

Study finds early signs of malaria drug resistance in Africa

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Africa's deadliest malaria parasite has shown resistance in lab tests to one of the most powerful drugs on the market -- a warning of possible resistance to follow in patients, scientists said Friday.

Researchers in London found resistance to artemether in test tube analysis of blood from 11 of 28 patients who had fallen ill after travelling in countries mainly in sub-Saharan Africa -- what they said was a "statistically significant" result.

Artemether is one of the most effective drugs in the artemisinin group most commonly used in malaria cocktails known as ACTs.

"Resistance in a test tube usually leads to resistance at some stage down the line in patients," study leader Sanjeev Krishna told AFP of the findings published in BioMed Central publishers' *Malaria Journal*.

"The question is how far down the line."

The study did not look at the patients' actual response to drugs, and "what that might mean in terms of [treatment failure](#), we have yet to assess. We don't know."

A statement said the resistance was caused by [genetic mutations](#) in a parasite transmitted by infected mosquitoes, and meant that "the best weapons against malaria could become obsolete."

The laboratory tests on the [Plasmodium falciparum](#) parasite, which causes the deadliest form of malaria and is responsible for 90 percent of deaths, showed artemether's effectiveness reduced by about half in the infected samples.

"This study confirms our fears of how the parasite is mutating to develop resistance," said Krishna, adding the [genetic changes](#) "occurred relatively recently".

"[Drug resistance](#) could eventually become a devastating problem in Africa, and not just in east Asia where most of the world is watching for resistance."

Sub-Saharan Africa is home to 90 percent of people killed by malaria every year.

The [World Health Organisation](#) (WHO) said Tuesday it was optimistic drug-resistant malaria that has emerged along Thailand's borders with Cambodia and Myanmar could be contained within the region.

While global campaigning and wide distributions of mosquito nets have helped curb malaria, it is still regarded as the worst parasitic disease in the world.

The WHO says 655,000 people died of malaria in 2010, making it the world's fifth biggest killer in low-income countries.

"What we should be doing is to use the drugs we have as effectively as we can, to make sure they are working and to stop using combinations that are not working," said Krishna.

And the focus should be on monitoring and further research.

"We must be very alert to the risk of there being increased treatment failures," the scientist warned.

"We need to know more, we need to know it fairly quickly."

More information: The full paper can be viewed at:
www.malariajournal.com/content/11/1/131/abstract

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