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# Malaria parasitemia and its association with hematological profiles among malaria patients in Metema Hospital, northwest Ethiopia

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**Background & Aim:** Malaria is mosquito-borne disease of human in tropics and sub tropics which altered hematological and lipid profile of malaria patients, despite no available data on malaria parasitemia and its association with lipid profile and complete blood count in Ethiopia. This study was aimed to assess malaria parasitemia and its association with lipid profile and complete blood count among malaria patients in Metema Hospital, northwest Ethiopia.

**Methods:** A cross-sectional study design was conducted from April 01-June 30, 2014, Metema, Ethiopia. Of 232 study subjects included in this study, 116 were clinically confirmed malaria patients and 116 healthy people as control groups. Study subjects were included based on OpenEpi and systematic random sampling techniques. Blood samples were collected after getting consent. Giemsa stains were used for malaria parasitemia detection while BC-5200, Mindray was used to do hematology profile analysis. Data were entered and analyzed by using SPSS-20 statistical software. Chi-square test proportions for categorical variables, independent t-test for mean comparison and one way ANOVA were run to compare mean difference between malaria parasitemia grades. In all cases, P-value <0.05 was taken as statistically significant.

**Results:** Of the 232 study subjects, 79.3% were males and 20.7% were females. Of the total, 39.7%, 45.7%, 14.6% were reported as low, moderate and high malaria parasitemia, respectively. Association of malaria parasitemia with sex, age, occupation, residence did not show any significant association ($p>0.05$). Independent t-test were used and there were significant mean difference between malaria positive and control groups in hemoglobin, HCT value, mean cell volume, mean cell hemoglobin concentration, platelet count at $p<0.05$. Platelet count were the only statistically significant parameters between moderate and high malaria parasitemia groups at $F=0.69$, $p<0.05$.

**Conclusions:** The reduction of Hgb, HCT, MCHC and platelet count and increment of MCV could be useful for clinicians to management of mild to severe malaria patients.

## Biography

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