Bronchopulmonary Zygomycosis

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A 48-year-old female presented with a 6-month history of intermittent fever and hemoptysis. She was diagnosed with diabetic ketoacidosis just before the appearance of fever. Repeated sputum cultures were all negative and broad-spectrum antibiotics were administered at a local hospital but were of no use. Upon admission to our

hospital, chest auscultation revealed that breath sounds had disappeared on the left side. Chest radiography showed a white left hemithorax (fig. 1), and chest CT scan revealed left pulmonary consolidation and obstruction of the left main bronchus (arrow in fig. 2).

Fig. 1. Chest radiography showed that the left hemithorax was white and the trachea-mediastinum was slightly shifted to the right.

Fig. 2. Chest CT scan showed left pulmonary consolidation with central necrotic low attenuation, a little pleural effusion, and obstruction of the left main bronchus by soft tissues.

Fig. 3. Bronchoscopic examination showed that a white, gelatinous mass entirely obstructed the left main bronchus and partly grew into the right main bronchus.

Fig. 4. Histopathologic examination of the biopsy demonstrated ribbon-shaped hyphae with right-angle branching. HE. $\times 400$.

Therefore, bronchoscopy was performed and a white, gelatinous mass was observed in the proximal opening of the left main bronchus (fig. 3). Hyphae with right-angle branching were demonstrated via histopathologic examination of the biopsy (fig. 4), which supported the diagnosis of bronchopulmonary zygomycosis. Unfortunately, the patient passed away due to massive hemoptysis soon thereafter and had no chance to be treated with amphotericin B or operation.

Zygomycosis is a relatively rare infection with a high mortality rate, which is frequently associated with diabetes mellitus, especially in patients with metabolic acidosis

[1]. Pulmonary zygomycosis with diabetes has a predilection for endobronchial diseases, which warrants diagnosis by flexible bronchoscopy [2]. However, transbronchial biopsy might lead to fatal endobronchial hemorrhage and should be managed with great caution.

References

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