

Lymphocyte Subsets In Human Immunodeficiency Virus Type 1-infected And Uninfected Children In Nairobi.

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Abstract

Background: Reference lymphocyte subset values for African children are lacking. This study documents these values as well as their alterations associated with perinatal and postnatal HIV-1 transmission and with protection from HIV-1 infection. Methods: Lymphocyte subsets were determined for HIV-1-seronegative nonpregnant women and their children (controls) and for uninfected, perinatally infected and postnatally infected children born to HIV-1-seropositive mothers in Nairobi, Kenya. The mean, median and 5th and 95th percentile values for CD4+ and CD8+ lymphocyte counts and percentages were determined and compared at the age ranges birth to 3 months, 4 months to 1 year, yearly from 1 to 5 years and from 6 to 10 years of age.

RESULTS: Among control children counts differed from published values of other populations. In all age ranges, whereas the absolute values were significantly higher than adult values, the percentages were significantly lower. Children perinatally infected with HIV-1 had clearly distinguishable differences in lymphocyte subset percentages by 3 months of age, when the median CD4+ percentage was 27.9% (5th to 95th percentile, 25.7 to 30.1%) for infected vs. 35.9% (33.3 to 38.7%) for uninfected and 39.9% (37.8 to 42.2%) for control children, $P < 0.001$; whereas the median CD8+ percentage was 37.0% (33.1 to 41.0%) for infected vs. 27.5% (24.2 to 30.8%) for uninfected and 27.5% (24.2 to 30.8%) for control children