

CASE IMAGES


Nocturnal cough and difficulty breathing during exertion in a young boy: Do not miss the forest for the trees

Question

A 12-year-old boy was referred to the department of paediatric allergology because of a cough and difficulty breathing during exertion. He reported the onset, some months before, of dyspnoea without wheezing while running, which symptom remitted with rest. He also reported an itchy nose. Furthermore, the boy reported having a nocturnal cough 3–4 times a week for the last 3 months, sometimes associated with the vomiting of gastric contents. In the last 6 months, he had also felt a ‘weight sensation’ at the diaphragmatic level of the thorax and suffered from dysphagia, especially with solid food consumption. His previous medical history was uneventful. The allergological evaluation yielded a positive prick test for dust mites. Furthermore, upon the execution of spirometry tests, a reduced peak expiratory flow rate and an obstructive trend without broncho-reversibility were found. Consequently, the allergist recommended a barium swallow test. A preliminary anteroposterior chest X-ray showed an enlargement of the mediastinum due to a significant oesophageal dilatation with an air-fluid level in the middle and distal thirds of the oesophagus (Fig. 1, left). The gastric bubble was not visualised. The administration of the barium contrast


medium confirmed the oesophageal ectasia, with a narrowing of the cardia resulting in a ‘rat-tail’ image (Fig. 1, right). Notably, the lateral chest radiograph showed an anteriorisation of the trachea. Oesophageal peristalsis was not observed; however, a minimal and constant passage of barium solution through the oesophageal hiatus was documented without the opening of the lower oesophageal sphincter (LES). What is the diagnosis? (Answer on page 410)

Silvia Fattori¹

Alessandro Boscarelli ²

Daniela Codrich²

Lydie Ammar³

Egidio Barbi ⁴

Claudio Granata ³

Jurgen Schlee²

¹Faculty of Medicine and Surgery, University of Trieste
²Departments of ²Paediatric Surgery and Urology, ³Radiology
Department, ⁴Paediatrics, Institute for Maternal and Child Health,
IRCCS “Burlo Garofolo”, Trieste, Italy

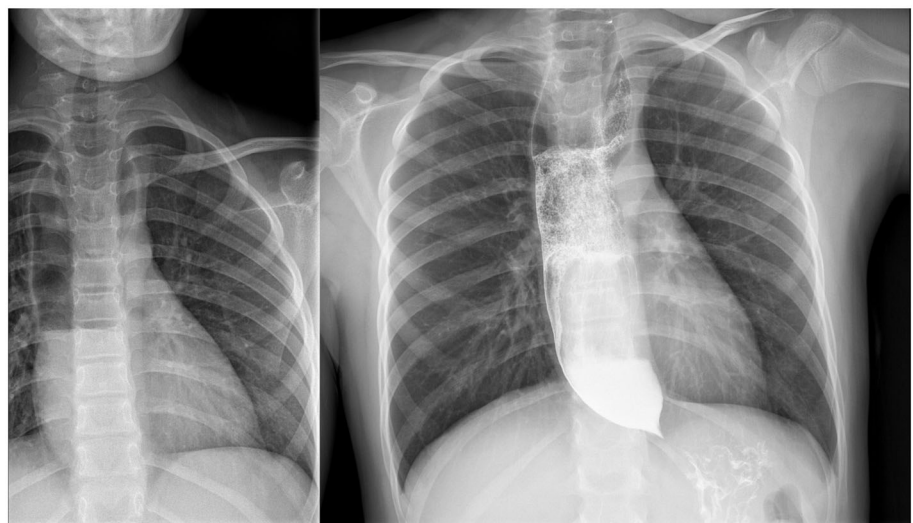


Fig. 1 Chest X-ray: the whole oesophagus appears distended with air-fluid level (left); Oesophagogram: the swallowed contrast agent accumulates in the oesophagus and the cardia shows a ‘rat-tail’ appearance (right).