

Chilaiditi's Sign: A Radiological Finding to be Known for Surgeons

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Dear Editor,

Radiological findings could mask some pitfalls for surgeons in the clinical practice. Here, we reported the case of a 68-year-old man who presented with a 2-month history of worsening constipation, rectorrhagia, weight loss, and fatigue. His past medical history included essential hypertension and Parkinson's disease. A colonoscopy identified a stenosing sigmoid rectal cancer. In preoperative chest radiography, the presence of air below the right diaphragm air was observed, indicating a pneumoperitoneum. However, the patient was clinically well without any signs of perforation. Computed tomography of the abdomen highlighted the presence of an anterior interposition of the colon to the liver reaching the undersurface of the right hemidiaphragm-the so-called Chilaiditi's sign (Figures 1-2); this clinical condition is also called as pseudopneumoperitoneum. The presence of symptoms, such as abdominal pain and vomiting, distinguishes Chilaiditi's syndrome from asymptomatic colonic interposition, which is termed as the Chilaiditi's sign, named after the Greek radiologist Dimitrios Chilaiditi, born in 1883, who first described it when he was working in Vienna in 1910 (1). He was the pioneer of modern radiology and one of the first members of Turkish Radiological Society. Neurological disorders, such as schizophrenia and Parkinson's disease, have been associated to Chilaiditi's sign/syndrome (2, 3). The patient underwent left colectomy with uncomplicated postoperative course. Written informed consent was obtained from the patient.

Chilaiditi's sign is a rare, and it is often misdiagnosed in clinical practice but remains a radiological finding that all surgeons should be aware of. The incidence on abdominal or chest X-rays is around 0.025-0.28% in adults, especially elderly patients with a marked male predominance (2, 3). Important differential diagnoses of this radiographic sign include pneumoperitoneum and subphrenic abscess (4). If radiography cannot clearly define whether the right subdiaphragmatic air

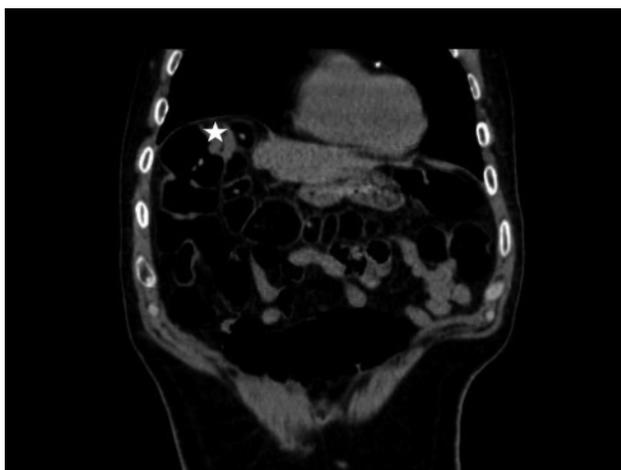


FIGURE 1. Computed tomography (coronal section) showing the colonic loop interposition between the right diaphragm and the liver (white star)



FIGURE 2 Computed tomography (axial section) showing the anterior interposition of the colon between the liver and the right hemidiaphragm (white star)

is free or intraluminal, computed tomography is recommended for a correct diagnosis. It is important to recognize Chilaiditi's sign/syndrome on presentation and to correlate it with clinical picture in order to prevent unnecessary examinations and surgical interventions. For these reasons pay attention to this radiological sign, surgeons!

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