Chloroquine resistant Plasmodium falciparum malaria in a local Kenyan: a case report.

Abstract:

The choice of partner drug is critical for artemisinine-based combination therapy (ACT) to remain effective and amodiaquine (AQ) is one important candidate to evaluate. We treated 81 children <5 years with uncomplicated Plasmodium falciparum malaria with AQ alone and related the treatment outcome to the possible selection of pfcrt 76T, 152T, 163S, 326S, pfmdr1 86Y and pfmrp 191H, 437S in recurrent infections (recrudescenses and re-infections) and to the blood concentration of desethylamodiaquine (DEAQ). During 21 days follow-up 28 children had a recurrent infection (9 recrudescenses, 13 re-infections and 6 mixed). Neither genotyping of the polymorphisms before treatment nor DEAQ blood concentrations could predict treatment outcome. pfcrt 76T was however significantly selected for in recurrent infections ($p = 0.020$). pfmdr1 86Y was also selected for, but only in recrudescent infections ($p = 0.048$). The study showed high prevalence of AQ resistant parasites in vivo, which appeared to be associated to pfcrt 76T and pfmdr1 86Y.