

A Fatal Case of *Aspergillus* Empyema

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Dear Editor,

An 85-year-old male patient presented with progressive dyspnea for two days. He had a medical history of chronic obstructive pulmonary disease (COPD), and coronary artery disease. This time, she presented to the emergency department with fever, cough and progressive dyspnea for several days.

Under the impression of COPD with exacerbation, he was admitted and received systemic steroid, bronchodilator and empirical antibiotics. However, the respiratory condition gradually deteriorated during hospitalization. Therefore, he received endobronchial intubation for acute respiratory failure and was transferred to intensive care unit on hospital day 15. On the arrival, his consciousness was unclear and vital signs were temperature of 37.2°C, pulse rate of 112/min, respiratory rate

of 28 per min, and blood pressure of 120/72 mmHg. Physical examinations showed coarse crackle over right lower lung field and diffuse wheezes over bilateral lung fields. Laboratory data revealed that the white blood cell of 4,600/mm³, hemoglobin of 12.6 mg/dl, and platelet of 38,000/mm³. Chest radiography showed consolidation over right lower lung, and the right pleural effusion was noted. Pleurocentesis was done and turbid pleural effusion was drained. Antimicrobial agents with teicoplanin, levofloxacin, and micafungin were administered for pneumonia. However, the clinical condition did not improve, and finally, he died due to multi-organ failure. In the meanwhile, *Aspergillus fumigatus* was isolated from the endotracheal aspirate and pleural effusion, and the galactomannan antigen in serum reported as 6.59 index. Therefore,

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the diagnosis of *Aspergillus* empyema was confirmed.

In the present report, we described a fatal case of *Aspergillus* empyema in a patient with COPD. Although *Aspergillus* empyema is extremely rare (1-3), this clinical entity is associated with high morbidity and mortality. As previous investigation (4), corticosteroids in our case play a critical role in increasing susceptibility to *Aspergillus* infection. Because the cases number is limited, the appropriate treatments, such as systemic antifungal agent, local administration of an antifungal agent, and surgical intervention still need further large study to investigate its efficacy. In conclusion, clinicians should keep in mind the possibility of *Aspergillus* empyema in the patients receiving corticosteroid. Early diagnosis and prompt treatment may save life.

Conflict of Interests

The authors declare that they have no conflict of interest in the letter.

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