

Aleukemic leukemia cutis

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TO THE EDITOR: I read with great interest the article “Aleukemic leukemia cutis” by Abraham et al,¹ as we recently had a case of this at my institution. The case is unique and quite intriguing; however, I found the pathologic description confusing and imprecise.

The authors state, “The findings were consistent with leukemic T cells with monocytic differentiation.”¹ This is based on their findings that the tumor cells expressed CD4, CD43, CD68, and lysozyme. However, the cells were negative for CD30, ALK-1, CD2, and CD3.

First, I must contest the authors’ claim that “the cells co-expressed T-cell markers (CD4 and CD43)”: CD4 and CD43 are not specific for T cells and are almost invariably seen on monocytes, especially in acute monoblastic/monocytic leukemia (AMoL; also known as M5 in the French-American-British classification system).^{2,3} Therefore, the immunophenotype is perfect for an AMoL, but since there was no significant blood or bone marrow involvement and it was limited to the skin, this would best fit with a myeloid sarcoma, which frequently has a monocytic immunoprofile.^{3,4}

Additionally, this would not be a mixed-phenotype acute leukemia, T/myeloid, not otherwise specified, as that requires positivity for cytoplasmic CD3 or surface CD3, and that was conspicuously absent.⁵ Therefore, the appropriate workup and treatment should have essentially followed the course for acute myeloid leukemia,⁴ which is unclear from the present report as there is no mention of a molecular workup (eg, for *FLT3* and *NPM1* mutations). This would, in turn, have important treatment and prognostic implications.⁶

The reason for my comments is to bring to light the importance of exact pathologic diagnosis, especially when dealing with leukemia. We currently have a host of treatment options and prognostic tools for the various types of acute myeloid leukemia, but only when a clear and precise pathologic diagnosis is given.⁵

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REFERENCES

1. Abraham TN, Morawiecki P, Flischel A, Agrawal B. Aleukemic leukemia cutis. *Cleve Clin J Med* 2019; 86(2):85–86. doi:10.3949/ccjm.86a.18057
2. Xu Y, McKenna RW, Wilson KS, Karandikar NJ, Schultz RA, Kroft SH. Immunophenotypic identification of acute myeloid leukemia with monocytic differentiation. *Leukemia* 2006; 20(7):1321–1324. doi:10.1038/sj.leu.2404242
3. Cronin DMP, George TI, Sundram UN. An updated approach to the diagnosis of myeloid leukemia cutis. *Am J Clin Pathol* 2009; 132(1):101–110. doi:10.1309/AJCP6GR8BDEXPKHR
4. Avni B, Koren-Michowitz M. Myeloid sarcoma: current approach and therapeutic options. *Ther Adv Hematol* 2011; 2(5):309–316. doi:10.1177/2040620711410774
5. Weir EG, Ali Ansari-Lari M, Batista DAS, et al. Acute bilineal leukemia: a rare disease with poor outcome. *Leukemia* 2007; 21(11):2264–2270. doi:10.1038/sj.leu.2404848
6. De Kouchkovsky I, Abdul-Hay M. Acute myeloid leukemia: a comprehensive review and 2016 update. *Blood Cancer J* 2016; 6(7):e441. doi:10.1038/bcj.2016.50

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IN REPLY: We greatly appreciate our reader’s interest and response. He brings up a very good point. We have reviewed the reports and discussed it with our pathologists. On page 85, the sentence that begins, “The findings were consistent with leukemic T cells with monocytic differentiation” should actually read, “The findings were consistent with leukemic cells with monocytic differentiation.” The patient was appropriately treated for acute myeloid leukemia.

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