

Poster presentation

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PII-14. Analysis of mucosal antibodies in genital fluids of HIV seropositive subjects from Cambodian and Italian cohorts

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Background

Genital mucosal districts play a key role in protection from STD and HIV infection, due to their involvement in both horizontal and vertical disease transmission. The high variability of published observations concerning IgA isolation and quantification underlies the strong requirement of a specific method to recover, quantify and process IgA able to maximize the following investigation of HIV-specific IgA.

Methods

In order to assess the optimal sampling conditions able to maximize mucosal antibody recovery, a total of genital fluids from 109 subjects including male and female from Cambodian and Italian subjects were collected and processed with different methods. We set up 6 different ELISA methods to quantify mucosal antibodies and 4 different purifications protocols.

Results

Sampling method is determinant to obtain a sufficient quantity of mucosal fluids. Sandwich ELISA assay offers higher sensitivity in detecting mucosal IgA, that are in lower concentrations than mucosal IgG and also in lower amount than serum antibodies. Affinity purification by three steps chromatography purifications system gave quantitative and reproducible IgA recovery from genital specimens, while conventional immuno-affinity columns

were shown to work better with serum antibodies but were poorly manageable in IgA purification.

Conclusion

The availability of specific, effective and reliable methods to study local immunity is of primary importance in understanding mechanisms of host immunity and to develop suitable ways to enhance it just at the major portals of HIV infection for an effective HIV vaccine.