A biopsy showed a superficial and deep perivascular, atypical mononuclear cell infiltrate with CD68, CD43, and myeloperoxidase positivity. A complete blood count revealed leukocytosis with monocytes and immature granulocytes. A bone marrow biopsy showed acute myeloid leukemia.

The patient received aggressive multiagent chemotherapy. After a disease-free period of 8 months, he subsequently developed a transient erythematous, macular eruption that prompted a repeat work-up. He was diagnosed with a relapse of his monocytic leukemia.

The lesions are the result of an infiltration of neoplastic cells into the epidermis and dermis, they occur in about 30% of leukemia patients. They most frequently appear as nonspecific, firm or rubbery papules, nodules, or plaques, which can range from flesh-colored to plum-colored. They can masquerade as other skin diseases including erythema nodosum, mycosis fungoides, erythema annulare centrifugum, urticaria, psoriasis, stasis dermatitis, and chilblains, said Dr. Guevara, a resident at the University of Oklahoma, Oklahoma City.

“Leukemia cutis occurs in a significant minority of patients who have been previously diagnosed with leukemia or in whom the work-up for systemic illness has already begun,” said Adrian Guevara, M.D., who presented this case in a poster session at the annual meeting of the American Academy of Dermatology. “But only rarely is it the presenting sign of a myeloproliferative or myelodysplastic state in an otherwise asymptomatic patient.”

The lesions of leukemia cutis are usually unilateral, and the common sites are the scalp, upper arms, legs, and lower extremities. They can also be seen in the interdigital folds, nail beds, and nail folds. The lesions are typically asymptomatic, but they can be pruritic or tender.

In the case presented by Dr. Guevara, the patient had a transient erythematous, macular eruption on his lower extremities as well as diffuse pink papules on back, legs, and feet. A biopsy showed a superficial perivascular infiltrate of lymphocytes and plasma cells, with CD68, CD43, and myeloperoxidase positivity. The patient was diagnosed with monocytic leukemia.

The lesions of leukemia cutis can be pathognomonic of monocytic leukemia, and they can be mistaken for other skin conditions, such as psoriasis, eczema, or seborrheic dermatitis. However, the lesions of leukemia cutis have a characteristic appearance, with a well-defined border and a central area of clearing.

In summary, leukemia cutis is a rare but important clinical entity that can be confused with other skin conditions. A biopsy is necessary to make the diagnosis and to exclude other possibilities. Early diagnosis and treatment are critical to achieving a good outcome.

Michele G. Sullivan