Demonstration of supernumerary tracheal bronchus by computed tomographic scanning and magnetic resonance imaging

S J Freeman, J E Harvey, P R Goddard

Abstract
A bronchus arising directly from the trachea is an infrequent congenital anomaly which usually represents the displaced origin of a normal bronchus. Rarely, a true supernumerary tracheal bronchus occurs supplying an associated tracheal lobe. The case is described of a patient in whom a supernumerary tracheal bronchus and tracheal lobe was demonstrated by computed tomographic scanning and magnetic resonance imaging.

Keywords: supernumerary tracheal bronchus, computed tomographic scanning, magnetic resonance imaging.

A non-smoking 50 year old woman was referred for investigation of a two year non-productive cough unresponsive to inhaled bronchodilators and inhaled steroids. She was otherwise in good health but had a history of eczema and whooping cough in childhood. Physical and ENT examinations were normal. She had a peak expiratory flow rate of 450 l/min (predicted 450–500 l/min) but was unable to perform spirometric tests because of the cough.

The chest radiograph was normal. Bronchosscopic examination revealed an accessory opening on the right wall of the trachea 5 cm above the carina. The bronchial anatomy was otherwise normal with three segmental bronchi arising from the right upper lobe bronchus. Computed tomographic scanning was performed (Somatom CR, Siemens) which demonstrated a small airway arising from the right side of the trachea (fig 1), passing caudally, dividing distally, and extending into an area of poorly defined soft tissue opacification immediately adjacent to the arch of the azygos vein. The appearances were consistent with a tracheal bronchus.

Magnetic resonance imaging was undertaken on a 1 Tesla magnet (Magnetom Impact, Siemens). Axial T1 weighted images showed the tracheal bronchus extending down to a small area of abnormal lung situated to the right of the trachea, immediately above the azygos arch (fig 2).

Discussion
The tracheal bronchus is a rare congenital abnormality seen in 0.1–2% of bronchoscopic examinations. It occurs almost exclusively on the right side and predominantly involves the upper lobe. In most cases the tracheal bronchus represents a displaced origin of the main right upper lobe bronchus or apical segmental bronchus, but rarely there may be a true supernumerary bronchus arising from the trachea itself.

Figure 1 Computed tomographic slice showing the tracheal bronchus to the right of the trachea. Lung settings: W 1000, C – 750.

Figure 2 Magnetic resonance imaging slice. Magnified detail of the mediastinum showing the tracheal lobe (arrow). A = aorta, S = superior vena cava, T = trachea, T1 weighted image: TR 961.7 ms, TE 25 ms.

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Absract
A...
Replacement of one lung by a large bulla in active tuberculosis

Sulaiman A Al-Majed

A 70-year-old diabetic man with pulmonary tuberculosis developed a progressively enlarging bulla which occupied the whole left hemithorax and caused some shift of the mediastinum.

(Torax 1995;50:427–428)

Keywords: tuberculosis, bulla, lung.

Large bullae are a known but rare complication of active tuberculosis.12 This is the first report of total replacement of one lung by a bulla which progressed in spite of successful chemotherapy.

Case report

A 70-year-old Saudi man was admitted to King Khalid University Hospital, Riyadh, with coughing, yellow sputum, fever, and sweating for one month. Diabetes had been diagnosed four months previously and he was treated with diet and an oral hypoglycaemic agent. He had never smoked and had no relevant occupational exposure. His chest symptoms persisted in spite of two courses of antibiotics. Chest radiography showed an infiltrate in the left mid zone without cavitation or elevation of the diaphragm. Bronchoscopic examination showed an inflamed, patent left main bronchus with multiple areas of ulceration. Abundant acid fast bacilli were seen in the bronchoalveolar lavage fluid. He was started on 300 mg isoniazid, 600 mg rifampicin, and 1·5 g pyrazinamide daily. Culture of lav-

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