

## **Human immunodeficiency virus, genital ulcers and the male foreskin: synergism in HIV-1 transmission.**

### **Abstract:**

Epidemiologic studies in Nairobi and elsewhere in Africa, have shown that men infected with HIV-1 more commonly have a history of genital ulcer disease compared to uninfected men. In one study, HIV infected men were three times as likely to have a recent history of genital ulcers. In a prospective study of seronegative men, those presenting with chancroid had a five-fold risk of seroconversion during follow-up compared to men presenting with urethritis. Uncircumcised men had an increased risk of seroconversion which was independent of their risk of genital ulcer disease. Over 95% of attributable risk in men with STD was either genital ulceration or the presence of a foreskin. Genital ulcers are a major risk factor for HIV infection among prostitutes. The increased risk is about 10-fold among prostitutes with ulcers compared to a cohort who did not. We hypothesize from these studies that genital ulcers are the major portals of entry for HIV infection and also increased shedding of virus infected cells into the vaginal secretions. HIV seropositive prostitutes are more susceptible to chancroid with a two-fold increase in the prevalence of genital ulcers as compared to HIV negative women. The use of condoms by their clients prevents both genital ulcer disease and HIV acquisition among prostitutes. Chancroid is more difficult to treat in HIV infected men with one-third of patients failing single dose treatment regimens as compared to less than five percent of men without HIV infection.