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THE DETECTION OF HIDDEN PLASMODIUM INFECTION IN LAOS


Microscopy and malaria rapid diagnostic tests (RDTs) are used to diagnose malaria in the Lao PDR. In order to evaluate the performance of a highly sensitive PCR technique in comparison to microscopy and the RDTs, as well as to understand the precise malaria situation, a small pilot study was conducted in a highly endemic Attapeu province in 2015. 381 volunteers from villages in Attapeu participated in the survey. Microscopy, RDTs and a real-time nested PCR were used to detect Plasmodium infections and their results were compared. The numbers of infections detected by the 3 methods were as follows: 1 *P. falciparum* and 2 *P. vivax* by microscopy; 2 *P. falciparum* and 3 *P. vivax* by RDTs; and 35 Plasmodium including 2 *P. falciparum*, 32 *P. vivax* and 1 mixed infection by the PCR. All the participants with parasitemia were asymptomatic showing body temperatures of $<37.1^{\circ}\text{C}$. It was reported in the "World Malaria Report 2016" that the

malaria burden in the Lao PDR was, as a whole, decreasing, but our present study provide that many asymptomatic Plasmodium carriers were in the study area, of whom *P. vivax* was the dominant species as high as 94.3%. In fact, Ministry of Health of Lao PDR has declared that malaria is to be eliminated by 2030 in the country. To achieve this goal, highly sensitive diagnostic tests including PCR-based diagnostic methods should be employed, and targeted elimination plans for the hidden *P. vivax* infections should be designed and implemented.

Biography

Shigeyuki Kano is director of the department of tropical medicine and malaria, research institute, national center for global health and medicine, japan. He is President of Japanese Society of Tropical Medicine, and presently, Board Member of the Japanese Society of Parasitology, member of ASTMH, Fellow of RSTMH. He is serving as an advisor to Japan International Cooperation Agency (JICA) for the malaria control project under Japanese ODA and as a TRP member of Global Fund. He also belongs to Institut Pasteur du Laos as Head of Lao-Japan Parasitology Laboratory under SATREPS (JICA/AMED) Project.

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