

PEDIATRIC IMAGES

Double Tracheoesophageal Fistula and Azygos Lobe



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Received Dec 2, 2015; received in revised form Feb 3, 2016; accepted Feb 12, 2016

Available online 27 April 2016

On Day 3 of life, a term female neonate, whose mother had gone through normal pregnancy and delivery, developed dyspnea and cyanosis during feeding. Chest X-ray demonstrated infiltration in the right upper lobe. Aspiration pneumonia was diagnosed, then antibiotic therapy was initiated, and enteral feeding was discontinued. After the feeding bottle was reintroduced, regurgitation, cyanosis, and coughing reappeared. Esophageal pH monitoring excluded gastroesophageal reflux and video-fluorographic swallowing study revealed no motor alterations. However, after recurrent episodes of aspiration pneumonia, a computed tomography (CT) scan was performed. CT revealed several right lung pulmonary opacities and a distinguished azygos lobe (Figure 1). To rule out the possibility of tracheal abnormality, a flexible bronchoscopy was performed and no pathology was found. Subsequent rigid bronchoscopy (Karl Storz, Tuttlingen, Germany; Ø 3.0) with a Hopkins Forward-Oblique Telescope 30° and positive pressure ventilation under general anesthesia detected two isolated H-type tracheoesophageal fistulas (TEFs) in the cervical trachea (Figure 2).

TEFs without esophageal atresia are rare, and two distinct occurrences are even rarer.¹ Diagnosis of such an anomaly is challenging even with standard procedures; in this case, only rigid bronchoscopy allowed the TEFs



Figure 1 Chest computed tomography image showing the azygos fissure (AF) outlining the azygos lobe (AL).

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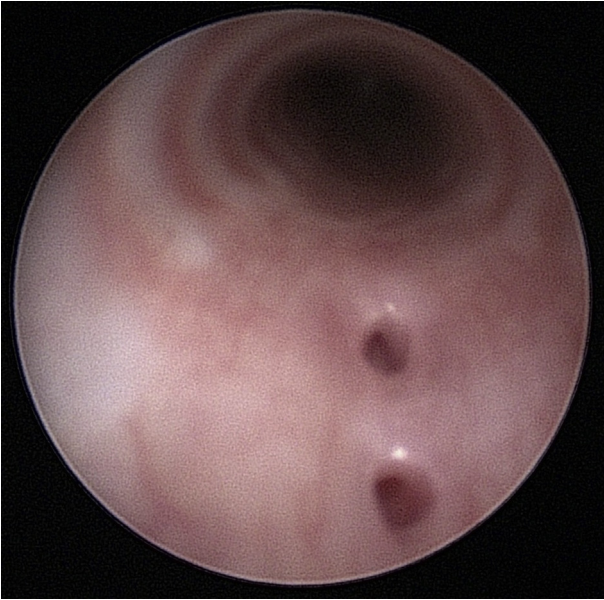


Figure 2 Rigid bronchoscopy showing two tracheoesophageal fistulas in cervical trachea.

identification. TEF is often overlooked during a flexible bronchoscopy, whereas it can be easily detected with rigid bronchoscopy and positive pressure ventilation due to a

distension of the posterior membranous wall of the trachea. To the best of our knowledge, this is the first record of the association of TEFs with azygos lobe, although other congenital anomalies have been reported.² Azygos lobe is an uncommon anomaly of the bronchopulmonary segmentation caused by an unusual course of the azygos vein,³ detected in 1.2% of CT. In cases of TEF, the azygos vein course is surgically significant because its landmark facilitates the identification of the fistula.

Conflicts of interest

The authors have no conflicts of interest relevant to this article.

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