SFTS virus

The SFTS virus is a tick borne phlebovirus in the family Bunyaviridae. It appears to be more closely related to the Uukuniemi virus serogroup than to the Sandfly fever group.

It is a member of the Bhanja virus serocomplex.

The clinical condition it caused is known as severe fever with thrombocytopenia syndrome (SFTS).

SFTS is an emerging infectious disease that was first described in northeast and central China and now has also been discovered in Japan and South Korea. SFTS has a fatality rate of 12% and as high as 30% in some areas. The major clinical symptoms of SFTS are fever, vomiting, diarrhea, multiple organ failure, thrombocytopenia (low platelet count), leukopenia (low white blood cell count) and elevated liver enzyme levels.

Emergence of encephalitis/encephalopathy during severe fever with thrombocytopenia syndrome progression has been identified as a major risk factor associated with a poor prognosis.

Case reports

Yoo et al. report the first case of severe fever with thrombocytopenia syndrome (SFTS) and a intracranial acute spontaneous subdural hematoma (SDH) in Korea. A 79-year-old male presented with fever and thrombocytopenia. On the third day of hospitalization, his mental changed from drowsy to semi-coma. Brain computed tomography indicated an acute subdural hemorrhage on the right convexity. He was given early decompressive craniectomy, but did not survive. Real-time reverse transcription polymerase chain reaction analysis of a blood sample indicated the presence of SFTS virus (SFTSV). This is the first reported case with intracranial hemorrhage and SFTS. This case report describes our treatment of a patient with acute SDH and an infection from a tick-borne species of Bunyaviridae [1)].

A 56-year-old Japanese man presented with fever and diarrhea, followed by dysarthria. Diffusion-weighted magnetic resonance imaging demonstrated high signal intensity in the splenium of the corpus callosum. The severe fever with thrombocytopenia syndrome virus genome was detected in our patient's serum, and the clinical course was characterized by convulsion, stupor, and hemorrhagic manifestations, with disseminated intravascular coagulation and hemophagocytic lymphohistiocytosis. Supportive therapy not including administration of corticosteroids led to gradual improvement of the clinical and laboratory findings, and magnetic resonance imaging demonstrated resolution of the splenial lesion. The serum severe fever with thrombocytopenia syndrome viral copy number, which was determined with the quantitative reverse-transcription polymerase chain reaction, rapidly decreased despite the severe clinical course. The patient's overall condition improved, allowing him to be eventually discharged.

Patients with encephalitis/encephalopathy due to severe fever with thrombocytopenia syndrome virus infection may have a favorable outcome, even if they exhibit splenial lesions and a severe clinical course; monitoring the serum viral load may be of value for prediction of outcome and potentially enables the avoidance of corticosteroids to intentionally cause opportunistic infection [2)].

1)
Yoo J, Oh JW, Jang CG, Moon JH, Kim EH, Chang JH, Kim SH, Kang SG. Spontaneous Acute Subdural Hemorrhage in a Patient with a Tick Borne Bunyavirus-Induced Severe Fever with Thrombocytopenia Syndrome. Korean J Neurotrauma. 2017 Apr;13(1):57-60. doi: 10.13004/kjnt.2017.13.1.57. Epub 2017 Apr 30. PubMed PMID: 28512621; PubMed Central PMCID: PMC5432452.
2)
Kaneko M, Maruta M, Shikata H, Asou K, Shinomiya H, Suzuki T, Hasegawa H, Shimojima M, Saijo M. Unusual presentation of a severely ill patient having severe fever with thrombocytopenia syndrome: a case report. J Med Case Rep. 2017 Feb 3;11(1):27. doi: 10.1186/s13256-016-1192-0. PubMed PMID: 28153057; PubMed Central PMCID: PMC5290612.