

The Effects of Anti-Retroviral Therapy on Some Renal Parameters of Hiv Sero-Positive Individuals in Rivers State, Nigeria

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Abstract

This study investigated the effect of antiretroviral therapy on some renal parameters of HIV seropositive individuals in Rivers State, Nigeria. A total of 300 HIV patients, who are undergoing treatment were recruited in this study, aged 20-70 years. They were classified into three groups; Group 1, made up of HIV sero-Positive infected individuals on highly antiretroviral therapy as the test subjects. Group 2 was HIV sero-Positive infected individual but not on highly active antiretroviral therapy as control 1. Group 3 was HIV sero-negative individual as control 2. Ethical approval for the study and informed consent from the participants was obtained. Renal parameters evaluated were Urea, Creatinine, Na, K, Ca, HCO₃ and uric acid. The results were statistically significantly higher ($P < 0.05$) in Na, K, HCO₃, Urea, creatinine and Ca of test subject and control I. compared to control II. Also, statistically significant increase ($P < 0.05$) in Na, K, HCO₃, urea, Creatinine and Ca, of the test subject and control 1 compared to control II. In relation to sex there was also statistically significant increase ($P < 0.05$) in Na, K, HCO₃, urea, creatinine, Ca of test subject and control I compared to control II in relation to Age group groups. Based on duration of therapy, for HIV positive patients who have been on Highly Active Antiretroviral Therapy (HAART) for 0-2years, there were no significant increase ($P < 0.005$) in Na and calcium level, however there was statistically significant increase ($P < 0.05$) in K, HCO₃, urea, creatinine, Ca. For 10 years and above, there was statistically significant increase ($p < +0.05$) in Na, K, HCO₃, urea, creatinine, Ca, compared to their respective control I and control II. This study demonstrated that long term administration of HAART to HIV infected positive subjects could lead to metabolic disorder which could predispose the patient to high risk of coronary heart disease.

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