The diagnosis of cerebral malaria is problematic in malaria-endemic areas because encephalopathy in patients with parasitemia may have another cause. Abnormal retinal findings are thought to increase the specificity of the diagnosis, and the level of histidine-rich protein 2 (HRP2) may reflect the parasite We examined the retina and measured plasma HRP2 levels biomass. Methods. in children with acute nontraumatic encephalopathy in Kenya. Logistic regression, with HRP2 level as an independent variable and World Health Organization-defined cerebral malaria and/or retinopathy as the outcome, was used to calculate malaria-attributable fractions (MAFs) and Of 270 children, 140 retinopathy-attributable fractions (RAFs).Results. (52%) had peripheral parasitemia, 80 (30%) had malaria retinopathy, and 164 (61%) had an HRP2 level of >0 U/mL. During 2006-2011, the incidence of HRP2 positivity among admitted children declined by 49 cases per 100 000 per year (a 78% reduction). An HRP2 level of >0 U/mL had a MAF of 93% for cerebral malaria, with a MAF of 97% observed for HRP2 levels of ≥10 U/mL (the level of the best combined sensitivity and specificity). HRP2 levels of >0 U/mL had a RAF of 77% for features of retinopathy combined, with the highest RAFs for macular whitening (99%), peripheral whitening (98%), and hemorrhages HRP2 has a high attributable fraction for features of (90%).Conclusion. malarial retinopathy, supporting its use in the diagnosis of cerebral malaria. HRP2 thresholds improve the specificity of the definition.

KEYWORDS:

attributable fractions, cerebral malaria, children, histidine-rich protein-2, malaria retinopathy