

HIV-1 Disease Progression in Breast-Feeding and Formula-Feeding Mothers: A Prospective 2-Year Comparison of T Cell Subsets, HIV-1 RNA Levels, and Mortality.

Abstract

Centre for Clinical Research, Kenya Medical Research Institute, University of Nairobi, Nairobi, Kenya.

Background. There is conflicting evidence regarding the effects of breast-feeding on maternal mortality from human immunodeficiency virus type 1 (HIV-1) infection, and little is known about the effects of breast-feeding on markers of HIV-1 disease progression. **Methods.** HIV-1-seropositive women were enrolled during pregnancy and received short-course zidovudine. HIV-1 RNA levels and CD4 cell counts were determined at baseline and at months 1, 3, 6, 12, 18, and 24 postpartum and were compared between breast-feeding and formula-feeding mothers. **Results.** Of 296 women, 98 formula fed and 198 breast-fed. At baseline, formula-feeding women had a higher education level and prevalence of HIV-1-related illness than did breast-feeding women; however, the groups did not differ with respect to CD4 cell counts and HIV-1 RNA levels. Between months 1 and 24 postpartum, CD4 cell counts decreased 3.9 cells/ μ L/month ($P < .001$), HIV-1 RNA levels increased 0.005 log₁₀ copies/mL/month ($P = .03$), and body mass index (BMI) decreased 0.03 kg/m²/month ($P < .001$). The rate of CD4 cell count decline was higher in breast-feeding mothers (7.2 cells/ μ L/month) than in mothers who never breast-fed (4.0 cells/ μ L/month) ($P = .01$). BMI decreased more rapidly in breast-feeding women ($P = .04$), whereas HIV-1 RNA levels and mortality did not differ significantly between breast-feeding and formula-feeding women. **Conclusions.** Breast-feeding was associated with significant decreases in CD4 cell counts and BMI. HIV-1 RNA levels and mortality were not increased, suggesting a limited adverse impact of breast-feeding in mothers receiving extended care for HIV-1 infection.