

12<sup>th</sup> World Congress on

# VIROLOGY

October 16-17, 2017 Baltimore, USA

## Comparison of viral load and CD4 values of ARV naïve and ARV challenged HIV patients in Taraba State Nigeria

**Margaret C Attah**

Federal Medical Centre, Jalingo, Nigeria

**Statement of Problem:** Taraba State has the second highest prevalence HIV infection in Nigeria, of 10.5% (NACA, 2015). Increased HIV viral load indicates increase in infectivity and weaker immune system by decrease in CD4 counts. Antiretroviral therapy (ART) helps to reduce the risk of transmission and infectivity of the virus and helps to improve the health and life expectancy of the patient. This study evaluated the baseline viral load and CD4 values of newly enrolled HIV positive patients; also at three and six months for both those that commenced ART (ARV challenged patients) and those who did not commence ART (ARV naïve patients) and compared these values at three and six months after commencement of ART or not.

**Methodology & Theoretical Orientation:** A prospective longitudinal observational cohort study design was adopted at the Federal Medical Centre, Jalingo, Taraba State, Nigeria.

**Finding:** Newly enrolled HIV positive adult patients 18 years and above were recruited. Data was obtained from each patient by administration of questionnaires. Intravenous blood samples were collected during clinical visits; processed and analyzed for current HIV viral load and CD4 counts using the COBAS Ampliprep/Taqman Machine (Polymerase Chain Reaction) and the Cyflow Counter respectively. Data was analyzed using SPSS statistical software version 18.0. A total of 171 HIV drug naïve adult patients were recruited into this study. The ratio of female (70.2%) to male patients (29.8%) was 2.3:1. Baseline assessment of the 171 enrollees showed 74 patients with CD4 count  $\geq 500$  cells/ $\mu$ l and 97 patients with CD4 count  $< 500$  cells/ $\mu$ l; females having higher CD4 count than males;  $p = 0.008$ . CD4 count and viral load of the 171 ARV naïve patients showed significance at baseline assessment ( $p < 0.0001$ ); then showed no significance at three months assessment for both ARV challenged and ARV naïve groups. There was significance for CD4 and viral load at six months, for both ARV challenged,  $p = 0.019$  and ARV naïve,  $p = 0.007$  groups respectively. Nineteen (19.6%) ARV challenged patients had an improved CD4 count from  $< 500$  cells/ $\mu$ l at baseline assessment to  $\geq 500$  cells/ $\mu$ l six months on therapy and 40 (41.2%) patients achieved viral suppression of  $< 1000$  copies/ml over the period, due to effective use of HAART. Also, 30 (30.9%) ARV challenged patients had CD4 count  $\leq 200$  cells/ $\mu$ l and 57 (58.7%) had viral load  $> 1000$  copies/ml after being on HART therapy for six months.

**Conclusion & Significance:** This study confirms the importance of CD4 and viral load in monitoring disease progression or regression in HIV infected patients.

### Biography

Margaret C Attah had her qualification in Medical Laboratory Science and presently, working with the Federal Medical Centre Jalingo, Taraba State, Nigeria as a Senior Medical Laboratory Scientist in Medical Microbiology (Virology Major). She has attended workshops and has keen interest in research related to Medical Virology. She is also involved in community services and medical outreaches to remote communities in her country.

attahmargaret606@yahoo.com

### Notes: