

**IMAGES IN EMERGENCY MEDICINE**

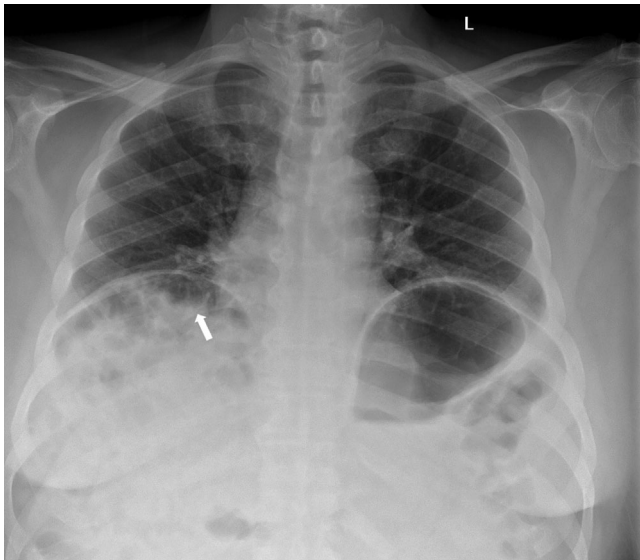
## Gastroenterology

**Man with chest discomfort**Molly Hartrich MD, MPH<sup>1</sup>  | Wesley Eilbert MD<sup>1</sup> | Amy Eisenberg DO<sup>2</sup><sup>1</sup>Department of Emergency Medicine, University of Illinois at Chicago Hospital and Health Sciences System, Chicago, Illinois, USA<sup>2</sup>Combined Emergency Medicine/Internal Medicine Residency, University of Illinois at Chicago Hospital and Health Sciences System, Chicago, Illinois, USA**Correspondence**

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Email: [Mhartr2@uic.edu](mailto:Mhartr2@uic.edu)**1 | CASE PRESENTATION**

A 76-year-old man presented to the emergency department complaining of intermittent chest tightness during the preceding day that had resolved “after passing gas.” His physical examination was unremarkable, and his electrocardiogram (ECG) showed no acute ischemic changes. Standard posterior–anterior and lateral radiographs of the chest were obtained (Figures 1 and 2).



**FIGURE 1** Posterior–anterior view of the chest showing interposition of a segment of the large colon between the liver and the diaphragm



**FIGURE 2** Lateral view of the chest showing interposition of a segment of the large colon between the liver and the diaphragm

**2 | DIAGNOSIS****2.1 | Chilaiditi syndrome**

Chilaiditi sign describes the radiographic findings of interposition of a segment of large or small bowel between the liver and the diaphragm.

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Anatomic variations that lead to this condition include the absence or laxity of the suspensory ligaments of the transverse colon or fal-ciform ligament. Chilaiditi sign is rare with an incidence of 0.025% to 0.28% and a male to female ratio of 4:1.<sup>1</sup> The diagnosis of Chilaiditi sign is made based on the following radiologic findings: the right hemidiaphragm is elevated above the liver by the intestine, the interposed bowel segment is distended by air mimicking pseudopneumoperitoneum, and the superior margin of the liver is depressed below the level of the left hemidiaphragm.<sup>2</sup> Chilaiditi sign may be misinterpreted as a diaphragmatic hernia or pneumoperitoneum, resulting in unnecessary surgical intervention.<sup>3,4</sup> The presence of plicae circulares or haustral markings under the diaphragm can help rule out free intraperitoneal air.

Chilaiditi sign is typically asymptomatic and requires no intervention. Chilaiditi syndrome is the result of complications from Chilaiditi sign, manifesting as abdominal pain, vomiting, or constipation, although there are reports of respiratory symptoms and chest pain.<sup>3</sup> Complications of the syndrome include internal herniation, colonic volvulus, bowel obstruction, and perforation.<sup>1,3,5</sup>

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## REFERENCES

1. Kumar A, Mehta D. *Chilaiditi Syndrome*. Treasure Island, FL: StatsPearls; 2021.
2. Lekkas CN, Lentino W. Symptom-producing interposition of the colon. Clinical syndrome in mentally deficient adults. *JAMA*. 1978;240(8):747-750.
3. Moaven O, Hodin RA. Chilaiditi syndrome: a rare entity with important differential diagnosis. *Gastroenterol Hepatol (NY)*. 2012;8(4):276-278.
4. Saber AA, Boros MJ. Chilaiditi's syndrome: what should every surgeon know? *Am Surg*. 2005;71(3):261-263.
5. Aldoss IT, Abuzetun JY, Nusair M, et al. Chilaiditi syndrome complicated by cecal perforation. *South Med J*. 2009;102(8):841-843.

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