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Cutaneous Lesions of Disseminated Histoplasmosis in a Haitian Man with the Acquired Immunodeficiency Syndrome

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A 31-year-old Haitian patient was admitted to the Vargas Hospital (Caracas) at the end of January 1985 because of a 2-month history of continuous fever, watery diarrhea without blood or mucus, malaise, and weight loss. He denied homosexuality, drug abuse, or tuberculosis. He had been in Venezuela since 1981 and had not visited Haiti since that time.

On admission, the patient appeared chronically ill, pale, febrile, and partially dehydrated. He had generalized, hyperpigmented macules and papules predominantly on the face, chest, and abdomen. His liver was painful and enlarged.

Pertinent laboratory findings included: hemoglobin, 10.5 g/dL; hematocrit, 38%; white cells, 10,000/μl; neutrophils, 83% (with toxic granulations); lymphocytes, 13%; monocytes, 2%; erythroblasts, 5%; direct Coombs', (++); hepatitis B surface antigen, (−); urine albumin (+++); hemoglobin, (++++), pyuria. Fecal examination revealed cryptosporidial oocysts.

Immunologic studies included the following: cutaneous anergy (to PPD, SK/SD, *Candida*) total lymphocytes, 1450/μl; E-rosettes, 68% (986/μl); OKT3, 74% (1073/μl); OKT4, 6% (65/μl); OKT8, 68% (729/μl); OKT4/OKT8 ratio, 0.08.

Chest x-ray was normal and ultrasonographic studies of the abdomen revealed hepatomegaly. Initial blood cultures were negative.

Skin biopsy, performed on the 7th day after admission, revealed the presence of oval organisms PAS (+) and Grocott (+) around the blood vessels without an inflammatory response. The organism was identified as *Histoplasma capsulatum* using an antiserum developed against *H. capsulatum* (serum was previously absorbed with *Paracoccidioides brasiliensis* and *Cryptococcus neoformans* and the avidin-biotin conjugated immunoperoxidase method [Figs. 1, 2, 3]).[1]

Initial treatment included gentamicin, carbenicillin, spiramycin, rifampin, isoniazid, and trimethoprim/sulfamethoxazole.

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After 7 days, the patient developed respiratory failure and disseminated intravascular coagulation. He died on the 10th day after admission, before amphotericin B could be given.

The autopsy revealed bilateral, hemorrhagic bronchopneumonia and small abscesses in the spleen and mediastinal lymph nodes. Light and electron-microscopic studies showed the presence of *H. capsulatum* in the bone marrow, kidneys, skin, heart, adrenals, gut, spleen, and lungs.

Discussion

The Acquired Immunodeficiency Syndrome (AIDS) is a devastating disease with an extremely high mor-

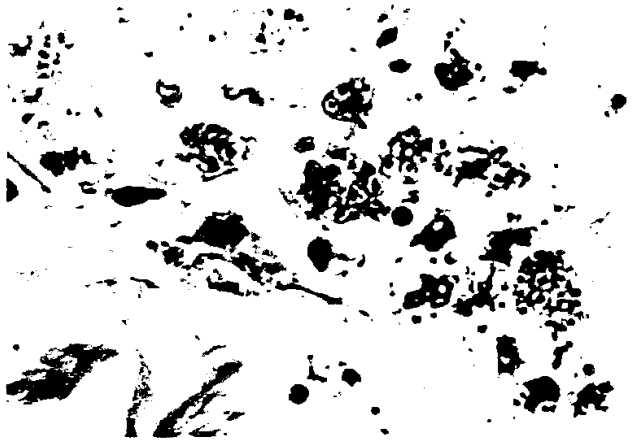

FIG. 1. Skin biopsy. There are PAS-positive spores in the connective tissue. (×1000)

FIG. 2. Skin biopsy. Grocott-positive spores are present in the connective tissue. (×1000)

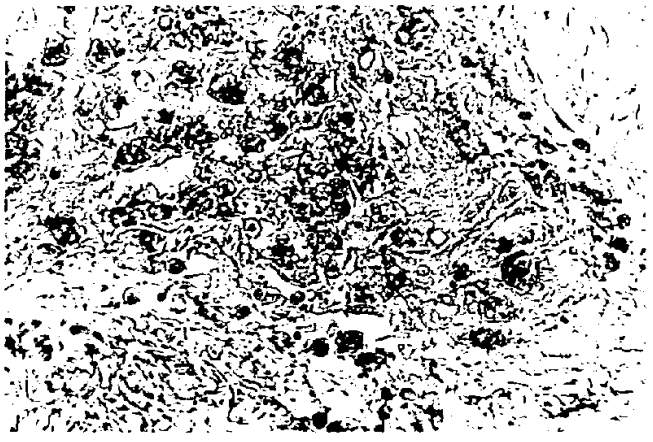

FIG. 3. Skin biopsy. Spores stained with the avidin-biotin conjugates (immunoperoxidase method) in the connective tissue. (×400)

tality.[2] At present, no patient with the diagnosis of AIDS has been cured. The patients generally die with opportunistic infections and/or Kaposi's sarcoma. Disseminated histoplasmosis, associated with the syndrome and as a cause of death, is infrequent. Only 12 cases have been reported.[3,4]

We have reported the association of histoplasmosis with intestinal cryptosporidiosis and hemolytic anemia in the same individual. To our knowledge, this is the first report of an AIDS patient with cutaneous lesions of *H. capsulatum* infection in the skin as evidence of disseminated infection.

Histoplasmosis is not listed as one of the opportunistic infections suggesting the diagnosis of AIDS. *H. capsulatum* is not considered an opportunistic pathogen, since persons with normal immune defenses are susceptible to this common pathogen. Unless there is heavy exposure, histoplasmosis is asymptomatic or mild and self-limiting in over 99.9% of cases. Interesting in our case was the predominance of skin lesions containing *H. capsulatum*. The microorganism clearly was shown by the avidin-biotin conjugated immunoperoxidase method. This technique helps to differentiate skin lesions of disseminated histoplasmosis from those of Kaposi's sarcoma.

It is important to suspect the diagnosis of disseminated fungal infections, such as histoplasmosis, in this group of patients with profound depression of cellular immunity because of the alarmingly high mortality rate among immunocompromised hosts.[5] We can expect more new cases of disseminated mycosis, such as histoplasmosis and paracoccidioidomycosis, in areas where causative fungi are endemic.

Drug Name

amphotericin B: Fungizone

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