

Malarial anemia (MA) is a multifactorial disease for which the complex etiological basis is only partially defined. The association of clinical, nutritional, demographic, and socioeconomic factors with parasitemia, anemia, and MA was determined for children presenting at a hospital in a holoendemic area of *Plasmodium falciparum* transmission in western Kenya. Parasitemia was not associated with malaria disease severity. In univariate logistic regression, fever was significantly associated with parasitemia, and wasting was associated with increased presentation of MA. Caretaker's level of education and occupation were significantly correlated with parasitemia, anemia, and MA. Housing structure was also significantly associated with parasitemia and anemia. Bed net use was protective against parasitemia but not anemia or MA. Multivariate logistic regression models demonstrated that fever, mother's occupation, and bed net use were associated with parasitemia. In the current study, none of the factors were associated with anemia or MA in the multivariate models.