JBR–BTR, 2011, 94: 91.

IMAGES IN CLINICAL RADIOLOGY

Ileo-colic hernia through the foramen of Winslow

R. Gutu[1], S.H. Sondji[2], S. Landen[2] , J. Pringot[1]

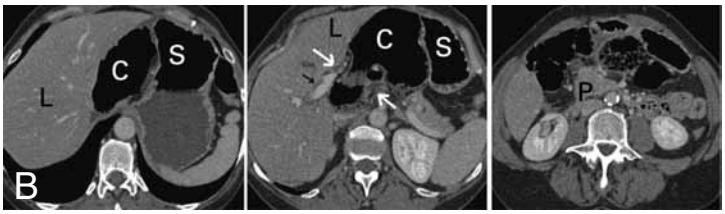
A 60-year-old woman was admitted to hospital for acute post prandial epigastric pain and vomiting.

Her medical history included hypercholesterolemia, surgery for varicose veins and breast implants.

Abdominal palpation elicited pain and guarding in the epigastrium and left hypochondrium. The patient was not febrile. Blood analysis showed a slightly elevated leukocytosis 11,500 (normal value: <10,000), with normal C reactive protein. Liver enzymes including lactico-dehydrogenase were within normal limits.

Plain abdominal radiograph showed gaseous dilatation of a hollow abdominal organ (C) situated in the epigastrium contiguous to the stomach (S), with presence of an air-fluid level (Fig. A).

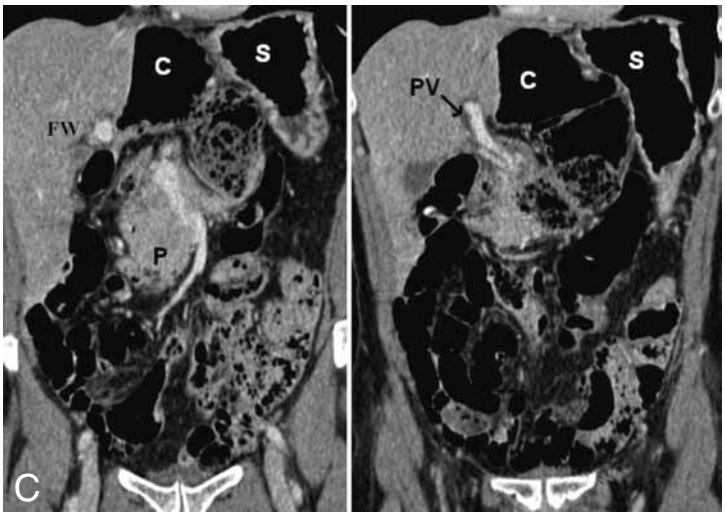
Contrast enhanced computerized tomography scan showed a dilated bowel loop (C) in the epigastrium, bordered by the stomach (S) laterally, the left liver lobe (L) and porta hepatis (arrow) medially and the pancreas (P) posteriorly (Fig. B).



Computerized tomography scan in a frontal plane just posterior to the hepatic pedicle showed the colon (C) coursing through the foramen of Winslow (arrow) posterior to the portal vein (PV) (Fig. C).

These features were suggestive of herniation through Winslow's foramen.

Laparoscopy showed a mobile caecum that had rotated upwards counterclockwise and had strangulated through the foramen of Winslow, attracting with it the terminal ileum. The dilated caecum could be seen bulging through the pars flacida of the lesser omentum, but showed no signs of gangrene. Laparotomy was required to reposition the caecum within the peritoneal cavity. Because the ascending colon was long and abnormally mobile it was decided to perform a right colectomy to reduce the risk of recurrence.



Comment

The foramen of Winslow is an embryological remnant that constitutes a communication between the peritoneal cavity and lesser sac. This foramen is bordered by the vena cava posteriorly, the hepatic pedicle anteriorly, the caudate lobe of the liver cranially and the first portion of the duodenum caudally.

Naturally occurring abdominal internal hernias represent less than 1 percent of all hernias. Herniation through the foramen of Winslow is especially rare, accounting for only 4% internal hernias and less than 200 cases have been reported.

Various parts of the bowel may herniate through the foramen of Winslow the most common being the small bowel (63%), the caecum and right colon (30%) and the transverse colon (7%). Risk factors include a large foramen of Winslow, an abnormally mobile caecum and a long small bowel mesentery. Symptoms are nonspecific and include recurring bouts of epigastric pain and bloating. Vomiting may result from compression of the body of the stomach or duodenum by the herniated viscus. If left untreated strangulation leads to bowel obstruction, necrosis and perforation. Surgical management is mandatory to reduce the hernia. To prevent recurrence a mobile caecum can be suture fixated in the right iliac fossa or resected as in the present report. In case of herniation of the small bowel, the foramen of Winslow can be obturated by placing a purse string suture on the peritoneum lining the foramen.

Conventional radiography often shows a dilated hollow viscus adjacent to or behind a dilated stomach. Computerized tomography scan shows passage of bowel behind the hepatic pedicle in continuity with a dilated hollow viscus incarcerated in the lesser sac. The herniated organ may occupy the medial part of the lesser sac as in the present report, or be situated more laterally behind the stomach. Non-visualisation of the caecum in the right hemiabdomen is noted when the caecum herniates. Small bowel obstruction presents early when the small bowel herniates. The differential diagnosis includes caecal volvulus and others types of internal hernias located in the left upper quadrant of the abdomen particularly those herniating through the lesser omentum.

1. Departments of 1. Radiology and 2. Surgery, St Elisabeth Hospital, Brussels, Belgium.