Mini Review

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Severe Fever with Thrombocytopenia Syndrome

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Severe fever with thrombocytopenia syndrome (SFTS) is a tick-borne severe febrile thrombocytopenic syndrome caused by a new virus classified as Bunyaviridae

Phlebovirus genus announced in 2011 by on New England Journal of Medicine. It is associated high mortality rate and has been reported in China, South Korea and Japan [1]. Even if it is not sucked directly by ticks, it is possible that humans may get infected by SFTS virus by being bitten by animals sucked by ticks. Further, person to person transmission by body fluids has also been reported.

The latency period after infection is 6 to 14 days. When SFTS develops, fever and thrombocytopenia are recognized and bleeding tendency, gastrointestinal symptoms, neurologic symptoms, hepatic dysfunction, and leukopenia is often found. According to the Japanese Ministry of Health, Labor, and Welfare Blood cell phagocytosis image has been confirmed in a previous example in which a bone marrow biopsy was performed in japan. In Japan all case reports are mandated. According to the report of the National Institute of Infectious Disease in Japan, since the first case diagnosed SFTS reported in 2013, the number of reported cases of SFTS is 280 until July 28, 2017, many from early summer to early autumn, and it is reported in 21 prefectures mainly in western Japan3). The ratio between men and women was 133:147, and the median age at the time of notification was 74.0 years old. About 50 to 60 cases were reported per year and the mortality rate is as high as 10% or more. SFTS has also been reported from South Korea. According to Choi SJ, et al. 172 cases were reported from January 2013 to December 2015 throughout the country except in urban areas. They say that most cases occurred from May to October with increasing yearly incidence and the overall case fatality ratio was 32.6%. Park SW and colleagues reported about 170 cases SFTS in South Korea during the same period, and main age group is over 60 years old, and the annual case fatality rate exhibited a downward trend. According to [2], SFTS virus undergoes rapid changes owing to evolution, gene mutations, and re-assortment between different strains of SFTF virus. Furthermore, from 2010 to October 2016, SFTS cases reported had increased numbers yearly and the national average mortality rate was 5.3%, with higher risk to elder people in China. Although these reports suggest several trends, there are still many unclear points such as incidence or severity factor and currently no effective drugs or vaccines for SFTS.

However, various attempts have already been done. Regarding the vaccine have published a paper attempting to identify optimal strains for vaccines from the eight main strains of SFTS virus strains in China [3]. According to that paper, it is concluded that HB 29 strain will be optimal as a standard strain for vaccines because of its strong cross-reactivity with heterologous antibodies and high homology in the S segments with other SFTS virus strains. Now, effective vaccine production and establishment of therapy by cooperation across countries will be awaited.

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