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Case Report

Panniculus traction and Pfannenstiel incision for hysterectomy in a super obese patient with early-stage endometrial cancer

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Background: We report a case of abdominal hysterectomy and bilateral salpingo-oophorectomy by Pfannenstiel incision after retraction of panniculus using the Kent retractor for a super obese patient with stage IA endometrial cancer. *Case*: A 40-year-old woman with stage IA endometrial cancer was transferred to our hospital for treatment. She had a BMI of 64 kg/m^2. We performed abdominal hysterectomy and bilateral salpingo-oophorectomy. The panniculus was extracted using No.1 sutures with bilateral Kent retractors during surgery, which allowed us to identify the Pfannenstiel line and perform the Pfannenstiel incision. She was discharged six days after the surgery without any complication. *Conclusion*: Abdominal hysterectomy with retraction of panniculus and Pfannenstiel incision may be one of the feasible options for super obese patients.

Keywords

Endometrial carcinoma; Hysterectomy; Morbid obesity; Panniculus; Transverse skin incision

Gynecologic surgery for morbidly obese patients is challenging. For early-stage endometrial cancer, hysterectomy and bilateral salpingo-oophorectomy are the gold standards for surgery. Previous studies reported that minimally invasive hysterectomy led to lesser complications than laparotomy; however, only a few patients with body mass index (BMI) of more than 60 kg/m^2 were examined [1]. We report a case of abdominal hysterectomy and bilateral salpingo-oophorectomy by Pfannenstiel incision after retraction of panniculus using the Kent retractor for a super obese patient with stage IA endometrial cancer. This simple retraction may improve the surgical feasibility of abdominal hysterectomy for super obese patients.

A 40-year-old woman visited a hospital with a one-month history of abnormal bleeding. Histological examination of endometrial sampling revealed endometrial adenocarcinoma, grade 1. She was then transferred to our hospital for treatment. She was 157 cm tall, weighed 155 kg, had a BMI of 64 kg/m^2, and did not have any comorbidity except post-traumatic stress disorder. We found no sign of myometrial invasion in vaginal ultrasound and no metastasis in computed tomography. We could not perform magnetic resonance imaging due to her severe obesity. We planned abdominal hysterectomy and bilateral salpingo-oophorectomy. Because of her extreme obesity, we avoided minimally invasive surgery owing to the difficulty in performing the procedure. The vaginal approach was also avoided because she did not have sexual intercourse experience.

In our country, non-invasive panniculus retractors were not available. Instead, the panniculus was extracted using No.1 sutures with bilateral Kent retractors during surgery (Fig. 1), which allowed us to identify the Pfannenstiel line and perform the Pfannenstiel incision. Owing to the relatively thin fat deposit in the Pfannenstiel line, we could easily approach the abdominal cavity. After the skin incision, we performed a hysterectomy following the usual procedure, with a total operation time of 183 minutes and a bleeding volume of 330 mL. Then, a subcuticular closure interrupted suture with 4-0 absorbable polydioxanone was placed; no drain was placed. The wound was covered with hydrocolloid wound dressing for three days after the surgery. Prophylactic antibiotics and low molecule heparin were used, according to the usual protocol. The patient started walking the next day and was discharged six days after the surgery, according to the standard protocol in our hospital, without any complication. She had no recurrence and no complications at two months after surgery.

Although endometrial cancer is the most common gynecologic cancer, only a few gynecologists may be experienced in performing hysterectomy for a super obese patient. Previous studies showed a high conversion rate in laparoscopic hysterectomy for morbidly obese patients [1, 2], and this was not cost-effective [1]. Robotic surgery is a promising approach that led to lower conversion rates in obese patients [2]. However, a majority of hysterectomies are still being performed as abdominal hysterectomies [3]. Therefore, improved feasibility of abdominal hysterectomy is meaningful for many gynecologists. A common complication of abdominal hysterectomy for morbidly obese patients is wound complication [4]. Transverse skin incision and intracutaneous sutures may reduce the risk of wound complication in these cases [5, 6]. Thus, abdominal hysterectomy with retraction of

