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## A Fatal Case of Disseminated Pleural Aspergillosis Secondary to Lung Resection for Fungus Ball

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The term aspergillosis describes of disease caused by *Aspergillus* species. Different pulmonary manifestations are defined in the literature, and the host's immune status is the main factor in determining the clinical course. We present a fatal case of disseminated pleural aspergillosis secondary to lung resection for fungus ball. We also aim to present progression the aspergilloma to invasive pulmonary aspergillosis. A 66-year-old man admitted to our clinic with a complaint of bloody sputum. He reported that this complaint existed for two weeks and 3-4 times a day. He did not describe fever, weakness and loss of appetite. He didn't report any chronic illness, but he reported that he received tuberculosis treatment 15 years ago and his treatment was completed without any problem. Chest CT revealed parenchymal opacity surrounded by an "air crescent" in the left upper lobe. According to these clinical and radiological findings, the patient was diagnosed with saprophytic pulmonary aspergillosis (aspergilloma), and surgical treatment was planned. Left upper lobectomy was performed, and *Aspergillus* infection was confirmed histologically. Therefore, blunt extrapleural dissection was performed to prevent parenchymal lacerations. Unfortunately, the cavity was perforated during extrapleural dissection despite all care taken and diligence. During postoperative follow-up, effective analgesia, incentive spirometry, deep breathing exercises and continuous positive airway pressure were performed, but because of persistent air leakage and emphysematous changes of lower lobe parenchyma, lung re-expansion could not be achieved. On the 15th postoperative day, sudden onset of massive bleeding through the chest tube was seen, and emergency surgery is planned. Left posterolateral re-thoracotomy is performed. Because of the fragility of the arterial stump main pulmonary artery was resected with GIA vascular stapler and completion pneumonectomy was performed. After the removal of specimen pleural cavity was explored and widespread erythematous pleural plaques are seen. Besides, there were multiple millimetric nodular lesions on these plaques. Interestingly, dust particles that we thought was fungus spore were seen while decorticating these plaques. Frozen section was performed, and it was revealed pleural aspergillosis. Operation completed without any major complication. Despite aggressive antimicrobial treatment patient died because of pneumonia of the remaining lung on the 16th postoperative day. In conclusion, despite high mortality and morbidity rate, surgical resection for aspergilloma should be considered in patients with good respiratory function. If the aspergilloma cavity perforated while surgical intervention, postoperative close follow-up must perform, and antifungal therapy should be initiated to reduce the risk of fungal pleural dissemination.

**Keywords:** Aspergilloma, lung resection, pleural dissemination