

TREATMENT OF THE ACUTE ATTACK OF MALARIA CAUSED BY
Plasmodium falciparum: RESULTS OF
MEFLOQUINE TREATMENT

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OBJECTIVE : To determine the effect of several therapeutic regimens upon *P. falciparum* asexual parasitemia in naturally infected humans.

BACKGROUND : With the advent of widespread resistance to sulfadoxine-pyrimethamine combinations in Thailand, it becomes increasingly important to find alternative drugs which are effective in a single dose and thus suitable for outpatient treatment programs. Mefloquine has proven itself effective in a single dose in over 95% of patients treated (1-3). There have been no fully documented cases of mefloquine resistance when the patient has received 1500 mg. of the drug. The Dept. of Medicine at AFRIMS continues to monitor the effectiveness of mefloquine in the rapidly changing drug resistance patterns of Thailand.

METHODS : The study was carried out at the Phrabuddabat Hospital using civilian patients who came for treatment at the local Malaria Treatment Center. Admission criteria for the study subjects were :

1. males at least 20 years of age
2. willingness to volunteer for hospitalization and follow-up
3. uncomplicated disease of mild to moderate severity
4. asexual parasite count between 1,000 and 100,000/cu.mm.

Patients included in this report received 1500 mg. of mefloquine as a single oral dose.

Treatment results were evaluated according to the WHO criteria originally conceived to evaluate chloroquine resistance. "S" indicates clearance of asexual parasitemia and maintenance of a negative blood film for 28 days after therapy. "RI" refers to initial clearance of parasitemia followed by recrudescence within 28 days following treatment. "RII" indicates initial reduction in the level of parasitemia, but failure to clear within seven days. "RIII" indicates no reduction in parasitemia following treatment.

RESULTS : Twenty of twenty-two patients treated with 1500 mg. of mefloquine between September 1980 and September 1981 were available for the complete 28 day follow-up period. All but one were cured. Mean initial parasitemia was 21,220, parasite clearance time was 81 ± 34 hrs. ($\bar{x} \pm 1$ S.D.) and fever clearance time was 30 ± 19 hrs. ($\bar{x} \pm 1$ S.D.). The single treatment failure had an initial parasitemia of 4,089, but took 147 hours to clear his parasitemia and then relapsed on day 20. A macro in vitro test showed no evidence of resistance and the patient responded promptly to a second dose of mefloquine.

The patient left the area and was not available for further follow-up. His serum will be tested for mefloquine levels.

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