

Human immunodeficiency virus type 1 viral loads in Kenyan women, men, and infants during primary and early infection.

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Abstract

Steady-state levels of human immunodeficiency virus type 1 (HIV-1) RNA in plasma reached at approximately 4 months postinfection are highly predictive of disease progression. Several studies have investigated viral levels in adults or infants during primary and early infection. However, no studies have directly compared these groups. We compared differences in peak and set point plasma HIV-1 RNA viral loads among antiretrovirus-naïve Kenyan infants and adults for whom the timing of infection was well defined. Peak and set point viral loads were significantly higher in infants than in adults. We did not observe any gender-specific differences in viral set point in either adults or infants. However, infants who acquired HIV-1 in the first 2 months of life, either in utero, intrapartum, or through early breast milk transmission, had significantly higher set point HIV-1 RNA levels than infants who were infected after 2 months of age through late breast milk transmission or adults who were infected through heterosexual transmission.