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Pleural Cryptococcosis in a Patient with AIDS

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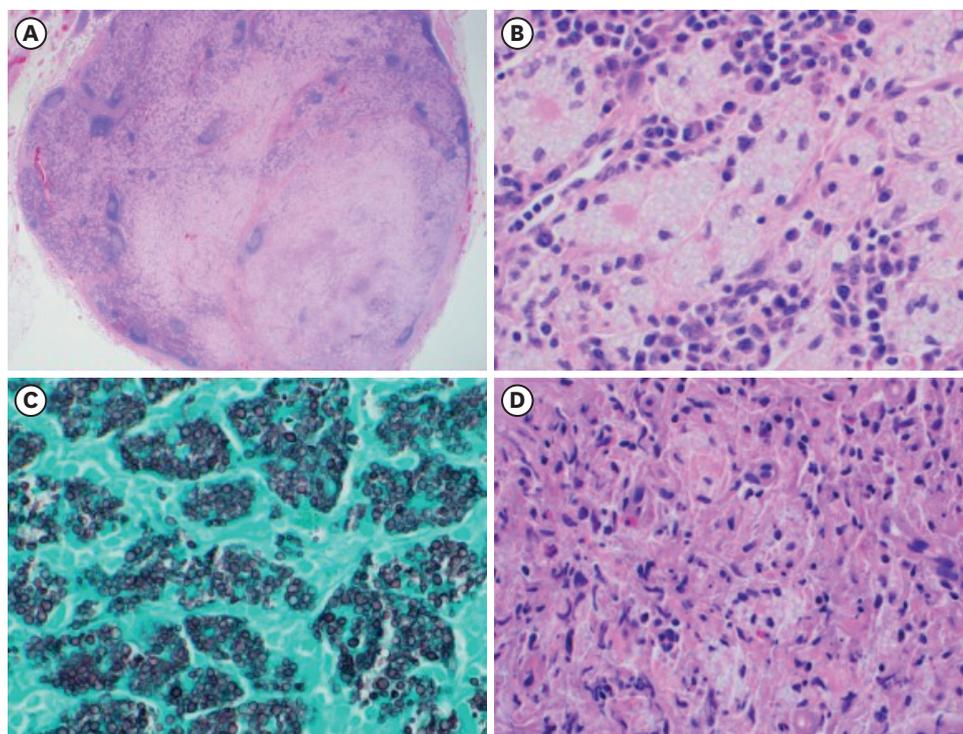


Fig. 1. Pathologic findings of the lymph node and pleura. (A) An enlarged lymph node shows near-total replacement of the cortex by marked accumulation of macrophages (H&E staining, $\times 12.5$). (B) The cytoplasm of macrophages contains variable numbers of intracellular organisms (H&E staining, $\times 400$). (C) These intracellular organisms have a faint round nucleus and large mucoïd capsule (GMS staining, $\times 400$). (D) The biopsied pleura shows many infiltrated macrophages with intracellular organisms (H&E staining, $\times 400$). H&E = hematoxylin and eosin, GMS = Grocott's methenamine silver.

A 41-year-old man with acquired immune deficiency syndrome (AIDS) was referred to our hospital with massive unilateral pleural effusion on January 31, 2020. He had been receiving antiretroviral therapy (lamivudine, abacavir, and dolutegravir) for 3 months. The CD4⁺ T lymphocyte count was 53/ μ L and the HIV RNA level was 82.9 copies/mL. Pleural fluid analysis revealed an exudative fluid with a white blood cell (WBC) count of 100/ μ L (lymphocyte count, 14%) and an adenosine deaminase (ADA) level of 46 IU/L. AFB staining, culture, and tuberculosis (TB) real-time polymerase chain reaction showed negative results. Chest computed tomography revealed multiple enlarged lymph nodes with internal necrosis in

the mediastinum. Because of the high level of pleural ADA and multiple lymph nodes with internal necrosis, a presumptive diagnosis of TB was made, and anti-tuberculosis treatment along with pleural drainage was initiated. On the 13th day after admission, biopsies of the pleura and lymph nodes were performed. Histological findings showed an accumulation of many sinusoidal macrophages in the lymph nodes and infiltrated macrophages in the pleura, which contained marked intracellular organisms, consistent with cryptococcal infection (Fig. 1). On the 18th day after admission, presence of cryptococcal antigens in the serum and cerebrospinal fluid (CSF) was detected. Evaluation of the CSF revealed asymptomatic meningitis with a WBC of 40/ μ L (differential count was not available due to many lysed cells). Liposomal amphotericin B (4 mg/kg/day) and flucytosine (25 mg/kg q 6 hr) were administered for 4 weeks, followed by fluconazole (400 mg/day) for 12 weeks. Pleural effusion is considered rare, whereas lung nodules, infiltrates, or cavitations are common in pulmonary cryptococcosis. Unilateral pleural effusion and multiple enlarged lymph nodes in patients with AIDS were frequently attributed to TB due to the high incidence of this disease in Korea. However, high pleural ADA levels are also suggestive legionellosis, brucellosis, coxiellosis, and cryptococcosis. This case emphasizes the importance of including cryptococcosis in the differential diagnosis of unilateral pleural effusion in patients with AIDS.

Ethics statement

Informed consent was obtained from the patient for this publication.