

Is There an Association Between HIV-1 Genital Shedding and Cervical Intraepithelial Neoplasia 2/3 Among Women on Antiretroviral Therapy?

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Abstract:

Given the high prevalence of cervical intraepithelial neoplasia (CIN) grade 2/3 among HIV-infected women, we sought to examine the relationship between CIN 2/3 and HIV-1 genital shedding among women on highly active antiretroviral therapy (HAART). Paired plasma and cervical wick specimens for HIV-1 RNA measurements were obtained from 44 HIV-infected women with biopsy-confirmed CIN 2/3 (cases) and 44 age-matched HIV-infected women with normal cervical findings on colposcopy (controls). All subjects tested negative for sexually transmitted infections and had been stable on HAART for at least 3 months. HIV-1 viral load was measured in both blood and cervical specimens using commercial real-time polymerase chain reaction assays. Cervical intraepithelial neoplasia 2/3 was not significantly associated with the detection or magnitude of plasma or cervical HIV-1 RNA shedding. HIV was detected in the plasma in 10 cases (23%) and 10 controls (25%) (odds ratio = 1.0; 95% confidence interval = 0.33-3.1). Cervical HIV-1 was detected in 6 cases (13.6%) and 9 controls (20.4%) (odds ratio = 0.61; 95% confidence interval = 0.20-1.90). Mean HIV-1 concentration in cervical secretions among women with CIN 2/3 who shed was 2.93 log₁₀ copies versus 2.72 among controls (p = .65). Among women on HAART, we found no relationship between CIN 2/3 and HIV-1 genital shedding.