

Sero-Prevalence of Herpes Simplex Virus 2 Infection among HIV Positive Patients

Short Communication

The infection with Herpes Simplex Virus (HSV) is one of the most common opportunistic infections in seropositive patients of Human Immunodeficiency Virus (HIV). Herpes Simplex Virus type 2 (HSV-2) is the most common cause of genital ulcer disease worldwide [1,2]. Undiagnosed and untreated genital herpesvirus infection in pregnant women can lead to vertical transmission from mother to newborn, causing infant morbidity and mortality [3]. Previous studies have shown that HSV-2 infection increases the risk for human immunodeficiency virus (HIV) infection by at least twofold [4]. Sero-prevalence of HSV2 infections in general population ranges from 16.2% in USA [5], 12% in Australia [6], 13.2% in China, 4% in England and Wales to 24% in Bulgaria [7]. Compared with developing countries, substantially higher rates of HSV-2 have been observed in sub-Saharan Africa ranging from 30% to 80% in women and 10% to 50% in men [8]. In Sudan, limited data were published on the prevalence of HSV-2 in HIV-sero-positive patients. The aim of the present study was to determine the sero-prevalence of HSV-2 in HIV-positive patients.

A cross sectional study was design to determine the sero-prevalence of HSV-2 infection among 91 HIV suspected (AIDS) patients. Samples were obtained from Omdurman Military Hospital and the National Health Institute, Khartoum State Sudan. The study was approved by scientific research committee of the Faculty of Medical Laboratory Sciences, University of Khartoum, Sudan. Blood samples were collected in sterile plain containers, serum was separated and preserved at -20 C till process. All samples were tested to confirm HIV infection, and then HSV-2 IgG was detected among HIV patients by Enzyme Link Immune Sorbent Assay (ELISA) using fortress commercial kits (U.K). The statistical analysis was performed by SPSS software. Among the positive HIV-infected patients studied, 75.8% are males, and 24.2% are females. The most infected age group was ranged from 26 to 45 year old 62.6 %. The prevalence of HSV-2 among HIV-infected patients was 9.9 % positive cases, 80.2% negative cases, and 9.9% borderline cases (Table 1). The sero-prevalence of positive HSV-2 cases among HIV patients was higher in females compared with males (Figure 1). In addition, the sero-prevalence of positive HSV-2 cases among HIV patients was higher among age group (10-25) compared with other age groups (Figure 2).

The study confirms strong association of HSV-2 infection with HIV. Previous study indicated that the prevalence of HSV-2 shedding is four to five times greater in HIV-positive individuals than in HIV-negative individuals, likely increasing HSV transmission [9]. In Kenya about, 81% of HIV-infected persons were co-infected with HSV-2. While, HIV prevalence was 16% among those with HSV-2 and 2% among those without HSV-2 Mugo et al. [10]. In this study, HSV-2 sero-positivity was higher in women compared with men, and the sero-prevalence of HSV2

in HIV infected patients was 9.9%. El-Amin et al. [11] indicated that the prevalence of HSV2 infection was 34.6% in Sudanese pregnant women. The study concludes that the prevalence of HSV-2 was significantly higher in HIV-positive women compared with men. The implementation of continuous control for sexually transmitted infections and HIV will reduce the prevalence and spread of both HSV-2 and HIV infection.

Table 1: The Prevalence of HSV-2 among HIV infected patients.

Trait	Frequency	Percentage
Gender		
Male	69	75.80%
Female	22	24.20%
Age Group		
25-Oct	11	12.10%
26 - 45	57	62.60%
> 45	23	25.30%
Prevalence of HSV-2 among HIV Infected Patient		
Positive	9	9.90%
Negative	73	80.20%
Borderline	9	9.90%

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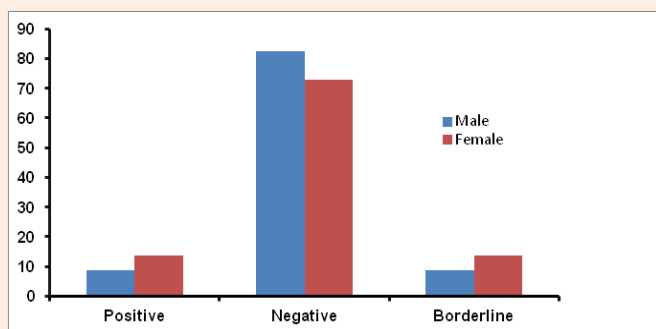


Figure 1: Association of gender with HSV2 among HIV infected patient.

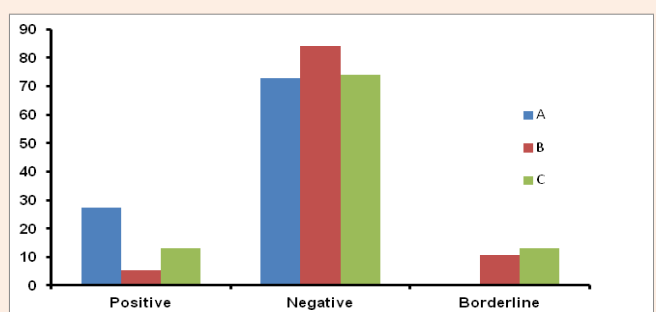


Figure 2: Association of age with sero-prevalence of HSV2 among HIV infected patient

Notes: A: age group (10-25); B: age group (26-45); C: age group (>45).

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Conflict of Interest

There is no conflict of interest.

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