

Effect of Circumcision on incidence of human immunodeficiency virus type 1 and other sexually transmitted diseases: a prospective cohort study of trucking company employees in Kenya

Lavreys, L; Rakwar, JP; Thompson, ML; Jackson, DJ; Mandaliya, K; Chohan, BH; Bwayo, JJ; Ndinya-Achola, JO; Kreiss, JK

Abstract:

To determine the effect of circumcision status on acquisition of human immunodeficiency virus (HIV) type 1 and other sexually transmitted diseases, a prospective cohort study of 746 HIV-1-seronegative trucking company employees was conducted in Mombasa, Kenya. During the course of follow-up, 43 men acquired HIV-1 antibodies, yielding an annual incidence of 3.0%. The annual incidences of genital ulcers and urethritis were 4.2% and 15.5%, respectively. In multivariate analysis, after controlling for demographic and behavioral variables, uncircumcised status was an independent risk factor for HIV-1 infection (hazard rate ratio [HRR]=4.0; 95% confidence interval [CI], 1.9-8.3) and genital ulcer disease (HRR=2.5; 95% CI, 1.1-5.3). Circumcision status had no effect on the acquisition of urethral infections and genital warts. In this prospective cohort of trucking company employees, uncircumcised status was associated with increased risk of HIV-1 infection and genital ulcer disease, and these effects remained after controlling for potential confounders