Epidemiological factors that promote the development of severe malaria anaemia in children in Ibadan

Chiaka I Anumudu, Christian MF Okafor, Victor Ngwumohaike, KA Afolabi,† Roseangela I Nwuba, and Mark Nwagwu

Abstract

Background

Effective control and management of severe malaria cases depends on a clear understanding of the local epidemiological factors and specific clinical manifestations of the disease in the different endemic regions.

Objectives

To determine the prevalence of severe malaria and epidemiological factors that affect the development of malaria anaemia.

Methods

A cross-sectional survey was carried out among children below 5 years of age, at the Adeoyo State Maternity Hospital, Ibadan, Nigeria. Questionnaires and case histories were taken from patients clinically diagnosed of malaria. Thus, 372 volunteers were recruited into the study from the 3131 paediatric cases that reported over the 10-week period to the out-patient department (OPD) of the hospital. 229 (61.6%) of the recruited volunteers presented with fever (>37.5 °C) at consultation. These had malaria parasite and PCV tests done.

Results

Clinical diagnosis was confirmed microscopically in 78% (290/372) for Plasmodium infection using thick film slides. Anaemia (PCV <28%) prevalence was 28.2%. Factors that contributed to the rapid progression of uncomplicated malaria to severe status included: age of the child, level of parasitaemia, careless response and attitude of parents or guardians to fever in the children; parents' preoccupation with their jobs or other healthy children and unwillingness to use available health facilities.

Conclusion

The study underscores the need for community involved partnership for malaria control especially through health education for the home management of malaria, especially among those experiencing some form of inequity in access to healthcare.

Keywords: malaria, epidemiology, development, anaemia children
Running title: Epidemiological factors that promote severe malaria in children