Injectable contraceptive use and genital ulcer disease during the early phase of HIV-1 infection increase plasma virus load in women.

Abstract:

We examined the association between host factors present near the time of human immunodeficiency virus type 1 (HIV-1) acquisition and subsequent virus loads, in a prospective cohort study of women in Mombasa, Kenya. Women were prospectively followed monthly before HIV-1 infection. One hundred sixty-one commercial sex workers who became infected with HIV-1 were followed for a median of 34 months, and 991 plasma samples collected > or =4 months after infection were tested for HIV-1 RNA. The median virus set point at 4 months after infection was 4.46 log10 copies/mL, and the average virus load increase during subsequent follow-up was 0.0094 log10 copies/mL/month. In a multivariate analysis that controlled for sexual behavior, the use of the injectable contraceptive depot medroxyprogesterone acetate (DMPA) at the time of HIV-1 infection was associated with a higher virus set point, and the presence of genital ulcer disease (GUD) during the early phase of HIV-1 infection was associated with greater change in virus load during follow-up. These findings suggest that, in women, the use of DMPA and the presence of GUD during the early phase of HIV-1 infection may influence the natural course of infection.