

Chilaiditi sign

Haitham Mazek MD

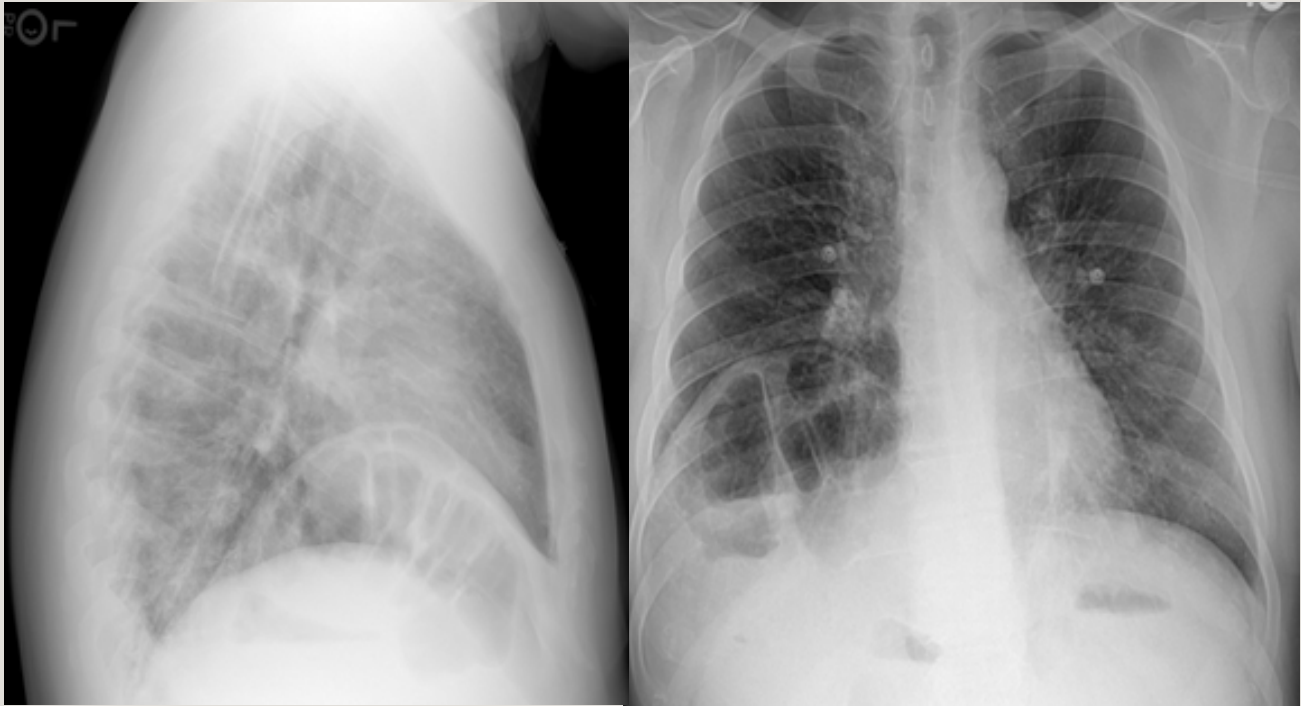


Figure 1. Chest x-ray posteroanterior and lateral showing anterior location of loops of bowel.

Hepatodiaphragmatic interposition of the intestine is known as Chilaiditi sign/syndrome and was described by Demetrius Chilaiditi in 1910. The term “Chilaiditi sign” is used in an asymptomatic person and the term “Chilaiditi syndrome” in symptomatic patients¹. It is a rare and often asymptomatic anomaly, typically diagnosed as an incidental radiographic finding. However, these patients can have intermittent abdominal pain, distention, vomiting, anorexia, and constipation that on rare occasions require surgical

intervention. The prevalence of Chilaiditi’s sign in the general population is 0.025–0.28%, and the sign is more common in male patients than female patients².

CASE

A 65-year-old man presented to the emergency department with worsening shortness of breath, productive cough, subjective fever, and chills for two days. He reported anorexia and fatigue but denied nausea, vomiting, and abdominal pain. On examination, he was afebrile and had normal vital signs. Chest examination revealed decreased air entry into both lower lungs, more so on the right side. His abdomen was mildly distended; no organomegaly and no

Corresponding author: Haitham Mazek MD
Contact Information: Haitham.mazek@ttuhsc.edu
DOI: 10.12746/swrccc 2014.0207.089

rebound tenderness were detected on palpation. Laboratory studies, including whole blood count, blood chemistry, and urinalysis, were within normal limits. A chest radiograph showed a gas collection under the

right hemidiaphragm (Figure 1). His abdominal CT scan demonstrated hepatodiaphragmatic interposition of the colon (Figure 2). The patient treated for community-acquired pneumonia with antibiotics.

