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Abstract (publication only)

Reduction in interleukin-2 serum levels but lack of evidence of the Th1 to Th2 cytokine shift during the course of HIV infection

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Objectives: Infection with human immunodeficiency virus (HIV) results in dysregulation of the cytokine profile. A switch from a T helper 1 (Th1) to a Th2 cytokine has been proposed as an important factor in progression of HIV infection to AIDS. The aim of the present study was to assess the levels of Th1 and Th2 cytokines in treatment naïve and under treatment HIV infected individuals in order to identify the switch from Th1 to Th2 cytokines. **Methods:** This study was carried out in 140 HIV infected patients (21 treatment naïve and 119 under treatment) and 35 matched healthy controls. The serum samples were checked with enzyme-linked immunosorbent assay (ELISA) for interleukin (IL)-2, IL-4, IL-10 and interferon (IFN)-gamma. **Results:** A total of 140 HIV positive patients with mean age 36.9 ± 9.2 years and 35 matched controls were enrolled in the study. IL-2 level was relatively higher and IL-10, IL-4 and IFN-gamma levels were relatively lower in the treatment naïve group than the under treatment group. Except for IL-2, all of the other cytokines exhibited a negative correlation with the CD4 cell counts and IFN-gamma levels showed the strongest negative correlation. **Conclusion:** Our observations did not demonstrate switching of the type 1 to type 2 T helper cells cytokine profile in HIV infected patients and suggested more complex changes in Th1 to Th2 cytokine patterns in HIV infection.