Early port site hernia causing small bowel obstruction after laparoscopic appendicectomy

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Abstract

Laparoscopic appendicectomy is increasingly performed. We report a case of small bowel obstruction caused by early port/drain site hernia diagnosed on the 6th day following laparoscopic appendicectomy.

Keywords

Port site hernia; laparoscopic appendicectomy; complications.

Introduction

Laparoscopic appendicectomy is an increasingly practiced alternative to open appendicectomy. It carries the advantages of performing the diagnostic laparoscopy, smaller incisions and quicker recovery with less pain[1]. We report here a rare complication of laparoscopic appendicectomy but one with significant consequences.

Case presentation

A forty-four year old normally fit and well female patient was admitted with a 3-day history of progressive lower abdominal pain with associated anorexia, an episode of vomiting and loose stools. Apart from a recent diagnostic hysteroscopy performed in the course of investigations for recurrent miscarriages, the patient had no significant medical or surgical problems. General examination revealed a temperature of 37.6°C and normal haemodynamics. Abdominal examination revealed signs of peritonitis in the lower abdomen with maximum tenderness in the right iliac fossa. Haematological and biochemical markers revealed neutrophilia with a total white cell count of \(13 \times 10^9/\text{l}\ (4.2-10.8)\) and a C-reactive protein of 103 mg/l (0–10). Laparoscopy following an open induction of pneumoperitoneum was performed revealing suppurative appendicitis with perforation and pus in the pelvis and the right iliac fossa. Further ports in the left iliac fossa (10 mm) and the suprapubic region (5 mm) were inserted and a standard laparoscopic appendicectomy was performed. A full peritoneal lavage with 31 of normal saline was performed. A 22 Fr tube drain was placed through the left iliac fossa port. The drain

1Currently moved on from the department to full time surgical research at Imperial College London.
was removed prematurely after 24 h. Apart from a brief loose motion on the 4th post-operative day, the patient developed progressive abdominal distension and associated vomiting and obstipation. A plain abdominal film on the 6th post-operative day showed dilated small bowel loops. The condition was managed as an ileus with an NG tube and replacement IV fluids but a CT scan of the abdomen and pelvis on the 8th day revealed left iliac fossa port site hernia with small bowel obstruction (Fig. 1). An operative exploration of the drain site (the left iliac fossa port) revealed a viable herniating loop of small bowel with tight constriction at its neck (Fig. 2). This was reduced and the external oblique aponeurosis was closed. The patient made an uneventful recovery and was discharged 4 days later.

Discussion

Laparoscopic appendicectomy is increasingly performed. Studies have shown a lower rate of wound infection in comparison to open appendicectomy\(^\text{[1,2]}\) with reduced post-operative pain and recovery period\(^\text{[2]}\). It also offers a significant advantage of establishing a precise diagnosis in young fertile women and overweight patients suffering from lower abdominal pain\(^\text{[1]}\). We present a case of the very rare complication of small bowel obstruction following laparoscopic appendicectomy. Petrocelli et al.\(^\text{[3]}\) presented a similar complication but secondary to an intra-peritoneal laparoscopic staple. In our case the cause of obstruction diagnosed on the 6th post-operative day was a port/drain site hernia. Drain site related bowel complications, though rare, have been reported before. Iwase et al.\(^\text{[4]}\) reported an incarcerated perforated Richter’s hernia through a drain site. Nomura et al.\(^\text{[5]}\) reported two cases of bowel perforation due

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Fig. 1. CT scan showing the dilated small bowel loops proximal to the herniating part through the left iliac fossa port/drain site (arrow).

Fig. 2. Operative picture of the port site hernia.
to pressure necrosis caused by open silicone drains and performed a thorough literature review revealing eight similar cases (six of which were in relation to suction drains). This highlights that drain sites can possibly be the source for bowel complications.

**Teaching point**

We report an early small bowel obstruction after laparoscopic appendicectomy due to drain/port site incarcerated hernia. We recommend closure of all 10 mm ports. If an intra-peritoneal drain is contemplated, it should be placed through a 5 mm port.

**References**