

Pregnancy and HIV transmission among HIV-discordant couples in a clinical trial in Kisumu, Kenya

Abstract:

A large proportion of new HIV infections in sub-Saharan Africa occur in stable HIV-discordant partnerships. In some couples, the strong desire to conceive a child may lead to risky behaviour despite knowledge of discordant serostatus. Our objective was to compare HIV transmission between discordant couples who did and did not conceive during participation in a clinical trial. Five hundred and thirty-two HIV-discordant couples were followed for up to 2 years in Kisumu, Kenya as part of the Partners in Prevention HSV/HIV Transmission Study. Quarterly HIV-1 antibody and urine pregnancy test results were analysed. Forty-one HIV-1 seroconversions occurred over 888 person-years of follow-up, resulting in an annual incidence of 4.6/100 person-years. Twenty seroconversions occurred among 186 HIV-1-uninfected individuals in partnerships in which pregnancy occurred (10.8% of HIV-1-negative partners in this group seroconverted), in comparison to 21 seroconversions among 353 uninfected individuals in partnerships in which pregnancy did not occur (5.9% of HIV-1-negative partners seroconverted), resulting in a relative risk of 1.8 [95% confidence interval (CI) 1.01-3.26; $P < 0.05$]. Pregnancy was associated with an increased risk of HIV seroconversion in discordant couples. These data suggest that the intention to conceive among HIV discordant couples may be contributing to the epidemic.