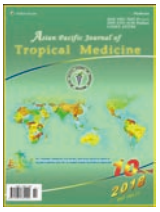

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The first laboratory-confirmed SFTS case from the Xinjiang Uygur Autonomous Region importing to Hainan International Tourism Island

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ABSTRACT Severe fever with thrombocytopenia syndrome (SFTS) is an acute infectious disease caused by a tick-borne phlebovirus, which was reported to be continuously epidemic in Japan, Korea and in 23 provinces of China since 2010. Most laboratory-confirmed SFTS cases in China have been recorded in 18 Eastern and Central provinces. A few suspected cases with SFTS-like symptoms were reported to the Chinese Disease Prevention and Control Information System from provinces including Guangxi, Guangdong, Gansu and Xinjiang Uygur Autonomous Region (XJUAR), however diagnosis was not confrimed due to lack of molecular biological and virological evidence. Here we reported the first laboratory-confirmed SFTS case in 2017. A resident of Hainan International Tourism Island (HNITI) was bitten by ticks when traveling in XJUAR and had illness onset after returning to HNITI. RT-PCR detected SFTSV RNA in the patient's serum samples. Antibodies against SFTSV were detected from the patient and the neutralization from serum samples was evaluated. And the samples of person who had close contact to the patient were also investigated. Moreover, a new SFTSV strain was isolated from the serum sample collected from the patient during acute phase of disease. The viral properties and phylogeny were further characterized. In addition, SFTSV was detected positive in ticks collected from XJUAR in 2017, which suggested that SFTSV was more widely distributed than we recognized. Therefore, this study identified the first SFTS case from XJUAR where confirmed cases have never been reported and demonstrated the substantial risk from SFTSV infection via tick bite there. It is also the first importing SFTS case in HNITI, which showed the significant role of human transport in disease spread and indicated that the recently authorized international tourism island may face more challenges for controlling other importing cases from different areas and countries.

Keywords: SFTS case; SFTSV; Laboratory-confirmed; Xinjiang Uygur Autonomous Region; Hainan International Tourism Island

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