Man with Weight Loss, Fever, Cough, and an Abnormal Spleen
(See page 805–6 for Photo Quiz)

Figure 1.  CT scan of the chest demonstrating diffuse alveolar infiltrates with air bronchograms. Also notable is pretracheal, subcarinal, and paraaortic adenopathy.

Diagnosis: Disseminated histoplasmosis in an immunocompetent patient.

The patient initially was treated for community-acquired pneumonia. Bronchoscopy with bronchoalveolar lavage (BAL) was done. Examination of BAL fluid and a transbronchial lung biopsy specimen revealed budding yeasts suggestive of Histoplasma capsulatum. Examination of a bone marrow biopsy specimen revealed normocellular marrow and multiple, poorly defined, noncaseating granulomas. Culture of bone marrow and a sample from the supraclavicular lymph node yielded H. capsulatum; the results of testing for complement-fixation antibodies to H. capsulatum were 1:512 (mycelial antigens) and 1:128 (yeast antigens). The level of urinary Histoplasma antigen was 6.14 U.

Amphotericin B lipid complex (5 mg/kg/day) was administered. The patient’s hospital course was complicated by septic shock and acute respiratory distress syndrome (ARDS). He died of multiorgan failure on day 20 after admission to the hospital. Multiple areas of infarct seen in the spleen at autopsy corresponded to the nodules seen on the CT scan (figures 1 and 2). H. capsulatum was seen on stained sections of lung (figure 3) and spleen tissue.

H. capsulatum infection in the immunocompetent patient is largely asymptomatic and benign in >90% of cases [1, 2]. Overwhelming infection occurs in the healthy host if the inoculum is high. A possible source of heavy exposure for this patient was bird or bat feces inhaled while he was collecting garbage. Progressive disseminated disease is more common among patients with AIDS or hematologic malignancies and those receiving immunosuppressive therapy.

This case illustrates rapid progression to ARDS, which can be a presenting feature [3] or may develop after treatment [4]. It also illustrates massive involvement of the spleen, which can occur in disseminated histoplasmosis, as demonstrated by the
Figure 2. CT showing the spleen, measuring 17 cm, with multiple heterogeneous nodules.

Figure 3. Gomori methenamine silver stain of a lung biopsy specimen obtained at autopsy demonstrating *Histoplasma capsulatum* yeast forms.
CT scan and autopsy examination. Disseminated atypical mycobacterial infection can present with similar clinical and pathological features. This can be a diagnostic challenge in geographic regions where atypical mycobacterial infection is common.

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References


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