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Serum zinc and copper are new prognostic markers which are relatively inexpensive, widely available, and have long term prognostic value of comparative magnitude to existing markers.

Infectious Viral Load of HIV-1 Among Women and Men Intravenous Drug Users. H. FARZADEGAN, D. VLAVOV, L. SOLOMON, J. MARGOUCK, B. MASTERS, J. ASTEBERG, K. NELSON. The ALIVE Study, Dept. of Epidemiology, Johns Hopkins University, Baltimore, Maryland

Objective: To determine the effect of gender and CD4 level on infectious viral load among IDUs.

Method: Quantitative PBMC microcultures were done to determine the infectious viral load in women and men (n=227) at various CD4 levels. A total of 241 IDUs were studied, 90 women (56%) and 190 men (60%), whose CD4 levels ranged from 0-1500 cells/µl. Infectious units per million (IU/µl) were determined by serial 5-fold dilution of one million PBMCs. Microcultures were considered positive if the p24 value was greater than 30.0 pg/ml after 14 days of coculture.

Results: The median IU/µl was 6. Of 159 IDUs with IU/µl 6, 157 (72%) were men and 44 (28%) were women. The proportion of men and women with IU/µl greater than 6 was similar in subjects with >400 CD4 cells/µl, whereas subjects with <400 CD4 cells/µl had 71% of IU/µl >6 and 94% of IU/µl >6, respectively. Multiple logistic regression analysis found CD4 level significantly associated with IU/µl (p < 0.001) but gender was not independently significant (p=0.2).

Conclusion: The HIV-1 viral load was significantly higher in subjects with lower CD4 cells/µl even in men and male IDUs with lower gender in controlling for CD4 level independently significant (p=0.2). These viral load data are consistent with recent epidemiologic studies showing similar rates of HIV progression in men and women.

SeroLogic Markers of AIDS Free Time and Progression to AIDS: A MACS Study.

FAZDAEGAN, H., HENRARD, D., BLACK, C., VOLTZ, A., SAHA, A., and FRANK, J. Multicenter AIDS Cohort Study (MACS), NIH, NIAID, USA, and Abbott Laboratories. N. Chicago, IL, USA

Objective: To evaluate HIV-p24, cell free HIV-1 RNA and HIV-1 antibody titers, neutropenia, and beta 2 microglobulin as markers of AIDS free-time in macaques infected with HIV-1 and to determine infected macaues men after 7 years of seminal follow-up visits.

Method: Longitudinal serum/plasma from 4 groups of macaque men were studied: a) enrofeedback (SI) with AIDS in <5 years (N=17); b) SC with no AIDS in 6 years follow-up (N=42); c) seroprevalence (SP) with no CD4 decline in 7 years (N=36); d) SP with moderate CD4 decline (N=56). TCD-624 HIV-1 RNA, Neutropenia, beta 2 microglobulin and HIV antibody titers were evaluated and compared in these 4 groups.

Results: SC had developed AIDS in <5 years had significantly higher HIV-1 p24 antigenemia (P=0.001). SP with moderate CD4 decline showed the lowest HIV-1 p24 positivity. SC with AIDS had significantly higher HIV-1 RNA and anti-gp120 antibodies in the first visit after seroconversion (P=<0.0001) than SI and SC with moderate CD4 decline. Neutropenia did not show any significant value as a marker of disease progression.

Conclusion: Serologic tests such as HIV-1 p24, titer of HIV-1 RNA and antibody in plasma and beta 2 microglobulin maybe used as marker or predictor of different courses of disease progression.