

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Hematology Quiz – Case 16

A 67-year-old man was referred to our center for the evaluation of anemia and the presence of a 2-month history of multiple erythematous patches associated with few papulonodular and blistering lesions located mainly on the trunk. His medical history included type 1 diabetes mellitus and hypertension.

His physical examination revealed erythematous arciform, annular patches and disseminated nodules, most of which had an ulcerated, hemorrhagic surface, on trunk (fig. 1) and axillary regions. There was a mild hypertension (145/95 mmHg) but there was no organomegaly or lymphadenopathy. His full blood count showed a mild anemia (Hb 11.2 g/dL, Ht 34.8%, MCV 89 fL, MCH 30.6 pg) with normal white blood cell and platelet counts. In the evaluation of peripheral blood smears, the presence of a small number (<1%) of atypical medium/large pleomorphic lymphocytes was observed (fig. 2).

There was an increased erythrocyte sedimentation rate (88 mm/h) and elevated serum β_2 -microglobulin (2.4 mg/mL).



Figure 1

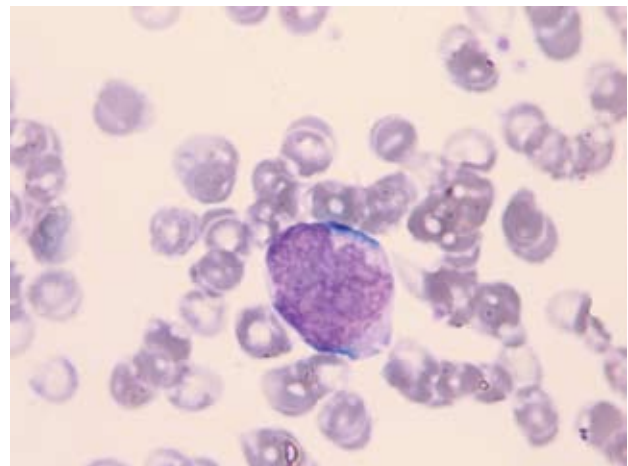


Figure 2

Serological tests for Epstein-Barr virus and cytomegalovirus suggested previous infection, whereas serology for hepatitis B and C viruses and human herpesvirus (HHV)-6, HHV-7, and HHV-8 produced negative findings. The bone marrow trephine biopsy and the marrow aspiration revealed no infiltration by clonal lymphocytes.

Histology from a nodule showed a massive infiltrate of large

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lymphocytes with a discrete number of blastic lymphoid cells throughout the entire dermis, with diffuse infiltration of the epidermis. Immunohistochemical studies on paraffin-embedded tissue demonstrated that the malignant cells had an α/β T-helper phenotype (CD3⁺, CD4⁺, β F1⁺, T-cell receptor [TCR]- δ 1⁻, CD56⁻); most of the neoplastic cells were proliferating (mindbomb homolog 1+) and expressed the CD30 antigen. TCR- γ gene rearrangement analysis of a biopsy specimen from lesional skin, using a polymerase chain reaction technique showed a monoclonal gene rearrangement.

The diagnosis was established and specific therapy started. Initial treatment produced only partial regression of the skin lesions within a 6-month period.

Comment

Cutaneous T-cell lymphomas (CTCLs) are a group of uncommon mature T-cell lymphomas presenting primarily or exclusively in the skin. The most common subtype, mycosis fungoides and its leukemic variant Sézary syndrome, frequently behave as a chronic lymphoma with good prognosis for early-stage disease and shortened survival only for patients in advanced stages. Historically, these patients have experienced excessive toxicity from chemotherapy without durable benefit, leading to current conservative treatment strategies. However, other subtypes of CTCLs have also been described.

Our patient belongs to a rare case of CTCLs in which malignant T-cells have a T-helper phenotype. T-helper and T-regulatory cell CTCLs are characterized by aggressive behavior and by the occurrence of protean cutaneous manifestations during its course, including both classic lesions, such as patches, nodules, and plaques, and atypical lesions, including bullae. These malignancies respond very rarely to classical chemotherapy.

An increasing number of novel therapies are available or in development. These newer therapies often have unique mechanisms of action and different toxicities with less myelosuppression than traditional cytotoxic chemotherapy. Among these novel systemic therapies are so-called biologic therapies, such as retinoids like bexarotene, the fusion toxin denileukin diftiox, lenalidomide, and toll-like receptor agonists. Other important novel or emerging agents include the histone deacetylase (HDAC) inhibitors; a novel antifolate, pralatrexate; the proteasome inhibitor bortezomib; and the purine nucleoside phosphorylase inhibitor forodesine. Even agents considered to be conventional chemotherapy, such as gemcitabine or pegylated liposomal doxorubicin, have demonstrated activity in CTCL at relatively lower doses with less myelosuppression.

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