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Evaluation of Apolipoprotein Profile in HIV/Aids Subjects in Pre and Post 12 Months Antiretroviral Therapy Using 1.5 NG/ML Troponin Diagnostic Cut-off for Myocardial Infarction in Nauth Nnewi, South Eastern Nigeria

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Abstract : Introduction: It has been reported that acute myocardial infarction (AMI) might occur at 1.5 ng/ml troponin level. HIV infection has been documented to influence antiviral drugs, stimulate the production of proteins that enhance fatty acids synthesis. Information on cardiac status in HIV-infected subjects in Nigeria is scanty. Aim: To evaluate the Apolipoprotein profile of HIV subjects in pre-and-post 12 months of antiretroviral therapy (ART) using 1.5 ng/ml troponin diagnostic cut-off for myocardial infarction (MI) in Nnewi, South Eastern, Nigeria. Methodology: A total of 30 symptomatic HIV subjects without malaria co-infection with a mean age of 40.70 ±10.56 years were randomly recruited for this prospective case-controlled study. Serum apolipoproteins (Apo A1, A2, B, C2,C3 and Apo E), troponin and CD4 counts were measured using standard laboratory methods. Parameters were re-classified based on 1.5 ng/ml troponin diagnostic cut-off for MI. Analysis of variance and student paired t-tests were used for data analyses. Results: paired-wise comparison showed that there were significantly higher levels of CD4 counts, Apo A2, Apo C2, Apo E but lower levels of ApoA1, ApoB and ApoC3 in symptomatic HIV subjects before antiretroviral therapy (ART) when compared with after therapy at $p<0.05$ respectively. The troponin value was significantly higher amongst the group studied at $p<0.05$, respectively. Conclusion: The increased values of troponin observed among the groups were higher than the diagnostic cut-off for AMI. This may imply that AMI may occur at any group of studies. But the significant reduction in the serum levels of Apo A2, Apo B, Apo C3, Apo E and a significant increase in serum levels of Apo A1, Apo C2 and blood CD4 counts as the length of therapy lengthened may indicate possible cardio-protective effects of the ART on the heart, which may connote recovery.

Keywords : ART, apolipoprotein, HIV, myocardial infarction
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