Regional variation in prevalence of antibody against human T-lymphotropic virus types I and III in Kenya, East Africa

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Abstract:

The prevalence of antibodies against HTLV-III and -I was studied among populations of 6 distinctly different regions of Kenya, an equatorial African country in which AIDS has rarely been observed. Overall, 21% of subjects had ELISA reactions suggesting the presence of antibody against HTLV-III. The frequency of HTLV-III antibodies was highest among the Turkana people (50%) and lowest among the Masai (8%). Prevalence increased with age but was not related to sex. The pattern of ELISA-detected antibody against HTLV-I was similar. The specificity of these antibodies was supported by Western blot analysis of a subset of sera with high and low ELISA ratios, in which 66% and 73% of those with ELISA ratios considered positive (= greater than 5.0 in this study) also had a profile of bands consistent with HTLV-III and HTLV-I respectively. The antibodies detected were not cross-reactive between HTLV-III and HTLV-I on Western blot analysis. In a series of subjects with various parasitic and infectious diseases, patients with idiopathic splenomegaly and with schistosomiasis had a high proportion of antibodies against both HTLV-III and HTLV-I. This survey shows that reactivity in the ELISA HTLV-III and HTLV-I assays are common among Kenyans but vary considerably by region