

中文題目：經支氣管鏡切片合併捺印細胞學檢查可加速診斷侵襲性肺麴菌病

英文題目：Bronchoscopic biopsy with imprint cytology facilitated early diagnosis of invasive pulmonary aspergillosis

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Introduction

Invasive pulmonary aspergillosis (IPA) is a critical condition mainly occurred in immunocompromised patients, such as patients with neutropenia and those receiving high-dose glucocorticoid or immunosuppressants. Due to its high mortality rate, timely diagnosis is important. Herein, we reported a patient with invasive pulmonary aspergillosis diagnosed with rapid on-site imprint cytology of the bronchoscopic biopsy specimens.

Case Report

A 70-year-old man with a history of bronchiectasis and end-stage renal disease due to rapidly progressive glomerulonephritis with steroid treatment (prednisolone 30 mg daily) was admitted to our intensive care unit for pneumonia with acute respiratory failure. In the first week, his pneumonia improved gradually with empiric broad-spectrum antibiotic treatments and high-flow nasal cannula support. However, the clinical condition deteriorated rapidly thereafter, and he was intubated for severe hypoxemia. Computed tomography of the chest revealed a mass-like lesion in the right middle lobe. Bronchoscopic biopsy in the RB4 was performed. Rapid on-site imprint cytology of the biopsy specimen revealed septate hyphae in acute angle, so voriconazole treatment was initiated. Few days later, galactomannan test of serum and bronchoalveolar lavage fluid both showed positive results and pathological examination of the biopsy specimens showed invasive aspergillosis. His condition stabilized gradually with voriconazole treatment and received tracheostomy for prolonged mechanical ventilation. However, his hospital course was complicated with recurrent bacterial pneumonia and cytomegalovirus pneumonia. He died after two months of treatment.

Discussion

Tissue biopsy is usually required to make a definite diagnosis of IPA. However, the pathological examination usually takes a few days, leading to a delay for the appropriate antifungal treatment. Our case demonstrated that rapid on-site imprint cytology of the bronchoscopic biopsy specimens might provide a timely diagnosis and treatment for IPA in critically ill patients.