

The use of endobronchial ultrasound-guided fine-needle aspiration (EBUS-FNA) in the diagnosis of lymphatic cryptococcosis

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DESCRIPTION

Endobronchial ultrasound-guided fine-needle aspiration (EBUS-FNA) is a minimally invasive technique that allows cytological and histological examination of the tissue sampled from mediastinal lymph nodes under real-time ultrasound guidance. EBUS-FNA has emerged as an important diagnostic modality with high diagnostic yield in malignant diseases. Recently, EBUS-FNA proved to be a useful diagnostic tool for non-malignant mediastinal lymphadenopathy such as in sarcoidosis. There are emerging reports of using EBUS-FNA in the diagnosis of infectious mediastinal lymphadenopathy such as in tuberculosis, histoplasmosis, blastomycosis, nocardiosis and cryptococcosis.¹⁻³ Mediastinal lymphatic cryptococcosis represents an uncommon presentation of cryptococcal infection dissemination.³ We present a case in which EBUS-FNA was used for the diagnosis of lymphatic cryptococcosis in an HIV positive patient. A 61-year-old man with a medical history of HIV infection (CD4 count of 18/mm³ and a viral load of 250 000 copies/mL) non-compliant with his antiretroviral therapy presented for evaluation of chronic cough. CT of the chest revealed a right lower lobe small thick-walled cavity associated with mediastinal lymphadenopathy (figure 1). Bronchoscopic EBUS-FNA of the right upper paratracheal lymph nodes (station 2R) and subcarinal lymph node (station 7) was performed (figure 2). Pathology showed numerous cryptococcus neoformans, confirmed by Gomori methenamine silver and mucicarmine stains (figure 3). Serum cryptococcal antigen test returned positive. Lumbar puncture showed an elevated opening pressure of 24 cm of H₂O, positive cerebrospinal fluid (CSF) cryptococcal antigen, and the CSF grew cryptococcus neoformans. The patient was treated initially with amphotericin B and



Figure 2 Endobronchial ultrasound-guided fine-needle aspiration (EBUS-FNA) of subcarinal lymph node (station 7; white arrow points to the sampling needle inside the subcarinal lymph node).

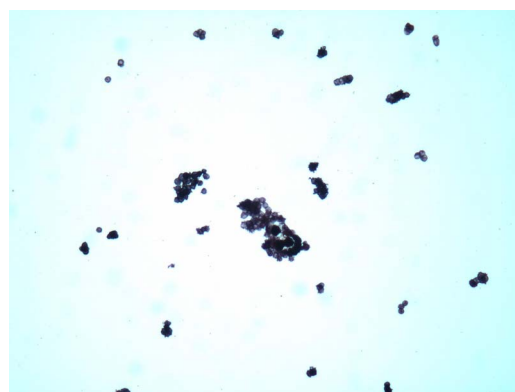


Figure 3 Gomori methenamine silver stain revealing multiple yeast organisms morphologically consistent with cryptococcus neoformans (x40 magnification).

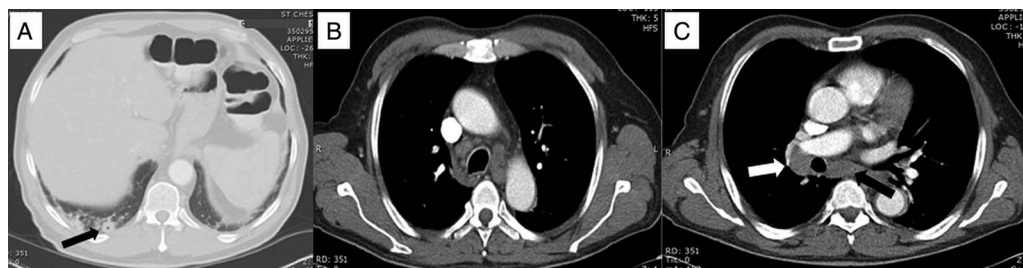


Figure 1 (A) CT of the chest (lung window) shows small thick-walled cavity in the posteromedial right lower lobe measuring 1.5x1.2 cm (black arrow). (B) CT of the chest (mediastinal window) shows paratracheal lymphadenopathy. (C) CT of the chest (mediastinal window) shows right hilar (white arrow) and subcarinal lymphadenopathy (black arrow).



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flucytosine followed by fluconazole with improvement of his condition.

Learning points

- ▶ Endobronchial ultrasound-guided fine-needle aspiration (EBUS-FNA) is a safe technique that can provide rapid and accurate diagnosis in cases of mediastinal lymphadenopathy of infectious aetiology.
- ▶ Despite rarity, lymphatic cryptococcosis should be considered in the differential diagnosis of mediastinal lymphadenopathy in immunocompromised patients.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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