

April 26,27 2018  
Rome, ItalyJ Transm Dis Immun 2018 Volume 2  
DOI: 10.21767/2573-0320-C1-003

# MICRONUTRIENT SUPPLEMENTATION DECREASED PLASMA HIV RNA LOAD AND INTERLEUKIN-6 WITHOUT INCREASING CD4+ CELL COUNT IN HIV-INFECTED ANTIRETROVIRAL (ART-) NAÏVE PATIENTS

**Obiako O. R.<sup>1</sup>, Musa B. O. P<sup>1</sup>, Maiha B. B<sup>1</sup>, I Abdu-Aguye<sup>1</sup>, Okonkwo L<sup>1</sup>, Balogun Y.<sup>2</sup>, Hassan A.<sup>1</sup>, Babadoko A.<sup>1</sup>, Muktar H. M.<sup>1</sup> and Mohammed A. A<sup>2</sup>**

<sup>1</sup>Ahmadu Bello University, Zaria

<sup>2</sup>University Teaching Hospital, Zaria

**Background:** Continuous HIV RNA replication, elaboration of pro-inflammatory cytokines and progressive CD4+cell destruction are hallmarks of HIV infection progression to HIV disease. This research studied the effect of micronutrient supplementation on plasma HIV RNA load (pVL), interleukin 6 (IL-6), C-reactive protein (CRP) and CD4+ cell counts (CD4+cc) among ART- naive HIV infected patients.

**Materials & Methods:** 90 ART-naïve adults (aged 18-59 years) attending two HIV clinics in Kaduna State were recruited after informed consent. Inclusion criteria were: WHO clinical stage I and II, CD4+  $\geq$ 520 cells/ $\mu$ l, and absence of immunosuppressive and/or psychiatric illness. Patients who became eligible for ART (CD4+ cc  $\leq$ 500 cells/ $\mu$ L or presence of AIDS-defining illness), or became pregnant or defaulted from one scheduled clinic visit in the course of the study were excluded. After history and physical examinations, venous blood was collected for baseline pVL, and serum IL-6 and CRP concentrations, after which each patient was given one capsule of SYNOVIT TM (micronutrient supplements) and 900 mg of co-trimoxazole to take daily for 48 weeks. Patients' CD4+ cc were evaluated quarterly, while pVL, IL-6 and CRP were evaluated at 24 and 48 weeks respectively.

**Results:** The pVL, IL-6, CRP and CD4+ cc decreased significantly from baseline to 48 weeks of micronutrient supplementation. The pVL decreased from 27,105.0 copies/mL to 585.0 copies/mL ( $p=0.00$ ); serum IL-6 decreased from 1.9 pg/mL to 0.5 pg/mL ( $p=0.02$ ); serum CRP reduced from 29.4 ng/mL to 25.8 ng/mL ( $p=0.03$ ); while CD4+ cc also reduced from 704.5cells/ $\mu$ L to 595.0 cells/ $\mu$ L ( $p=0.00$ ) respectively.

**Conclusion:** 48 weeks of micronutrient supplementation reduced pVL, IL-6 and CRP without increasing CD4+ cc in HIV-infected ART-naïve patients in Kaduna State, Nigeria.

orobiako87@gmail.com