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Hepatotoxicity and related risk factors of severe hepatotoxicity among HIV-1 infected individuals initiated on Highly Active Antiretroviral Therapy in Cameroon

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Aim: Hepatotoxicity due to highly active antiretroviral therapy (HAART) has gained prominent attention since it can be affected by many factors. The aim of this study was to determine the prevalence of hepatotoxicity and related risk factors for severe hepatotoxicity following HAART initiation.

Methods: One hundred naive HIV-1 patients were recruited and followed up for 24 weeks. They were placed on either Tenofovir(TDF) + Lamivudine(3TC) + Efavirenz(EFV) or Zidovudine(AZT) + Lamivudine + Nevirapine(NVP) or Zidovudine + Lamivudine + Efavirenz regimen. Venous blood samples were collected to measure trans-aminotransferases (ALT and AST) and alkaline phosphatase (ALP), using colorimetric enzymatic reaction which was used to classified hepatotoxicity based on age and sex.

Results: A total of 38(38%) and 55(55%) patients presented with hepatotoxicity while 15% and 28% of patients of them had severe hepatotoxicity at 4 and 24 weeks respectively. Serum levels of all enzymes increased significantly ($p<0.05$) with increased treatment duration. Univariate analysis revealed that the risk factor of developing severe hepatotoxicity was significantly ($p<0.05$) greater in patients <30years, males, low BMI, low monthly income earners and patient on AZT+3TC+ NVP regimen. While multivariate analysis showed that age <30 years, Low BMI, low monthly income and the use of AZT+3TC+NVP was an independent risk factor.

Conclusions: Low BMI, <30years, low monthly income and the use of AZT+3TC+NVP regimen were identifiable risk factors for the development of severe hepatotoxicity. As such these factors should be considered as an important strategy by clinicians in preventing the hepatotoxicity.

Biography

Lem Edith Abongwa a Medical Microbiologist is an assistant lecturer of the University of Bamenda and a PhD student in Kenyatta University. Her interest is on HIV and Hepatitis B virus. She is interested in the identification and assessment of risk factors that expose communities to these infections and possible solutions to prevent and control them as well as parasite strain diversity and severity to infectious infection. Prior to medical research, she was the head, a public health non-governmental organization assessing the implementation of Option B+ in two regions of Cameroon sponsored by a PEPFAR HIV/AIDS project in Cameroon Department of Biological Sciences, Faculty of Science, University of Bamenda, PO Box 39,Bambili, NW The region, Cameroon.

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