

The relationship between age and the manifestations of and mortality associated with severe malaria

Abstract

Background. The reported case-fatality rate associated with severe malaria varies widely. Whether age is an independent risk factor is uncertain. **Methods.** In a large, multicenter treatment trial conducted in Asia, the presenting manifestations and outcome of severe malaria were analyzed in relation to age. **Results.** Among 1050 patients with severe malaria, the mortality increased stepwise, from 6.1% in children (age, <10 years) to 36.5% in patients aged >50 years ($P < .001$). Compared with adults aged 21-50 years, the decreased risk of death among children (adjusted odds ratio, 0.06; 95% confidence interval, 0.01-0.23; $P < .001$) and the increased risk of death among patients aged >50 years (adjusted odds ratio, 1.88; 95% confidence interval, 1.01-3.52; $P = .046$) was independent of the variation in presenting manifestations. The incidence of anemia and convulsions decreased with age, whereas the incidence of hyperparasitemia, jaundice, and renal insufficiency increased with age. Coma and metabolic acidosis did not vary with age and were the strongest predictors of a fatal outcome. The number of severity signs at hospital admission also had a strong prognostic value. **Conclusion.** Presenting syndromes in severe malaria depend on age, although the incidence and the strong prognostic significance of coma and acidosis are similar at all ages. Age is an independent risk factor for a fatal outcome of the disease.

Keywords — Severe malaria, adult, age distribution, anemia, Asia, mortality