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Acute Myeloid Leukemia Relapse in an a Rare form After Treating his Tuberculosis TB

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Abstract : Objectives: 1. Documenting the spontaneous resolution of AML following the initiation of anti-TB therapy. 2. Presenting an uncommon type of relapse in Acute Myeloid Leukemia. 3. Highlighting the role of immune markers in the diagnosis of Leukemia cutis. 4. Exploring and highlighting the possibility of skin relapse as the exclusive manifestation, even when skin involvement is known secondary manifestation in AML. Background: Spontaneous remission of Acute Myeloid Leukemia (AML) is a rare phenomenon that has only been reported in some case reports, usually following severe infections. Some studies have described the occurrence of tuberculosis (TB) infection with AML, usually after starting chemotherapy. Spontaneous resolution of AML after starting anti TB therapy (ATT), without starting chemotherapy has never been described in the literature. Moreover, Leukemia cutis is another rare skin manifestation of Acute Myeloid Leukemia as a result of infiltration of the skin or subcutaneous tissue by leukemic cells, in which can present during, precedes, after or independently of systemic leukemia. Methods: Here, we present a case of a 13-year-old male who presented with fever, weight loss, lethargy, epistaxis, bruising and dry cough and was later diagnosed with AML. Before initiating leukemia treatment, the patient was tested for TB and was found to have active TB infection. His leukemia treatment was postponed to clear the TB infection and he was commenced on ATT. Two months later, repeat blood film and bone marrow biopsy showed resolution of his AML. The patient remained in remission for 1 month, after which he presented with symmetrical blue purple well-defined round indurated plaques on the chest and thighs. Our differentials were leukemia cutis and Kaposi sarcoma. Results: Skin Biopsy with immune markers done, showed a picture of Acute Myeloid Leukemia. Immunohistochemistry (IHC) showed neoplastic cells diffusely and strongly positive for LCA, CD2, CD31, MPO, CD117, Lysozymes and TDT, and moderately positive for CD34, CD99, CD43 and CD6 And patchy for CD68. Ki67 showed 60% proliferation index. They were negative for the remaining markers. This suggested acute myeloid leukemia (AML). Conclusion: In summary, we present a rare case of TB with AML that resolved after treatment of TB with ATT but relapsed later as leukemia cutis. While skin involvement might occur as a secondary manifestation of AML, Skin relapse could be the only one.

Keywords : Leukemia cutis, Leukemia relapse, Acute Myeloid Leukemia, spontaneous resolution of AML
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