Disseminated Blastomycosis: A Potential Cause of Death in Immunocompromised Patients

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Clinical Image

A 73-year-old female with multiple comorbidities including rheumatoid arthritis and congestive heart failure presented with worsening shortness of breath. Her condition got rapidly deteriorated and the patient developed multiorgan failure including Acute Respiratory Distress Syndrome (ARDS), septic shock, renal failure, and coagulopathy. Chest tomography showed large right hilar mass (3 cm × 3.8 cm) and right lower lobe nodules (the largest measuring 1.2 cm) that have progressed over the last 8 years. Bronchoscopy and transbronchial biopsy confirmed the presence of disseminated blastomycosis (Figure 1). Comprehensive workup ruled out malignancy, connective tissue diseases and other potential infectious causes. The patient was placed on liposomal amphotericin B but died because of severe ARDS. Timely diagnosis and treatment are pivotal to prevent the development of irreversible lung damage and ARDS caused by endemic fungal infections in immunocompromised patients.

Figure 1: Large, numerous, spherical, double-contoured yeast cells characteristic of Blastomyces dermatitidis are seen in Hematoxylin and eosin (H&E, original magnification 40x) - and Grocott-Gomori's methenamine silver stain (GMS, original magnification 40x) - stained biopsy section from the right lung.