



## Bilobulated circulating lymphocytes in persistent polyclonal B-cell lymphocytosis

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A 44-year-old female was referred for investigation of a 10-year persistent lymphocytosis. The patient was a heavy smoker. On physical examination no organomegaly was detected. Complete blood counts showed: hemoglobin 11g/dL, platelets  $219 \times 10^9/L$ , leukocytes  $10.3 \times 10^9/L$ , 47% segmented neutrophils, 1% band forms, 48% lymphocytes, 1% monocytes, 2% eosinophils and 1% basophils. Serum IgM was increased (794 mg/dL) but without a peak. Serum IgG and IgA were normal to slightly decreased. HLA-DR typing expressed DR3, DR7, DRw52 and DRw53. Blood chemistry was normal. Microscopic blood smear examination revealed 10% of lymphocytes with a binucleated or bilobulated nucleus connected sometimes by a slender internuclear bridge (Figure 1). The most striking nuclear abnormality was nuclear pockets found in 6 of 25 sections of mainly bilobulated lymphocytes (Figure 2). Bone marrow aspirate was normal. Immunophenotyping of peripheral atypical lymphocytes revealed CD19<sup>+</sup>, HLA-DR<sup>+</sup>, IgM<sup>+</sup>, CD3<sup>-</sup>, CD5<sup>-</sup>, CD23<sup>-</sup>. Both  $\kappa$  and  $\lambda$  light chains were expressed indicating the polyclonal nature of the B-lymphocytes. FISH studies demonstrated the presence of three spots corresponding to three centromeres of chromosome 3.

Bilobulation of lymphocytes is the morphologic hallmark of persistent polyclonal B lymphocytosis, an indolent disorder associated with HLA-DR7, a polyclonal increase in IgM and sometimes an additional  $i(3)(q10)$  as cytogenetic abnormality.<sup>1,2</sup>

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### References

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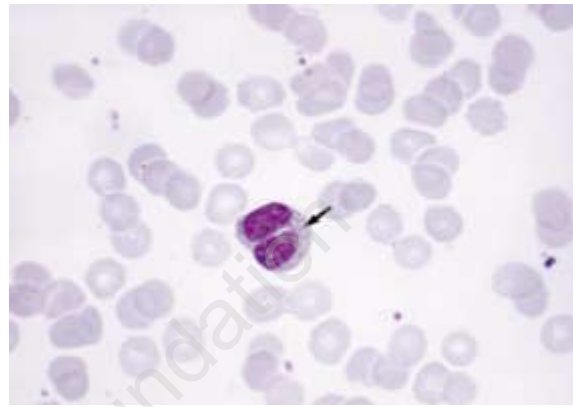


Figure 1. Bilobulated lymphocyte from a patient with persistent polyclonal B-cell lymphocytosis. Both nuclear lobes are connected by a fine chromatin bridge; a nuclear pocket is also visible (arrow). (May-Grünwald Giemsa x 1,000).

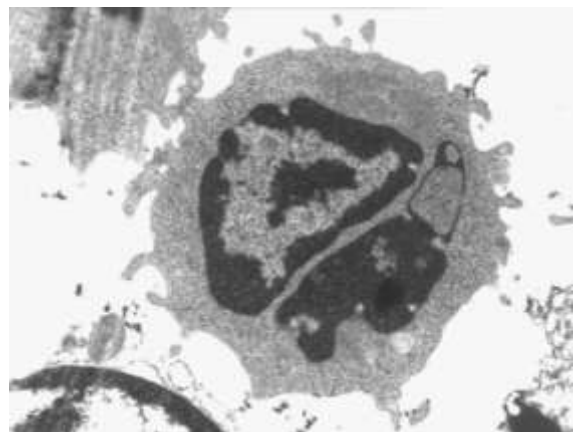


Figure 2. Bilobulated lymphocyte with a conspicuous nuclear pocket. (Original magnification x 8,900).

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