

monal Contraception On Genital Tract Shedding Of Hiv-1.aids

Wang, C C; Mcclelland, R S; Overbaugh, J; Reilly, M; Panteleeff, D D; Ndinya-Achola, JO; Kreiss, J K; Mandaliya, K; Lavreys, L; Chohan, B

Abstract:

OBJECTIVE: A previous cross-sectional study reported that hormonal contraception may be associated with increased infectivity in HIV-1 infected women. We conducted a prospective study to determine if cervical shedding of HIV-1 increased after initiating hormonal contraception. **DESIGN:** Shedding of HIV-1 DNA (a marker of HIV-1 infected cells) and HIV-1 RNA were measured before and after initiating hormonal contraception. **METHODS:** HIV-1 seropositive women were recruited from a Kenyan family planning clinic. At baseline, cervical secretions were collected for HIV-1 DNA and RNA assays in women initiating hormonal contraception; follow-up samples were collected a median of 64 days later. **RESULTS:** One-hundred and one women chose depot medroxyprogesterone (Depo), 53 chose low-dose oral contraceptives (OC), seven high-dose OC, and 52 progesterone-only OC. At follow-up, there was a significant increase in the prevalence of cervical HIV-1 DNA detection [from 42% to 52%, odds ratio (OR), 1.62; 95% confidence interval (CI), 1.03-2.63) for all hormonal contraception combined, and a trend for an increase for each individual type. Although the prevalence of cervical HIV-1 RNA increased slightly (from 82% to 86%; OR, 1.56; 95% CI, 0.83-3.03), the concentration of cervical HIV-1 RNA did not change significantly overall (from 2.81 to 2.84 log₁₀ copies/swab; P = 0.77) or for individual contraception types. **CONCLUSIONS:** A modest but significant increase in shedding of HIV-1 DNA but not of HIV-1 RNA was detected after starting hormonal contraception. Our results may have important implications regarding the infectivity of women using hormonal contraception, and highlight the need for epidemiologic studies of transmission rates from women using and not using hormonal contraception.