ABSTRACT

**Background:** Herpes simplex virus type 2 (HSV-2), the cause of genital herpes, is the most frequent cause of genital ulcerative disease worldwide. Its potential interaction with Human immunodeficiency virus (HIV) has emerged as a major public health problem for countries facing the global HIV pandemic. Several studies have pointed to the two- to four-fold increased risk of HIV-1 acquisition associated with prevalent HSV-2 infection. The picture is however, not clear in our setting.

**Objective:** The objective of this study is to determine the prevalence of HSV-2 in HIV infected patients in University of Maiduguri Teaching Hospital; and to compare with HIV negative age and sex matched controls.

**Methods:** A hospital-based case control study was undertaken. Ninety six consecutive HIV-infected patients who fulfilled the inclusion criteria and 78 age- and sex-matched controls were recruited. Presence of HSV-2 specific antibodies was determined by serological test and the virus was isolated in those with genital lesion. The CD4 count and HIV viral load were determined in cases. Prevalence of antibodies to HSV-2 was determined in cases and controls. Odds ratios (OR) and 95% confidence intervals (CI), for HSV-2 acquisition, were calculated. Chi square ($\chi^2$) was used to determine the relationship between presence of HSV-2 antibodies and genital lesion. Student t-test was used to determine the differences in mean HIV load and CD4 cell count in HSV-2 antibody positive and negative cases.
**Results:** The prevalence of HSV-2 was 58.3% among cases and 25.6% among controls. The OR of HSV-2 seropositivity was 4.1 (95% CI, 2.1–7.8). Risk factors associated with HSV-2 seropositivity included age group 15-24 years (OR 3.4, 95% CI 1.6-7.1), age group 45-54 years (OR 11.8, 95% CI 2.1-66.0), female sex (OR 2.7 95% CI 1.1-6.5), polygamy (OR 4.9, 95% CI 2.2-11.3), being single (OR 10.0 95% CI 1.6-64.2), illiteracy (OR 14.6 95% CI 2.6-82.7), tertiary education (OR 6.0 95% CI 1.6-222.9), lack of condom use (OR 3.8 95% CI 1.9-7.7), and duration of sexual activity of greater than 20 years (OR 6.2 95% CI 2.1-17.9). HSV-2 was isolated in 34 (77.3%) out of 44 cases with genital lesion. HIV load was higher in HSV-2–seropositive case subjects, compared with that in HSV-2–seronegative case subjects, (p=0.00) and genital lesions were commoner in those with CD4 counts below 200 cells/µl.

**Conclusion:** There was a high prevalence of clinical and subclinical HSV-2 infection among HIV patients compared with controls (OR 4.1; 95%CI, 2.1-7.8), and symptomatic disease is commoner in those with advanced immunosuppression.