ABSTRACT

BACKGROUND AND OBJECTIVES

Anemia is the most common hematologic manifestation seen in HIV infection. The etiologies of anemia may be different from the general population. The objectives of the study were to study the etiology of anemia in HIV positive individuals and to study the relationship between anemia and immunological status as indicated by the CD4 count.

METHODS

This was a cross sectional study done among sixty HIV positive patients with anemia admitted in medical wards of MADRAS MEDICAL COLLEGE, CHENNAI.

RESULTS AND CONCLUSIONS

Mean age of the patients was 41.23 years. CD4 count was lesser than 200/μl in 58.3% of patients. Fifty one percent of the patients were on HAART. Among the patients on HAART 67% were on zidovudine. 16.7% of patients had grade one anemia, 31.7% of percent had grade two anemia, 18.3% of percent had grade three and 33.3% of percentage had grade four anemia. Seventy percent had their MCV in normal range, 16.7% percent had MCV less than 76 fl and 13.3% had MCV greater than 96 fl. Most patients had anemia of chronic disease in comparison to other etiologies. 51.7% percent had anemia of chronic disease, 15% had B12/folate deficiency, 10% had bone marrow infiltration, 10% had iron deficiency anemia, 10% had zidovudine induced anemia and 3.3% had anemia due to hemolysis.
In total 18.3% of patients in microcytic anemia in that had 40% of patients had of patients with microcytic anemia had anemia of chronic disease and the rest had iron deficiency. Among the patients with macrocytosis 87.5% had B12/folate deficiency and 10% had zidovudine induced anemia. Only 3.3% had documented evidence of hemolysis among the 15% of percent of the patients who had positive direct anti globulin (Coomb’s) test. Only 50% percent of patients with low B12 levels had macrocytosis. 3.3% of patients had low serum ferritin levels probably due to ongoing inflammation, signifying anemia of chronic disease. There was correlation between CD4 count and hemoglobin (t =2.042, p = 0.02). However, mean CD4 count (119/μl) in patients who had anemia of chronic disease was significantly lesser than the mean CD4 count (270/μl) in patients who had anemia due to other etiologies (p<0.001). Among patients with worse immunological status(CD4 count<200/μl), anemia of chronic disease was the most common cause (67.7%). The mean MCV was significantly higher in patients on HAART compared to those not on HAART. Hemoglobin levels were significantly lower in patients on zidovudine than those who were not. In sex differentiation male had percentage of 70% and female had 30% infected in HIV in my study in that,married is 88.3% and unmarried around 11.7%. this shows transmission of hiv from male to female after marriage is significant.

**KEYWORDS**

AIDS,Anemia,HIV,HAART, Hemoglobin,Lymphoma,MCV,CD4 count,B12 deficiency.