

Magnitude and associated factors of peripheral Cytopenia among HIV-infected children attending at university of Gondar specialized referral hospital, northwest Ethiopia

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Background: Isolated or multi lineage cytopenia are the most common clinicopathological features and independently associated with increased risk of disease progression and death among human immunodeficiency virus infected children. In the study area, there is scarcity of data about the magnitude of various cytopenia.

Objectives: Aimed to determine the magnitude and associated factors of peripheral cytopenia among HIV infected children at the University of Gondar Specialized Referral Hospital ART clinic, Northwest Ethiopia.

Methods: Institutional based cross-sectional study was conducted on 255 HIV infected children from January- April 2020. None probable convenient sampling technique was used to select the study participant. Socio demographic data were collected by pre tested structured questionnaire via face-to-face interview and their medical data were obtained from their follow-up medical records. Moreover, blood specimens were collected and examined for complete blood count, viral load and blood film, whereas stool specimens were collected and examined for intestinal parasites. Bi-variable and multi-variable logistic regression models were fitted to identify associated factors of cytopenia. P-Value <0.05 was considered as statistically significant.

Result: The overall magnitude of peripheral cytopenia was 38.9%. Anemia, leukopenia, lymphopenia, thrombocytopenia and bi-cytopenia were 21.2%, 12.2%, 11%, 1.6% and 3.9% respectively. Being in the age group of 2-10 years (AOR= 5.38, 95%CI 2.33-12.46), AZT based regimen (AOR=5.44, 95%CI: 2.24-13.21), no eating green vegetables (AOR=2.49, 95% CI: 1.26-4.92) and having plasma viral load >1000 copies /ml (AOR =5.38, 95%CI: 2.22-13.03) showed significant association with anemia.

Conclusion: Anemia was the predominant peripheral cytopenia among HIV infected children in this study. It was strongly associated with AZT based drug type, age below 10 years and high viral load. Critical stress should be given for early investigation and management of cytopenia in addition to the use of alternative drug which leads to higher viral suppression and lower risk of toxicity issue.

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