Patients with lymphocytosis might develop chronic lymphocytic leukemia

Diagnosis of chronic lymphocytic leukemia (CLL) requires a lymphocyte count of >5,000 circulating CLL-phenotype B cells/mm^3. Asymptomatic individuals with mononuclear B-cell counts below this value are diagnosed with monoclonal B-cell lymphocytosis (MBL). A study by Rawstron *et al.* examined the relationship between these disorders.

The study included 1,520 individuals aged 62–80 years with normal blood counts (cohort A), and 2,228 individuals with lymphocytosis (>4,000 lymphocytes/m^3; cohort B). CLL-phenotype MBL was diagnosed in 5.1% (n = 78) and 13.9% (n = 309) of patients in cohorts A and B, respectively. Trisomy 12 and 13q14 deletion was detected in 20% and 48% of individuals with CLL-phenotype MBL, respectively; these rates are comparable to those previously reported in patients with CLL. *IGHV* (immunoglobulin heavy variable) genes had an altered rearrangement pattern in these individuals. Of 185 individuals with CLL-phenotype MBL who were followed up for a median of 6.7 years (range 0.2–11.8 years), 51 (28%) developed progressive lymphocytosis, of whom 28 (55%) developed progressive CLL and 13 (7%) required chemotherapy. The only independent prognostic factor for progressive lymphocytosis was the B-cell count at presentation. During follow-up, 62 of the 185 patients died; however, only 4 of 13 deaths in patients with progressive CLL were caused by this condition. Age >68 years and hemoglobin level <12.5 g/dl at diagnosis of CLL-phenotype MBL were the only independent prognostic factors for mortality.

The results demonstrate that MBL shares many biologic features with CLL and that individuals with MBL have an increased risk of developing CLL compared with the general population.

Original article Rawstron AC *et al.* (2008) Monoclonal B-cell lymphocytosis and chronic lymphocytic leukemia. *N Engl J Med* **359:** 575–583