

Incidence of cervical precancers among HIV-seropositive women

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Objective

The objective of the study was to estimate the impact of human immunodeficiency virus (HIV) infection on the incidence of high-grade cervical intraepithelial neoplasia (CIN).

Study Design

HIV-seropositive and comparison seronegative women enrolled in a prospective US cohort study were followed up with semiannual Papanicolaou testing, with colposcopy for any abnormality. Histology results were retrieved to identify CIN3+ (CIN3, adenocarcinoma in situ, and cancer) and CIN2+ (CIN2 and CIN3+). Annual detection rates were calculated and risks compared using a Cox analysis. Median follow-up (interquartile range) was 11.0 (5.4–17.2) years for HIV-seronegative and 9.9 (2.5–16.0) for HIV-seropositive women.

Results

CIN3+ was diagnosed in 139 HIV-seropositive (5%) and 19 HIV-seronegative women (2%) ($P < .0001$), with CIN2+ in 316 (12%) and 34 (4%) ($P < .0001$). The annual CIN3+ detection rate was 0.6 per 100 person-years in HIV-seropositive women and 0.2 per 100 person-years in seronegative women ($P < .0001$). The CIN3+ detection rate fell after the first 2 years of study, from 0.9 per 100 person-years among HIV-seropositive women to 0.4 per 100 person-years during subsequent follow-up ($P < .0001$). CIN2+ incidence among these women fell similarly with time, from 2.5 per 100 person-years during the first 2 years after enrollment to 0.9 per 100 person-years subsequently ($P < .0001$). In Cox analyses controlling for age, the hazard ratio for HIV-seropositive women with CD4 counts less than 200/cmm compared with HIV-seronegative women was 8.1 (95% confidence interval, 4.8–13.8) for CIN3+ and 9.3 (95% confidence interval, 6.3–13.7) for CIN2+ ($P < .0001$).

Conclusion

Although HIV-seropositive women have more CIN3+ than HIV-seronegative women, CIN3+ is uncommon and becomes even less frequent after the initiation of regular cervical screening.