

Abstract

BACKGROUND: Prevalent herpes simplex virus type 2 (HSV-2) infection increases human immunodeficiency virus acquisition. We hypothesized that HSV-2 infection might also predispose individuals to acquire other common sexually transmitted infections (STIs).

METHODS: We studied the association between prevalent HSV-2 infection and STI incidence in a prospective, randomized trial of periodic STI therapy among Kenyan female sex workers.

Participants were screened monthly for infection with *Neisseria gonorrhoeae* and *Chlamydia trachomatis*, and at least every 6 months for bacterial vaginosis (BV) and infection with

Treponema pallidum, *Trichomonas vaginalis*, and/or HSV-2. **RESULTS:** Increased prevalence of HSV-2 infection and increased prevalence of BV were each associated with the other; the

direction of causality could not be determined. After stratifying for sexual risk-taking, BV status, and antibiotic use, prevalent HSV-2 infection remained associated with an increased incidence of

infection with *N. gonorrhoeae* (incidence rate ratio [IRR], 4.3 [95% confidence interval {CI}, 1.5-12.2]), *T. vaginalis* (IRR, 2.3 [95% CI, 1.3-4.2]), and syphilis (IRR, 4.7 [95% CI, 1.1-19.9]).

BV was associated with increased rates of infection with *C. trachomatis* (IRR, 2.1 [95% CI, 1.1-3.8]) and *T. vaginalis* (IRR, 8.0 [95% CI, 3.2-19.8]).

CONCLUSION; Increased prevalences of HSV-2 infection and BV were associated with each other and also associated with enhanced susceptibility to an overlapping spectrum of other STIs. Demonstration of causality will require clinical trials that suppress HSV-2 infection, BV, or both