An unusual cause of small bowel obstruction: “The swiss cheese transomental hernia”

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Received: 12 December 2009 / Accepted: 2 February 2010
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A 30-year-old female patient suffering from abdominal pain, nausea, vomiting and dyspeptic complaints over the past 2 days was admitted to our emergency department. She denied any surgery or intra-abdominal inflammatory process. The pain was associated with biliary vomiting. On physical examination, the temperature was normal. Her abdomen was distended with mild tenderness over the umbilical and epigastric areas. There was no surgical scar, no abdominal wall hernia and no abdominal mass. We recorded normal findings at digital rectal examination. Blood tests showed a normal white cell count. Abdominal radiography showed loops of dilated small bowel suggesting a mechanic obstruction of small bowel (Fig. 1).

Emergency laparotomy was performed 2 hours after admission. The jejunum and proximal ileum were dilated. We found that a 10 cm long cyanotic segment of small bowel was herniated at a point 100 cm proximal to the ileocecal valve through a defect in the greater omentum (Fig. 2). Exhibiting an anatomical variation, there were also other defects of the greater omentum having the appearance of a “Swiss cheese” (Fig. 3). We reduced the small bowel, which has recovered normal coloration, back into the peritoneal cavity, and resected the perforated omentum. The patient recovered well and was discharged 4 days after the operation.

Fig. 1 Abdominal radiography suggesting the small bowel obstruction

Fig. 2 Peroperative view showing the intestinal loop strangulated in the transomental defect

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Fig. 3 Peroperative view showing the transomental defects: Swiss cheese transomental hernia

Herniation through a defect over the greater omentum, as in this case, accounts for approximately 1–4% of internal hernias in the literature [1]. Most such hernias have a congenital origin, as in our case, but trauma and inflammation may also produce omental perforation or weak areas [2]. The defects can then serve as potential sites for transomental herniation. In the absence of a limiting sac, a considerable length of small intestine may protrude through the defect [2].

The possibility of an internal hernia should be considered in cases of acute or intermittent small-bowel obstruction, particularly in the absence of an external hernia or a history of previous abdominal surgery. High clinical suspicion and appropriate investigations including abdominal radiography

and CT scan may aid the diagnosis of bowel strangulation secondary to internal hernia [3].

Internal hernias are diagnosed by the football sign on radiography; abnormal location of the small bowel, fixed and circumscribed small-bowel loops, and the closely approximated, constricted afferent and efferent limbs are diagnostic on barium study and CT. Besides these images, CT can further delineate the anatomic relationships among the small bowel and its associated vessels and the adjacent organs [1]. When CT scan is not readily available (as in our case) or does not show any abnormality, surgery should proceed according to clinical parameters. Surgical treatment remains the mainstay of management when complications, e.g. obstruction, arise from an internal hernia [2]. Laparoscopy is a good technique with minimal complications compared with laparotomy [3]. The surgical procedure depends on the viability of bowel. The defects must be closed or resected [2].

Conflict of interest: The authors do not have any disclosable interest.

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