Letter

Initial treatment of severe malaria in Cameroonian children - likely problems of inadequate, improper, delayed or failed treatment

To the Editor: We read the recent article by Chiabi et al. with keen interest and some surprise. Pre-admission medications were reportedly used for 287 patients (97%), of whom 59% (170) had used some form of antimalarials. Poor knowledge on the part of the mothers on how to identify the signs and symptoms of malaria and their inability to differentiate malaria from other causes of childhood fever might explain the non-treatment of a significant number of the patients before hospital admission.

Pre-admission doses were reportedly adequate for 72% of the 170 patients who had been given some form of antimalarials, so inadequate treatment was very unlikely to have been the only cause of the severe malaria. Improper, delayed or failed treatments might have contributed to the number of cases reported.

We were puzzled that the children were hospitalised and treated for severe malaria, yet the authors did not mention what antimalarials were used for their treatment during admission. However, we assumed that they were treated with parenteral quinine or artemesinin derivatives according to the World Health Organization (WHO) guideline. Quinine and artemesinin-based combination therapies (ACT), in adequate doses, constituted the majority of the antimalarials used for home and primary health care management of the children studied by Chiabi et al., yet the children responded to treatment with these drugs while hospitalised. The quality of the pre-admission antimalarials must therefore be questioned. Counterfeit quinine is abundant in Cameroon and the fake artesemisin derivatives that have dominated the Thai-Cambodian market have gradually spread to some African countries. Adequate systems for the monitoring of the quality of antimalarials in the marketplace may therefore be urgently required in Cameroon.

The source of the antimalarials used for self-medication in Chiabi et al.’s study is very important. It is common practice for mothers to store medicines at home, especially antimalarials, in anticipation of malaria fever in their children. The stability of medicines kept at home is known to decrease over time, especially in a warm climate, and a short shelf-life could increase treatment failure from loss of potency and possibly cause toxicity.

Typical African diets are low in fat, an important factor for the absorption of several antimalarial compounds. Although many studies from African countries have shown that the daily fat intake in children was well above the 1.2 g/day needed for appropriate absorption of lumefantrine, sick children with malaria are often nauseous and will not eat, thus reducing their fat intake and possibly decreasing lumefantrine absorption.

Concomitant bacterial infections occur more frequently in children than adults and are associated with mortality. This may explain the fact that 6.5% of children were treated with antibiotics before hospital admission. The consequent delayed treatment of malaria in this group might have contributed significantly to the number of children hospitalised for severe malaria.

Lastly, traditional healers play a prominent role in treating African children with malaria, but unfortunately Chiabi et al. did not explore this in their study. Children with severe malaria are often brought to hospital late because they have received treatment from healers, as the parents strongly believe in traditional medicine.

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References
Treatment was improper because ACTs, which have been recommended in place of monotherapy by the Cameroon Ministry of Public Health for simple malaria since 2004, were administered in only 29.9% of the children. Simple malaria will certainly lead to severe malaria if untreated. Monotherapy was widely used before admission (in 51% of the children). Chloroquine was officially withdrawn from the drug market in Cameroon in 2002, so we were surprised that it was still available and continued to be given to patients by parents and some health personnel (see Fig. 5 of our article).

Failed treatment due to resistance could have occurred in our study, as emerging resistance to effective new antimalarials in Cameroon has been demonstrated by Mbacham et al.10

From our experience the role of traditional healers in the management of febrile illness or malaria in urban areas in Cameroon is not significant. A bigger problem is self-medication from doubtful sources, as pointed out by Basco,6 and the many health posts occupied by unskilled personnel (which escape any official control), which compromise the proper management of childhood illnesses. Traditional medicines had been taken by only 4.3% of our patients.

Finally, we emphasise that ineffective initial treatment for severe malaria in Cameroonian children is multifactorial, with inappropriate, improper, delayed and failed treatment all playing a role. There is a need for appropriate education of communities and parents on the choice and source of drugs, rational drug use and home-based treatment, and timely presentation to health care services.

References