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 $2.19 \times 10^9$/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+, HLA-DR+, IgM+, CD3–, CD5–, CD23–. 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 centromers 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.1,2

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References