

DETECTION OF THE IMPAIRMENT OF CD80 EXPRESSION ON CIRCULATING MONOCYTES IN HIV-INFECTED THAI CHILDREN

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ABSTRACT

The mechanism of progressive anergic response in HIV-infected children has yet to be adequately described. One possibility is inappropriate delivery of an essential second signal for T-cell activation due to the inappropriate presentation of co-stimulatory molecules. To determine whether the ligand for the secondary signal is impaired in pediatric AIDS, we compared the level of CD80 expression by circulating monocytes in HIV-infected and non-infected children (15 mild/asymptomatic, 13 symptomatic and 12 HIV seronegative children). By two-color flow cytometry analysis, there was no statistically significant difference in the percentage of monocytes expressing CD80 among the groups (i.e., 63.2_15.8, 60.9_12.7, 61.04_10.9 for uninfected children, mild-asymptomatic children and symptomatic children, respectively). However, both infected groups showed statistically significant lower levels of CD80 expression, with mean fluorescent intensities of 40.9_15.9 and 38.8_10.7 compared to 57.05_16.3 for the uninfected control group. Our data demonstrated a correlation between HIV infection and impairment of CD80 by circulating monocytes. Whether the impairment on CD80 expression contributes to destruction of the immunological network in HIV-infected children requires further investigation.

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