

The First Identification and Retrospective Study of Severe Fever With Thrombocytopenia Syndrome in Japan

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(See the editorial commentary by Qiu and Kobinger on pages 811–2.)

Background. Severe fever with thrombocytopenia syndrome (SFTS) is caused by SFTS virus (SFTSV), a novel bunyavirus reported to be endemic in central and northeastern China. This article describes the first identified patient with SFTS and a retrospective study on SFTS in Japan.

Methods. Virologic and pathologic examinations were performed on the patient's samples. Laboratory diagnosis of SFTS was made by isolation/genome amplification and/or the detection of anti-SFTSV immunoglobulin G antibody in sera. Physicians were alerted to the initial diagnosis and asked whether they had previously treated patients with symptoms similar to those of SFTS.

Results. A female patient who died in 2012 received a diagnosis of SFTS. Ten additional patients with SFTS were then retrospectively identified. All patients were aged ≥ 50 years and lived in western Japan. Six cases were fatal. The ratio of males to females was 8:3. SFTSV was isolated from 8 patients. Phylogenetic analyses indicated that all of the Japanese SFTSV isolates formed a genotype independent to those from China. Most patients showed symptoms due to hemorrhage, possibly because of disseminated intravascular coagulation and/or hemophagocytosis.

Conclusions. SFTS has been endemic to Japan, and SFTSV has been circulating naturally within the country.

Keywords. Severe fever with thrombocytopenia syndrome; SFTS; SFTS virus; Japan; tick borne virus infection; bunyavirus; Hemophagocytosis.

Received 28 August 2013; accepted 26 September 2013; electronically published 14 November 2013.

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Presented in part: 15th International Negative Strand Virus Meeting, Granada, Spain, 16–21 June 2013; Abstract 324.

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The Journal of Infectious Diseases 2014;209:816–27

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DOI: 10.1093/infdis/jit603