

Atypical Mycobacterial Infection in a Patient With Hairy Cell Leukemia

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*A case of a cutaneous tumor caused by atypical mycobacterial infection (*Mycobacterium kansasii*) in a patient with hairy cell leukemia is reported. Surgical removal of the lesion and subsequent combination antituberculous treatment led to a cure of this infection. Remission of the leukemia was achieved with interferon alfa.*

Patients with immunosuppression can develop various atypical infections. We report a unique case of a single suprasternal tumor caused by *Mycobacterium kansasii* in a patient with hairy cell leukemia.

Case Report

A 60-year-old woman presented with pancytopenia consequent to hairy cell leukemia. As a result of interferon alfa therapy, her blood count and clinical status showed significant improvement. Nine months after her initial presentation, she developed a fungating mass 4 cm in diameter in the suprasternal notch (Figure 1), draining purulent material. Computer-assisted tomographic scan showed that the mass extended into the upper mediastinal region.

The tumor was completely removed via mediastinotomy. The postoperative course was uneventful. The histopathologic features were consistent with granulomatous infiltration with few multinucleated giant cells and histiocytes (Figure 2). The diagnosis of atypical tuberculous infection was suggested. Further exploration of the patient's history revealed that she was in close contact with birds in her home.

The diagnosis was confirmed by a specimen culture that identified the organism present as



Figure 1. A fungating mass 4 cm in diameter in the suprasternal notch draining purulent material.

M kansasii. The patient was treated for 1 year with rifampin, ethambutol, isoniazid, and pyridoxine. At the time this work was completed, the hairy cell leukemia was in remission, and she showed no clinical or laboratory evidence of persisting mycobacterial infection.

Comment

Hairy cell leukemia, a subtype of chronic lymphocytic leukemia, is a clonal expansion of T cells showing characteristic cytoplasmic projections. Whereas these cells infiltrate the spleen, bone marrow, and blood, specific cutaneous manifestations are rare, with only 1 of 113 cases showing skin infiltration with leukemic cells.¹ The most common nonspecific findings are cutaneous and/or systemic infections caused by bacterial organisms.^{1,2}

Disseminated atypical mycobacterial infections developed in 9 of 186 patients with hairy cell leukemia. Six were caused by *M kansasii*, 2 by *Mycobacterium avium-intracellulare* complex, and 1 by *Mycobacterium chelonae*; 5 of the 9 patients survived these infections after treatment with multiple antituberculous agents.³ In another report of a patient

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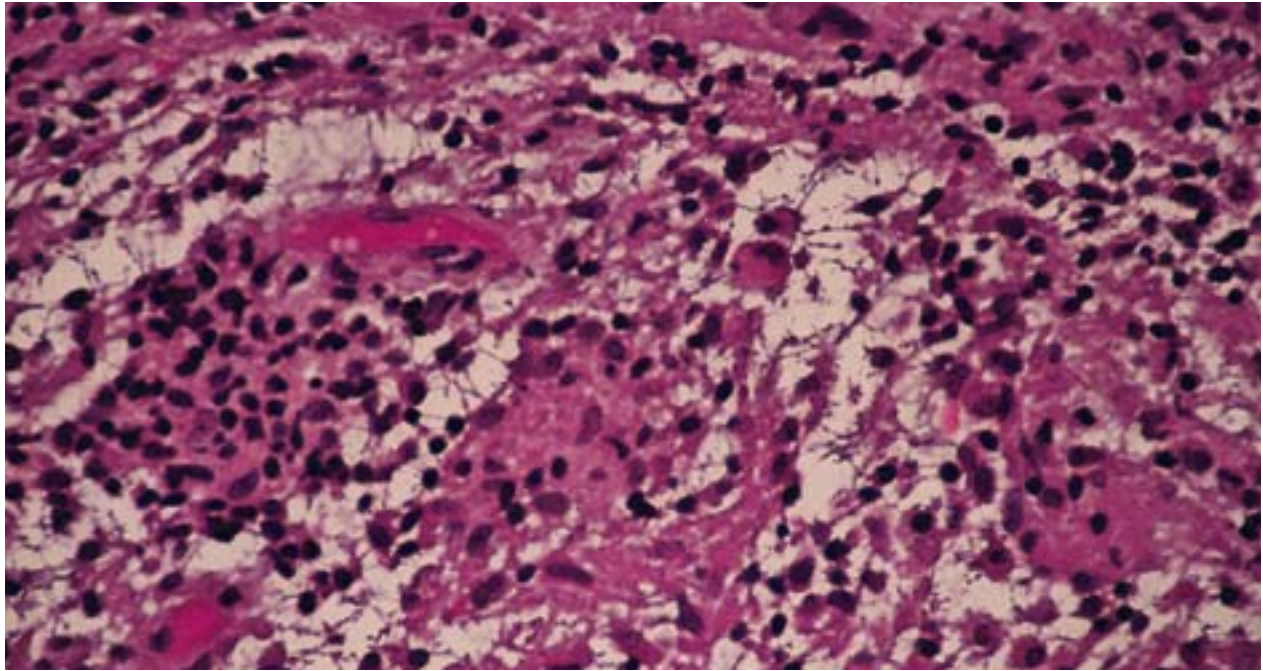


Figure 2. Granulomatous infiltration with few multinucleated giant cells and histiocytes (H&E).

with hairy cell leukemia, *M avium-intracellulare* complex caused disseminated cutaneous and subcutaneous nodules. Erythromycin added to the multidrug regimen resulted in marked improvement of the cutaneous lesions.⁴ A recent case report described a patient with hairy cell leukemia accompanied by pulmonary and disseminated skin infection caused by *Mycobacterium malmoense*, which was successfully treated with combined antituberculous therapy.⁵

Our case is unique because: (1) there was only a single lesion caused by *M kansasii*; (2) surgical removal of the lesion and subsequent combination antituberculous treatment was successful; and (3) the patient's hairy cell leukemia remained in remission after treatment with interferon alfa.

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