ABSTRACT

A modified method of quantitation of lymphocyte subsets using avidin biotin peroxidase complex (ABC) was developed in this study. The method was compared with the conventional indirect immunofluorescence (IF). A good correlation between the two methods was obtained ($r = 0.97$, $p<0.005$). Quantitation of OKT3 , IF.5, and OKT8 positive cells using flow cytochemistry technique revealed comparable results with the manual count ($r=0.97$, $p<0.005$). However, the reaction of OKT4 positive cells was not intense enough to be detected by the automated machine. The positive pattern as single of multiple large granules stained with ANAE, B-glu, and AcP was corresponded with OKT3 positivity whereas the scatter granule pattern stained with ANAE and AcP reflected HNK positive cells. In addition, the percentage of large granular lymphocyte in Wright's stain correlated with the percentage of HNK1 positive lymphocytes. The quantitation of lymphocyte subpopulation in patients with aplastic anemia showed significant increase in the percentage of OKT3 positive cells as compared with normal subjects. In chronic lymphocytic leukemia, elevated B cells and decreased T cell subpopulation were shown. The lymphoblasts in acute lymphoblastic leukemia were negative for all monoclonal antibodies tested. This might be due to non appropiate monoclonal antibodies and/or decreased amount of antigen on the cell surface.