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KEY WORD : HRP-II / PARASIGHT[®]-F TEST / *PLASMODIUM FALCIPARUM*
/ MALARIA / MEFLOROQUINE

NIPON THANYAVANICH : DURATION OF HRP-II ANTIGENAEMIA
DETECTED BY PARASIGHT[®]-F TEST IN *PLASMODIUM FALCIPARUM* MALARIA
PATIENTS TREATED WITH MEFLOROQUINE. THESIS ADVISOR : USA LEK-UTHAI.
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A field-based experimental study was conducted to compare the diagnostic performance of the *Plasmodium falciparum* histidine-rich protein-II (HRP-II) antigen detection assay by ParaSight[®]-F test (PS) and Giemsa-stained thick blood films (GTF) among 72 *falciparum* malaria cases, age more than 7 years, treated with mefloquine. The main purpose of the study is to assess whether the duration of detection of HRP-II antigen varied with the initial parasite density before the treatment. The PS and GTF were performed on day 3, 5, 7, 10, 12, 14, 16, 18, 20, 22 and 28.

The results show that all *falciparum* malaria cases were negative by GTF before day 7 with the average duration of 3.3 (\pm 0.9) days. Duration of positive readings by PS is approximately 5 days longer than GTF with the average of 8.1 (\pm 5.6) days and the longest duration observed was up to 22 days in 3 cases. The mean duration of positive readings by PS varied significantly with different levels of parasite density (p-value = 0.02), with 9.9 days, 6.5 days and 6.1 days for parasitaemia > 10,000/ μ l, 1,000-9,999/ μ l, and < 1,000/ μ l respectively. The temporary longer duration of positive readings by ParaSight[®]-F test compared to Giemsa-stained thick blood film was likely due to persistent parasite antigen, rather than subpatent parasitaemia.