Case Reports

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A Case of 'Bronchial String' – A Rare Anomaly of the Bronchus

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Key Words

Bronchial string
Anomaly of the bronchus
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Abstract

An incidental string-like structure spanning the lumen of the intermediate bronchus was found during bronchoscopy in an 18-year-old woman. We consider that the lesion may be a rare fibrous anomaly of the bronchus and may be closely related to a bronchial web. We have named this unusual structure 'bronchial string'.

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Introduction

Congenital obstructive airway lesions are considered to be relatively uncommon, but their true incidence is not well known as they may go unrecognized throughout life. In a recent review, Cohen [1] reported congenital laryngeal webs in approximately one of 1,200 children admitted for otolaryngological and endoscopic care. However, to our knowledge, there are very few reports on tracheobronchial webs [2–5] and the true incidence of these lesions is unknown. We report a case of a rare structural anomaly of the bronchus which is considered to be closely related to the bronchial web and have named it 'bronchial string'.

Case Report

An 18-year-old woman with a 4 pack-year smoking history presented to the outpatient clinic of our hospital with a 4-year history of intermittent hemoptysis. She denied wheezing or dyspnea. Her anamnesis was significant for chronic sinusitis and allergic rhinitis. There was no history suggesting foreign body aspiration. Physical examination was unremarkable. Chest x-ray showed left lower lobe infiltrates obscuring the descending aorta. Chest tomogram showed tubular shadows in the left lower lobe which were suggestive of left lower lobe bronchiectasis. Although bronchography revealed that the bronchi of the right lung and the left upper lobe were normal, no further evaluation could be obtained. Fiberoptic bronchoscopy did not reveal any macroscopic changes responsible for hemopty-

Fig. 1. Fiberoptic bronchoscopy revealed this whitish, smooth, 'string-like' structure spanning the lumen of the intermediate bronchus as an incidental finding.

sis. Therefore, together with the radiographic suspicion, the diagnosis of bronchiectasis in the left lower lobe was suggested. An incidental whitish, smooth, 'string-like' structure spanning the

lumen of the intermediate bronchus was noted (fig. 1). No additional anomalies of the tracheobronchial tree or other organs were found. Examination of the lesion, which was easily broken during biopsy, revealed a fibrous string with lymphocytic infiltration covered by ciliated epithelium without bronchial glands or cartilage (fig. 2).

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Fig. 2. Biopsy specimen showed a fibrous string with lympho-cytic infiltration covered by ciliated epithelium without bronchial glands or cartilage.

Discussion

Stradling [6] presents a case with a 'twin-stringed adhesion' of the right main bronchus in his text which appears similar to our 'bronchial string'. However, he does not describe the clinical characteristics or pathological findings of the case, and the etiology of the lesion – congenital versus inflammatory – is not postulated. To our knowledge, there has been no other report on the clinical or pathological findings of this bronchial lesion.

In this case, although it cannot be sure that this lesion is not secondary to inflammation, we feel that the shape and healthy appearing mucosa around the lesion suggests that it is a congenital lesion.

Congenital tracheal obstructive lesions are classified as fibrous structures, or as lesions associated with

absence or deformity of tracheal cartilages [2, 4]. The former includes webs, fibrous stenosis and stenosis associated with tracheo-esophageal fistula.

A tracheobronchial web is a thin membrane-like diaphragm which sometimes produces complete or almost complete airway occlusion [5]. Although a 'bronchial string' may be one of the congenital fibrous structures, we feel it should be distinguished from a bronchial web because they are considerably different in shape.

We have found only one case with this lesion among approximately 5500 patients who underwent bronchoscopy in our hospital. This is the first detailed report of a rare anomaly which we have named 'bronchial string'.

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