DISSEMINATED HISTOPLASMOsis

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Abstract

A case of disseminated histoplasmosis in a 45-year-old male patient with acquired immunodeficiency syndrome (AIDS) from Pune is reported. The patient presented with high-grade fever and pain in hypochondrium. Clinical signs were pallor and hepatosplenomegaly. Bone marrow and splenic aspirate revealed numerous intracellular oval shaped yeast forms. Histoplasma capsulatum was isolated from the bone marrow and splenic aspirate.

H. capsulatum infection is an opportunistic infection usually reported from patient with AIDS in areas endemic for H. capsulatum. The present case highlights the fact that histoplasmosis could be an emerging opportunistic infection in India.

Key words: Acquired immunodeficiency syndrome, culture, histoplasmosis, India

Histoplasmosis, a disease caused by Histoplasma capsulatum var capsulatum, is a relatively rare entity in India. In areas endemic for histoplasmosis, it usually presents as a mild clinically insignificant respiratory disease following inhalation of the fungus from environmental sources. However, there could be three major clinical presentations of Histoplasmosis i.e., pulmonary, progressive disseminated (PDH) and primary cutaneous. Approximately 10% of individuals infected with histoplasmosis may develop progressive disseminated histoplasmosis. This may manifest as chronic PDH characterized by oro-pharyngeal ulcers with or without hepatosplenomegaly or as acute PDH usually seen in immunocompromised individuals. Acute PDH has a spectrum of clinical manifestations. Its presentation as fever, malaise, cough and weight loss could result in the patient being treated for pulmonary tuberculosis, a more common clinical entity in our country. Disseminated histoplasmosis presenting as fever, weight loss, malaise and hepatosplenomegaly may also mimic leishmaniasis.

In the Indian scenario, there appear to be two case reports of histoplasmosis in acquired immunodeficiency syndrome (AIDS) patients. In both the cases a histopathological diagnosis was made. We present here a case report of the first culture confirmed case of disseminated histoplasmosis in an AIDS patient in India.

Case Report

A 45-year-old manual laborer working at a construction site, was admitted to Sassoon General Hospital, Pune, with complaints of high-grade fever, rigors and night sweats of one month duration. He also complained of high colored urine and pain in the right hypochondrium since two weeks. On general examination, the positive findings were fever, pallor, healed scars of herpes zoster on the left side of the back and lesions of Molluscum contagiosum on the face.

A systemic examination revealed a soft abdomen with tender palpable liver (3 cm) and a non-tender palpable spleen (4 cm). A provisional diagnosis of malaria /leishmaniasis was made. Laboratory investigations revealed anemia and a polymorphonuclear leucocytosis. No malarial parasites were seen in the peripheral blood smear. Febrile agglutination tests for typhoid, brucellosis and infectious mononucleosis were negative. Antibodies to HIV 1 and 2 were detected (Capillis HIV Cambridge diagnostic Ireland and Innotest HIV1/HIV2 Innogenetics N.V, Belgium).

A bone marrow aspirate stained by the Leishman’s stain showed oval globose to subglobose yeast-like cells measuring 3-4 mm x 2-3 mm in size, suggestive of H. capsulatum (Fig. 1).

The bone marrow aspirate and splenic aspirate were inoculated at the patient’s bedside on two pairs of Sabouraud’s dextrose agar (SDA) with and without antibiotics and brain heart infusion broth. After two weeks of incubation the SDA inoculated at 28°C revealed a floccose velvety white colony. Microscopic examination showed numerous pyriform microconidia and tuberculated macroconidia 8-14 mm in diameter (Fig. 2).

This mycelial phase could be converted into the yeast in six weeks by weekly serial passages on brain heart infusion blood agar. An identification of Histoplasma capsulatum var capsulatum was made based on dimorphic nature of the fungus and the typical morphology of micro and macroconidia.
acute PDH is diagnosed among AIDS patients with approximately the same frequency as systemic cryptococcal disease. In India, there appear to be only two cases of acute PDH in AIDS patients, which have been diagnosed on the basis of histopathology. One patient is from the north–eastern region and the other an Assamese sailor residing in Mumbai.

With the current pandemic of AIDS one would have expected an upsurge in the incidence of this disease, but in a country like ours where we are already dealing with a plethora of opportunistic pathogens, it is possible to miss a diagnosis, unless there is high index of suspicion. It is suggested that in AIDS patients with fever and hepatosplenomegaly, acute PDH should be considered irrespective of the fact that the patient is from an area not known to be endemic for Histoplasma.

References