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When a marginal zone–type lymphocytosis mimics large granular lymphocytes

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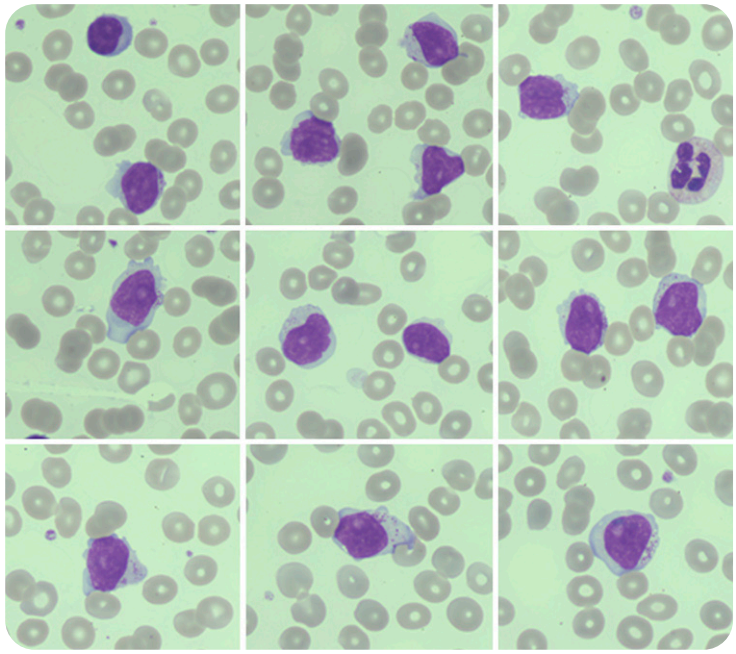

A 72-year-old man presented with a persistent lymphocytosis. Physical examination was unremarkable, with no evidence of lymphadenopathy or organomegaly. A marked lymphocytosis (11.4 × 10^9/L) and slight anemia (12.0 g/dL) were observed. The peripheral blood smear showed 70% atypical lymphocytes of medium size, with a condensed chromatin, often small nucleoli, and a weakly basophilic cytoplasm containing clustered granulations, with a large granular lymphocyte morphology (May-Grünwald-Giemsa stain, original magnification ×1000). Unexpectedly, in immunophenotyping analysis, 71% of lymphocytes were of B origin, expressing CD19, CD20, CD79b (bright), FMC7, CD5 (partial), CD23, and a κ (bright) light chain restriction. Physiologic distributions of $TCD4^+$, $TCD8^+$, and natural killer (NK) lymphocytes (15%, 9%, and 4% of lymphocytes, respectively) were observed, excluding a T or NK origin of the granular lymphocytes observed in the peripheral blood smear. A 46,XY,del(3)(p12),der(5)t(5;?)(p15;?),del(17)(p11)[12]/46,idem,inv(6)(p22q16),del(7)(q21)[2]/46,XY[1] was observed. Fluorescent in situ hybridization analysis demonstrated a *TP53* 17p13 locus deletion and no *IGH/CCND1* rearrangement. *CCND1* was not overexpressed by quantitative reverse-transcriptase polymerase chain reaction. All of these features were consistent with a B-cell lymphocytosis of marginal zone type, with atypical morphological features mimicking large granular lymphocytes. The patient remains stable 9 months after the diagnosis.

This case illustrates that cytology can sometimes be misleading, and it highlights the importance of integrating all biological results to establish an accurate diagnosis.

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