ACG CASE REPORTS JOURNAL

IMAGE | COLON

Acute Abdomen Due to Cecal Volvulus Associated With Chilaiditi Syndrome

José Mauricio Ocampo Chaparro, MD, MSc[1,2], Katherine García Mazuera, MD[1], Jacob W. Reynolds, BS[3], and Carlos A. Reyes-Ortiz, MD, PhD[4]

[1]*Corporación Comfenalco-Universidad Libre, Servicio de Hospitalización Geriátrica Programa Siéntete Como en Casa, Cali, Colombia*
[2]*Departamento de Medicina Familiar, Facultad de Salud, Universidad del Valle, Cali, Colombia*
[3]*Department of Internal Medicine, University of Texas Medical School, Houston, TX*
[4]*Department of Internal Medicine, Geriatrics and Palliative Medicine, University of Texas Medical School, Houston, TX*

Case Report

A 73-year-old woman with a history of chronic abdominal pain, constipation, and cholecystectomy 20 years ago presented with symptoms of diarrhea without mucous or blood, and constant pain in the right abdomen. She was febrile (37.7°C) and tachycardic (105 bpm), with a distended abdomen, decreased peristalsis, and abdominal pain worst in the right upper quadrant with an associated mass. Laboratory results revealed leukocytosis (11.6 x 10^3/μL), AST 176 mU/mL, ALT 198 mU/mL, and alkaline phosphatase 147 U/L. Ultrasound of the liver and biliary tract showed hepatomegaly. Chest radio-

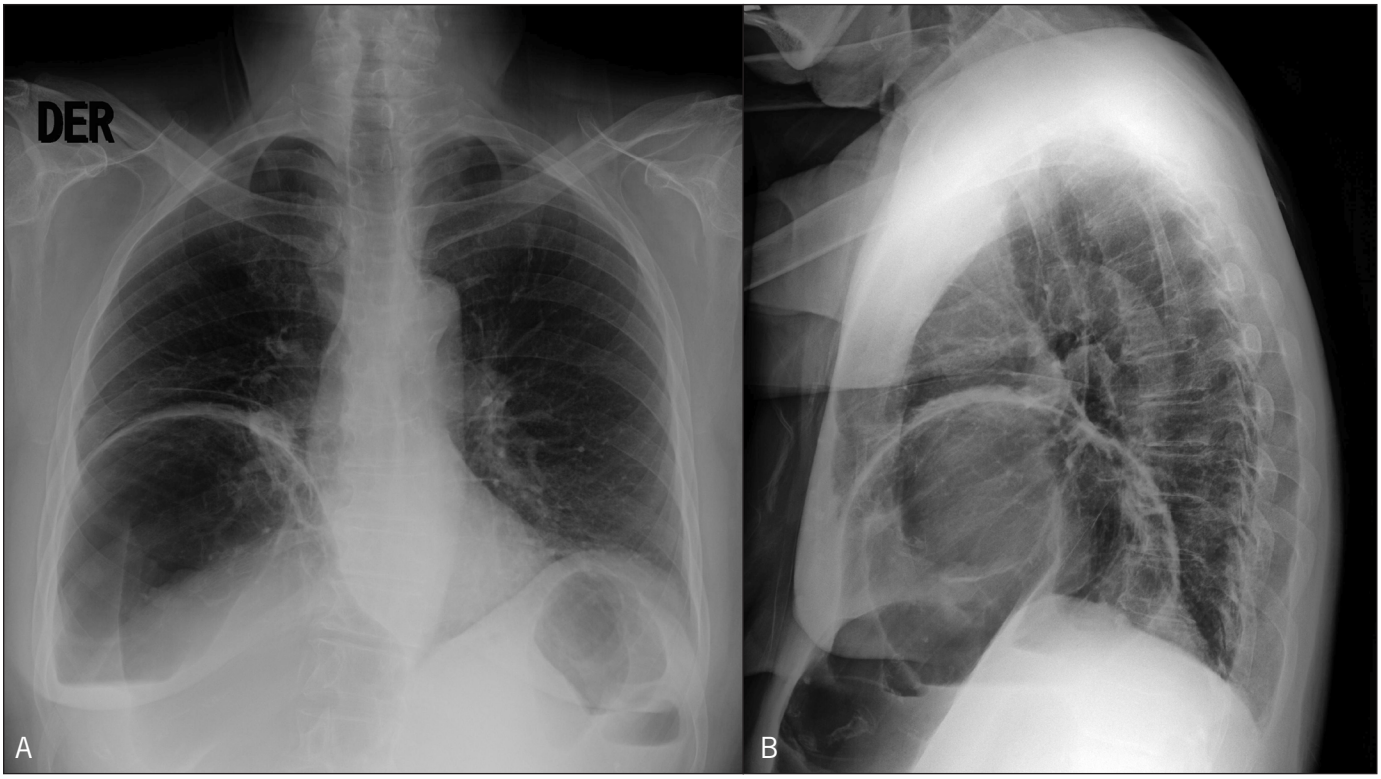

Figure 1. (A) Anteroposterior and (B) lateral chest radiographs showing air in the right upper quadrant due to hepatodiaphragmatic interposition of the colon, elevation of the right hemidiaphragm, and inferior and medial displacement of the liver.

