CHAPTER II

OBJECTIVES

The objectives of the present research were to study the pharmacokinetics, pharmacodynamics, and clinical efficacy of the antimalarials artesunate, dihydroartemisinin, and mefloquine in healthy volunteers and in patients with acute uncomplicated falciparum malaria. Specific objectives included:

1. To investigate the clinical efficacy of monotherapy of high dose dihydroartemisinin or combination therapy of high dose dihydroartemisinin and mefloquine in Vietnamese patients with acute uncomplicated falciparum malaria.

2. To investigate the pharmacokinetics of mefloquine given in two different regimens, 6 h after the first dose of DHA or 24 h concurrently with the second dose of DHA, in Vietnamese patients with acute uncomplicated falciparum malaria.

3. To investigate a simple, sensitive, and specific liquid chromatography-mass spectrometry method for the simultaneous quantification of artesunate and dihydroartemisinin in human plasma.

4. To investigate the change in pharmacokinetics of dihydroartemisinin during a 5-day oral treatment for acute uncomplicated falciparum malaria.

5. To investigate the time-dependent pharmacokinetics of artesunate and its active metabolite, dihydroartemisinin, following repeated oral doses of artesunate during 5 consecutive days in healthy volunteers.