A 41-Year-Old Hispanic Man with Nonproductive Cough

(See pages 1741–2 for the Photo Quiz)

Figure 1. Computed tomography of the patient’s chest

Diagnosis: paracoccidioidomycosis.

A diagnosis of paracoccidioidomycosis was made on the basis of the biopsy findings, computed tomography findings (figure 1), and pleural fluid culture results (figures 2 and 3). Itraconazole therapy was initiated, and the patient experienced clinical improvement; unfortunately, he was lost to follow-up.

Paracoccidioidomycosis is restricted geographically to Mexico and Central and South America (with exception of Belize, Chile, Guyana, Nicaragua, Suriname, and most of the Caribbean islands). Areas of high endemicity are present in Brazil, Venezuela, Colombia, Ecuador, Peru, and Argentina and are usually found in tobacco- or coffee-growing regions [1]. Paracoccidioidomycosis in humans is caused by Paracoccidioides brasilensis, a dimorphic fungus that is present in soil as mold and that grows as yeast in vivo at 37°C [2]. P. brasiliensis has a pathognomonic “pilot wheel” or “Mickey Mouse” appearance in culture and tissue specimens [2].

Paracoccidioidomycosis is more common among men and among individuals >30 years of age. P. brasiliensis infection occurs after inhalation of the fungus from contaminated soil. Most initial infections are subclinical; progression to symptomatic disease can occur shortly after the initial infection or after a latency period as long as 30 or more years. There are 2 major types of clinical presentation: acute or subacute (juvenile form) and chronic (adult form) [1]. The chronic form is seen in 80%–90% of the cases and is characterized by progressive respiratory
Figure 2. Giemsa stain of the lung biopsy specimen, showing yeasts with “pilot wheel” morphology (original magnification ×1000).

Figure 3. Lactophenol blue stain of the pleural fluid culture, grown at 37°C, showing yeast with “pilot wheel” morphology (original magnification ×1000).

Symptoms, constitutional symptoms, and occasional involvement of the oral mucous membranes, adrenal glands, skin and lymph nodes, and central nervous system [2]. Chronic pulmonary sequelae and chronic morbidity are common [3]. The juvenile form is seen in individuals who are younger or whose immune systems are compromised (including individuals with AIDS) and is characterized by a more aggressive presentation, with diffuse reticuloendothelial system involvement and constitutional symptoms [2].

The drug itraconazole is the treatment of choice for mild-to-moderate cases, and amphotericin B is reserved for severe cases [2, 4]. Alternative therapies include treatment with voriconazole and sulfonamides.

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