



Double-barrel adult congenital broncho-esophageal fistulae—images

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Abstract

Congenital broncho-oesophageal fistulae (CBEF) are foregut developmental anomalies. They are formed due to the persistent attachment between the developing tracheal bud and the foregut in the embryo. They commonly present in young age and patients present with symptoms of recurrent respiratory tract infections and low body weight. Only one case of a double CBEF has been reported in literature so far. Here we present a congenital double barrel broncho-oesophageal fistula in a middle aged lady, which is a rare presentation. Definitive treatment involves division and repair of the fistula along with resection of the damaged portion of lung in select cases. We publish these images due to the rarity of a double fistula.

Keywords Broncho-esophageal fistula · Esophagus congenital anomalies · Surgery

Congenital broncho-esophageal fistulae (CBEF) are foregut developmental anomalies. They are formed due to the persistent attachment between the developing tracheal bud and the foregut in the 5-mm embryo. Only one case of a double CBEF has been reported in literature so far [1].

We present the images of a double fistula in a 55-year-old, who presented with a history of cough upon swallowing for 4 years and fever due to recurrent pneumonitis for the last 6 months.

Chest x-ray showed an area of localized pneumonitis in the mid zone. A computerized tomogram showed breaches in the right lateral wall of the mid thoracic esophagus with an adjoining area of pulmonary consolidation in segment 6 (Fig. 1).

Barium esophagogram confirmed the presence of double fistulae (Fig. 2). Gastroscopy revealed the fistulous openings in the esophagus at 27 cm and 29 cm from the incisor teeth, surrounded by normal mucosa

(Fig. 3). Biopsy at the site revealed squamous epithelium and hyperplasia with no granuloma or evidence of malignancy. Bacterial cultures were not diagnostic.

Bronchoscopy showed thick secretions in the lower lobe bronchus, but no fistulae were identified.

At thoracotomy, two CBEF were seen, 0.8 cm and 1.5 cm in diameter and 2 cm long, arising from the lateral wall of the esophagus and entering the lower lobe bronchus. The fistulae were interrupted and closed and were buttressed with an intercostal muscle pedicle (Fig. 4). The post-operative period was uneventful.

CBEF produces recurrent pulmonary infection. Though endoscopic treatments have been described with a small degree of success [2], definitive treatment involves division and repair of the fistula. Resection of the damaged portion of the lung may be warranted. Failure to diagnose broncho-esophageal fistula pre-operatively or overlooking a second fistula will result in peri-operative complications.

We publish these images due to the rarity of a double fistula.

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Fig. 1 Contrast-enhanced computed tomography images (axial and coronal) showing a contrast-filled tract leading into the right lower lobe bronchus

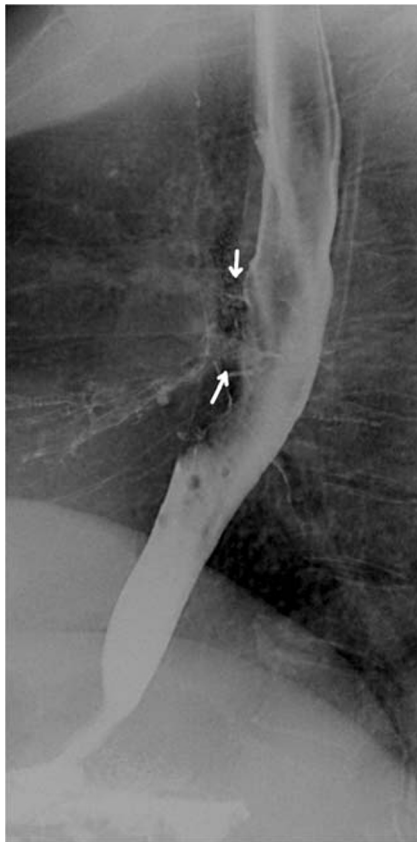
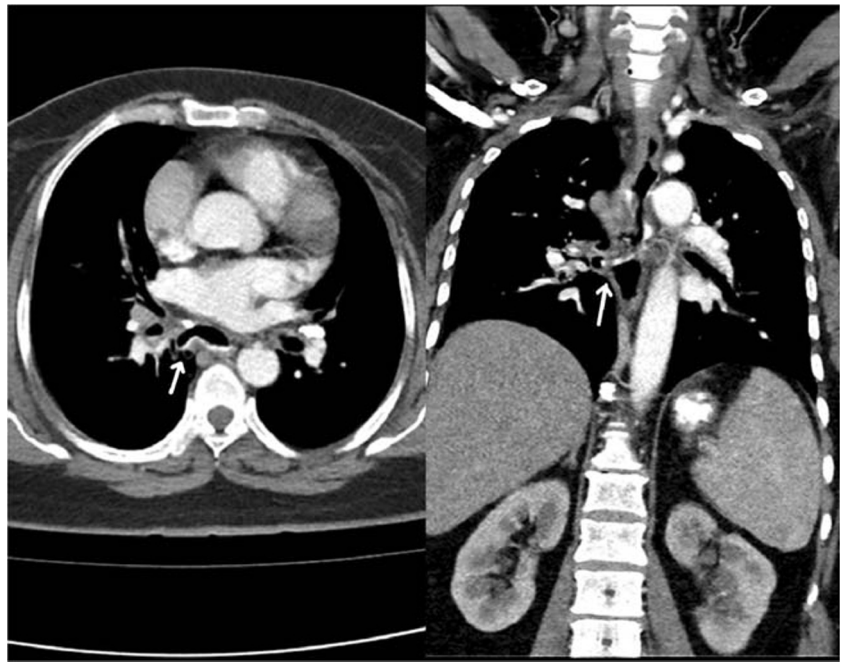


