

Emerging parasite resistance in Africa - are we about to see a resurgence in *falciparum* malaria across the continent?

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Abstract

Clinical management of uncomplicated malaria caused by *Plasmodium falciparum* is reliant on the effectiveness of artemisinin-based combination therapy (ACT). New parasite genotypes encoding variants of the *pfk13* gene are now emerging in Africa, and these are less susceptible to the artemisinin component drugs. This poses a risk of resistance selection against the partner drugs in ACT. Case histories from UK travellers with documented ACT treatment failure and field surveys of resistance gene variants will be presented, together with newly collected *in vitro* susceptibility data for parasites of African origin adapted to long-term culture in 2022. The implications of these findings for future drug strategies for African malaria chemotherapy, and management of imported UK cases, will be considered. Finally, we will consider the wider public health implications of a potential resurgence of artemisinin tolerant *P. falciparum* in Africa.