



FNAC DIAGNOSES OF DISSEMINATED HISTOPLASMOSIS A RARE ENTITY

Pathology

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ABSTRACT

Disseminated histoplasmosis is caused by the dimorphic fungus *Histoplasma capsulatum* (*H. capsulatum*). The early clinical manifestations are nonspecific, often lead to diagnostic difficulty, and is misdiagnosed as tuberculosis and seen usually in immunosuppressed states. Fine needle aspiration cytology (FNAC) is a simple, safe, and quick technique to establish the initial diagnosis of *H. capsulatum*, thereby prompting early treatment. The skin involvement is rare in disseminated disease and we describe a case of disseminated histoplasmosis in an immunocompromised patient with unusual molluscum contagiosum like umbilicated skin lesions and FNAC of the submandibular lymph node was the only tool for rapid and early confirmatory diagnosis.

KEYWORDS

Fine needle aspiration cytology (FNAC); *Histoplasma capsulatum* (*H. capsulatum*); immunocompromised; molluscum contagiosum

Introduction

Histoplasmosis is caused by the dimorphic fungus *Histoplasma capsulatum* (*H. capsulatum*), the clinical spectrum of which ranges from transient pulmonary infections to disseminated disease. The infection is acquired with the inhalation of spores of *H. capsulatum* found in soils contaminated by bird and bat excreta.^[1]

The disseminated histoplasmosis is uncommon and can present as acute, subacute, or chronic illness. The acute form is a rapidly fatal infection, seen in immunocompromised individuals. The chronic form is characterized by an indolent course with an intact cell mediated immune response adrenal gland, and mucous membrane of the oral cavity.^[1,2] The present case reveals the importance of fine needle aspiration (FNA) being a simple technique for early diagnosis of infection with *H. capsulatum*. It highlights the occurrence of unusual skin lesions associated with histoplasmosis in an immunocompetent individual and asserts as well that the early clinical course of the same mimics tuberculosis causing a delay in diagnosis.

Case Report

A 46 year old male on HAART for last 4 months, who was a carpenter by profession, presented to the department of dermatology, with the complaints of mucocutaneous oral lesions and submandibular lymph nodes. There were multiple discrete to confluent plaques involving tongue, hard palate, uvula and multiple skin coloured papules on face and genitalia. He was referred to the department of Pathology for fine needle aspiration cytology of the bilateral submandibular lymph nodes. Review of other systems was normal. FNAC of the submandibular lymph nodes revealed smears which are cellular and show a mixed inflammatory cell infiltrate which include many dispersed macrophages showing aggregates of intracellular, round to oval capsulated organisms, (2-4u) sized, which are PAS- stain-positive and eosinophilic with a clear halo around and associated inflammation

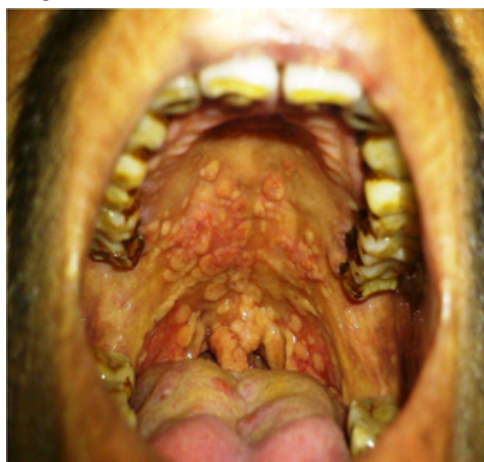


Figure1 showing multiple discrete to confluent plaques

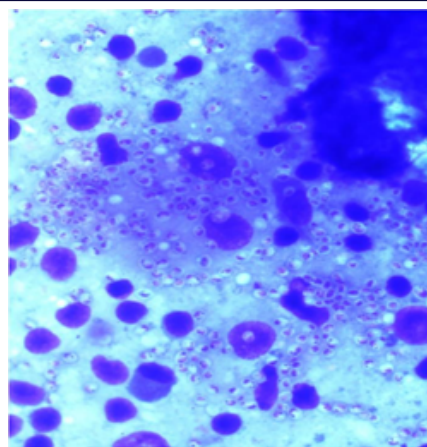


Figure 2 FNAC of rt submandibular lymph node showing macrophages studded with spores

DISCUSSION

Disseminated histoplasmosis is an uncommon airborne disease caused by dimorphic fungus *H. capsulatum* from the soil infected with bird and bat excreta. The course of the illness may be acute, which is seen primarily in infants and immunocompromised patients with high-grade fever with anemia, leukocytopenia, thrombocytopenia, and hepatosplenomegaly. Chronic disseminated histoplasmosis is associated with destructive lesions in the number of organs and occurs almost exclusively in adults.^[3,4] The early clinical manifestation are nonspecific, often leads to diagnostic difficulty, and is misdiagnosed as tuberculosis due to the high prevalence of tuberculosis in India.^[3] Similar diagnostic dilemma in our case must have led to the early start of ATT and delay in diagnosis. The predisposing factors for histoplasmosis are extremes of age, immunosuppressed patients, acquired immunodeficiency disease syndrome, cancer, solid organ or bone marrow transplant, and corticosteroid therapy.^[1,2] However, the patient in this case was immunosuppressed and did not show any clinical improvement. The sites most commonly involved in disseminated histoplasmosis are lungs, lymph nodes, spleen, liver, bone marrow, gastrointestinal tract, adrenal, and the mucus membrane of the oral cavity.^[4] The skin involvement is rare.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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