

Artemisinin-based combination therapies (ACTs): Best hope for malaria treatment but inaccessible to the needy!

[T.K.Mutabingwa](#)^{ab}

^a Department of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, London, UK

^b National Institute for Medical Research, P.O. Box 9653, Dar-es-Salaam, Tanzania

Received 6 June 2005, Accepted 7 June 2005, Available online 11 August 2005.

<https://doi.org/10.1016/j.actatropica.2005.06.009>Get rights and content

Abstract

Artemisinin-based combination therapies (ACTs) are the best anti-malarial drugs available now. Artemisinin enhances efficacy and has the potential of lowering the rate at which resistance emerges and spreads. Under low transmission intensity, ACTs have an additional public health benefit of reducing the overall malaria transmission and studies are urgently needed to investigate modalities of attaining similar benefits under high transmission. Despite being recommended by WHO since 2001, overall deployment of ACT has been slow. Limiting factors are high cost, limited knowledge and public awareness on the concept of combination therapy (CT) and ACT in particular, limited knowledge on safety of ACTs in pregnancy, operational issue such as inappropriate drug use, lack of suitable drug formulations, lack of post-marketing surveillance (PMS) systems, and the imbalance between demand and supply. Through concerted efforts of multilateral organizations, the local scientific community with involvement of policy-makers progress has been on several fronts leading to improved ACT uptake rates in the last 2 years. Of 43 countries that had adopted ACT by February 2005, 18 (42%) adopted the policy in 2004. Preference to co-formulated Coartem has led to a surge in its demand with consequent shortage. Alternative ways for increased production of ACTs are urgently needed otherwise most policies will remain adopted on paper.

Despite limitations, opportunities are opening up for effective malaria control. Insecticides, insecticide-treated nets (ITNs) and ACTs are proven efficacious controls available that should be accessed by many. Substantial funding is now available for biomedical malaria research and for

policy implementation. While the Global Fund is the financial engine behind the scaling up of ACT uptake, delays in cash flow after grant approval has led to many countries adopting ACT in 2004 but only few (nine) implementing it. Clear policies on granted funds and minimal politics within funding agencies might improve the situation. Increased interest in drug development together with the public and private sector partnership have led to new anti-malarials, some less expensive and therefore affordable by poor malaria endemic countries. Dihydroartemisinin-piperaquine (Artekin) has a cost advantage over other ACTs (US\$ 1 for an adult treatment) making it a potential best candidate for deployment in Africa.

Part of available funds should be invested into capacity building and strengthening (personnel, resources and infrastructure) of institutions in malaria endemic countries. This will create enabling environment and a critical mass of scientists and public health experts to spearhead ACT policy implementation. Active involvement of scientists from malaria endemic countries in recent International Scientific Forums like the Malaria in Pregnancy Working Group and the Consortium on ACT Implementation is the best way forward to emulate.

Keywords: Malaria, Artemisinin-based combination therapy, Resistance, Control tools