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Anemia and risk factors in HAART naive and HAART experienced HIV positive participants in South West Ethiopia: A comparative study

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Background: Human immunodeficiency virus (HIV) infection and its treatment cause a range of hematological abnormalities. Anemia is commonly observed and multifactorial in origin in HIV positive people and has been associated with increased mortality rates and disease progression.

Objective: We aimed to determine the prevalence and risk factors of anemia in highly active antiretroviral therapy (HAART) naive and HAART experienced HIV positive people.

Methods: A facility-based comparative cross sectional study was conducted in Jimma University Specialized Hospital from February 1 to March 30, 2012. A total of 234 HIV positive persons, 117 HAART naive and 117 HAART experienced, were enrolled in this study. Blood and stool specimens were collected from each participant for hematological, immunological and parasitological investigations. Socio-demographic characteristics and clinical data of patients were collected using pre-tested questionnaire. Statistical analysis of the data (Chi-square, student's t-test, logistic regression) was done using SPSS V-16.

Results: The overall prevalence of anemia was 23.1%. The prevalence of anemia in HAART naive and HAART experienced people was 29.9% and 16.2% respectively (P=0.014). Presence of opportunistic infections (P=0.004, 95%CI=1.69-15.46), CD4+<200 cells/µl (P=0.001, 95%CI=2.57-36.89) and rural residence (P=0.03, 95%CI=1.12-10.39) were found to be predictors of anemia for HAART naive participants. On the other hand, HAART regime (ZDV/3TC/NVP) and the duration of HAART were found to be predictors of anemia for HAART experienced groups.

Conclusion: The prevalence of anemia in HAART naive patients was higher than HAART experienced patients. Risk factors for anemia in HAART naive and HAART experienced HIV positive persons were different. Hence, there is a need for a large scale and longitudinal study for further characterization of the type of HIV associated anemia.

Biography

Lealem Gedefaw acquired his first degree from Hawassa University in medical laboratory science and an MSc in Clinical Laboratory Science Speciality Haematology and Immunohematology from Jimma University in 2012. Currently he is working at Jimma University, one of the top leading universities in Ethiopia, as lecturer. He is involved in lecturing and advising postgraduate and undergraduate students in their research project in the Department of Medical Laboratory science and pathology, Jimma University. He has participated in different local and international workshops prepared by different organizations. He is also doing different researches in the university in the area of HIV, Immunology, parasitology and nutrition.

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