

# First Case of Laboratory-confirmed Zika Virus Infection Imported into China

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To the Editor: Zika virus (ZIKV) was first isolated from a rhesus monkey in the Zika forest in Uganda.<sup>[1]</sup> It is an emerging arbovirus of the *Flaviviridae* family, which includes Dengue, West Nile, yellow fever, and Japanese encephalitis viruses, and causes a mosquito-borne disease transmitted by the *Aedes* genus.<sup>[2]</sup> ZIKV was demonstrated explosion recently in American countries, especially in Brazil, Venezuela, and so on.<sup>[3]</sup> We reported a case of laboratory-confirmed ZIKV infection imported into China from Venezuela. The patient developed fever, rash, myalgia, headache, and conjunctivitis after returning to China from Venezuela on February 6, 2016. Serological investigations revealed positive ZIKV-specific real-time reverse transcription-polymerase chain reaction (RT-PCR).

A previously healthy male Chinese traveler aged 34 years visited the doctor at the Second-class Hospital, Ganzhou, Jiangxi Province, China, on February 6, 2016, after returning from Venezuela for a business trip. During the patient's 9-day round trip (in lately January), he developed a joint fever (self-reported), dizziness, and chills on January 28, 2016. After 4 days (February 2, 2016), all these symptoms mentioned above aggravated slightly. However, this patient did not adopt any treatment and then went to Paris for another business trip. On the day he arrived in Paris (February 3, 2016), a slightly pruritic erythematous rash (not highlight the skin) appeared on his neck that later spread to his chest, arms, legs, and trunk over a period of 4 days before fading. Concomitantly, the patient suffered from malaise and fever again, and first, suffered from paroxysmal stabbing pain (2 h attacks for 5–6 min), which position was back of ears or around the eyes. All these symptoms mentioned above improved the next day, still under the premise of no treatment. The patient had noted several mosquito bites previously despite using insect repellents regularly.

On return to Ganzhou, Jiangxi Province, China, the patient was asymptomatic except for the subjective complaint of ongoing rush and diarrhea (up to 3 times/day). Physical examination was normal, and no particular treatment was initiated. Laboratory parameters 12 days after disease onset revealed a normal C-reactive protein

level (5.3 mg/L) and normal leukocytes count of  $4.6 \times 10^9/L$  (31.4% lymphocytes, 6.8% monocytes, and 59.6% neutrophils). Platelet count was normal with  $232 \times 10^9/L$ . Lactate dehydrogenase levels (196 U/L), plasma fibrinogen concentration (3.69 g/L) and serum procalcitonin ( $<0.05$  ng/ml), and kidney and liver function tests were normal except for an increased PT (15.55 s; normal value 11.00–14.00 s) and activated partial thromboplastin time (40.73 s; normal value 32.00–35.00 s).

A serum sample from the same day (10 days after symptom onset) showed a positive result for ZIKV-specific real-time RT-PCR (done at Jiangxi Province Center for Disease Control and Prevention, Nanchang), with primers ZIKVF 9121-9141 (5'-CCT TGG ATT CTT GAA CGA GGA-3') and ZIKVR 9312-9290 (5'-AGA GCT TCA TTC TCC AGA TCA A-3'). Tests for Dengue virus- and Chikungunya virus-specific RT-PCR had been done on the same day, and negative results were reported on February 7, 2016.

Given the consideration of ZIKV infection, the patient had been given antiviral treatment (Xiyanping injection, Chinese medicine, active ingredients was andrographolide [C20H30O5]) and symptomatic treatment with ibuprofen tablets and so on. This patient recovered completely and discharged from hospital on February 14, 2016 (day 18 of illness).

In endemic areas, as well as in the setting of travel medicine, ZIKV infection represents both clinical and diagnostic challenges since the symptoms are very similar to other arboviral diseases.<sup>[4]</sup> Moreover, no drugs reported could prevent or treat Zika fever

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currently. Therefore, the prevention of the spread of ZIKV was important. This case shows that ZIKV is probably circulating more widely than has been officially reported in the America. Moreover, it illustrates the role of travelers as sentinels for outbreaks and for the potential expansion of pathogens to new geographic areas. More recent reports found that saliva specimen is a more sensitive and rapid diagnostic sample for detection of ZIKV infection, and these results also emphasize the important issue of human-to-human transmission through intimate contact during kissing or sexual intercourse.<sup>[5]</sup> All these studies would be valuable for point of care management and large-scale epidemiological studies.

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### Conflicts of interest

There are no conflicts of interest.

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