain her records from this procedure, which would have indicated the type of suturing that was performed during TLH. Sexual intercourse was permitted 3 months after the hysterectomy. Six months later, she visited our hospital due to lower abdominal pain and vaginal bleeding that started the second day after sexual intercourse. She had no past history of abdominal surgery prior to hysterectomy and had no significant medical or family history. Physical examination revealed rebound tenderness in the lower abdomen and pelvic examination showed a small amount of vaginal bleeding and an evisceration of the small intestine through the vagina (Fig. 1). The eviscerated small

* Corresponding author.
E-mail addresses: t-jimi@kitano-hp.or.jp (T. Jimi), rumiko-yamamoto@kitano-hp.or.jp (R. Yamamoto), k-seo@kitano-hp.or.jp (K. Seo), mari-matsuoka@kitano-hp.or.jp (M. Matsuoka), s-hata@kitano-hp.or.jp (S. Hata), y-andou@kitano-hp.or.jp (Y. Ando), capybara2438@yahoo.co.jp (H. Miyata), y-kozono@kitano-hp.or.jp (Y. Kozono), n-tsuzi@kitano-hp.or.jp (N. Tsuji), 0610akko@gmail.com (A. Okuda), k-sekiyama@kitano-hp.or.jp (K. Sekiyama), k-terakawa@kitano-hp.or.jp (K. Terakawa), nagano.tadayoshi@b2.kepco.co.jp (T. Nagano).

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Fig. 1. Pelvic examination revealed evisceration of the small intestine through the vagina.

Table 1
Clinical laboratory data.

		Reference ranges
White blood cell count (10^9/L)	14.4	3.3–8.6
Differential count (%)		
Neutrophils	91.4	41.7–73.7
Lymphocytes	6.3	18.4–44.8
Monocytes	2.1	4.6–12.3
Eosinophils	0.1	0.7–8.1
Basophils	0.1	0.2–1.4
Hemoglobin (g/L)	136	116–148
Platelet count (10^9/L)	230	158–348
Amylase (μkat/L)	0.75	0.73–2.2
Creatinine (μmol/L)	56.6	40.1–69.8
Lactate dehydrogenase (μkat/L)	2.6	2.1–3.7
Glucose (mmol/L)	6.2	4.1–6.1
C-reactive protein (nmol/L)	367.6	0–13.3

intestine appeared peristaltic and not ischemic. Internal examination revealed complete dehiscence of the vaginal cuff. Her body temperature was 36.9 °C, blood pressure was 118/69 mmHg, pulse rate was 82 beats per minute, and respiratory frequency was 20 breaths per minute. Elevated white blood cell count, neutrophil differentials, and C-reactive protein values indicated inflammation. A bowel injury was not suspected since the lactate dehydrogenase level was within the normal range. Laboratory results are shown in Table 1. No radiological examination was performed.

The patient was admitted to our hospital and combined laparoscopy with a vaginal approach for vaginal cuff dehiscence was performed. Before starting the operation, intravenous antibiotic (ampicillin/sulbactam) was administered. The eviscerated bowel, which appeared to be a part of the ileum, was carefully transvaginally reintroduced manually into the abdominal cavity. Laparoscopic observation revealed adhesions between the omentum, small intestine, and the peritoneum. Specifically, the small intestine was adhered around the vaginal cuff. An abdominal abscess was identified in the left lower abdominal cavity (Fig. 2). Only the right edge of the vaginal cuff was recognizable due to adherence of the small intestine and the presence of purulent fluid (Fig. 3). A laparoscopic adhesiotomy between the omentum and the peritoneum, and between the small intestine and the peritoneum, was performed (Fig. 4). The abdominal abscess was removed and the area was irrigated with warmed saline. After laparoscopic adhesiolysis and lavage of the abdominal cavity, complete separation

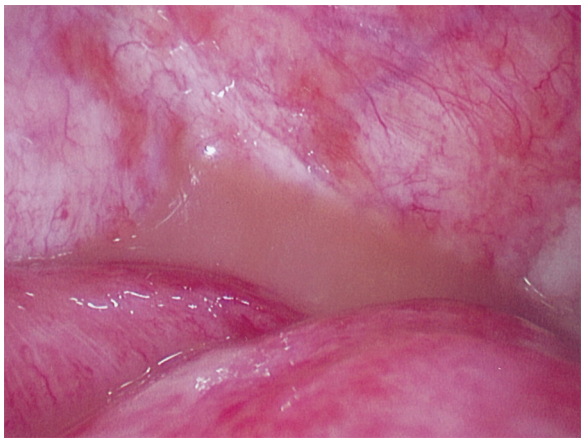

Fig. 2. An abdominal abscess was identified in the left lower abdominal cavity.

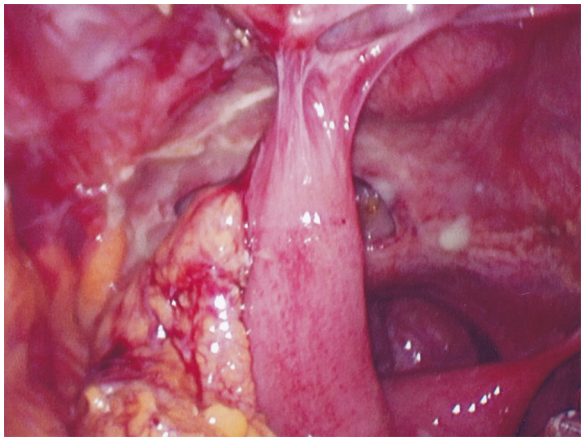

Fig. 3. Adhesiotomy between the omentum and the peritoneum as well as between the small intestine and the peritoneum was performed laparoscopically.

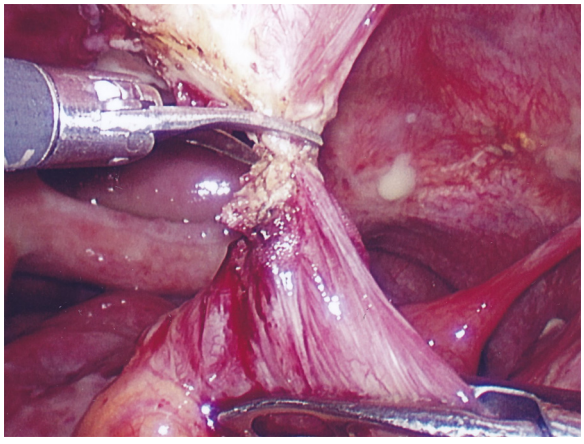

Fig. 4. Adhesiotomy around the vaginal cuff was performed laparoscopically.

of the anterior and posterior vaginal cuff edges was accomplished (Fig. 5). The vaginal cuff was closed transvaginally with interrupted 0-polydioxanone absorbable sutures (PDS® II: ETHICON Endo-Surgery, Inc). The patient had an uneventful postoperative course and was discharged from our hospital on postoperative day 7. *Streptococcus pyogenes* (Group A) was detected in the abdominal purulent fluid culture. A 6-month follow-up examination revealed complete healing of the vaginal cuff.