

Cutaneous and Nodal Cryptococcosis in an ATL Patient

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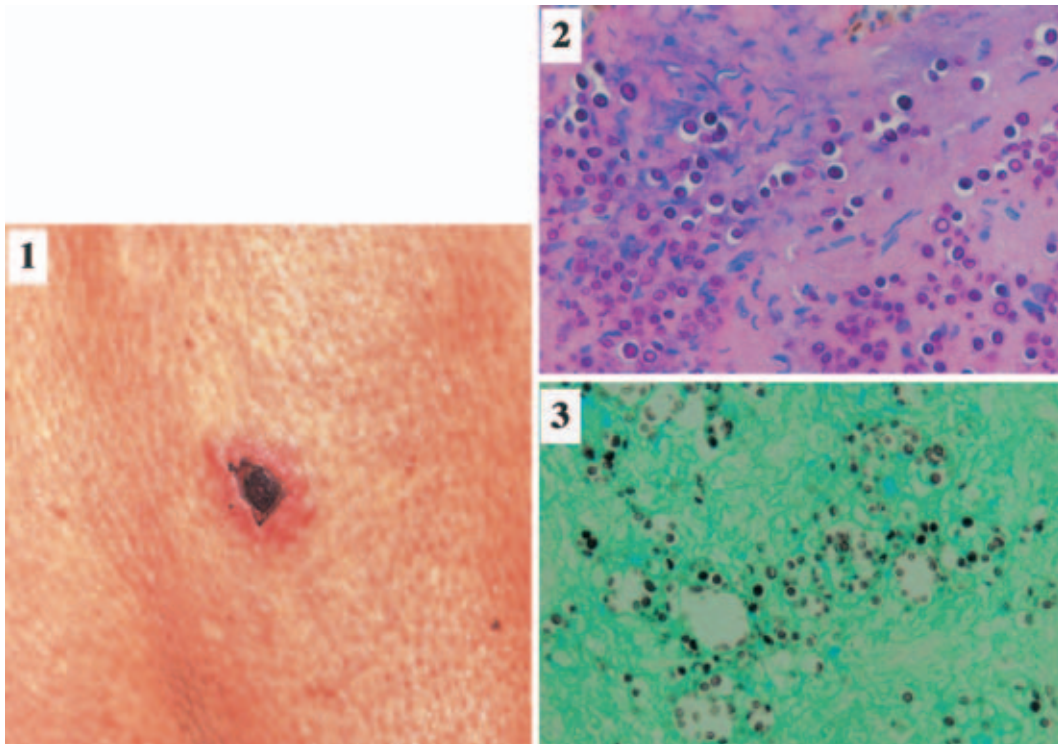


Figure 1. Back skin showing a diffuse erythematous rash and a necrotic lesion.

Figure 2. Biopsy of the necrotic skin lesion showing numerous cryptococci (periodic acid-Schiff stain).

Figure 3. Biopsy of the inguinal lymph node showing invasion of cryptococci (Grocott's stain).

A 66-year-old man with chronic adult T cell leukemia (ATL) was admitted because of a high fever and an itchy skin eruption. There was a miliary erythematous rash on the trunk and extremities. Also present on the back were several ulcerated lesions with a dark crust measuring up to 1 cm in size (Fig. 1). Inguinal lymph nodes (about 3 cm in diameter) were bilaterally palpable. The leukocyte count was 25,500 /mm³ with 67% abnormal lymphocytes, the majority of which were CD4-positive T cells. He was seropositive for human T cell leukemia virus type I (HTLV-I). Abnormal blood chemistries included lactic dehydrogenase 439 U/l, alkaline phosphatase 1,018 U/l, total bilirubin 4.6 mg/dl, and glucose 245 mg/dl. A chest radiograph was normal. Computed tomography scans of the chest and abdomen showed no mediastinal or retroperitoneal lymphadenopathy. Skin biopsies revealed numerous cryptococci neighboring on the necrotic epidermal and dermal tissue in the crusted region on the back (Fig. 2) and dermal infiltration of abnormal lymphocytes in the erythematous region on the left forearm. A biopsy of the right inguinal lymph node demonstrated granulomatous histology with invasion of cryptococci and abnormal lymphocytes (Fig. 3). These organisms possessed the characteristic thick capsule which looked like an

empty space. *Cryptococcus neoformans* was detected from cultures of biopsied skin and lymph node specimens. The serum was positive for cryptococcal antigen but cultures of blood and cerebrospinal fluid were negative for fungi. The patient was treated with combination of fluconazole and amphotericin B for 23 days. This resulted in the clearing of the crusted skin lesions and marked regression of the inguinal lymph nodes. The two antifungals were then replaced with itraconazole due to signs of renal dysfunction. *C. neoformans* is an opportunistic fungal pathogen that causes the third most frequent infection after candidiasis and aspergillosis. The present patient seems to have been predisposed to cryptococcosis by helper T cell immunodeficiency mediated by HTLV-I infection. His cutaneous cryptococcosis was assumed to be a manifestation of disseminated disease rather than a primary infection, since there was cryptococcal involvement of the lymph nodes in both groins.

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