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## RISK OF CARDIOVASCULAR DISEASE AMONG HIV PATIENTS ON HIGHLY ACTIVE ANTI-RETROVIRAL THERAPY

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**Background:** The risk of Cardiovascular Diseases (CVD) in Human Immunodeficiency Virus (HIV) infected patients on Highly Active Antiretroviral Therapy (HAART) from some rural parts of Africa and Uganda isn't well known. We assessed CVD risk factors, and used the lipid panel relationship to estimate the risk to CVD in persons with HIV infection on HAART in Gulu, Uganda.

**Methods:** A cross-sectional study in which data on demographic, lifestyle, diet and physical activity were collected using the WHO Stepwise approach to surveillance questionnaire, Biochemical measurements were tested using standard Biochemical methods on the Humastar 200 chemistry analyzer, Physical measurements; BMI and Hip to waist circumference were measured using standard methods, alongside the blood pressure. Multivariate logistic regression was used to analyze predictors of CVD risk factor.

**Results:** Mean HDL-C was 38.8 (SD 14.4) (CI: 36.8—39.8), mean T.CHOL was 187.8 (SD 42.3) (CI: 169—200), the mean TRIG was 130.2 (SD 7.5) (CI: 121—148) and the mean FBS was 4.5 (SD 1.1) (CI: 4.2—5.0). The most common risk factor was the low HDL-C of 40.4%, the HAART regiment that caused the most dyslipidemia was the efavirenz based HAART regiment (TDF-3TC-EFV), hypertriglyceridemia of 5.9%, hypercholesterolemia of 3.6%, hyperglycemia of 2.9% and by the TC/HDL-C ratio; 33(9.9%) participants were at risk for CVD while by the TG/HDL-C ratio 61(18.3%) participants were at risk for CVD. Obese participants were 2(0.6%), combined hypertension was 11(3.3%), systolic hypertension 11(3.3%) diastolic hypertension 3(0.9%).

**Conclusion:** The risk factors for CVD exist at 9.8%(TC/HDL>1.49), 18.3%(TG/HDL>5) and a combined risk of 28.1% lower than the risk in Mashinya et al., (2015) so the Null hypothesis was rejected and alternative accepted hence justifies clearly a considerable health burden that can possibly be reduced by increasing educational programs on CVD prevention for people on HAART. There is however a need to develop and evaluate a race/ethnicity-specific CVD risk estimation tool for HIV infected Africans and assessment at HAART initiation and follow-up alongside developing a testing algorithm for lipid panel during monitoring for HAART.

## BIOGRAPHY

Okello Emmanuel Onen has completed his BMLS at the age of 29 years from Clark International University, Kampala, Uganda where he was the publicity coordinator for the Clark International University Research Club. He is a registered clinical pathologist/medical laboratory scientist, also the CEO of the independent medical laboratory detectives and investigators in Gulu, Uganda with a passion for cardiovascular disease especially in HIV in the local setting of Gulu, Uganda. He has unpublished work in the pipeline for publication in the area of HIV/aids, diabetes, fungal and enrolled for MSc in infectious disease at London School of Hygiene and Tropical Medicine. Emmanuel ha presented his paper in scientific conferences/seminars at both national and international level, supported a number of manuscript writing and guardians to fellow researchers in the field of medicine to achieve valid research findings and currently a laboratory scientist at Gulu regional referral hospital and safety auditor waiting to present at the world cardiology congress in March, 2019.

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