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Simultaneous bone marrow involvement by CLL/SLL and LEF1/cyclin D1-positive metastatic melanoma

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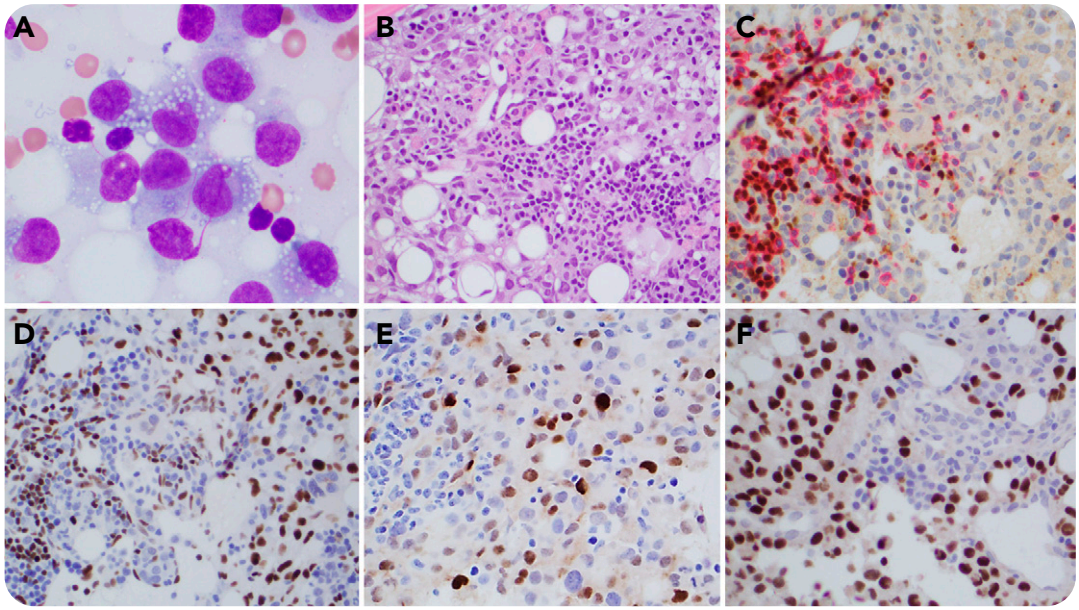

A 69-year-old man with a history of melanoma and chronic lymphocytic leukemia (CLL) presented with pancytopenia, low-grade fever, and shortness of breath. Bone marrow smear and biopsy specimen showed infiltrate consisting of 2 admixed populations of atypical cells: (1) large, pleomorphic cells with small vacuoles in cytoplasm; and (2) small lymphoid cells with scant cytoplasm, round nucleus with clumped chromatin, and occasionally a small nucleolus (panel A, smear, hematoxylin and eosin stain [H&E], original magnification ×1000 [100× objective]; panel B, H&E, original magnification ×400 [40× objective]). CD5/PAX5 highlighted small atypical lymphoid cells that were surrounded by negative, large, pleomorphic cells (panel C, original magnification ×400 [40× objective]). LEF1 was positive in both cell populations (panel D, original magnification ×400 [40× objective]). Cyclin D1 was positive in a subset of large, pleomorphic cells and negative in small lymphoid cells (panel E, original magnification ×400 [40× objective]). SOX10 (panel F, original magnification ×400 [40× objective]) and S100 were strongly positive in large, atypical cells and negative for cytokeratin, Melan-A, and HMB-45 in both populations.

This rare and interesting case represents a coexistence of CLL and metastatic melanoma in bone marrow. To avoid misdiagnosis, it is important to remember that melanoma can be positive for widely used lymphoma stains (LEF1 and cyclin D1), especially in cases with negative Melan-A and HMB-45 markers.

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