

## RESEARCH NOTE

### *PLASMODIUM MALARIAE* IN EAST TIMOR

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**Abstract.** A community-based rainy-season malaria prevalence survey was conducted in Bobonaro district, in recently independent East Timor, in 2001. Although the survey was primarily aimed at defining the prevalence of *Plasmodium falciparum* and *P. vivax*, six individuals with *P. malariae* infection were identified (prevalence 0.57%). We believe these are the first reported cases of *P. malariae* from the island of Timor.

Infection with *Plasmodium malariae* has been reported from a number of southeast Asian countries (Kawamoto *et al*, 1999), and several islands in the Indonesian archipelago. However, to our knowledge, it has not been reported from the island of Timor, and literature searches using *Medline* (1966 - present) and *Embase* (1988 - present) failed to identify any references. We report six cases of *P. malariae* infection that came to light during a malaria prevalence survey in the recently independent country of East Timor.

The malaria survey was a community-based systematic household survey primarily aimed at defining the prevalence of *P. falciparum* and *P. vivax* in Bobonaro district (population 70,000). HealthNet International, a Dutch medical aid organization, carried out the survey with technical assistance from the Australian Army Malaria Institute (AAMI). Seven villages within the district were surveyed, ranging in elevation from the coastal plain to the highlands at 850 m, with approximately 200 individuals included at each site. The first survey was conducted in the middle of the wet season (January/February 2001); surveys were repeated in the same villages three months later, as the wet season finished (April/May 2001). Demographic information and Giemsa-

stained thick and thin blood films were obtained from each individual. Blood films were examined by oil immersion microscopy (magnification x 1,000) and considered negative if no asexual parasites were found in 200 fields of the thick film. The full results of the surveys will be reported elsewhere.

The prevalence of *P. falciparum* malaria ranged from 0% to 7.4% among the villages in the first survey, while *P. vivax* ranged from 0% to 13.8%. No *P. ovale* or *P. malariae* infections were detected. In the second survey (April/May 2001), the prevalence of *P. falciparum* rose in most areas while *P. vivax* remained stable. In addition, blood films from six individuals were found to be positive for *P. malariae* (prevalence 0.57%). An independent second examiner confirmed species identification. Four of the six subjects were from the coastal village of Batugade: a 4-year-old boy with recent fever and splenomegaly, a 7-year-old girl with recent fever but without splenomegaly, and two asymptomatic individuals without splenomegaly (a 16-year-old boy and a 30-year-old woman); the other two cases were from Tonobibi and Maliana on the inland flood plain (elevations 100 m and 250 m respectively): a 14-year-old girl with neither symptoms nor splenomegaly, and an 8-year-old boy with recent fever and a palpable spleen. All except the 16-year-old boy had been included in the first survey.

We believe these are the first cases of *P.*

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*malariae* to be reported from the island of Timor. Resource limitations mean that most symptomatic patients presenting to local primary health facilities in East Timor will be treated on clinical suspicion of malaria alone, without the benefit of microscopy; the current national policy is to use chloroquine and sulphadoxine/pyrimethamine to treat such cases. The effectiveness of this combination in treat-

ing *P. malariae* infection in East Timor has not yet been determined.

#### REFERENCES

- Kawamoto F, Liu Q, Ferreira MU, Tantular IS. How prevalent are *Plasmodium ovale* and *P. malariae* in East Asia? *Parasitol Today* 1999; 15: 422-6.