

LETTER

Invasive pulmonary and central nervous system aspergillosis following slops aspiration in a trauma patient

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Cerebral aspergillosis is a rare complication of multiple trauma. In this report, we present a remarkable case of multiple lung and brain lesions caused by aspergillosis after a falling incident.

A 54-year-old male was admitted with multiple trauma (brain contusion, aspiration pneumonitis with pulmonary contusion, right humerus fracture and right scapular fracture) due to a 6-m fall and aspiration of slops. In view of aspiration pneumonitis (Figure 1, day 1), intravenous antibiotic treatment (tazocin, moxifloxacin hydrochloride and metronidazole) was started. Brain computerized tomography (CT) on day 12 indicated a focus of encephalomalacia in the left frontal lobe, which was thought to be the progress of brain contusion (Figure 1, day 12). On the same day, chest CT showed a pulmonary halo sign on the left upper lung (Figure 1, day 12), and voriconazole therapy was used because of high suspicion of invasive pulmonary fungal infection. Voriconazole treatment had to be stopped, however, due to severe rash 5 days later. Anti-fungus therapy was continued with caspofungin. On day 19, the brain CT showed signs of fungus infection (Figure 1, day 19). Twenty-two days after injury, the central venous catheter culture grew aspergillus species and established the diagnosis of invasive aspergillosis in this patient; liposomal amphotericin B was then also added to the patient's treatment. On day 34, enhanced CT imaging of the brain showed progression of multiple lesions of fungus infection (Figure 1, day 34). Unfortunately, the patient died 40 days after injury.

We have described invasive aspergillosis with a rapidly progressive and fatal pulmonary and cerebral course in a previously healthy man. Neuroaspergillosis is an

uncommon infection associated with an exceedingly high mortality. The diagnosis of neuroaspergillosis is difficult, often made at the terminal stage of disease or on autopsy [1]. Perhaps due to the greater penetration into the central nervous system (CNS), voriconazole treatment greatly improved clinical outcomes with a survival rate of 30% in high-risk patients [2,3]. According to the guidelines for treating invasive pulmonary aspergillosis, voriconazole is recommended for primary treatment [4]. Unfortunately, this patient was refractory to voriconazole because of severe rash, and then caspofungin was selected for salvage therapy. Owing to the large molecular mass, high protein binding and water solubility of caspofungin, its penetration into the CNS was limited [5]; this invasive pulmonary aspergillosis was then further complicated by dissemination to the CNS on day 19.

In conclusion, we report a rare trauma case accompanied with invasive pulmonary and CNS aspergillosis following slops aspiration. This case highlights the diagnostic challenge presented by invasive aspergillosis in non-neutropenic patients and underscores its poor prognosis.

Abbreviations

CNS, central nervous system; CT, computerized tomography.

Competing interests

The authors declare that they have no competing interests.

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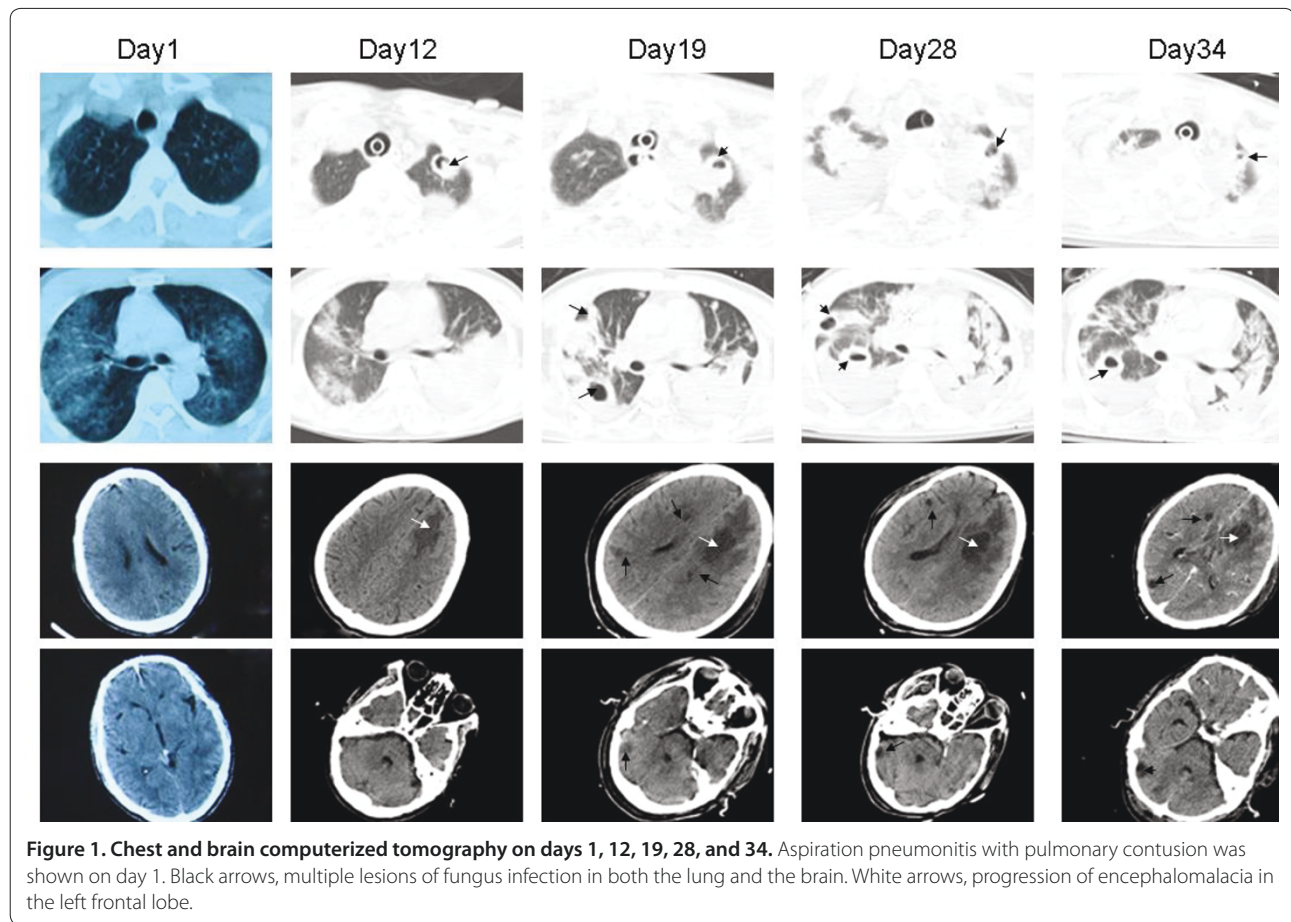
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