Chilaiditi syndrome: a case of missed diagnosis

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DESCRIPTION

A 55-year-old woman presented to the emergency department with acute upper abdomen pain and vomiting for 2 days. She had no history of duodenal ulcer. On examination she appeared unwell and hypotensive. Abdominal examination revealed mild guarding with no rebound. Plain abdominal radiograph upon emergency presentation showed colonic interposition between the anterior surface of the liver and the diaphragm (figure 1). The observation was Chilaiditi's sign and the patient was admitted for conservative management.

Chilaiditi's sign refers to the presence of a gas filled loop of large bowel in the right upper quadrant, between the liver and the right hemidiaphragm. If the patient has gastrointestinal symptoms, then it is referred to as Chilaiditi's syndrome.¹

Although this is a benign condition with rare surgical indication,² it has great importance for surgical emergency. The great relevance of Chilaiditi's syndrome resides in its differential diagnosis with conditions that run their course with pneumoperitoneum, which generally implies immediate surgical intervention.³ In our patient a perforated viscus was missed as a result of suboptimal chest X-ray and inappropriately taken left lateral decubitus view (where examination time totals should be 20 min). Owing to lack of clinical improvement, abdominal X-ray was repeated 3 days later (figure 2).

Laprotomy revealed a perforated duodenal ulcer that was around 5 days old (time since patient symptom started prior to emergency room presentation).

Figure 1 Elevated right hemidiaphragm by the distended colon (black arrow) with haustral folds seen (black asterisks).

Figure 2 Dark crescent gas under the right diaphragm with no haustral folds seen (white arrow). Rigler's sign below the left hemidiaphragm (it is seen on an X-ray of the abdomen when air is present on both luminal and peritoneal sides of the intestine (white asterisk)).

Learning points

- ▶ Although the syndrome is generally asymptomatic, it has been associated with severe complications including bowel perforation.
- ▶ Pneumoperitoneum is an important differential diagnosis of Chilaiditi's syndrome. In this case, the haustral markings (usually best seen on lateral films) are absent.
- ▶ Proper acute abdominal series should take no less than 20 min.

Competing interests None.

Patient consent Obtained.

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