

POSTER PRESENTATION

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Protective effect of KIR3DS1 in asymptomatic HIV-1 seroconverters towards AIDS

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Background

The extreme variability at the Killer cell Immunoglobulin like Receptor (KIR) expressed on the surface of natural killer cells interacts with Human Leukocyte Antigen (HLA) Class I appear to play a crucial role in the outcome against viral infection. The combination of HLA/KIR gene products either individually or collectively have been implicated in the control of HIV-1 in various populations. Objective of this immunogenetic case-control study is to determine the association between KIR3DS1 and HIV-1 asymptomatism.

Methods

31 treatment naive HIV-1 asymptomatic (>3yrs without disease progression) and 31 HIV-1 seronegative ethnic matched healthy controls were recruited for this case – control study. Genomic DNA was extracted from peripheral blood by salting out procedure and KIR genotyping was performed for 16 KIR genes (Activating, Inhibitory and Pseudogenes) by Duplex PCR sequence-specific primer method.

Results

Overall, we observed 66.12 % of individuals with B KIR haplotype among case and controls group. Among the 16 KIR genes were typed KIR3DS1 (Activating KIR gene) shows significant variation among HIV asymptomatic individuals was 74.2 % whereas 54.8 % among controls.

Conclusion

Since, KIR3DS1 is well known for its effect on direct viral containment, presence of higher KIR3DS1 is one of

the possible reasons for asymptomatism among this study cohort.

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