

## Study emphasises the need for radical cure of vivax malaria

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A study into the treatment of the difficult-to-cure *Plasmodium vivax* malaria in Ethiopia has emphasised the need to include the drug primaquine to reduce the risk of relapsing infection, further transmission, and potentially, loss of life.

The results of the study were published today in the *PLoS Medicine* journal.

The clinical study was a collaborative effort by Menzies School of Health Research in Darwin, US President's Malaria Initiative and ICAP Columbia University's Mailman School of Public Health in Addis Ababa, with support from the Ethiopian Public Health Institute. It was funded by the US President's Malaria Initiative and the Bill and Melinda Gates Foundation.

Dr Kamala Thriemer, co-lead author from Menzies School of Health Research, said the findings of the radical cure study would influence malaria treatment policy in Ethiopia and other malaria-endemic countries.

"Vivax malaria can remain dormant in the liver, and successful treatment requires treatment for both the blood stages and liver stages. Treating just the blood stages of the infection is like pulling weeds out of the garden without taking steps to prevent them growing back," Dr Thriemer said.

"During the course of the study, we found evidence of resistance to chloroquine, which is traditionally used to treat the blood stages of vivax malaria; almost 20 per cent of patients failed treatment within 42 days.

"Surprisingly, artemether-lumefantrine, the drug used to treat the more commonly-diagnosed *Plasmodium falciparum* malaria, was not much better than chloroquine unless it was administered in combination with primaquine, which is used to treat the liver forms of malaria.

"The conclusion we arrived at was the administration of the combination treatment significantly reduced the risk of relapse."

Researchers found the best results were achieved when the primaquine treatment, given over 14 days, was supervised. Unsupervised treatment resulted in it not working as well.

Ethiopian lead author on the study, Dr Tesfay Abreha, acknowledged additional work needed to be done in treating vivax malaria, which accounted for around 40 per cent of reported malaria cases in the country.

"We recognise further work is needed to improve adherence to the current regimen to ensure maximum public health impact," said Dr Abreha.

The findings of this study have implications for other malaria-endemic regions, including Australian tourist hotspots like Southeast Asia, where a spreading resistance to commonly-prescribed treatment is on the rise.

ENDS

**Link to paper:**

<http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002299>

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