

Poster presentation

## Frequency, pattern and risk factors for distal sensory polyneuropathy in human immunodeficiency virus infected patients at a tertiary hospital South East Nigeria

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### Background

Human immunodeficiency virus (HIV) infection has posed a significant global threat to health care, more so in developing countries. Peripheral nerve involvement has been documented with distal sensory polyneuropathy (DSP) as the commonest manifestation. The pattern and risk factors for DSP have not been adequately defined in this patient population especially in a low resource setting. This study aims to determine the frequency of DSP, and the effect of demographic and other clinical variables on the clinical manifestation of DSP, among HIV positive patients from South East Nigeria.

### Methods

This is a case control study. The study took place at the University of Nigeria Teaching Hospital Enugu. Two cohorts of HIV positive patients (drug naïve and patients on HAART) were recruited and studied with HIV negative age and sex matched controls. Study participants were classified as asymptomatic or symptomatic if they had symptoms such as paraesthesias, numbness, and burning sensation. Objective testing was done, and DSP diagnosed if patient displayed abnormalities in 2 or more of the following: ankle reflex, vibration perception threshold using the Bio-Thesiometer and pressure sensation with 10 g monofilament.

### Results

A total of 200 HIV positive study participants (100 drug naïve and 100 patients on HAART) and 100 HIV negative controls were recruited. The mean age of drug naïve patients was  $35.11 \pm 8.71$  years while that for patients on HAART and controls were  $35.15 \pm 8.00$  years and  $35.58 \pm 8.38$  years respectively. There was no significant difference in the mean age ( $p = 0.908$ ). Eighty-five patients (42.5%) had DSP. This was made up of 37 drug naïve patients and 48 patients on HAART. Age ( $p = 0.041$ ), height ( $p = 0.002$ ) and low hemoglobin ( $p < 0.001$ ) were found to be the risk factors for DSP in the study participants. Though DSP occurred more in patients on HAART, the difference was not statistically significant. The duration on HAART may have affected the result.

### Conclusion

DSP is commoner in HIV infection. Low hemoglobin, height and advancing age were significantly associated with DSP while body mass index and CD4 count did not affect DSP in this study. Though DSP occurred more in patients on HAART, the difference was not statistically significant. Vibration perception threshold had the highest predictive accuracy for DSP in this study. There is need for all HIV patients especially those with low hemoglobin, tall stature and advancing age to be assessed for distal sensory polyneuropathy.