ACG Case Rep J 2015;3(1):15-16. doi:10.14309/crj.2015.86. Published online: October 9, 2015.

Correspondence: Carlos A. Reyes-Ortiz, MD, PhD, University of Texas Medical School at Houston, Department of Internal Medicine, Division of Geriatric and Palliative Medicine, Houston, TX 77030 (careyesortiz@hotmail.com).

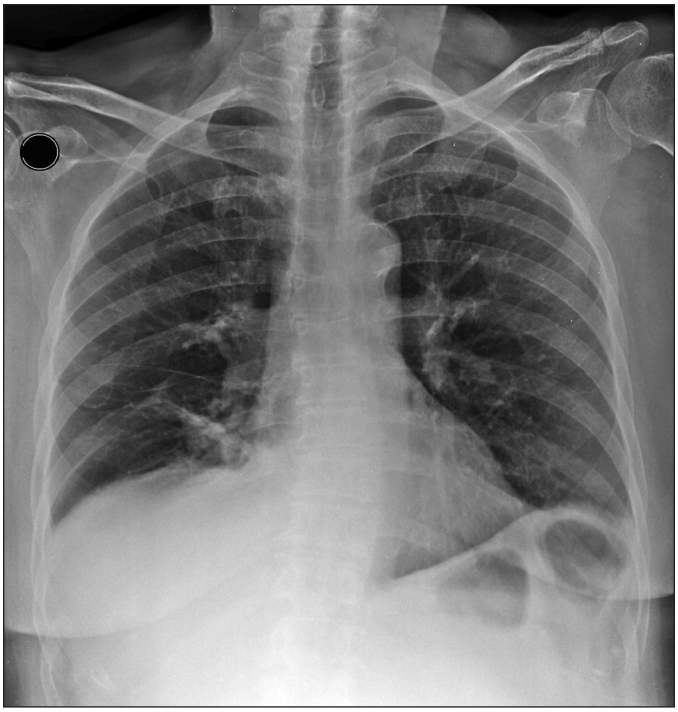

Figure 2. Chest radiograph 5 days after surgery does not show bowel loops interposed on the hepatic silhouette.

graph (Figure 1) showed the right hemi-diaphragm elevated above the liver, the intestine distended with air representing a pseudo-pneumoperitoneum, and the upper margin of the liver depressed below the level of the left hemi-diaphragm, consistent with Chilaiditi's sign.[1] A laparotomy showed volvulus of the right colon above the liver with signs of peritonitis, severe ischemia, and microperforation of the cecum. A right hemicolectomy was performed with ileostomy and mucous fistula. Pathology showed an ischemic appendix with liquefactive necrosis, acute peritonitis, and borders of viable resection. The outcome was favorable, and a radiograph showed resolution of Chilaiditi's sign (Figure 2). She was discharged 7 days after surgery and managed with antibiotics.

The etiology of Chilaiditi syndrome—the transposition of the colon between the diaphragm and the liver—has been associated with intestinal factors (abnormal fixation of the colon due to a defect/absence of its suspensory ligaments, congenital malrotation of the intestine), liver factors (agenesis of the right lobe of the liver, cirrhosis), diaphragmatic factors (phrenic nerve injury), chronic lung disease, and obesity.[1-3] The differential diagnosis includes pneumoperitoneum, diaphragmatic hernia, intestinal pneumatosis, subphrenic abscess, and hydatid cyst.[1-3] The characteristics of the clinical presentation and surgical findings of this patient suggest an episode of acute abdomen due to a cecal volvulus.[4]

Disclosures

Author contributions: JM Ocampo Chaparro and K. García Mazuera aquired the data and drafted the manuscript. JW Reynolds reviewed the literature and edited the manuscript. CA Reyes-Ortiz designed, edited, and critically revised the manuscript for intellectual content, and is the article guarantor.

Financial disclosure: None to report.

Informed consent was obtained for this case report.

Received: June 16, 2015; Accepted: October 10, 2015

References

1. Moaven O, Hodin RA. Chilaiditi syndrome: A rare entity with important differential diagnoses. *Gastroenterol Hepatol.* 2012;8(4):276–8.
2. Weng WH, Liu DR, Feng CC, Que RS. Colonic interposition between the liver and left diaphragm: Management of Chilaiditi syndrome: A case report and literature review. *Oncol Lett.* 2014;7(5):1657–60.
3. Chao CT. Right upper-abdominal pain in a 97-year-old. *Cleve Clin J Med.* 2013;80(1):15–6.
4. Ansari H, Lay J. Chilaiditi syndrome and associated caecal volvulus. *ANZ J Surg.* 2011;81(6):484–5.