Splenic abscess as a rare presentation of blastomycosis

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DESCRIPTION
An 18-year-old man with no significant medical history was admitted to an academic medical centre in the state of Iowa, USA, with a 1-day history of left upper quadrant abdominal pain and fever. Seven months prior to the admission, he developed cough, fever and malaise and involuntarily lost 14 kg. A few weeks prior to the onset of symptoms, he was digging holes in cities near the Mississippi River. He was given oral antimicrobials for presumptive diagnosis of community-acquired pneumonia. Follow-up chest CT in 2 months demonstrated left lower lung consolidation with a possible small focus of cavitation. Bronchoscopy showed chronic interstitial inflammation. Transbronchial biopsy showed no malignant cells and cultures were negative. At 5 months he was asymptomatic and CT demonstrated improved consolidation. On admission, his temperature was 38.3°C and heart rate was 112/min. Physical examination revealed palpable spleen and tenderness over left upper quadrant. Laboratory tests revealed white cell count of 10.4×10⁹/L, haemoglobin of 12.5 g/L, platelet count of 201×10⁹/L. Liver function tests were normal. CT abdomen showed splenomegaly with a large multiloculated septated lesion measuring 10.7 cm×5.5 cm (figure 1A,B). Ultrasound-guided needle aspiration obtained 10 cc of purulent fluid. Calcofluor white staining of the aspirate was positive for yeast forms consistent with Blastomyces dermatitidis, which subsequently grew in culture (figure 2).

Blastomycosis is a systemic pyogranulomatous infection, most commonly reported in North America, that is diagnosed by culture, antigen testing and histopathology. Risk factors include living in or travelling to endemic area, activities involving disruption of soil, such as clearing brush or cutting trees, and water activities such as canoeing, boating or fishing. Symptoms of blastomycosis are varied and range from subclinical infection to fatal systemic disease. Blastomycosis most commonly involves the lungs. The second...
most common manifestation after pneumonia is skin disease, and splenic abscess due to blastomycosis has been rarely reported. Though definitive diagnosis requires growth of the organism from the affected site, this process can take weeks. Staining of round yeast approximately 8 mm in diameter, budding on a broad base, is helpful from direct samples and the detection of blastomyces antigen in serum and urine has proven useful in rapid diagnosis. Its sensitivity is reportedly 93%, whereas the specificity is reported 79% due to cross-reactivity with histoplasma. In addition, antigen levels decline with successful treatment and increase with recurrence. Treatment is recommended for all patients with symptomatic blastomycosis. Oral itraconazole is recommended for mild to moderate disseminated extrapulmonary blastomycosis and amphotericin B is recommended for moderately severe to severe disease. Treatment duration is based on site, severity of infection and immune status of the patient. In general, mild to moderate disease requires 6–12 months of treatment, and severe disease requires at least 12 months of treatment.

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