

Human immunodeficiency virus type 1-infected cells in breast milk: association with immunosuppression and vitamin A deficiency

Abstract:

Breast milk samples from human immunodeficiency virus type 1 (HIV-1)-seropositive women were analyzed by polymerase chain reaction to determine the prevalence and determinants of HIV-1-infected cells in breast milk. Breast milk samples (212) were collected from 107 women, and 58% of the samples had detectable HIV-1 DNA. The proportion of HIV-1-infected cells in the milk samples ranged from 1 to 3255/10(4) cells. Breast milk samples with detectable HIV-1 DNA were more likely to be from women with absolute CD4 cell counts of < 400 (odds ratio, 3.1; 95% confidence interval [CI], 1.5-7.0). Severe vitamin A deficiency (< 20 micrograms/dL) was associated with a 20-fold increased risk of having HIV-1 DNA in breast milk among women with < 400 CD4 cells/mm³ (95% CI, 2.1-188.5). Women with CD4 cell depletion, especially those with vitamin A deficiency, may be at increased risk of transmitting HIV-1 to their infants through breast milk.