

Prevalence and associated factors of anemia in Hiv-infected patients attending care and treatment clinic at Vwawa district hospital in Mbeya region-Tanzania

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Background: AIDS related chronic opportunistic infections like TB may lead to anemia. ART may also cause insufficient food intake due to the side effect like nausea and vomiting. There is scarcity of data on the prevalence and factors associated with anemia among HIV-infected adult patients.

Methods: A cross sectional study was conducted at Vwawa district hospital CTC from January to March 2016. A questionnaire containing socio-demographic, clinical and associated factors information was administered to the study respondent. Blood and stool samples were collected in EDTA vacutainer tube and plastic clean container for complete blood count, CD4 T cell count, hemo-parasites and intestinal parasites, respectively. Data was analyzed using EPI INFO version 7. Univariate, bivariate and multivariate analysis was carried out where odds ratio was used as a measure of association to identify factors associated with anemia. Factors with $p < 0.05$ at multivariate analysis was regarded as independently associated with anemia.

Results: A total of 350 HIV-infected patients aged 15 years and above were included in the study. The median age of the study participants was 36 years with a range of 16 to 70 years. Male participants contributed 42.3% while age group of 30 years and above contributed 70.6% (247). Six participants (1.7%) were receiving cotrimoxazole prophylaxis, and one hundred and eighty eight (53.7%) were on antiretroviral therapy. Ninety-five (27.1%) of the 350 participants were anemic (≤ 11.9 g/dl) with a mean hemoglobin value of 12.9 g/dl ± 2.2 S.D. The severe (Hb less than 8g/dl) anemia was observed in eight (2.3%) participants. Anemia increased with WHO HIV disease stages III & IV with the highest prevalence in stage IV with the prevalence of 31.8% and 62.5%, respectively (OR 1.97, 95%CI 1.02- 3.82). CD4 T cell count (OR 2.095% CI 1.21- 3.18), fever (OR 2.22, 95% CI 1.03-4.77) and use of co-trimoxazole OR (OR 14.11, 95% CI 1.63-122.41) were significantly associated with anemia.

Conclusion: The prevalence of anemia at Vwawa district hospital was found to be high. The factors associated with anemia among HIV-infected patients were multi-factorial and they included advanced WHO HIV stage, CD4 T cell count, presenting feature of fever and use of cotrimoxazole

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