Plasmodium knowlesi malarial infection in western travelers returning from Southeast Asia
A summary of the clinical pattern

OBJECTIVE Knowlesi malaria is a new, important and potentially lethal mosquito-borne disease in the tropical countries, caused by infection with Plasmodium knowlesi. Southeast Asia is the region with the highest prevalence of this new malarial infection. This paper describes the epidemiology and clinical manifestations of knowlesi malaria in western travelers returning from Southeast Asia. METHOD The clinical patterns of knowlesi malarial infection among travelers returning from Southeast Asia were reviewed and analyzed on the basis of the available hospital documents. RESULTS At least 6 case reports have been published of knowlesi malarial infections in travelers returning from Southeast Asia, of which none was lethal. The characteristic clinical manifestations were a sharp high fever and myalgia. CONCLUSIONS The clinical pattern of knowlesi malaria infection among western travelers returning from Southeast Asia is similar to that of the general population in the endemic area, but hemorrhagic complications have been less commonly reported. Physicians should be aware of the potentially severe complications.
DISCUSSION

Knowlesi malaria is the most important emerging mosquito-borne viral infectious disease. Currently, *knowlesi* malaria is endemic in Southeast Asia where the mosquito vector and its reservoir host, the monkey, are abundant.1−3 Although *knowlesi* malarial infection among western travelers returning from endemic area has been reported sporadically for years, there has been no systematic description of the clinical pattern of *knowlesi* malarial infection among travelers. The main aim of this retrospective study was to investigate the clinical pattern of *knowlesi* malarial infection in the non-endemic population of western travelers returning from Southeast Asia.

According to this review, the clinical manifestations of *knowlesi* malarial infection among the studied population are similar to those of the population in the endemic areas. A sharp high fever is the first presentation of the infection. Many of the complications of malaria are immune-related complications, which cannot occur at the initial infection.22 Thus, it is not surprising that the incidence of complications of the new malaria among travelers from non endemic countries is low. All the documented cases were in males who had a history of visiting jungle areas endemic for *knowlesi* malaria. The geographical extent of this new infection is still limited; it circulates among the monkeys living in the forests and accidental infection is possible if the human beings come into close contact with those monkeys. It is a pure zoonosis that needs contact with the infective reservoir host animals.13 According to this review, the clinical pattern of *knowlesi* malarial infection among western travelers returning from Southeast Asia is similar to that of the general population in the endemic area. This pattern cannot be very useful for differential diagnosis from other mosquito-borne diseases, especially dengue, that can also be harbored in the western traveler returning from Southeast Asia.6

References

6. WIWANITKIT V. Dengue infection in a traveler returning from Southeast Asia: A summary of clinical pattern. *Haema* 2007, 10:61−63

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