

Adhesive Small Bowel Obstruction due to Pelvic Inflammatory Disease: A Case Report

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Abstract

We report a rare case of a 32-year-old woman with adhesive small bowel obstruction due to pelvic inflammatory disease. She had no history of abdominal surgery, gynecological complaints or constitutional symptoms of chronic illness. The diagnosis was based on the laparoscopic findings of small bowel adhesions, free peritoneal fluid, “violin string” adhesions of Fitz-Hugh–Curtis syndrome and left hydrosalpinx. Laparoscopic adhesiolysis was performed successfully, and the patient had an uneventful postoperative course. The authors conclude that pelvic inflammatory disease should be included as a cause of adhesive small bowel obstruction in sexually active young women with no history of abdominal surgery or constitutional symptoms of chronic disease. When performed by experienced surgeons, laparoscopy in such patients is feasible and safe.

Keywords: Fitz-Hugh–Curtis syndrome, laparoscopy, pelvic inflammatory disease, small bowel obstruction

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INTRODUCTION

Small bowel obstruction (SBO) is a common surgical emergency. Postoperative adhesions are the most common cause of SBO. However, intra-abdominal adhesions may result from other inflammatory processes such as inflammatory bowel disease, colonic diverticulitis and tuberculous peritonitis.^[1-3]

Pelvic inflammatory disease (PID) secondary to gonococcal or chlamydial infection remains a common pathology in sexually active women. Common complications of PID include chronic pelvic pain, infertility and ectopic pregnancy.^[4]

Conventionally, laparotomy is the standard approach for SBO. Currently, more surgeons are performing laparoscopy in patients with SBO.^[1] Compared with laparotomy,

laparoscopy is associated with less postoperative pain, shorter hospital stay and convalescence period as well as better cosmetic results.^[5] However, laparoscopy may result in vascular or visceral injuries, particularly during insertion of the Veress needle and mobilization of the distended bowel. Hence, all precautions must be taken to prevent serious complications, and the procedure must be done by surgeons with good experience in advanced laparoscopy.

Here, the authors report a rare case of a young woman with adhesive SBO, most likely due to PID, who underwent laparoscopic management.

CASE REPORT

A 32-year-old woman presented with generalized colicky abdominal pain, bilious vomiting and constipation of

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1-day duration. She had no history of abdominal surgery or constitutional symptoms of chronic illness such as tuberculosis, inflammatory bowel disease or malignancy. She had been married for more than 10 years and has one child. Her vital signs were normal. Complete blood count, liver and renal function tests, erythrocyte sedimentation rate and C-reactive protein levels were normal. Abdominal examination revealed diffuse distention with hyperactive bowel sounds; there were no hernias or signs of peritonitis. The clinical impression and plain abdominal X-ray findings were consistent with subacute SBO. Initially, the patient improved on conservative management of nil by mouth, intravenous (IV) fluids and nasogastric tube (NGT) decompression. Abdominal computerized tomography scan with water-soluble contrast through NGT revealed dilated loops of small bowel, left hydrosalpinx and contrast reaching the colon. The patient underwent laparoscopic intervention because of persistence of her symptoms and to establish the underlying cause. Laparoscopic findings were multiple small bowel adhesions (mainly ileal), “violin string” adhesions between the liver and anterior abdominal wall, free peritoneal fluid and left hydrosalpinx [Figure 1]. Laparoscopic adhesiolysis was performed using endoshears and diathermy [Figure 1]. Swab samples were initially taken from the peritoneal fluid and later from the uterine cervix to test for *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. Swabs and serology for both organisms were negative. Gynecological consultation was sought, and no antibiotics were recommended because the patient did not have active PID. The patient had an uneventful recovery and was discharged 5 days after surgery. Two months later, she remained symptom-free when seen at the outpatient clinic.

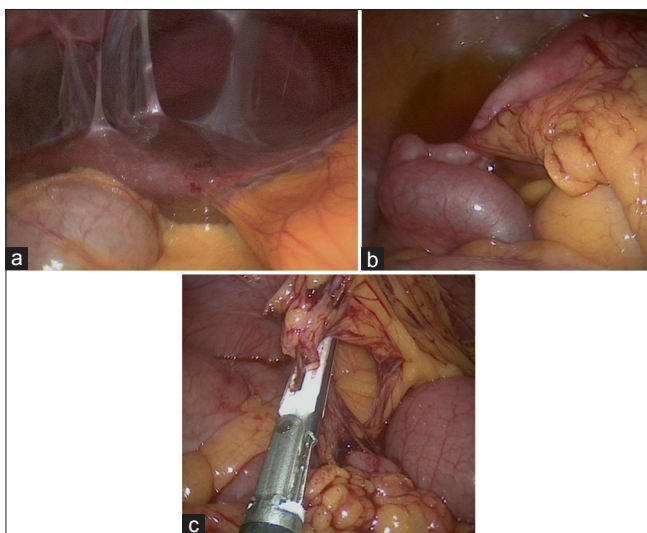


Figure 1: Laparoscopic view of (a) “violin-string” adhesions, (b) left hydrosalpinx and free peritoneal fluid and (c) lysis of adhesions

DISCUSSION

The authors initially managed our patient conservatively according to the Bologna Guidelines, namely, nil by mouth, IV fluids and NGT decompression.^[6] However, surgical intervention was necessary because of the persistent abdominal pain and distention and to establish the underlying cause. Based on our experience,^[5] the authors opted for a laparoscopic approach, which was done without complications. Compared with laparotomy, laparoscopy results in less postoperative pain, shorter hospital stay and rapid recovery.^[5] It also permits visualization of the entire abdomen and pelvis. According to some authors, laparoscopy is associated with a lower incidence of adhesions compared with laparotomy.^[7] Similar to patients in earlier reported cases, our patient had no history of documented PID or gynecological complaints.^[8,9] However, the authors believe that her adhesive SBO was due to PID based on the following reasons. First, she was a sexually active young woman. Second, she had secondary infertility because of which she was able to have only one child in her 10 years of marriage. Finally, laparoscopic findings of “violin string” adhesions, left hydrosalpinx and straw-colored peritoneal fluid [Figure 1].

Fitz-Hugh–Curtis syndrome refers to perihepatitis secondary to PID. It is rare, having been found to occur in only 4–14% of patients with PID.^[10] Its pathognomonic finding is “violin string” adhesions between the liver capsule, anterior abdominal wall and surrounding parietes. In patients with PID, adhesive SBO and Fitz-Hugh–Curtis syndrome most likely result from transperitoneal, lymphatic or hematogenous dissemination to the bowel serosa and liver capsule, respectively.^[10] About two-thirds of patients with Fitz-Hugh–Curtis syndrome develop clinical manifestations such as acute/chronic right abdominal pain mimicking acute cholecystitis/biliary colic.^[9,10] Rarely, patients present with intestinal obstruction due to entrapment of the intestine between the “violin string” adhesions (Chilaiditi syndrome).^[8] Our patient was among one-third of patients who have asymptomatic Fitz-Hugh–Curtis syndrome. Her “violin string” adhesions were harmless and only incidentally discovered during laparoscopy. We concur with authors who have found that asymptomatic “violin string” adhesions require no adhesiolysis.^[11] We believe that the wide practice of laparoscopy, particularly laparoscopic cholecystectomy, will increase surgeons’ awareness of Fitz-Hugh–Curtis syndrome.

CONCLUSION

In sexually active women with virgin abdomen and no constitutional symptoms of chronic disease or malignancy, PID must be considered as a cause of adhesive SBO. When performed by experienced surgeons, laparoscopy in such cases is both diagnostic and therapeutic and results in good outcome.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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