

HIV-1 RNA shedding after cryotherapy among HIV-positive women with cervical intraepithelial neoplasia stage 2 or 3.

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Abstract:

Objective To determine the effect of cryotherapy on HIV-1 cervical shedding. **Design** Prospective cohort study. **Methods** Five hundred HIV-positive women enrolled at an HIV treatment clinic in Nairobi, Kenya were screened for cervical cancer. Women diagnosed with cervical intraepithelial neoplasia stage 2 or 3 (CIN 2/3) by histology were offered cryotherapy treatment. The first 50 women had cervical swabs taken at baseline and at 2 and 4 weeks following treatment. Swabs were analyzed for HIV-1 RNA and compared using General Estimating Equation (GEE) with binomial or Gaussian links. **Results** Of the 50 women enrolled, 40 were receiving antiretroviral therapy (ART) and 10 were not receiving ART at the time of cryotherapy and during study follow-up. Among all women, the odds of detectable cervical HIV-1 RNA did not increase at 2 weeks [odds ratio (OR) 1.18; 95% confidence interval (CI) 0.656-2.13] or 4 weeks (OR 1.29; 95% CI 0.716-2.33) following cryotherapy. Among 10 women not receiving ART, the OR of detectable shedding at 2 weeks was higher, but not statistically significant (OR 4.02; 95% CI 0.536-30.79; $P = 0.2$), and at 4 weeks remained unchanged (OR 1.00; 95% CI 0.276-3.74). **Conclusion** There was no increase in detectable cervical HIV-1 RNA among HIV-positive women after cryotherapy. The risk of HIV-1 transmission after cryotherapy may not be significant, particularly among women already on ART at the time of cervical treatment. However, further investigation is needed among women not receiving ART.