

Fulminant tracheobronchial aspergillosis

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DESCRIPTION

A man aged 56 years with a history of HIV and diffuse B-cell lymphoma (in remission) was referred to our institute for management of pancytopenia and acute kidney injury. Five days prior to the admission, the patient went to a dental clinic for tooth extraction; he was noted to have a rash on the lateral aspect of his tongue, extending through the oral cavity. On examination, he was alert, awake and oriented to time, place and person. Laboratory investigation revealed Hb: 8.3 mg/dL, WCC: 500 cells/mL and platelet: 70 000 cells/mL.

BUN/Cr was 47/3, CD4 count was 350 and HIV viral load was 10 K. Chest X-ray was unremarkable; CT scan chest revealed mediastinal lymphadenopathy. Bronchoscopy was scheduled for the evaluation of lymphoma recurrence. It revealed yellowish raised lesion throughout the distal trachea, right middle stream bronchus, left middle stream bronchus, right upper lobe bronchus and right lower lobe bronchus mucosa (figure 1). Rapid evaluation of bronchial biopsy revealed fungal hyphae suggestive of aspergillosis. Voriconazole was added to the treatment regimen. Next day, the patient developed shortness of breath and was intubated due to acute respiratory failure. Owing to increased peak airway pressure, it was progressively difficult to ventilate the patient. Repeat bronchoscopy on the third day revealed fungating lesion throughout trachea to the carina, which was obstructing his airways (figure 1). Bronchoalveolar lavage and bronchial biopsy was sent for cytology, bacterial, AFB, PCP and fungal evaluation. Despite

aggressive respiratory support and mechanical ventilation, the patient rapidly deteriorated and died of respiratory failure.

Invasive pulmonary aspergillosis (IPA) is a life-threatening disease that occurs in critically ill patients as well as in immunocompromised individuals. Major risk factors include neutropenia (<500 cells), prolonged corticosteroid therapy, solid organ transplantation, haematological malignancy and advanced AIDS.¹ Tracheobronchial aspergillosis (TBA) is a variant of IPA. TBA is associated with solitary invasion of tracheobronchial tree and most of the times, it imitates bronchopneumonia. It has non-specific symptoms such as cough, dyspnoea, sputum production and fever non-responsive to antibiotics. Although IPA is uncommon in AIDS patients, especially those on highly active antiretroviral therapy, there is increased incidence of TBA in such patients.² It was found most of them had CD4<100 cells, with other factors including neutropenia and chronic corticosteroid therapy.² Isolation of aspergillus from tracheobronchial secretion has poor predictive value, thereby, for confirmation of diagnosis, histopathological analysis is performed.² Characteristic fibre-optic bronchoscopy findings pooled with microbiological analysis of tracheobronchial specimen obtained during bronchoscopy can accelerate the diagnostic process. Voriconazole is the drug of choice in a patient with IPA.³ If there is clinical or microscopic suspicion of TBA, medications must be instituted at the earliest.

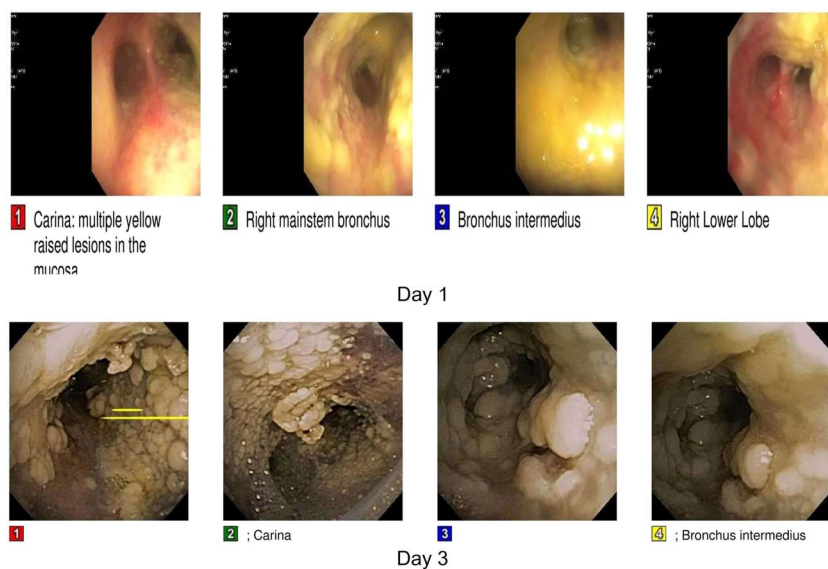


Figure 1 Bronchoscopy images on the first day revealed yellowish raised lesion throughout the distal trachea, right middle stream bronchus, left middle stream bronchus, right upper lobe bronchus and right lower lobe bronchus mucosa. On the third day, it revealed fungating lesion throughout the trachea to the carina, which was obstructing the lumen.



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Learning points

- ▶ Invasive pulmonary aspergillosis (IPA) is a life-threatening disease that occurs in critically ill patients as well as in immunocompromised individuals.
- ▶ Tracheobronchial aspergillosis (TBA) is a variant of IPA. It is associated with solitary invasion of tracheobronchial tree and most of the times, it imitates bronchopneumonia.
- ▶ Voriconazole is the drug of choice for TBA. If there is clinical or microscopic suspicion of TBA, medications must be instituted at the earliest.

Contributors LKT and KKJ assembled the case history and investigations from hospital records, analysed the data and wrote the paper. SJ and AJ selected the case, assessed the patient data and critically reviewed the paper.

Competing interests None declared.

Patient consent Obtained.

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