

High HIV incidence among men with genital ulcers in South Africa

G. Paz-Bailey¹, M. Sternberg², D. Lewis³, O. Nwanyanwu⁴, D. Greyling⁵, A. Puren⁵, S. Hawkes⁶

¹Universidad del Valle de Guatemala, Global AIDS program for Central America, CDC, Guatemala, Guatemala, ²Centers for Disease Control and Prevention, Division of STD Prevention, Atlanta, United States, ³National Institute for Communicable Diseases, STI Reference Centre, Johannesburg, South Africa, ⁴Centers for Disease Control and Prevention, Global AIDS Program, South Africa, Johannesburg, South Africa, ⁵National Institute for Communicable Diseases, Specialized Molecular Diagnostics Unit, Johannesburg, South Africa, ⁶London School of Hygiene and Tropical Medicine, Department of Infectious Diseases, London, United Kingdom

Background: Acute HIV infections have an important role in HIV transmission and co-infection with sexually transmitted infections (STI) and high-risk behaviors may also amplify transmission. Prevalence of acute HIV among STI patients has ranged from 0.03%-2.5%.

Methods: Patients were recruited as part of a trial of episodic acyclovir among men with genital ulcer disease (GUD) in South Africa. At baseline, participants were tested for HIV and received syndromic management for STI. The Determine test was used for initial HIV screening and Capillus for confirmation. Discordant HIV tests were resolved using ELISA. Patients were followed for 28 days. HIV-negative participants at baseline were tested again at day 28 to measure HIV sero-conversion. Stored serum from HIV negatives was used to detect HIV RNA using the COBAS AmpliScreen HIV-1 Test v.1.5. Pools of 6 specimens were initially tested. Positive pools were disaggregated to test individual specimens. An incident HIV case was defined as either an HIV-1 sero-converter or an acute HIV case (PCR RNA positive).

Results: 615 men with GUD were enrolled, median age was 29 years, 63% (387) were HIV-1-positive. There were 228 HIV-negative men at baseline and 8 sero-converted to HIV at day 28. Among the remaining 220 HIV-seronegative men there were a total of 20 HIV RNA positive specimens. The prevalence of incident HIV in the overall study population was 4.6% (28 of 615; 95% CI: 2.9 - 6.2). The prevalence of incident HIV among HIV-negative men at baseline was 12.2% (28 of 228, 95% CI: 8.0 - 16.5).

Conclusions: We detected an exceedingly high prevalence of acute HIV infections, higher to previous reports among STI patients. Men with GUD are likely playing an important role on HIV transmission in South Africa due to a combination of high genital viral loads and STD co-infection.

Presenting author email: sarah.hawkes@lshtm.ac.uk