

Leukemia Cutis–Associated Leonine Facies and Eyebrow Loss

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To the Editor:

I read with interest the informative *Cutis* case report by Krooks and Weatherall¹ in which the authors not only described the case of a 66-year-old man whose diagnosis of bone marrow biopsy–confirmed acute myeloid leukemia (AML) presented concurrently with skin biopsy–confirmed leukemia cutis but also discussed the poor prognosis of individuals with acute myelogenous leukemia cutis. Their patient died within 5 weeks of establishing the diagnosis. In addition, lateral and frontal photographs of the patient's face demonstrated diffuse infiltrative plaques of leukemia cutis; he had swollen eyelids and lips with distortion of the nose secondary to dermal infiltration of leukemic myeloid cells.¹ Although not emphasized by the authors, the patient appeared to have a leonine facies and at least partial loss of the lateral eyebrows.

Malignancy-associated leonine facies resulting from infiltration of the skin by neoplastic cells has been reported in a patient with metastatic breast carcinoma.^{2,3} However, it predominantly occurs in patients with hematologic dyscrasias such as leukemia cutis, lymphoma (ie, cutaneous B cell, cutaneous T cell, Hodgkin), plasmacytoma, and systemic mastocytosis.^{3,4} The report by Krooks and Weatherall¹ adds AML-associated leukemia cutis to the previously observed types of leukemia cutis–related leonine facies in patients with acute lymphocytic leukemia, acute myelomonocytic leukemia, and chronic lymphocytic leukemia.^{3,4}

Partial or complete loss of eyebrows in the setting of leonine facies has a limited differential diagnosis.^{3,5} In addition to cancer, the associated disorders include adnexal mucin deposition (alopecia mucinosis), granulomatous conditions (sarcoidosis), infectious diseases (leprosy), inherited syndromes (Setleis syndrome), photoallergic dermatoses (actinic reticuloid), and viral conditions (viral-associated trichodysplasia).³⁻⁹ Neoplasms associated with leonine facies and eyebrow loss include lymphomas (mycosis fungoides and unspecified cutaneous T-cell lymphoma), systemic mastocytosis and

leukemia cutis secondary to acute lymphocytic leukemia, acute myelomonocytic leukemia, and now AML.^{1,3-5}

The eyebrow loss associated with leonine facies often is not reversible once the causative cell of the associated condition (eg, granulomas of mycobacteria-infected histiocytes in leprosy, neoplastic lymphocytes in cutaneous T-cell lymphoma) has infiltrated the area of the eyebrows and abolished the preexisting hair follicles; however, follow-up descriptions of patients after treatment of other conditions that cause eyebrow loss usually are not reported. Indeed, there was partial reappearance of the eyebrows in a woman with systemic mastocytosis–associated loss of the eyebrows after malignancy-related treatment was reinitiated and the infiltrative facial plaques that had created her leonine facies had decreased in size.⁵ It is reasonable to speculate that the eyebrows may have reappeared in the patient reported by Krooks and Weatherall¹ and his leonine facies–associated facial plaques may have resolved if he had undergone and responded to treatment with antineoplastic chemotherapy.

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The author reports no conflict of interest.

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