

**Risk factors of nevirapine hypersensitivity reaction among human immunodeficiency virus-1 infected treatment in naïve patients at Korle-bu Teaching Hospital****Elvis Twumasi Aboagye**

University of Ghana, Ghana

**Objective:** The introduction of antiretroviral drugs in Ghana has improved survival rates amongst HIV patients. According to National Guidelines for Ghana, administration of nevirapine, a frontline antiretroviral drug leads to hypersensitivity reactions in some patients. This study examined the clinical risk factors and specific genotypic alleles associated with nevirapine hypersensitivity reactions.

**Method:** 74 antiretroviral naïve HIV-1 infected patients, initiating nevirapine-based HAART therapy were enrolled in this nested case control study. Recruited subjects were monitored clinically over a period of 24 weeks from July 2013 through June 2014. Blood samples were evaluated for aminotransferase activity and DNA genotyped for specific MDR1 and CYP2B6 markers.

**Results:** Eleven (15.7%) patients were identified as cases and 59 (84.3%) patients classed as comparisons out of the study population at the end of the 24 week-monitoring periods. Eight out of the observed cases were categorized as nevirapine hypersensitivity rash and 4 as hepatotoxicity. The concentration of AST was much higher in the cases ( $119.44 \pm 155.86$ ) compared to the comparisons group ( $68.80 \pm 42.65$ ),  $p=0.056$ . The concentration of ALT was also higher in the cases ( $136.44 \pm 165.99$ ) compared to the control ( $56.72 \pm 33.02$ ),  $p=0.003$ . The CYP2B6 516 G > T, variant allele frequency observed in the study was 62 (44.3%). There was no variant allele detected for the three SNPs in ABCB1 gene genotyped.

**Conclusion:** The effect of this outcome although not statistically significant with respect to the specific alleles genotyped, this findings might be clinically traced to non-adherence to medication and hospitalization of patients which seems to be a major factor to treatment failure in resource limited countries.

**Biography**

Elvis Twumasi Aboagye has completed his MPhil from the University of Ghana and is awaiting grant approval to enroll into a PhD programme in Molecular Cell Biology and Molecular Medicine at the University of Ghana. He is a Biomedical Scientist at Life Medical Mission, a non-governmental organization. His MPhil research findings has been published by OMICS International in *Journal of AIDS and Clinical Research*.

atelvis45@gmail.com

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