

Radiology for the surgeon

Soft-tissue case 58

Presentation

An 85-year-old woman was admitted to our surgical ward with a 4-day history of left lumbar pain associated with vomiting and constipation.

Her past medical history included congestive heart failure and atrial fibrillation. There was no previous history of trauma or surgery. Physical examination revealed a tender left lumbar mass, 10 cm in diameter, which was not reducible (Fig. 1). The abdomen was

mildly distended with active bowel sounds. The patient underwent plain radiography and contrast-enhanced computed tomography (CT) of the abdomen (Fig. 2, Fig. 3)

What is your diagnosis?



FIG. 1. Photograph of left lumbar mass.



FIG. 2. Plain radiographic image of the abdomen.



FIG. 3. Contrast-enhanced computed tomographic image of the abdomen.

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Diagnosis

Incarcerated Grynfeldt hernia

Plain abdominal radiography showed a feces-loaded proximal descending colon, with no feces or gas seen distal to the mid-descending colon (Fig. 4, arrow). Contrast-enhanced CT of the abdomen demonstrated herniation of a short segment of descending colon and the adjacent pericolic fat through the superior lumbar triangle of Grynfeldt and Lesshaft to the left flank region, which was diagnostic of superior lumbar or Grynfeldt hernia (Fig. 5). The defect was relatively narrow and measured about 3 cm. The segment of descending colon proximal to the hernia was dilated, filled with feces and looked edematous. The herniated segment of descending colon was opacified by oral contrast, but the descending colon distal to it was collapsed and was not opacified (Fig. 6, arrow), raising the suspicion of impending obstruction.

Emergency laparotomy was arranged after initial resuscitation of the patient. However, she developed an acute myocardial infarction just before surgery and succumbed shortly afterwards.

Lumbar hernias are rare posterolateral abdominal-wall hernias, with only about



FIG. 4. Plain radiographic image of the abdomen shows the absence of feces or gas distal to the mid-descending colon (arrow).

300 cases reported in the literature.¹ The hernias may protrude through 1 of 2 anatomical weak points in the lumbar region: the superior lumbar triangle of Grynfeldt and Lesshaft (bounded by the 12th rib superiorly, the internal oblique muscle anteriorly and the erector spinae muscle posteriorly) or the inferior lumbar triangle of Petit (bounded by the latissimus dorsi muscle posteriorly, the external oblique muscle anteriorly and the iliac crest inferiorly).¹ The hernias may contain retroperitoneal fat, kidney, colon or even intraperitoneal structures, most commonly the small bowel. Lumbar hernias may be acquired (80%) or congenital. If acquired, they may be primary (55%) or secondary to trauma, surgery or inflammation (25%).² Patients usually present with a protruding bulge in the



FIG. 5. Contrast-enhanced computed tomographic image of the abdomen shows herniation of a short segment of descending colon and the adjacent pericolic fat through the superior lumbar triangle of Grynfeldt and Lesshaft to the left flank region (arrow).



FIG. 6. Contrast-enhanced computed tomographic image of the abdomen shows the collapsed segment of distal descending colon, which was not opacified (arrow).

lumbar region. It may be asymptomatic or associated with a varying degree of pain. In patients with primary lumbar hernias, bowel incarceration and strangulation may occur in 24% and 18% of cases, respectively.¹

Lumbar hernias may be difficult to diagnose clinically especially in obese patients with small hernias. In such a situation, CT will be particularly helpful in diagnosis by delineating the anatomy and contents of the hernia,³ as clearly demonstrated in our case. It can also allow differentiation of a hernia from renal tumour, other soft-tissue tumour, hematoma or abscess.

Treatment of lumbar hernia consists primarily of surgical repair. Many techniques have been described, including primary repair, local tissue flaps and conventional mesh repair.⁴ Bowel resection may be required in cases with strangulation. More recently, some surgeons have reported the successful use of the laparoscopic approach in repairing lumbar hernia.⁵ Patients may benefit from this minimally invasive approach with less morbidity, less pain, shorter hospital stay, better cosmetic result and minimal effect on everyday living.

Competing interests: None declared.

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