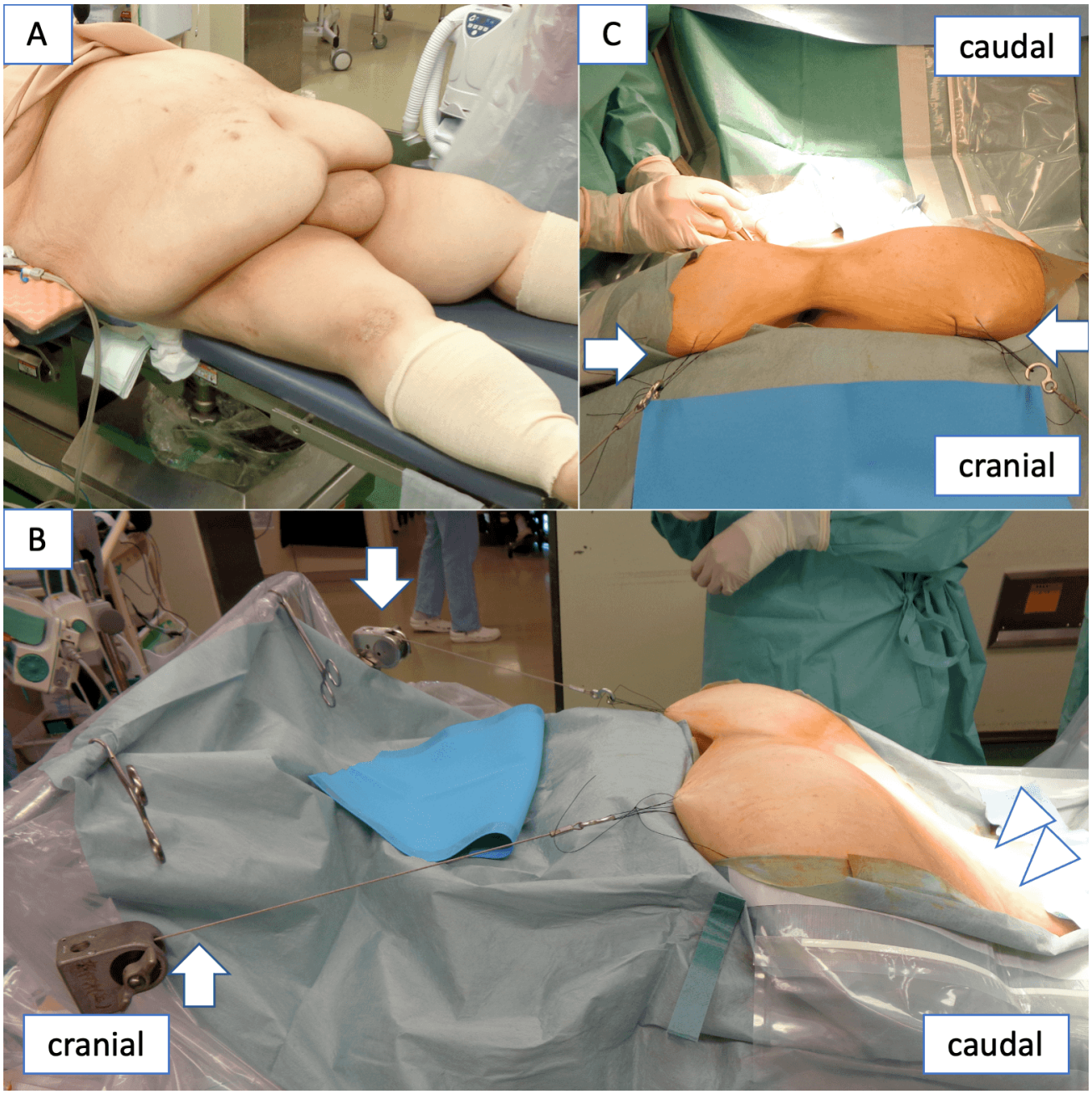

Fig. 1. Traction of panniculus. (A) Abdomen before the traction. (B) Abdomen after the traction (lateral view). (C) Abdomen after the traction (cephalon-caudal view). Panniculus is extracted by Kent retractor and two No.1 sutures on both sides (arrow). Pfannenstiel line is identified (arrowhead in panel C).

panniculus and Pfannenstiel incision may be one of the feasible options for super obese patients. This method is one of the options for panniculus retraction where a non-invasive retractor is not available.

Author contributions

Manuscript draft: YT, TI, SF, KS. Critical revision of the article for important intellectual content: YT, TI, SF, KS. All authors contributed to editorial changes in the manuscript. All authors read and approved the final manuscript.

Ethics approval and consent to participate

This case report was approved by the Institutional Review Board at Ome municipal General Hospital (ethics number: 2021010). We obtained written informed consent for publication of this case report from the patient.

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Conflict of interest

The authors declare no conflict of interest. Tsutomuy Ida is a reviewer of this journal, given his role as a reviewer, had no involvement in the peer-review of this article and has no access to information regarding its peer-review.

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