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# Mantle cell lymphoma with unusual Burkitt-like morphologic features

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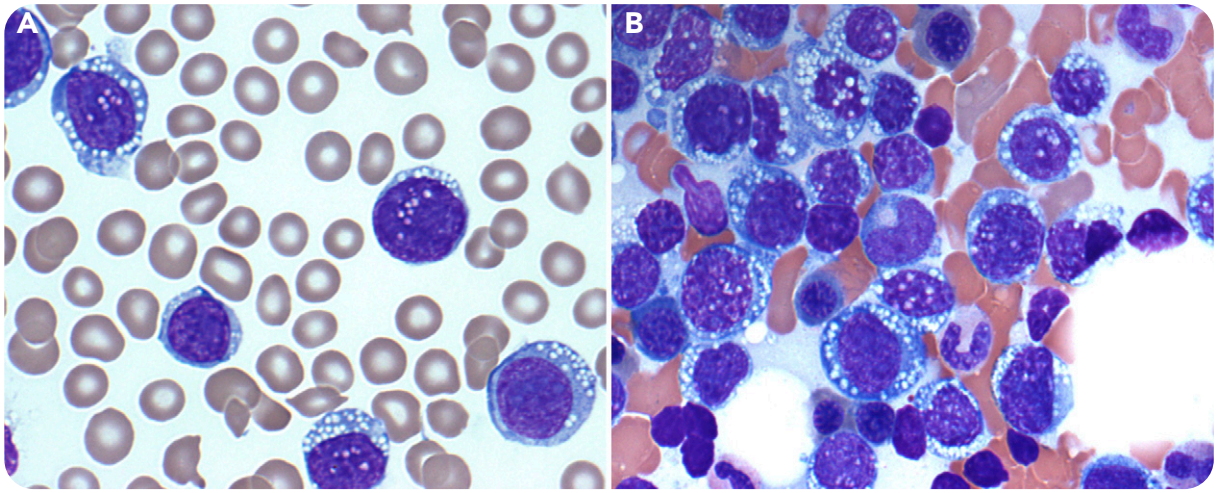


A 77-year-old man presented with self-observed splenomegaly after intentional weight loss. His complete blood count (CBC) showed an elevated white blood cell count at 45.5 × $10^9$/L, normocytic anemia, and thrombocytopenia. The peripheral blood smear shows a population of large mononuclear cells with a high nuclear-to-cytoplasmic ratio containing cytoplasmic vacuoles, some with prominent nucleoli (panel A; Wright-Giemsa stain, original magnification ×100). These atypical cells were also seen on the bone marrow aspirate (panel B; Wright-Giemsa stain, original magnification ×100). The flow cytometry of the bone marrow specimen showed a large population of $CD5^-/CD10^-$ surface λ–restricted B cells with coexpression of CD45, CD19, and without CD138 expression. The neoplastic cells expressed PAX5, BCL2, and BCL1 by immunohistochemical stains in the bone marrow. The immunostain for CD20 was negative due to the patient receiving rituximab prior to the bone marrow biopsy. p53 immunostain was negative in the neoplastic cells. A subset of the cells expressed MYC and a small subset showed weak expression of SOX11. Proliferation rate was increased by Ki67 immunostain highlighting ~60% of the neoplastic cells. Fluorescence in situ hybridization studies detected t(11;14) and immunoglobulin-H gene rearrangement with no evidence of MYC rearrangement or amplification. These findings are diagnostic for mantle cell lymphoma, blastoid variant. A complex karyotype with *t(11;14)* was noted by cytogenetics without evidence of *17p* loss.

Morphologically, the neoplastic cells with large nuclei, prominent nucleoli, and vacuoles appeared like Burkitt lymphoma or dysplastic pronormoblasts. This case demonstrates that mantle cell lymphoma may present with an atypical morphologic feature and lack CD5 expression; in these cases, immunophenotypic studies along with the molecular and cytogenetic testing are imperative for diagnosis.

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