

An Imported Case of Repeated Infections of *Plasmodium vivax* Malaria

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Abstract

In 2006, one case was reported to have two episodes of malaria after returning from Indonesia in January and June. The pathogens in these two episodes, as revealed by microscopy and PCR for the SSU-rRNA gene, were both *Plasmodium vivax*. To further clarify whether these two episodes were caused by relapse or re-infection, sequencing of the *csp* and *mssl* block genes was used to compare the differences between these two *P. vivax* strains. The results showed that there were one 54 bp and other small deletions in the *csp* sequence, and several longer deletion in the *mssl* block 2 sequence. While comparing with *csp* and *mssl* block 2 sequences of other *P. vivax* strains in the GenBank, the two sequences belonged to two different groups, suggesting that the two *P. vivax* strains should be from different subtypes. Therefore, we concluded that the second episode was caused by re-infection of a new *P. vivax* strain.

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