Internal Herniation Involving the Sigmoid Mesocolon*

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Two cases of internal hernia involving the sigmoid colon are reported. Comparison of their presentations and operative findings are made. Both highlight the need to be aware of the dangers of internal herniation and the consideration of such diagnoses in the patient who has no external hernia or previous history of abdominal operations. [Key words: Herniation; Mesocolon, sigmoid]

The diagnosis of internal hernia should be considered in any patient with acute intestinal obstruction who has neither an external hernia nor history of intraabdominal surgery. Occasionally, internal hernia may be present with colic, nausea, and distention, suggesting incomplete obstruction.

Report of Two Cases

Patient 1 (intersigmoid hernia): A 68-year-old woman was admitted to Oldchurch Hospital on October 17, 1978; she had had lower abdominal colic, distention, and constipation for five days. There was no history of abdominal surgery or other relevant history.

On examination she was in distress but not dehydrated. Her temperature was normal. Her pulse was 96 bpm and her blood pressure was 150/90 mm Hg. Abdominal examination revealed mild distention and no external hernia. There was no tenderness or guarding and bowel sounds were normal. Rectal examination results were normal. Hemoglobin, full blood count, urea, electrolyte values were all normal. A roentgenogram of the abdomen showed multiple fluid levels in the small bowel. A nasogastric tube was passed. Over the next 48 hours she was stable but still passed no flatus per rectum. Laparotomy was performed on October 20, and distention of the abdomen of one week's duration. She had not had her bowels open for six days. She gave a history of a hystectomy 20 years before. On examination she was in distress and dehydrated. She was a pyrexial, with a pulse rate of 92 bpm and a blood pressure of 120/80 mm Hg. Abdominal examination revealed marked distention. There was no tenderness or guarding and no evidence of an external hernia. Bowel sounds were high pitched. Rectal examination revealed a mass in the pouch of Douglas. Hemoglobin, leukocyte count, urea, and electrolyte values were normal. An abdominal roentgenogram revealed multiple fluid levels in the small bowel. She was rehydrated and nasogastric tube passed. Laparotomy was performed the same day.

Patient 2 (sigmoid hernia): A 68-year-old woman was admitted to Oldchurch Hospital on October 4, 1978, complaining of pain and distention of the abdomen of one week's duration. She had not had her bowels open for six days. She gave a history of a hysterectomy 20 years before. On examination she was in distress and dehydrated. She was a pyrexial, with a pulse rate of 92 bpm and a blood pressure of 120/80 mm Hg. Abdominal examination revealed marked distention. There was no tenderness or guarding and no evidence of an external hernia. Bowel sounds were high pitched. Rectal examination revealed a mass in the pouch of Douglas. Hemoglobin, leukocyte count, urea, and electrolyte values were normal. An abdominal roentgenogram revealed multiple fluid levels in the small bowel. She was rehydrated and nasogastric tube passed. Laparotomy was performed the same day.

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Operative Findings: A small-bowel herniation through a defect in the mesosigmoid was found. The hernial sac produced a bulge over the iliac crest, displacing the colon medially and containing 2 inches of nonviable gut (Fig. 2). Resection and end-to-end anastomosis was performed and the defect closed. The patient's postoperative recovery was uneventful.

Discussion

Diagnosis of an internal hernia is difficult and only laparotomy can verify it. Internal hernias account for from 1 to 3 per cent of all cases of intestinal obstruction. The mortality rate in the past has been high, due to late or even missed diagnoses. Common sites include the paraduodenal and paracceal fossae, a mesenteric defect, and the foramen of Winslow. However, some 5 per cent of all internal hernias occur in the region of the sigmoid colon. Three types of hernia involved in the sigmoid mesocolon have been described.

1) The intersigmoid hernia (Patient 1) arises in the congenital fossa situated in the attachment of the lateral aspect of the sigmoid mesocolon to the posterior abdominal wall (Fig. 1). This fossa is said to be present in 75 per cent of all bodies at death. Since 1885, only 31 cases of intersigmoid hernia have been reported, with an overall mortality rate of 50 per cent.

2) The transmesosigmoid hernia (patient 2) occurs when loops of intestine pass through a defect in the sigmoid mesocolon. No actual hernial sac is present in this condition, but in our patient the small-gut hernia ended up retroperitoneally lateral to the colon. Only four cases have been reported.

3) The intrasigmoid hernia (Fig. 3) occurs when the defect in the sigmoid mesocolon affects only the left leaf of the peritoneum, and the hernial sac lies within the sigmoid mesocolon itself. Only one case has been reported.

Radiographically, these hernias are characterized by intestinal obstruction with dilated loops of bowel with fluid levels. The diagnosis may be suspected if the loops are confined to one particular side of the abdomen. The lack of peritonism is presumably due to the inflamed loops lying retrosigmoid and pelvic in situation. However, there are two interesting comparisons to be made from the two case reports.