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Hematological Profiles of Visceral Leishmaniasis Patients before and after Treatment of Anti-Leishmanial Drugs at University of Gondar Leishmania Research and Treatment Center Northwest, Ethiopia

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Abstract : Background: Visceral leshimaniasis is a parasitic disease characterized by a systemic infection of phagocytic cells. Hematological parameters of these patients may be affected by the progress of the disease or treatment. Thus, the current study aimed to assess the hematological profiles of visceral leishmaniasis patients before and after treatment. Method: An institutional based retrospective cohort study was conducted among visceral leishmaniasis patients at University of Gondar Comprehensive Specialized Referral Hospital Leishmaniasis Research and Treatment Center from 2013 to 2018. Hematological profiles before initiation and after completion of treatment were extracted from registration book. Descriptive statics was presented using frequency and percentage. Paired t-test and Wilcoxon Signed rank test were used for comparing mean difference for normally and non- normally distributed data, respectively. Spearman and Pearson correlation analysis was used to describe the correlation of hematological parameters with different variables. P value < 0.05 was considered as statistically significant. Result: Except absolute nerutrophil count, post treatment hematological parameters show a significant increment compared to pretreatment one. The prevalence of anemia, leucopenia and thrombocytopenia was 85.5%, 83.4% and 75.8% prior to treatment and it was 58.3%, 38.2% and 19.2% after treatment, respectively. Moreover, parasite load of the disease showed statistically significant negative correlation with hematological profiles mainly with white blood cell and red blood cell. Conclusion: Majority of hematological profiles of patients with active VL have been restored after treatment, which might be associated with treatment effect on parasite proliferation and concentration of parasite in visceral organ, which directly affect hematological profiles.

Keywords : visceral leshimaniasis, hematological profile, anti-leshimanial drug, Gondar
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