

Poster presentation

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P04-46. Broadly cross-neutralizing activity in plasma of HIV-1 and HIV-2 infected individuals

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Background

Inter-subtype neutralization of HIV-1 and cross-neutralization between HIV 1 and 2 was explored using plasma collected from 54 HIV-infected individuals within the framework of a case control study in Guinea-Bissau, West Africa. Twenty one were infected with HIV-1, 21 with HIV-2 and 12 were dually HIV-1/2 seropositive, of whom 5 were from a professional cohort in the same area. HTLV-I status was also known, five HIV-1-infected and 10 HIV-2-infected were HTLV-I seropositive.

Methods

The plasma were tested for neutralizing activity against five HIV-1 and one HIV-2 isolates. Two HIV-1 (subtype A/G) isolates and the HIV-2 isolate were from Guinea-Bissau, one HIV-1 subtype B isolate was from Sweden and two subtype C isolates were from Brazil and India, respectively. Plaque reduction assay on U87.CD4-CCR5 cells was used and neutralization was scored as negative (<30% neutralization), moderate (30–59% neutralization) and strong (≥60% neutralization).

Results

Sixty seven percent of HIV-1 plasma strongly neutralized at least one HIV-1 isolate, while 33% strongly neutralized at least two HIV-1 isolates. All HIV-2 plasma neutralized the HIV-2 isolate (70% strongly) and 29% strongly neutralized at least one HIV-1 isolate (5% neutralized at least two HIV-1 isolates). This is to be compared with 10% of HIV-1 plasma that neutralized the HIV-2 isolate.

Conclusion

HTLV-I co-infection appears to modulate neutralization in HIV-1 infection, whereas gender seems to influence neutralization by HIV-2 plasma.