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CLINICAL IMAGE

Tracheobronchial aspergillosis presenting with black mucus plugs and tracheal ulcers

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Abstract

Tracheobronchial aspergillosis is a rare but lethal disease with characteristic findings of tracheal plaques and ulcers. It requires appropriate airway management for possible tracheal obstruction with the black mucus plug.

KEYWORDS

bronchoscopy, intensive care, point of care, tracheal ulcers, tracheobronchial aspergillosis

A 70-year-old man on mechanical ventilation deteriorated in terms of respiratory status who was being managed for respiratory failure with drug-induced neutropenia after 23 days of cardiovascular surgery. Bronchoscopy confirmed almost complete endotracheal tube obstruction by black mucus plug, which required endotracheal tube exchange and repeated bronchoscopic removal of the black mucous blocks (Figure 1A,B). The tracheal mucosa was edematous with ulcers and plaques (Figure 1B,C). No lesion was detected on the peripheral airway. Computed tomography of the brain and the lung did not detect any specific findings of aspergillosis. *Aspergillus fumigatus* was repeatedly cultured from the black sputum. The patient was diagnosed with tracheobronchial aspergillosis. He had a good clinical response to anti-fungal treatment with voriconazole.

Tracheobronchial aspergillosis is a rare but lethal disease, which requires prompt interventions.[1,2] The risk factors include immunocompromised status, chronic obstructive pulmonary disease, steroids, and multiple antibiotics use.[1] The sensitivity and specificity of sputum culture are low; however, those of the unique bronchoscopic findings of tracheal plaques and ulcers are relatively high with 80% and 70%, respectively.[1] Point of care bronchoscopy at the ICU bedside would provide diagnostic information in making appropriate initiation of anti-fungal drugs and airway management.

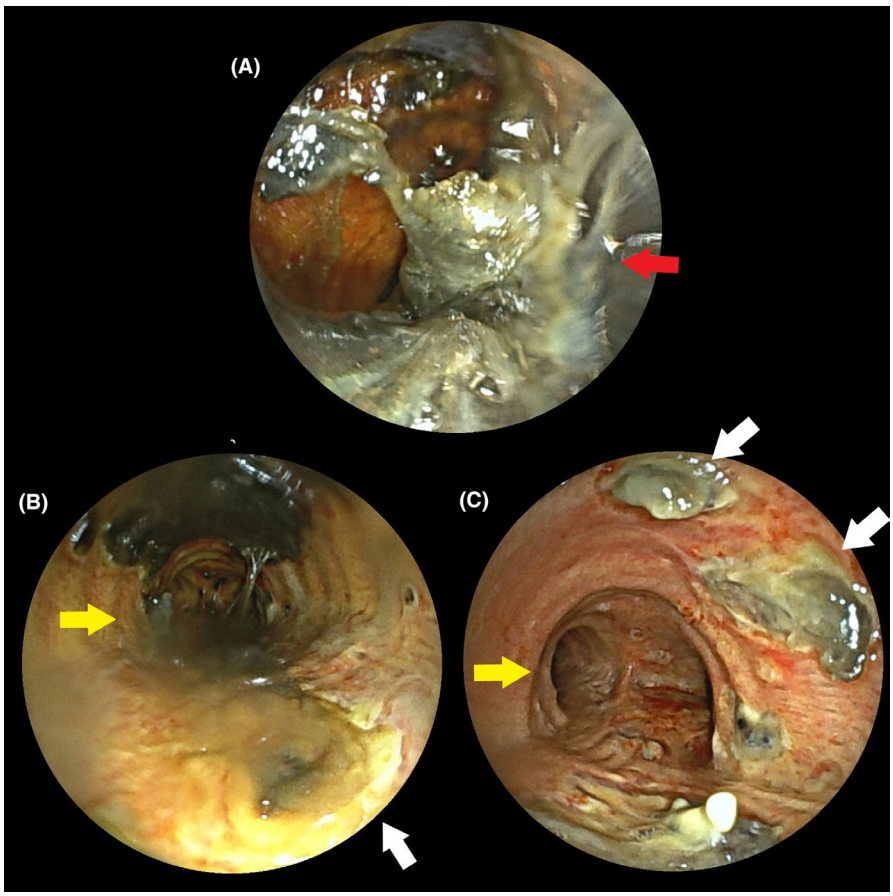

FIGURE 1 Serial bronchoscopic images in the course of tracheobronchial aspergillosis. (A) postoperative day (POD) 25, (B) POD 38, (C) POD 53. (A) Mucus plug which obstructed the endotracheal tube. (B) Viscous black secretions and ulcers in the lower trachea. (C) The lower trachea with hyperemic mucosa and ulcers with white exudate. Red arrow: an endotracheal tube; yellow arrow: trachea; white arrow: ulcers

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CONFLICT OF INTEREST

None.

AUTHOR CONTRIBUTIONS

YM and NN drafted the manuscript and contributed to treating the patient. KO, YG, and HA contributed to treating the patient and critically revised the manuscript. All authors read and approved the final manuscript.

CONSENT

Written Consent from the patient: Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analyzed.

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