

Letter to the Editor: Cavitory Pulmonary Aspergillosis in Heart Transplantation Recipient

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Dear Editor,

A 53-year-old male, a heart transplantation recipient for dilated cardiomyopathy under immunosuppressants and with a history of diabetes mellitus, presented with productive cough and chest pain for days. Additionally, he had low-grade fever and progressive dyspnea. Chest imaging revealed multiple cavitory lesions, the largest being 8.8 x 6.4 cm over the left upper lobe (*Figure 1A, arrows*), indicative of fungal infections. Microbiological analysis detected *Aspergillus fumigatus* in sputum, alongside elevated galactomannan optical density index levels in bronchoalveolar fluid (18) and serum (3.7). Voriconazole was given, and surgical resection of the large cavity (*Figure 1B*) was performed, confirming cavitory pulmonary aspergillosis (CPA) upon analysis of histopathology.

Despite antifungal therapy, the patient's condition deteriorated, resulting in death two weeks later. This case highlights the challenging management of CPA in immunocompromised patients, particularly in the context of heart transplantation and diabetes mellitus. Despite aggressive antifungal therapy and surgical intervention, the poor prognosis underscores the need for early detection and targeted treatment strategies in such complex scenarios.

The presented case of a 53-year-old male heart transplant recipient with a history of diabetes mellitus underscores the intricate management challenges associated with CPA in immunocompromised patients. Early diagnosis of invasive pulmonary aspergillosis (IPA) is crucial in addressing this serious condition (1). In this case, the presence of multiple cavitory

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lesions on chest imaging in an immune-compromised host suggests the diagnosis of invasive fungal infections, prompting clinicians to conduct further work-up for IPA.

Furthermore, confirming the diagnosis of IPA typically requires microbiological assessment (2). In the present case, culture of respiratory specimens yielded *Aspergillus fumigatus*, accompanied by elevated galactomannan in bronchoalveolar fluid and serum, supporting the diagnosis of CPA. Histological findings further confirmed the diagnosis. However, it's important to note that obtaining tissue proof for the diagnosis of IPA is not always feasible. In many cases, non-invasive examinations, such as the galactomannan test, play a crucial role in aiding diagnosis (3).

Despite the prompt initiation of voriconazole therapy and surgical resection of the large cavity, the patient's condition continued to deteriorate, ultimately resulting in death two weeks later. This outcome underscores the aggressive nature of infection and the limited efficacy of the current treatment approaches in severe cases. Managing CPA in immuno-compromised individuals, especially those with a history of organ transplantation and underlying comorbidities, necessitates early detection and targeted treatment strategies.

However, despite advances in the antifungal therapy and the surgical interventions, the prognosis for such patients remains poor.

Conflicts of Interest

Authors declare no conflict of interest.

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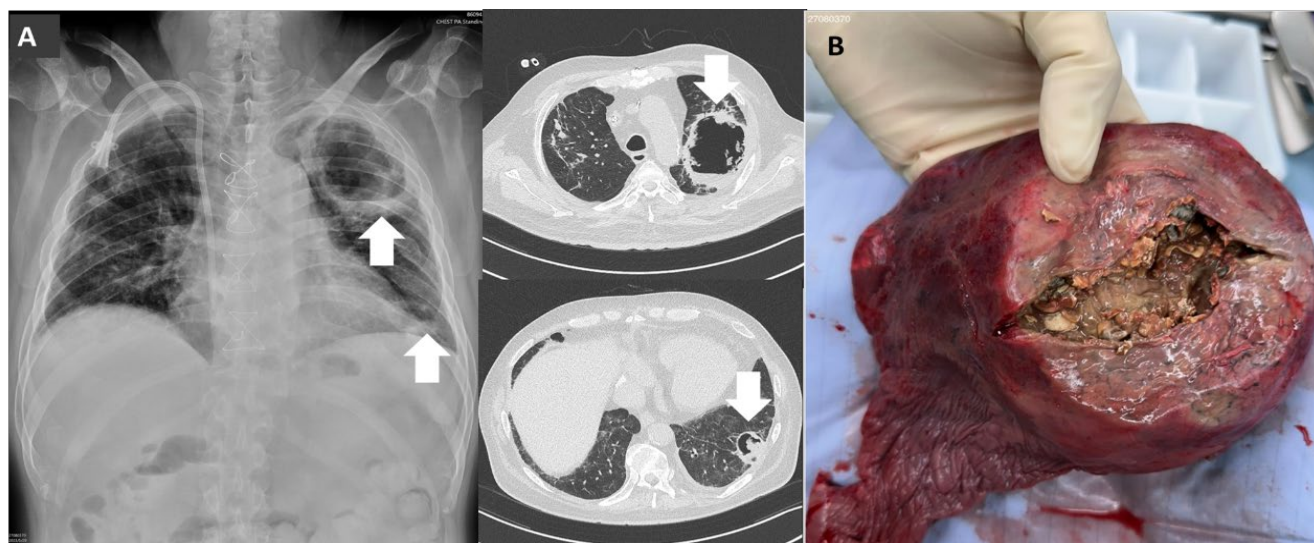


Figure 1. (A) Chest imaging revealed multiple cavitary lesions with the largest being 8.8 x 6.4 cm over the left upper lobe (arrows), and (B) surgical specimen of largest cavity.