

Immunodeficiency virus type 1 IgA antibody in breast milk and serum.

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Abstract:

Breast-feeding plays a potentially significant role in mother to child transmission of human immunodeficiency virus type 1 (HIV-1). The additional transmission risk attributable to breast-feeding and the factors that enhance or inhibit transmission are presently unknown. One mechanism by which breast milk might inhibit HIV-1 transmission is the presence of specific antibodies directed against HIV-1 in breast milk of seropositive mothers. In this study serum and breast milk samples from women in Nairobi, Kenya, were tested to determine the prevalence of HIV-1 IgA antibodies. A Western blot test developed in our laboratory was used to detect anti-HIV-1 immunoglobulin A in serum and anti-HIV-1 secretory IgA (sIgA) in breast milk. Ninety-four percent of 63 HIV-1 seropositive women had anti-HIV-1 IgA in serum and 59% had anti-HIV-1 sIgA in their breast milk. No significant associations with maternal characteristics or serum anti-HIV-1 IgA or IgG banding patterns and the presence of anti-HIV-1 sIgA in breast milk were found. No protective effect of anti-HIV-1 sIgA was seen regarding mother to child transmission; however, further studies are necessary to determine the effect of these antibodies in maternal sera or in breast milk on the efficacy of HIV-1 transmission