

Poster presentation

Age-related standards for CD4+ T-lymphocytes in healthy non-infected infants born to HIV-1 infected mothers from AMATA study in Rwanda

Gilles Francois Ndayisaba *, Patrick Cyaga Ndimubanzi, Claude Rutanga, Emmanuel Havuga, Christine Omes Karasi and Cécile Alexandra Peltier

Address: Esther project, Lux-Development, Kigali, Rwanda

* Corresponding author

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Background

CD4 cell count reference values have not yet been established in Rwanda.

Objectives

Describe the evolution of CD4+ subsets in HIV-exposed-uninfected children from birth to 7 months.

Methods

Pregnant HIV-infected women received information on PMTCT and AMATA study. Those giving informed consent were enrolled from 28 weeks of pregnancy and were given HAART systematically.

The child's HIV status was assessed by DNA polymerase chain reaction. Infants aged 15 days to 7 months came for regular visits at day 1, 15, 45, month 3 and 7. Within 72 hours after birth and at every visit, peripheral blood was collected for CD4+ cell counts and PCR. CD4+ T-lymphocytes subsets expressed in absolute numbers and percentages were recorded.

Results

521 infants were studied prospectively at four health centers in Rwanda.

By day 1, the median CD4+ percentage is 54% (5th to 95th percentile, 37% to 67%) and the average absolute number

of CD4+ cells is 1712 [164-5736]. Forty (7.7%) non-infected newborns have CD4+ cell count less than 1000.

By day 15, the median CD4+ percentage is 50% (5th to 95th percentile, 31% to 62%) and the average absolute number of CD4+ cells is 2430 [407-7065].

By day 45, the median CD4+ percentage is 41% (5th to 95th percentile, 24% to 56%) and the average absolute number of CD4+ cells is 2151 [862-5776].

By 3 months, the median CD4+ percentage is 37% (5th to 95th percentile, 25% to 49%) and the average absolute number of CD4+ cells is 2071 [326-8202].

By 7 months, the median CD4+ percentage was 38% (5th to 95th percentile, 22% to 52%) and the average absolute number of CD4+ cells is 2241 [614-6236].

Conclusions

Normal lymphocyte subset values among Rwandan children do not differ from those in other populations. CD4 counts are very variable for the same child.