HIV-Oral Lesions, Secretory Immunoglobulin A (SIGA) and Salivary Cytokine Profile among Adults Newly Diagnosed with HIV/AIDS

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Background

Innate immunity host defense and immune surveillance plays a crucial role in oral health. An understanding of immunological changes particularly in the oral cavity of persons with HIV is pivotal to predicting oral health status in such individuals. We present the preliminary results of a study designed to prospectively assess the correlation between salivary levels of sIgA, salivary cytokines, CD4 T cell counts and oral lesions among adults newly diagnosed with HIV before and after antiretroviral therapy (ART) initiation.

Methodology:

The study was conducted among adults (>18 years) newly diagnosed with HIV who presented at antiretroviral clinics of two tertiary hospitals in Ibadan, Nigeria. Data documented include socio-demographics, oral mucosal lesions and CD4 status. Saliva assays of sIgA, interleukin-6 and interferon were done using ELISA kits. CD4 counts and saliva analytes levels were compared between those with and those without oral lesions using T-test and Mann Whitney U test respectively. Ethical approval was obtained from UI/UCH institutional review board. SPSS version 25 was used for data analysis.

Results:

Seventy one participants who were ART naïve, comprising of 23 males and 48 females were assessed. Their ages ranged from 22 to 68 years with a mean of 38.8±11.7 years. Only 26(36.6%) had single or combined HIV- associated oral lesions mainly pseudomembranous candidiasis, melanotic hyperpigmentation and a case of chronic osteomyelitis of the right mandible.

Mean CD4+ counts were lower among those with oral lesions 330.16±282.28 cells/mm3 compared to those without oral lesions 388.29±238.92cells/mm3 (p=0.5). Among the study participants, saliva assays revealed the median values (interquartile range) of sIgA as 7.99pg/mL (IQR 6.14-9.01), IL-6 as 7.09pg/mL (IQR 5.93-8.33) and IFN as 6.23pg/mL (IQR 5.27-7.60). Secretory IgA, IL6 and IFN levels did not significantly differ between those with and those without oral lesions.

Conclusion:

HIV- associated oral lesions were found to be associated with lowered CD4 count rather than saliva cytokine dysregulation.

Key words: Cytokines, saliva, HIV, ART