Case Report

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Port Site Hernia with Presentation of Increasing in Creatinine

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ABSTRACT

Incisional hernia is defined as dehiscence of fascia and bowel obstruction. The clinical manifestation includes gross disruption of the wound with drainage, presence of a bulging with exertion or Valsalva maneuver, painful continuous bulge if bowel or omentum is incarcerated, and bowel obstruction or infarction. We report a 63-year-old woman with the history of three times cesarean section with a midline incision. She was operated for ovarian tumor. Total laparoscopic hysterectomy and lymphadenectomy was performed. She attended to hospital 5 days after surgery with the chief complaint of abdominal pain, nausea, and vomiting. There was a bulge tender around the umbilical port and patient's creatinine was 4 mg/dl in laboratory test. The ultrasound confirmed a port site hernia. A strangulated hernia was diagnosed and treated with laparotomy.

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Introduction

Incisional hernias are less frequent in laparoscopic approach (1). The incidence of trocars site hernias is 0.65-2.80 percent with conventional cutting-tip trocars, and this risk increases with the diameter of the trocar (2), specially with a diameter greater than 10 mm. (2, 3). Incisional hernia increases with some risks such as making stop or delay on the process of wound healings. Other risk factors include trocar access technique, older age, higher body mass index, complex surgery, larger diameter ports, devices designed to minimize leakage of air, and increased operation times. (4)

Prevention of port site hernia includes use of trocars of equal or less than 12 mm, radially dilating trocars, bladeless trocars, and fascia closure (5, 6). However, 18 percent of hernia cases was observed in spite of fascia closure (7).

Clinical manifestation includes gross disruption of the wound with drainage, presence of a bulge with exertion or Valsalva maneuver, painful continuous bulge if bowel or omentum is incarcerated, and bowel obstruction or infarction. We report a rare presentation of laboratory test in a patient with incarcerated hernia.

Case Report

A 63-year-old fatty woman with the history of three-time cesarean section, and a midline incision attended to laparoscopy clinic of teaching hospital. She had an ovarian tumor with normal tumor marker. She was candidate for laparoscopic oophorectomy, and the surgery performed with an open entry with a scissor and a conical blunt tipped trocar. After laparoscopic oophorectomy, concomitant frozen section histopathology diagnosis was suspicious of malignancy. Total laparoscopic hysterectomy and lymphadenectomy was performed and fascia was closed with a non-absorbable suture. The time of surgery was 5 hours, and the patient had an ecchymosis around the umbilicus that was not tender.

She attended to hospital 5 days following surgery with the chief complaint of abdominal pain, nausea, and vomiting, and oliguria from 2 days before. A firm, focally tender mass was noted around the umbilicus with differential diagnosis of seroma, hematoma, or hernia.

In laboratory study, hemoglobin (Hb) was 8.5 g/dl, and creatinine was 4 mg/dl. Alanine aminotransferase (ALT) and aspartate aminotransferase (AST) were in normal level, and the mean volume of urine was below 20 cc per hour. The ultrasound confirmed a port site hernia. She was operated immediately for strangulated hernia through laparotomy (Figure 1).

Two days following hernia reduction, creatinine level was normal.

Discussion

We reported an incisional hernia case in a woman with history of three cesarean sections presenting with a high level creatinine that was treated with laparotomy. As suggested, the first-line management for such patients is to perform urgent surgery in order to carry out hernia reduction (8).

Figure 1. Reduction of hernia with laparotomy

Incisional hernia will increase with any condition that inhibits natural wound healing including infection, obesity, smoking, drugs (such as immunosuppressives), excessive wound tension, malnutrition, connective tissue disorders, fractured sutures, and poor surgical technique (9). The highest incidence of this type of hernia is seen with midline incision (10).

In this patient, one probable cause of hernia in spite of fascia closure was dehiscence of fascia due to past three midline surgeries. As such immediate surgical intervention is necessary to prevent small bowel strangulation, which may cause intestinal ischemia and bowel necrosis. Early identification of bowel obstruction may decrease related morbidity and mortality. The non-specific signs and laboratory findings limit timely diagnosis and implementation of appropriate clinical management (11).

One of the presentations of incarcerated hernia may be prerenal azotemia due to sever vomiting (12). Although routine laboratory studies are not specific for a diagnosis of small bowel obstruction, it helps assess the presence and severity of hypovolemia. Patients with bowel ischemia usually present with systemic signs (e.g. fever, tachycardia, hypotension, and altered mental status) and

metabolic acidosis. In addition, hypovolemia is severe enough to cause hypoperfusion of other organs (13); but in this case, only hypoperfusion of kidney caused creatinine increase, and timely diagnosis of bowel obstruction.

To the best of our knowledge, only a few cases of creatinine increase have been reported due to incarcerated hernia. Indeed, the surgeon should be aware of different presentation of incisional hernia.

Conflict of Interests

Authors have no conflict of interests.

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