



MEETING ABSTRACT

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Immunological characteristics of Spanish IDUs infected with HTLV-2 and HIV-1

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Background

HTLV-2 infection has been detected in injecting drug users (IDUs) in Spain, who often are coinfecting with HCV and HIV-1. It has been reported that HCV infection increases the immune activation of HIV-1-infected patients. Our objective was to analyze how HTLV-2 infection affects T-cell activation and other immunological parameters such as naïve and memory T-cells and immunosenescence.

Methods

Eighteen HTLV-2 positive IDUs from Spain, also infected with HCV and HIV-1 were selected for this study. Fresh blood was immunostained with CD38 +/HLA-DR+ antibodies to define activated cells, CD45RA+/CD62L+ for naïve T-cells, CD45RA-/CD62L- for effector memory T-cells and CD57+ for T-cell senescence, in both CD4+ and CD8+ cells. Immunological parameters were compared to two control groups, HCV-HIV-1 coinfecting (N=7) and HIV-1 mono-infected patients (N=7).

Results

The median of CD4+ and CD8+ counts for the HTLV-2-infected individuals were 497[312-632] and 784[598-1206], respectively. CD4+ count was lower than control groups, with no statistical difference. Among CD4+ cells, naïve cells decreased while effector memory cells increased. No significant differences were found in CD8+ level and senescence when compared to group controls. CD8+ cell activation (8.5[2.93-12.21]) was higher than control groups, either HCV-HIV-1-coinfecting

patients (4.02[3.54-6.11], $p=0.038$) or HIV-1-mono-infected patients (5.7[2.72-8.32], $p=0.056$).

Conclusions

HTLV-2 induces an increase of CD8+ cell activation and senescence in HCV-HIV-1 coinfecting patients compared to HCV-HIV-1 or HIV-1 infection. Besides, the levels of CD4+ count and CD4+ naïve cells are lower in these patients. Nevertheless, the CD4+ effector memory cells increased. This might have beneficial effects on HIV-1 or HCV infection.

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