

ABSTRACT

Background

Total antioxidant capacity is a novel early bio-chemical marker of oxidative stress in Human Immunodeficiency Virus (HIV) infected individuals. Oxidative stress can affect the initiation and progression of many infectious diseases such as HIV. Oxidative stress induced by the production of reactive oxygen species may play a critical role in the stimulation of HIV replication and contribute to immunodeficiency by reduction of cellular immunity. Salivary antioxidants constitutes a line of defense against free radical mediated oxidative stress of cells of the immune system .

Aim

To assess the Total Antioxidant Capacity (TAC) of unstimulated saliva of HIV seropositive patients on Highly Active Antiretroviral Therapy (HAART).

Materials and Methods

Unstimulated saliva was collected from HIV seropositive patients and seronegative controls. Total Antioxidant Capacity (TAC) was calculated from the unstimulated saliva samples of HIV seropositive patients and seronegative controls by spectrophotometric analysis.

Results: The study includes 100 subjects comprising of HIV seropositive patients (n=50) and HIV seronegative controls (n=50). We compared the mean Total Antioxidant Capacity-Average (TAC-Average) of the HIV seropositive patients and HIV seronegative controls. The mean TAC-Average of the HIV seropositive

and HIV seronegative controls were 0.744 ± 0.12 and 0.576 ± 0.24 respectively. There was a significant difference in the mean TAC levels of the 50 HIV seropositive patients and 50 HIV seronegative controls ($p = 0.002$). There was a significant correlation in the mean TAC levels and the diet quality of HIV seropositive patients. ($p= 0.001$)

Conclusion: We observed that mean TAC was higher in HIV seropositive patients than in seronegative controls which was partly related to the consumption of balanced diet by the HIV seropositive patients as a result of proper diet counselling and also due to the adherence to the HAART regimen.

Keywords: HIV, TAC, Unstimulated saliva.