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Internal Medicine Flashcard

Chilaiditi's sign

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1. Case presentation

A 79-year old male with a history of diabetes mellitus and systemic hypertension was admitted with cough and fever through the out-patient department of our hospital. In spite of his advanced age he was ambulant without support and led an active life. He neither smoked nor consumed alcohol and was married for many years. Clinical examination revealed the presence of decreased breath sounds in the right infrascapular area and lower part of both the right axillary and mammary areas. Examination of the abdomen revealed the presence of resonance in the right hypochondrium. The rest of the physical examination including his vital signs was normal. The initial laboratory investigations including his blood counts, blood sugar, serum electrolytes, liver and renal function tests and ECG also showed no abnormalities. Chest X-ray (postero–anterior view) showed the presence of an elevated right hemi-diaphragm and underlying gas filled bowel loops (Fig. 1A).

What is your diagnosis?

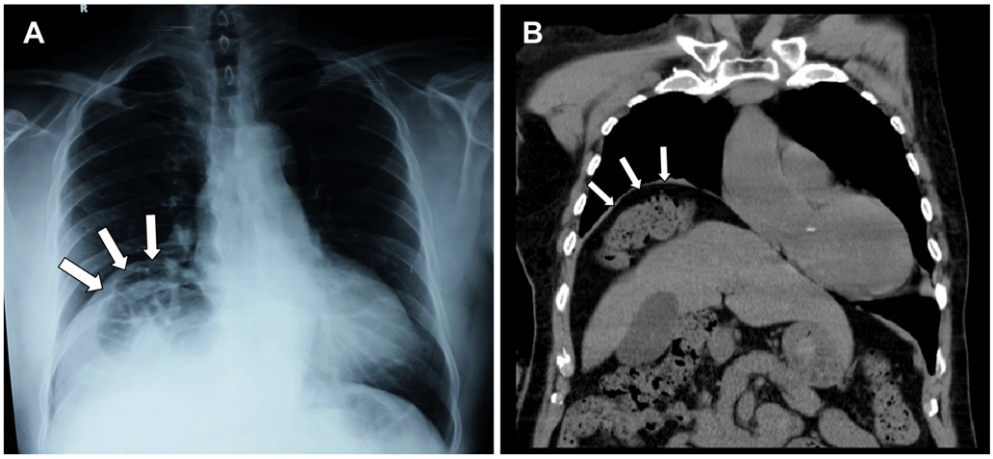

Fig. 1. (A) shows an elevated right hemi-diaphragm with underlying gas filled bowel loops while CT scan (B) showed the hepatic flexure of the colon filled with faeces, interposed between the elevated right hemi-diaphragm and the liver.

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2. Diagnosis

The presence of haustrations in the bowel loop is suggestive of the colon. This was confirmed with a CT scan of the thorax and abdomen which showed the hepatic flexure of the colon filled with faeces, interposed between the elevated right hemi-diaphragm and the liver (Fig. 1B). The patient was treated as a case of acute bronchitis and had an uneventful recovery.

The interposition of the bowel between the diaphragm and the liver, visualized on a plain chest X-ray or abdominal X-ray is called Chilaiditi's sign. It is named after Dr. Demetrius Chilaiditi, a Greek radiologist who first described the findings in 1910 [1]. Chilaiditi's sign is a rare anomaly with a reported incidence of less than 0.3% [2]. It is usually asymptomatic and may be seen as an incidental finding during imaging studies. When this finding is accompanied by symptoms (abdominal pain, nausea, vomiting and shortness of breath), it is called Chilaiditi syndrome [3]. Chilaiditi's sign is often mistaken for the more ominous condition called pneumoperitoneum, which is characterized by the presence of air under the diaphragm; this usually results from perforation of the stomach or gut. Surgical intervention is mandatory in a case of pneumoperitoneum while most cases of Chilaiditi syndrome usually require only a conservative line of management. A case of Chilaiditi's sign may not require any treatment at all.

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Conflict of interests

None to declare.

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None to declare.

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