

are defined by ulceration of an atheromatous plaque that interferes with the internal elastic lamina and permits intramural haematoma within the media. Within the ascending aorta, there is a tendency to develop saccular or fusiform aneurysms. Penetrating atherosclerotic ulcers have an elevated risk of aortic rupture compared to aortic dissection (Goldstein et al, 2015). Computed tomography with contrast is the investigation of choice for a penetrating atherosclerotic ulcer. Similar to this patient, the penetrating defect in the lamina will be visualized. **BJHM**

Erbel R, Aboyans V, Boileau C et al; ESC Committee

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LEARNING POINTS

- Chest pain is a common presentation to the emergency department and acute medicine.
- Acute aortic syndromes are rare but may be lethal.
- Acute aortic syndromes may be associated with elevated levels of D-dimers.
- The consideration of an acute aortic syndrome requires timely imaging of the aorta.

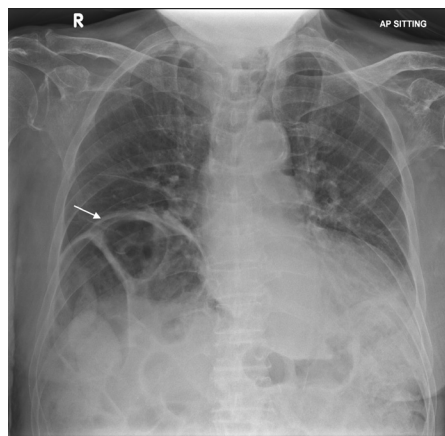
Chilaiditi syndrome: an uncommon cause of dyspnoea

A 78-year-old man presented with acute chest discomfort and dyspnoea. Clinical examination revealed reduced right-sided breath sounds and abdominal distension. Chest radiograph (*Figure 1*) and abdominal computed tomography (*Figure 2*) revealed the Chilaiditi sign, confirming the diagnosis of Chilaiditi syndrome (when symptomatic) (Moaven and Hodin, 2012).

Although Chilaiditi syndrome is benign and usually managed conservatively, it has a broad differential diagnosis including conditions which require urgent surgical intervention such as volvulus and bowel obstruction or ischaemia. The Chilaiditi sign may be mistaken for free subdiaphragmatic gas caused by perforated viscus. However, identification of interposed colonic haustrations on chest radiograph distinguishes the Chilaiditi sign from

pneumoperitoneum. When in doubt, computed tomography of the abdomen or left lateral decubitus abdominal radiograph may be performed, where change in air location would exclude the Chilaiditi sign (Keles et al, 2006).

Figure 1. Chest radiograph demonstrating the Chilaiditi sign: elevated right hemidiaphragm, hepatodiaphragmatic interposition of an air-distended large bowel loop, and inferior displacement of the superior margin of the right hepatic lobe below the level of the left hemidiaphragm (white arrow). Atelectasis is also present in the bilateral lung lower zones, worse in the right lung base, because of superior displacement by the right hemidiaphragm.



This patient's dyspnoea was contributed to by reduced intrathoracic volume and right lung ventilation as a result of superior displacement by the right hemidiaphragm, which resolved with bowel decompression. **BJHM**

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Figure 2. Computed tomography scan of the abdomen (coronal section) demonstrating the Chilaiditi sign (white arrow).



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