Dengue virus infection in travellers returning from Benin to France, July – August, 2010

M L Moi¹, M Ujiie², T Takasaki (takasaki@nih.go.jp)¹, I Kurane¹

1. Department of Virology, National Institute of Infectious Diseases, Tokyo, Japan

2. Disease Control and Prevention Center, National Center for Global Health and Medicine, Shinjuku, Tokyo, Japan

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To the editor: In a recent issue of Eurosurveillance, Gautret *et al.* report two cases of dengue fever in travellers returning from Benin [1]. The authors noted that serology tests indicated the presence of anti-dengue virus (DENV) IgM and IgG antibodies in serum samples obtained from the travellers from Benin, where limited data are available on dengue outbreaks.

In 2010, our laboratory confirmed a case of DENV-3 infection in a traveller returning from Benin [2]. Isolation of DENV-3 in both east and west Africa suggests that the serotype has emerged or re-emerged in various parts of Africa [3]. As indicated by Gautret *et al.*, further studies are needed to understand the extent of DENV-3 outbreak in Africa, and to reinforce disease surveillance.

Laboratory investigation of all suspected cases of DENV infection is conducted in Japan as a part of surveillance for imported cases of DENV infection. As of 19 September 2010, 163 imported cases of DENV infection have been reported, as required by the Japanese Infectious Diseases Control Law. All were confirmed by laboratory tests in the Japanese National Institute of Infectious Diseases or in local public health institutes. Due to the complexity of identifying DENV in the laboratory, virus isolation or a four-fold rise in acute and convalescent serum antibody titre is required for confirmatory diagnosis. In our laboratory, all suspected cases of DENV infection are tested for the virus using reverse transcription-polymerase chain reaction (RT-PCR), commercial anti-DENV IgM and IgG enzyme-linked immunosorbent assay (ELISA), virus isolation and nonstructural protein 1 (NS1) antigen ELISA. Our laboratory data and current data on evaluation of commercial kits for the detection of NS1 antigen by other investigators demonstrated that NS1 could be detected in patients with DENV infections up to 14 days after onset of symptoms [4]. It is probable that in combination with IgM and IgG assay results, as acknowledged by Gautret *et al.*, NS1 antigen ELISA may increase the confidence of the diagnosis of DENV infection in travellers [1].

As discussed by Gautret *et al.*, it is highly probable that the French travellers returning from Benin were infected with DENV-3. It is therefore important to examine if these patients develop high neutralizing antibody titres to DENV-3. Taken together, our findings and those of Gautret *et al.* suggest local DENV transmission in Benin. With the increase in the number of cases of DENV infection reported annually worldwide and the identification of local DENV infection in non-endemic areas, including France [5], more attention needs to be paid to identification of epidemics, disease management and enhanced surveillance of travellers returning from endemic areas.

References

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