



Clinical image

Spiculated Nodule in a Lung Transplant Recipient: Localized Cryptococcosis



Nódulo espiculado en un trasplantado pulmonar: cryptococosis localizada

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A 57-year-old male, 10 years post-bilateral lung transplant for pulmonary arterial hypertension, was incidentally discovered to have an 11 mm spiculated solid solitary pulmonary nodule (PN) in the left lower lobe during routine chest computed tomography (Fig. 1A). He was on tacrolimus, mycophenolate mofetil and prednisone, along with prophylactic sulfamethoxazole/trimethoprim and nebulized amphotericin B. His forced expiratory volume in the first second (FEV₁) remained stable at 88% of the maximum post-transplant value, with no microbiological isolations or significant exposures.

An ¹⁸F-fluorodeoxyglucose positron-emission tomography showed isolated increased metabolism (standardized uptake value of 2.4) in the PN (Fig. 1B). Atypical resection via video-assisted thoracoscopic showed necrotic epithelioid granulomatous inflammation (Fig. 1C) and encapsulated yeast-like fungal structures (Fig. 1D–F). *Cryptococcus neoformans* was isolated from the biopsy

culture. Brain magnetic resonance and lumbar puncture ruled out disseminated infection.

Radiological follow-up is essential in lung transplant recipients, due to their increased susceptibility to malignancies (primary clinical suspicion based on the patient's clinic-radiological findings), infections and inflammatory conditions. Despite prophylaxis, fungal infections remain a significant cause of morbi-mortality.¹ A thorough evaluation is necessary to rule out disseminated cryptococcosis.² Fluconazole is effective for asymptomatic or mild-moderate pulmonary infections, while severe cases may require amphotericin B plus 5-flucytosine.²

Informed consent

The patient provided written informed consent for the publication of this case.

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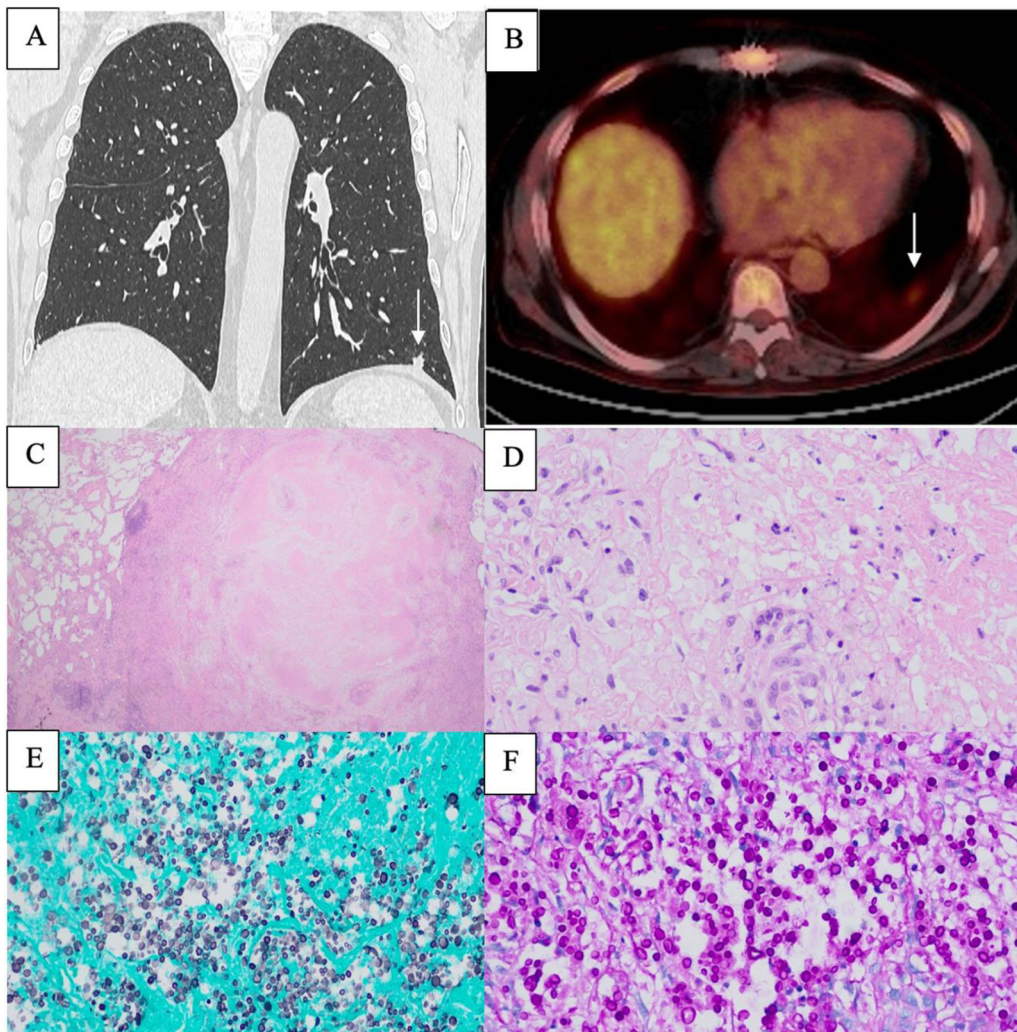


Fig. 1. (A) Chest computed tomography scan, coronal axis, with left lower lobe pulmonary nodule (arrow). (B) ^{18}F -fluorodeoxyglucose positron-emission tomography with pathological metabolism of the pulmonary nodule (arrow). (C) Microscopic section of the atypical lung resection, low-power view (H&E, $2\times$) shows necrotic epithelioid granulomatous inflammation, with normal lung parenchyma visible on the left side. (D) High-power view (H&E, $40\times$) reveals encapsulated yeast-like fungal structures. These fungal structures were positively stained with immunohistochemical techniques: (E) Grocott stain ($40\times$) and (F) periodic acid-Schiff (PAS) reaction ($40\times$).

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Authors' contributions

JGM and QLCA contributed to data acquisition, writing and manuscript review. PGA, AMR, PGVL, MPJC and LMF contributed to data interpretation and manuscript review. DFA contributed to image acquisition, image interpretation and manuscript review. All authors approved the final version of the article. All were involved in managing the patient.

Conflicts of interest

None to declare.

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