

Treatment Of Cervicitis Is Associated With Decreased Cervical Shedding Of Hiv-1. AIDS

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Abstract:

OBJECTIVE: To determine whether cervical mucosal shedding of HIV-1 RNA and HIV-1 infected cells decreases following successful treatment of cervicitis. **DESIGN:** Prospective interventional study. **SETTING:** Sexually Transmitted Infections Clinic, Coast Provincial General Hospital, Mombasa, Kenya. **PARTICIPANTS:** Thirty-six HIV-1 seropositive women with cervicitis: 16 with *Neisseria gonorrhoeae*, seven with *Chlamydia trachomatis*, and 13 with non-specific cervicitis. **INTERVENTIONS:** Treatment of cervicitis. Main outcome measures: Levels of total (cell-free and cell-associated) HIV-1 RNA and presence of HIV-1 DNA (a marker for infected cells) in cervical secretions before and after resolution of cervicitis. **RESULTS:** After treatment of cervicitis, the median HIV-1 RNA concentration in cervical secretions was reduced from 4.05 to 3.24 log₁₀ copies/swab (P = 0.001). Significant decreases in cervical HIV-1 RNA occurred in the subgroups with *N. gonorrhoeae* (3.94 to 3.28 log₁₀ copies/swab; P = 0.02) and *C. trachomatis* (4.21 to 3.19 log₁₀ copies/swab; P = 0.02). Overall, the prevalence of HIV-1 infected cells in cervical secretions also decreased after treatment, from 67% to 42% (odds ratio, 2.8; 95% confidence interval, 1.3-6.0; P = 0.009). Detection of infected cells was associated with higher mean HIV-1 RNA levels (4.04 versus 2.99 log₁₀ copies/swab; P < 0.0001). **CONCLUSIONS:** Effective treatment of cervicitis resulted in significant decreases in shedding of HIV-1 virus and infected cells in cervical secretions. Treatment of sexually transmitted diseases may be an important means of decreasing the infectivity of HIV-1 seropositive women by reducing exposure to HIV-1 in genital secretions.