MALARIA IN THE NEWS

QUICK TEST FOR MALARIA APPROVED BY FDA

Press release from United States Food and Drug Administration http://www.fda.gov, 26 Jun 2007.

The US Food and Drug Administration has cleared for marketing the Binax NOW Malaria Test, the first US-authorized rapid test for malaria for use in laboratories.

Standard laboratory tests for malaria require identifying parasites in a blood sample under a microscope. With the Binax NOW test, results are available in 15 minutes after a few drops of whole blood are placed on a dipstick. The test differentiates the most dangerous malaria parasite, *Plasmodium falciparum*, from less virulent malaria parasites. Results still need to be confirmed using standard microscopic evaluation.

Humans infected with malarial parasites may develop a high fever, chills, and flu-like illness. Untreated, they may develop severe complications and die.

Malaria was eliminated from the United States in the 1950s. According to the Centers for Disease Control and Prevention, 1,528 newly-reported cases of malaria were reported in the United States in 2005, including 7 deaths. **Nearly all deaths from malaria can be prevented if the infection is diagnosed and treated early.**

The Binax NOW test was 95% accurate compared with standard microscopic diagnosis in a multi-center study outside the United States in areas where malaria is prevalent.

The Binax NOW test is manufactured by Binax Inc, a subsidiary of Inverness Medical Innovations Inc, Scarborough, Maine.

Filho FSF, Arcanjo ARL, Chehuan YFM, Costa MR, Martinez-Espinosa FE, Vieira JLF, et al. Chloroquine-resistant Plasmodium vivax, Brazilian Amazon. Emerg Infect Dis. 2007 Jul. At http://www.cdc.gov/EID/content/13/7/1125.htm

From September 2004 to February 2005 the Foundation for Tropical Medicine of Amazonas in Manaus, Brazil tested the effectiveness of standard supervised chloroquine therapy on 166 volunteers with uncomplicated *P vivax* malaria. Each volunteer was administered uncoated, scored, 150-mg chloroquine tablets (10 + 7.5 + 7.5 mg/kg at 24-hour intervals). Primaquine was withheld until day 28 (dose regimen of 30 mg/day for 7 days). Of the 109 volunteers completing the in vivo test, 19 had positive blood smears within the 28-day follow-up (1 on day 14, 3 on day 21, and 15 on day 28). All were required to be treated with mefloquine, which was the alternative therapy.

Chloroquine absorption was confirmed adequate in these humans on day 2 with a mean±SD chloroquine plasma concentration of 785.4±800.1ng/mL) (n=10) Suspected therapeutic failure (*P vivax* chloroquine resistance) was confirmed in 11 of 109 patients with a mean isolated choloroquine plasma concentration >10ng/mL (356.6±296.1ng/mL). Plasma desethylchloroquine concentrations were not measured.

The proportion of failures was 10.1%; even though 89.9% of the *P vivax* infections were successfully evaluated and adequate clinical and parasitologic responses were obtained. The amount of therapeutic failures indirectly indicates the possible regional spread of *P vivax* chloroquine-resistant strains.

We believe our findings are important and merit the attention of local public health authorities. Considering the possibility of emerging underestimated *P vivax* chloroquine resistance in Manaus, we feel it is essential to clarify whether such documented resistance can copromote *P vivax* malaria outbreaks in malaria-endemic areas within the Amazon.

This study was supported by the Brazilian Ministry of Health and the US Agency for International Development as part of the scientific program of the Amazonian Surveillance Network for Antimalarial Drugs Resistance (RAVREDA).

Compiled and edited by SJ Dodgson PhD

Cashew tree in Lagos. Cashew bark is used to treat malaria. Photo courtesy of Pastor OL Edoro-Ighalo.