

ENDOBRONCHIAL ASPERGILLOMA ASSOCIATED WITH IDIOPATHIC PULMONARY FIBROSIS: A CASE REPORT AND REVIEW OF THE LITERATURE

Qiu-hong Li¹, Yi-liang Su¹, Li-kun Hou², Yuan Zhang¹, Yang Hu¹, Li Shen¹, Fen Zhang¹, Ying Zhou¹, Huiping Li¹

¹Department of Respiratory Medicine, Shanghai Pulmonary Hospital, Tongji University, School of Medicine, Shanghai, China; ²Department of Pathology, Shanghai Pulmonary Hospital, Tongji University, School of Medicine, Shanghai, China

To the editors,

Endobronchial aspergilloma (EBA) is considered to be a rare presentation of pulmonary aspergillosis. The rarity of EBA associated with idiopathic pulmonary fibrosis (IPF) prompted us to report the case to make a correct diagnosis.

A 69-year old non-smoking man presented to the hospital due to intermittent cough for 4 years and progressive dyspnea for 1 year. High Resolution Computed Tomography performed usual interstitial pneumonia pattern and a mass lesion in the left lower lung field. The patient was initially diagnosed as IPF associated with tumor or tuberculosis with the non-specific clinical and radiological features. Fiberoptic bronchoscopy revealed an irregular whitish necrotic mass lesion which totally obstruct lateral branch on posterior basal segmental bronchus of the left lower lobe. EBA was diagnosed by histopathologic features of the slender septate hyphae with acute angle branching of the *Aspergillus* spp. in the necrotic lesion biopsied from the fiberoptic bronchoscopy (Figure 1). The EBA was disappeared after treated with oral voriconazole and with gradual partial removal of the lesion by bronchoscopy forceps. Finally, there

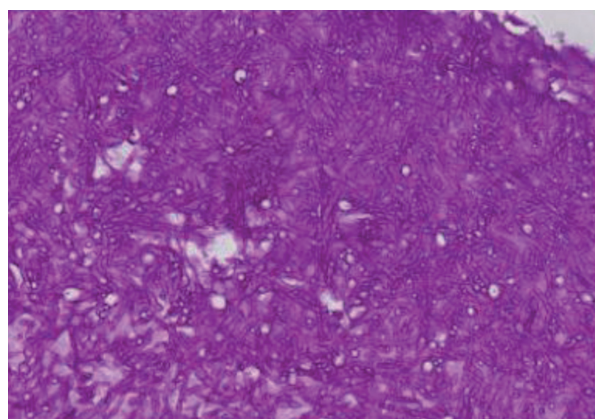


Fig. 1. The histologic features of the necrotic lesion biopsied. Papanicolaou Stain (10×100)

was a bronchiectasis on posterior basal segmental bronchus of the left lower lobe after the therapy. So, EBA can be associated with IPF, because there is a tractional bronchiectasis. The pathological proofs are essential to diagnosis. And the endoscopic treatment combined with systemic antifungal medicine has been proved to have a good prognosis.

EBA is considered to be an unusually positioned aspergilloma (1) and a rare presentation of pulmonary aspergillosis. It can present as a noninvasive form of aspergillosis characterized by growth of *Aspergillus* spp. within the bronchi, with or without parenchymal lesions or cavities(2). In our case there was a tractional bronchiectasis on posterior basal segmental bronchus of the left lower lobe, so that may be the cause of endobronchial aspergilloma.

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Correspondence: Prof. Dr. Hui-Ping Li, MD,
507 Zheng Min Road, Shanghai 200433, China

Tel. 86-21-65115006-2103

Fax 86-21-65111298;

Email: liw2013@126.com

To our knowledge, our report is the first to describe IPF complicated by EBA. EBA does not like the pulmonary aspergilloma which having an air crescent sign. Sometimes, it can mimic lung tumor(3). This case had no specific symptoms, laboratory examinations and HRCT features. The TB could also not be excluded with the bronchoscopy performances. The case could be diagnosed as having lung cancer or TB without pathology. However, the (1, 3)- β -D-glucan was higher, which maybe help to diagnose. And the histological features with slender, septated hyphae that exhibit angular dichotomous branching in the same direction demonstrated the typical features of *Aspergillus* species in the necrotic lesion biopsied. Therefore, the case was diagnosed with EBA by the pathological proof.

Treatment of EBA has not yet been established, because it may be non invasive in immunocompetent host (4). Our patient was treated with oral voriconazole 200 mg twice daily for 3 months and with gradual partial removal of the lesion in the bronchus by bronchoscopy forceps for 2 times once a month until completely cleared. The EBA was disappeared after three months therapy and there were no side effects. Follow-up of 8 months, there was no recurrence until present. So our patient was benefited from the medical treatments.

We can get three important clinical issues from our case. First, the *Aspergillus* species can infect

the bronchial lumen of immunocompetent IPF patient, because there was a tractional bronchiectasis in IPF. Second, the classical CT features and the pathological proofs are essential to diagnosis, the other measures like *Aspergillus*-precipitating antibody test, *Aspergillus* galactomannan antigen test, (1, 3)- β -D-glucan assay and cultures of specimens have important accessory diagnostic value. Third, endobronchial aspergilloma may not need to be treated, but in our case, the endoscopic treatment combined with systemic antifungal medicine has been proved to be a good therapeutic method for endobronchial aspergilloma without any side effects. Therefore, the clinicians can give an accurate diagnosis and provide a good treatment program with those above three points at the first time.

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