



## Pulmonary cryptococcosis mimicking lung cancer

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A 77-year-old man with no history of smoking presented to a clinic with a cough and low-grade fever. He had a history of right pneumothorax and rib fracture. CT imaging showed a shadow of a mass in his right lung and cancer was suspected (figure). He was admitted to our hospital for further assessment. Serum concentrations of the lung tumour markers carcinoembryonic antigen (3.3 ng/mL), cytokeratin 19 fragment (1.6 ng/mL), and progastrin-releasing peptide (31.7 pg/mL) were not increased; however, cryptococcal antigen was detected with a latex agglutination test. The man underwent <sup>18</sup>F-fluorodeoxyglucose PET, and high uptake was detected at the mass. A bronchoscopic examination was done. Pathologically, he was diagnosed with pulmonary cryptococcosis, and no tumour cells were detected.

The man was given several antifungal drugs: oral fluconazole 200 mg daily for 9 days, oral voriconazole 600 mg daily for 1 day and then 400 mg daily for 13 days, and intravenous liposomal amphotericin B 400 mg daily for 17 days. However, treatment showed poor efficacy because after day 12 on amphotericin B the patient's chest radiograph and CT showed enlargement of the mass. CT-guided repeat biopsy of the pulmonary mass was done, and the diagnosis of pulmonary cryptococcosis was confirmed. However, the man refused to continue therapy and left our hospital. The mass shadow gradually improved with only observation at another hospital.

Cryptococcosis is caused by *Cryptococcus neoformans* and *Cryptococcus gattii*. The number of cases of cryptococcosis has been increasing worldwide. Most patients with pulmonary cryptococcosis have no symptoms. Lung nodule shadows are frequently detected in patients with pulmonary cryptococcosis, but lung mass shadows are very rare. Lung cancer is primarily suspected when a lung mass shadow is detected; however, infectious

diseases, such as pulmonary cryptococcosis, should be considered among the differential diagnoses.

### Contributors

NI and KK acquired the data. MT wrote the manuscript. MY and NH critically reviewed the manuscript for intellectual content. All authors have read and approved the final manuscript.

### Declaration of interests

We declare no competing interests.

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Figure: CT image showing a shadow  
Arrow points to shadow of mass.