Pulmonary Blastomycosis Diagnosed by Thoracentesis

To the Editor:

Pleural effusions in blastomycosis are uncommon.1,2 We describe a case of blastomycosis in which the diagnosis was made by direct examination of pleural fluid.

CASE REPORT

A 38-year-old black woman was admitted to a local hospital complaining of a three-day history of left lateral pleuritic chest pain. Low-grade fever and nonproductive cough had been present for several weeks, and a ten pound weight loss had occurred over the preceding two months. A chest roentgenogram revealed a left perihilar infiltrate. She was treated with multiple antibiotics, but remained febrile to 39°C, and the chest roentgenogram showed extension of the infiltrate to include the entire left lower lobe. She was transferred to our hospital.

She appeared acutely ill, but was alert and oriented. Examination of the chest revealed dullness to percussion and decreased breath sounds on the left to the angle of the scapula. A pleural friction rub was present on the left. The hematocrit was 28.6 percent and the white cell count was 13,900/cu mm with 73 segmented forms and 8 bands. The chest roentgenogram revealed a left lower lobe infiltrate, and a large left pleural effusion was confirmed with a left lateral decubitus film.

Thoracentesis produced yellow, cloudy fluid with the following characteristics: protein 4.2 gm/dl, glucose 221 mg/dl, red blood cells 2200/cu mm, white blood cells 1,640/cu mm with 50 percent mononuclear cells and 50 percent polymorphonuclear cells. A wet mount of the pleural fluid contained numerous oval, doubly refractile organisms, many of which had single, broad-based buds (Fig 1). Culture of the pleural fluid was subsequently positive for Blastomyces dermatitidis. The patient was treated with a total of 1500 mg amphotericin B with rapid subjective improvement and clearing of the chest roentgenogram.

REFERENCES

1 Genovesi MG, Simmons DH: Airway obstruction due to spontaneous retropharyngeal hemorrhage. Chest 68:840-842, 1975

COMMENT

The chest roentgenogram in pulmonary blastomycosis is non-specific.1,2 The disease may occur anywhere in the lungs and may appear as homogeneous pneumonic infiltrates with a segmental or lobar distribution, as patchy reticulomodular infiltrates, as diffuse nodular infiltrates, or as miliary infiltrates. Cavitary lesions, hilar and mediastinal lymphadenopathy and pleural thickening are also described.1,3 Although pleural thickening is commonly seen (10 of 25 patients in the study by Hawley and Felson3) pleural effusions are uncommon.1,2 In the VA cooperative study,4 only 4 of the 198 cases had roentgenographically detectable pleural effusions, and only one had a positive pleural fluid culture. In a recent review of 50 cases, “pleural reaction” was present in 13 patients, but cultures of fluid obtained at thoracentesis were positive in only four cases.5

Our patient with blastomycosis developed a large pleural effusion that was not only culture-positive, but also smear-positive. Because results of culture of the organism usually requires two to three weeks,6 direct examination of pleural fluid for the yeast form of Blastomyces dermatitidis should be included in the evaluation of patients from endemic areas who develop pleural effusions of unknown etiology.

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REFERENCES


Spontaneous Pneumothorax as a Presenting Pulmonary Manifestation of Early Sarcoidosis

To the Editor:

A 25-year-old black woman was hospitalized in another hospital in January 1975 because of fever and weight loss. No abnormalities were detected by physical examination and chest roentgenograms. Serum alkaline phosphatase was elevated and a liver biopsy showed multiple noncaseating granulomas, but no definite diagnosis could be made and the patient was discharged without therapy.

On July 13, 1976, the same patient was admitted to San Francisco General Hospital Medical Center because of left-sided chest pain and severe dyspnea. The chest roentgenograms showed left-sided pneumothorax and bilateral