Fig. 2 Barium swallow with arrows showing a proximal and distal contrast-filled linear tracts leading to the right lower lobe bronchus

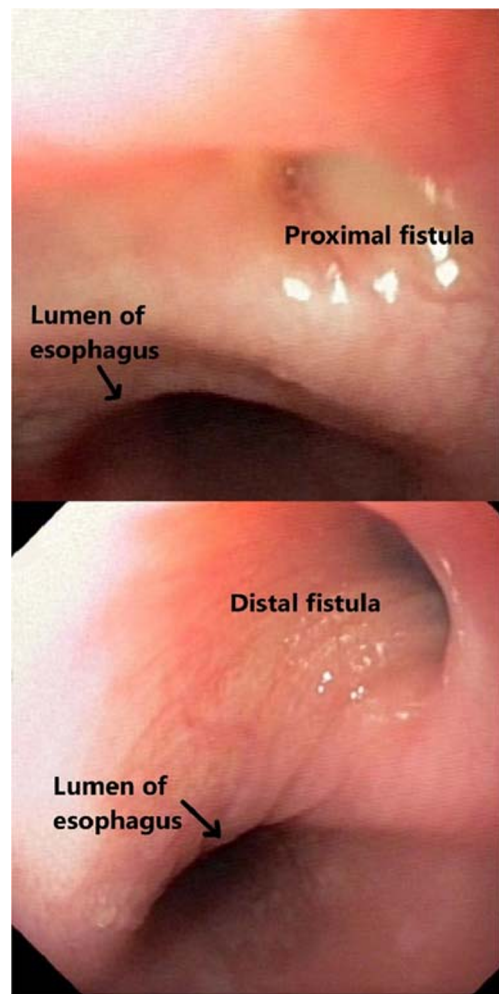
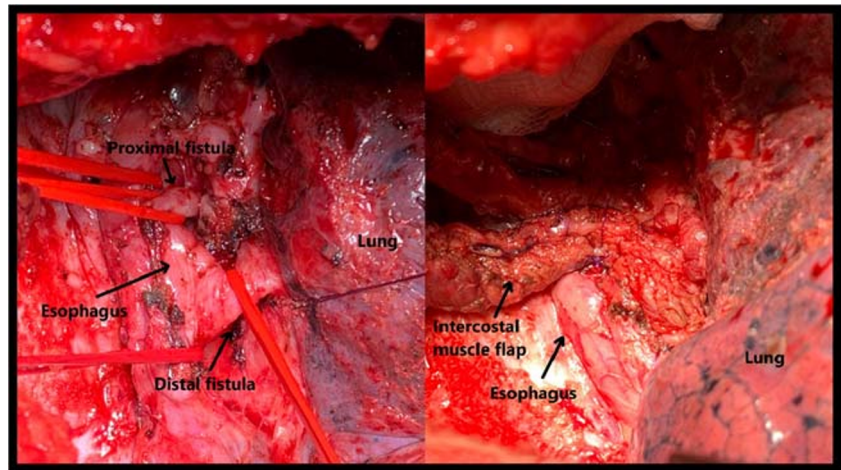


Fig. 3 Gastroscopy images showing the two congenital broncho-esophageal fistulae

Fig. 4 Intraoperative pictures showing double-barrel congenital broncho-esophageal fistulae and fistulae closure with a pedicled intercostal muscle flap buttress



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Compliance with ethical standards

Conflict of interest The authors declare that there are no conflicts of interest.

Informed consent Obtained.

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