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.

**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 retinopathy-attributable fractions (RAFs).

**Results.** Of 270 children, 140 had malaria retinopathy, and 164 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 macular whitening (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