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Richter's hernia occurring through a 5-mm laparoscopy sheath incision

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Abstract We report a case of postoperative Richter's hernia presenting through a 5-mm sheath incision. A 58-year-old woman having undergone laparoscopic hysterectomy 8 days before presented with severe left abdominal pain, nausea and light-headedness. The hypothesis of a sigmoid volvulus was suggested based on peroperative rectum and sigmoid release, the X-ray finding, and pain evolution. A secondary laparoscopic procedure allowed both diagnosis of a Richter's hernia through a 5-mm sheath incision and surgical repair of the hernia. The use of this sheath during the laparoscopic vagina suture caused extension of the wound. Large 5-mm sheath defect sufficient for a Richter's hernia can be created by multiple passes with small instruments and require surgical closure at the end of laparoscopy. Laparoscopy is useful in cases of postoperative complications, particularly when other complementary examinations are less informative.

Keywords Richter's hernia · Laparoscopic hysterectomy · 5-mm sheath incision

Introduction

The increased use of laparoscopy during the last decade has been followed by the occurrence of new types of postoperative complication related to the absence of closure of abdominal incisions. Postoperative incisional hernias are usually reported as occurring through 10-mm sheath incisions [1]. We report a case of an incisional small

bowel hernia presenting through a 5-mm sheath incision and its subsequent management by laparoscopy.

Case report

A 58-year-old woman underwent a laparoscopic hysterectomy associated with left adnexectomy. Her surgical antecedents were: appendectomy using the MacBurney incision in childhood, right adnexectomy for endometriosis using the Pfannenstiel incision 20 years earlier, and ablation of an intrauterine myoma by hysteroscopy 2 years previously. The patient had the menopause 8 years before and received hormonal therapy for a 7-year period. A hysterectomy was required following recurrent uterine haemorrhage, despite medical treatment.

The hysterectomy was performed according to a standard laparoscopic procedure, performed in our department since 1995 [2, 3]. Four sheaths were used: one umbilical 10-mm sheath and three 5-mm sheaths placed one in the lower-umbilical line, and one each in the right and left lower quadrants. Several dense adhesions were found involving the rectum, the broad ligaments and the uterus, and lysis was carried out without difficulty. At the end of the hysterectomy, the vaginal incision was closed by laparoscopic suture with three cross-stitches using resorbable monobit thread. The knots were tied extracorporeally and required three successive extractions and introductions of the left 5-mm sheath to allow for needle passage. At the end of the laparoscopy, only the umbilical fascia was closed by a cross-stitch with braided resorbable thread. No incidents were reported during the 90-min procedure. The postoperative outcome was favourable and the patient was discharged on day 3.

Ten days later, the patient presented with severe left abdominal pain, associated with nausea and light-headedness. Abdominal examination found a left abdominal tumour, which was soft and painful. An emergency abdominal X-ray examination was performed and showed a dilated digestive loop measuring 9 cm in diameter located in the left lower quadrant. The hypothesis of a sigmoid

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volvulus was suggested based on peroperative rectum and sigmoid release, the X-ray finding and pain evolution. A emergency colonoscopy did not confirm this hypothesis. A decision to carry out laparoscopic exploration was made within 6 h.

A 10-mm umbilical sheath was introduced through the previous umbilical incision under endoscopic control, prior to abdominal insufflation. A small bowel handle was found, forming a Richter's hernia through the left 5-mm sheath muscular incision (Fig. 1). Subsequently, the skin above the hernia was opened to allow bowel reinsertion into the abdominal cavity. Laparoscopic examination of the small bowel showed bowel peristaltic movements and the absence of any necroses. No digestive resection was performed. Aponeurotic closure was carried out with two cross-stitches using resorbable thread. Postoperative outcomes were favourable with pain resolution and digestive transit occurring within 48 h. The patient was discharged on day 10.

Discussion

The Richter's hernia is a rare cause of postoperative pain. Diagnosis is made difficult due to the lack of clinical information and unspecific digestive transit disorders [4]. Subsequently, delayed diagnosis is frequent and results in bowel necroses requiring digestive resections.

In our case, the patient was free of hernia risk factors (obesity, chronic cough, chronic bronchopneumonopathy, and malnutrition [1]). She had had no previous surgery likely to lead to weakness of the abdominal wall. However, the procedure used to suture the vagina, requiring both successive ablation and reintroduction of the left sheath, may have increased the aponeurotic incision around the sheath [5]. This procedure has been used in our department to carry out more than 1,000 laparoscopic hysterectomies [2] and is considered safe, rapid and reproducible. Should the passage of the needle occur through the sheath and not directly through the abdominal wall, a second 10-mm sheath is required, increasing the risk of hernia [6].

The Richter's hernia may be prevented by both laparoscopic and digital examination of all incisions damaged by sheath manipulation. Suture may be performed under laparoscopic control [7, 8].

Abdominal laparoscopic examination in early postoperative complications of laparoscopic surgery can appear to be a dangerous procedure, particularly when the bowel is dilated. However, when umbilical incision has been performed at the umbilical point and not on its border, it may be easily opened to allow introduction of a 10 mm sheath and the endoscope before pneumoperitoneum



Fig. 1 Richter's hernia presenting through the left 5-mm sheath incision (laparoscopic view)

insufflation. This procedure avoids any blind and traumatic gestures such as the introduction of a Veres insufflation needle and presents an argument in favour of the immediate use of laparoscopy in cases of postoperative complications, particularly when other complementary examinations are less informative.

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