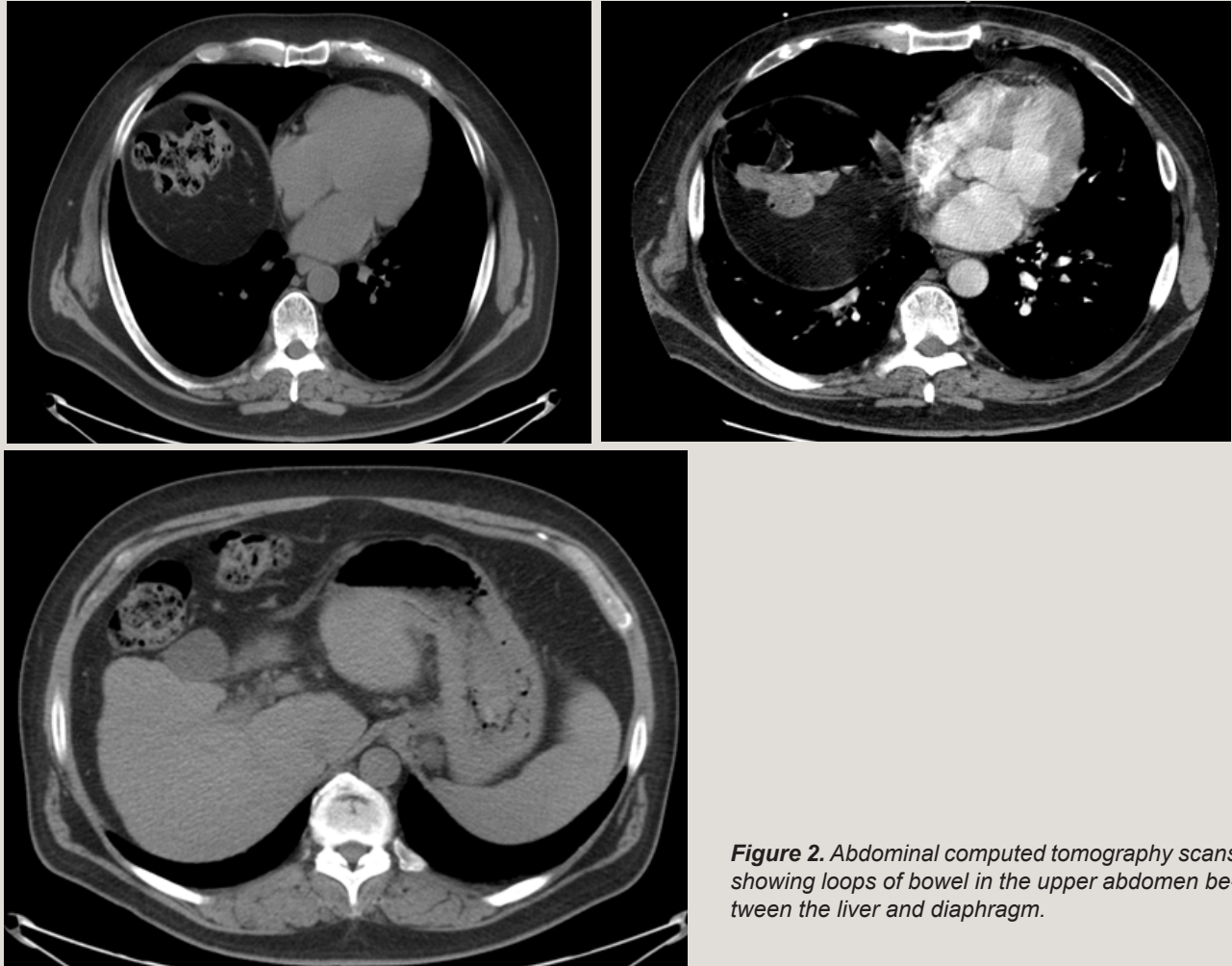


Figure 2. Abdominal computed tomography scans showing loops of bowel in the upper abdomen between the liver and diaphragm.

DISCUSSION

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. Predisposing factors for Chilaiditi sign/syndrome are not clear but may include increased colonic mobility, chronic constipation,

lax suspensory ligaments, and phrenic nerve injury³. It is important to distinguish gas-containing bowel loops between the liver and right hemidiaphragm from other significant pathological conditions, such as perforated viscus, subdiaphragmatic abscess, and pneumoperitoneum, which require surgical operations⁴. In most cases of Chilaiditi syndrome,

management is conservative and consists of bowel decompression, bowel rest, and aggressive fluid rehydration. Patients who fail conservative therapy should undergo an exploratory laparotomy⁵. Failure of nonsurgical treatment for Chilaiditi syndrome has been associated with colonic volvulus and obstruction⁶.

Author affiliation : Haitham Mazek is a resident in Internal Medicine at TTUHSC.

Submitted: 3/29/2014

Accepted: 6/4/2014

Reviewers: Eman Attaya MD

Conflict of Interest: None

Published electronically: 7/13/2014

References

1. Murphy JM, Marbaum A, Alexander G, Dixon AK. Chilaiditi's Syndrome and obesity. *Clinical Anatomy* 2000; 13:181-4.
2. Choussat H, Choussat-Clausse J. Deux cas d'interposition hepatodiaphragmaticdu colon avec autopsies. *Bulletin et Memoires de la Societe de Radiologie Medicale de France* 1937; 25:147-154.
3. Chang TY, Tiu CM, Chou YH, Huang LL, Yu C. Hepatodiaphragmatic interposition of the intestine: Chilaiditi's Syndrome. *Chin J Radiol* 1999; 24:101-5.
4. Havenstrite KA, Harris JA, Rivera DE. Splenic flexure volvulus in association with Chilaiditi syndrome: report of a case. *Amer Surg* 1999; 65(9):874-6.
5. Kurt Y, Demirbas S, Bilgin G, et al. Colonic volvulus associated with Chilaiditi's syndrome: report of a case. *Surg Today* 2004; 34:613-615.
6. Orangio GR, Fazio VW, Winkelman E, McGonagle BA. The Chilaiditi syndrome and associated volvulus of the transverse colon. an indication for surgical therapy. *Dis Colon Rectum* 1986; 29:653-656.