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

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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/μL/month (P<.001), HIV-1 RNA levels increased 0.005 log(10) copies/mL/month (P=.03), and body mass index (BMI) decreased 0.03 kg/m(2)/month (P<.001). The rate of CD4 cell count decline was higher in breast-feeding mothers (7.2 cells/μL/month) than in mothers who never breast-fed (4.0 cells/μL/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.