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PHOTO CLINIC

Leukemia Cutis in a Child with Acute Lymphoblastic Leukemia at Diagnosis and Relapse

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A 9-year-old boy who was diagnosed with acute lymphoblastic leukemia (ALL) at the age of five developed a combined testicular and bone marrow relapse after 4 years while he was off therapy for one year.

At initial diagnosis of acute leukemia, physical examination was remarkable for splenomegaly and an ulcerative lesion on his cheek. Immunophenotyping was in favor of Pre-B ALL. Cytogenetic study was positive for t(12,21). He was treated with BFM oriented protocol for standard ALL. Chemotherapy was continued for three years. At relapse, physical examination disclosed splenomegaly and unilateral testicular enlargement. Bone marrow aspiration was also indicative of relapse. He was scheduled to receive protocol for relapsed ALL (ALL-REZ BFM) consisting of repeating chemotherapy courses of R1, R2 and R3. Orchiectomy was performed for the involved testis and he received radiation to the contralateral testis. He was also considered to go through allogenic hematopoietic stem cell transplantation. After receiving two cycles of each course, an ill-defined ulcer with erythematous border was observed on his cheek at the same place of the original ulcer at primary diagnosis (figure 1). Skin biopsy revealed infiltration of lymphoblasts. It was considered as extramedullary relapse while his bone marrow was in morphologic remission at this time and minimal residual disease was reported negative by flowcytometry. This is the first case of ALL in a child who developed LC as an extramedullary site of relapse at second relapse after receiving intensive chemotherapy.

Figure 1: An ill-defined ulcer with erythematous border was observed on the cheek

Leukemia cutis (LC) is defined as infiltration of the skin with lymphoblasts and is an extramedullary manifestation

of leukemia. The cutaneous involvement has a wide spectrum of manifestations ranging from nodules and plaques to rare lesions such as erythematous macules, blisters and ulcers.[1] LC is an uncommon finding in ALL. It typically manifests as red or violaceous papules mainly on the face.[2] Skin is a very rare extramedullary site that can be involved in relapsed cases of leukemia. LC is considered a poor prognostic marker heralding hematologic and bone marrow relapse.[3] Isolated cutaneous relapse has been reported in a 9-year-old girl with AML who was treated successfully with electron beam therapy to the skin lesions.[4]

Conflict of Interest: None declared.

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