

# Dyspnoea caused by a Chilaiditi syndrome: contribution of the non-invasive ventilation

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## DESCRIPTION

A 49-year-old man presented to the emergency department with respiratory distress and extreme abdominal distension, with a history of chronic

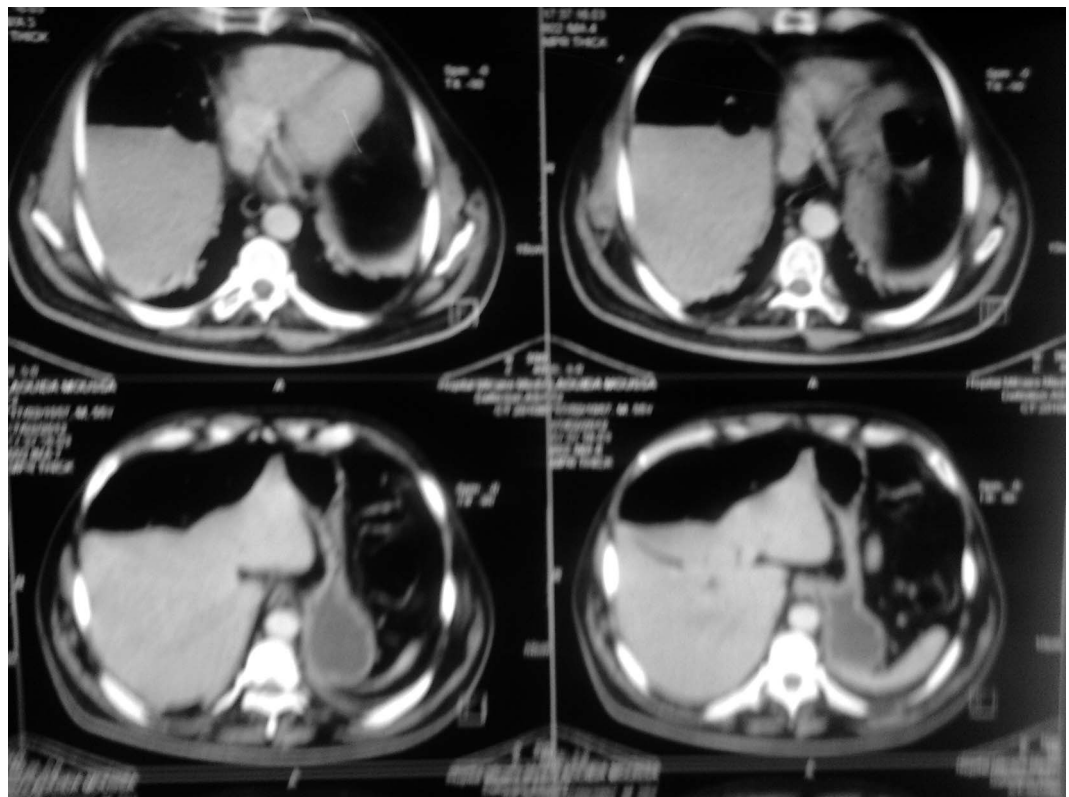
constipation. His chest auscultation was normal and the patient experienced drowsiness and showed signs of respiratory fatigue. He experienced severe disturbances in blood gas tensions (pH 7.28, PaO<sub>2</sub> 65 mm Hg, PaCO<sub>2</sub> 76 mm Hg); the admission chest radiograph (figure 1) showed Chilaiditi sign and large colonic distension. The CT scan showed the same aspect with no complications (figure 2).

Non-invasive ventilation was performed (100% FiO<sub>2</sub>, inspiratory pressure=12±2 cm H<sub>2</sub>O, PEEP 5–8 cm H<sub>2</sub>O) with the establishment of a nasogastric suction probe and enema spillway; after 48 h the patient improved and was transferred to gastroenterology department to explore his colonic disorder.

The Chilaiditi sign was first described in 1910 by the radiologist Demetrius Chilaiditi. It is defined as colonic interposition between the liver and diaphragm (differential diagnosis of pneumoperitoneum).<sup>1</sup> It is called Chilaiditi syndrome when it is accompanied by clinical symptoms such as dyspnoea and cardiovascular manifestations (tachycardia, cardiac rhythm troubles and cardiac arrest) owing to the interposition of the large bowel between the liver and the diaphragm causing an increase in the thoracic pressure.<sup>2</sup>



**Figure 1** Chest radiograph showing the Chilaiditi sign.



**Figure 2** CT scan showing the same aspect of the Chilaiditi sign and the absence of complications.

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Learning point

The non-invasive ventilation can save the patient by avoiding invasive ventilation, providing positive expiratory pressure and decreasing respiratory load. It also allows reducing work of respiration and recruiting collapsed alveoli.

**Competing interests** None.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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