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IMAGING IN INTENSIVE CARE MEDICINE

Severe ARDS in a critically ill influenza patient with invasive pulmonary aspergillosis

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A 63-year-old previously healthy woman presented to the hospital with fever, breathlessness, and abdominal pain for 6 days. She reported a history of successfully treated breast cancer 5 years ago (surgery and chemotherapy) and 37 pack-years of smoking. In the following days she developed a severe ARDS. Bronchoscopy showed

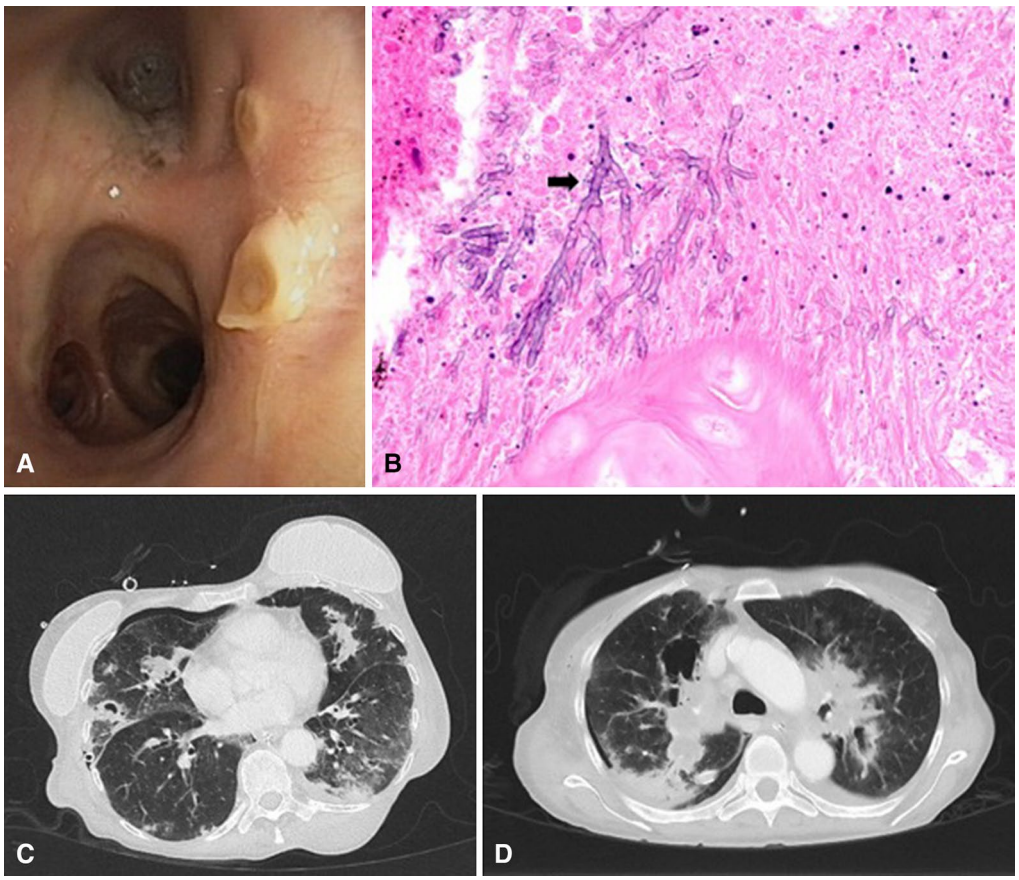

Fig. 1 **a** Multiple tracheal ulcerations on day 3. **b** Histology of lung parenchyma with invasive pulmonary aspergillosis (*arrow*). **c** CT scan of the lungs on day 4 showing bilateral alveolar and peribronchial lesions compatible with invasive aspergillosis. **d** CT scan of the lungs on day 11 showing progressive bilateral cavities

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multiple tracheal ulcerations (Fig. 1a). The performed transbronchial biopsy, BAL cultures, and PCR revealed influenza A, parainfluenza 4 virus, and an invasive aspergillus (IA) fumigatus infection (Fig. 1b). Serum aspergillus galactomannan antigen levels were 1.5 ng/mL. CTs of the thorax showed progressive bilateral cavities over the following days (Fig. 1c, d). Despite full intensive care, including antiviral and antifungal treatment, the patient died of the severe ARDS.

Risk factors are use of corticosteroids (CS) or smoking. However, influenza viruses have been reported to cause cell-mediated destruction of airway epithelium and disruption of normal mucociliary clearance, fostering colonization and invasion with *Aspergillus* even in immunocompetent H1N1 patients [1]. The occurrence of IA in the ICU usually entails a poor prognosis. Therefore, our threshold to actively search for invasive aspergillosis in critically ill influenza patients should be low. Only early diagnosis and treatment might improve the high mortality rate.

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Compliance with ethical standards
Consent was obtained for the use of information and images. The patient's identity has been kept confidential.

Conflicts of interest
None to declare.

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Reference

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