

Abstract

TUPE0288 - High prevalence of HIV-RNA excretion from the genital ulcers of co-infected STD patients in Lilongwe, Malawi

S. Phiri¹, I. Hoffman², N. Nyirenda³, D. McCormick³, S. Fiscus², C. Chen⁴, H. Weiss⁵, W. Miller², G. Joaki³, D. Chilongozi³, F. Martinson³, L. van der Hoeven⁶, M. Cohen², P. Mayaud⁵

¹Lighthouse at Kamuzu Central Hospital, Lilongwe, Malawi, ²UNC, Chapel Hill, NC, United States, ³UNC, Lilongwe, Malawi, ⁴CDC, Atlanta, United States, ⁵London School of Hygiene and Tropical Medicine, London, United Kingdom, ⁶Reproductive Health Unit, Ministry of Health, Lilongwe, Malawi

Background: Pathogens causing genital ulcer disease (GUD) have been strongly associated with HIV acquisition, but there is much less evidence of their direct role in HIV transmission. Demonstration of detection of HIV RNA associated with particular GUD etiologies would support their role in HIV transmission.

Methods: A randomised placebo-controlled trial evaluating the impact of the addition of acyclovir as episodic treatment for HSV-2 on ulcer healing and HIV-1 genital shedding is underway in Lilongwe, Malawi. GUD patients are interviewed, examined and samples collected prior to randomization. Ulcer swabs are assessed for GUD etiologies (*T. pallidum*, *H. ducreyi*, HSV and LGV) by real-time multiplex PCR, and for HIV-1 RNA using the Roche 1.5 assay. Blood is tested for syphilis, HIV, and HSV-2 (HerpeSelect, Focus) serologies.

Results: By Nov 2005, 250 patients (204 men, 46 women) had been enrolled, of whom 150 (60%) were HIV-1 sero-positive and 175/236 (74%) were HSV-2 sero-positive. Presence of lesional HIV-1 RNA was detected among 64% (82/128) HIV-1 sero-positive patients and 63% (72/114) HSV-2 sero-positive patients. Among the 108 patients with both etiology and lesional HIV results, 66 (61%) had detectable HSV and 63 (58%) had detectable HIV-1 RNA. There was no increased frequency of lesional HIV-1 RNA among patients with HSV ulcers versus other etiologies (37/63 [59%] vs 29/45 [64%], $p > 0.5$).

Conclusions: HIV shedding from genital ulcers was frequently detected among HIV-positive patients in Malawi and suggests the feasibility of enhanced HIV transmission. There was no evidence of increased HIV detection among HSV-2 infected patients prior to acyclovir treatment. Impact of this treatment on ulcer healing rates and lesional HIV shedding will be assessed at the end of the trial.