

Abstract

Epidemiological characteristics of patients with Severe Fever with Thrombocytopenia Syndrome (SFTS) from 2013 to 2020

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Severe fever with thrombocytopenia syndrome (SFTS) is an infectious disease that causes high fever and thrombocytopenia as a result of being bitten by ticks infected with the SFTS virus (SFTSV). This manuscript is the result of an analysis of the epidemiological and clinical features of SFTS patients reported from 2013 to 2020.

A total of 1,334 SFTS patients were reported over the last 8 years. By age, there were 732 people between 60 to 70; by gender, 688 women; by region, Gyeonggi-do had 225 peoples, which marked the largest number of SFTS patients. Jeju-do had the largest population share, 12.7 per 100,000 by percentage of the population. The most common clinical symptoms were fever and fatigue. Other symptoms included digestive and nervous system symptoms. Regarding bitten of bug and tick 435 patients were bitten by bugs and 149 patients were bitten by ticks. The largest distribution of attachment sites among bugs and ticks between 2014 and 2020 were legs (n=102).

In Korea, starting with the first patient in 2013, about 200 to 250 patients have been reported every year since 2017. Currently, preventive vaccines for SFTS patients have not been developed and no antiviral treatments are available. Therefore, avoiding tick bites is the best way to prevent SFTS. In the future, this study plans to lay the foundation for public relations and countermeasures for SFTS prevention through SFTS continuous surveillance and epidemiological investigations.

Keywords: Severe Fever with Thrombocytopenia Syndrome (SFTS), SFTS virus, Tick disease

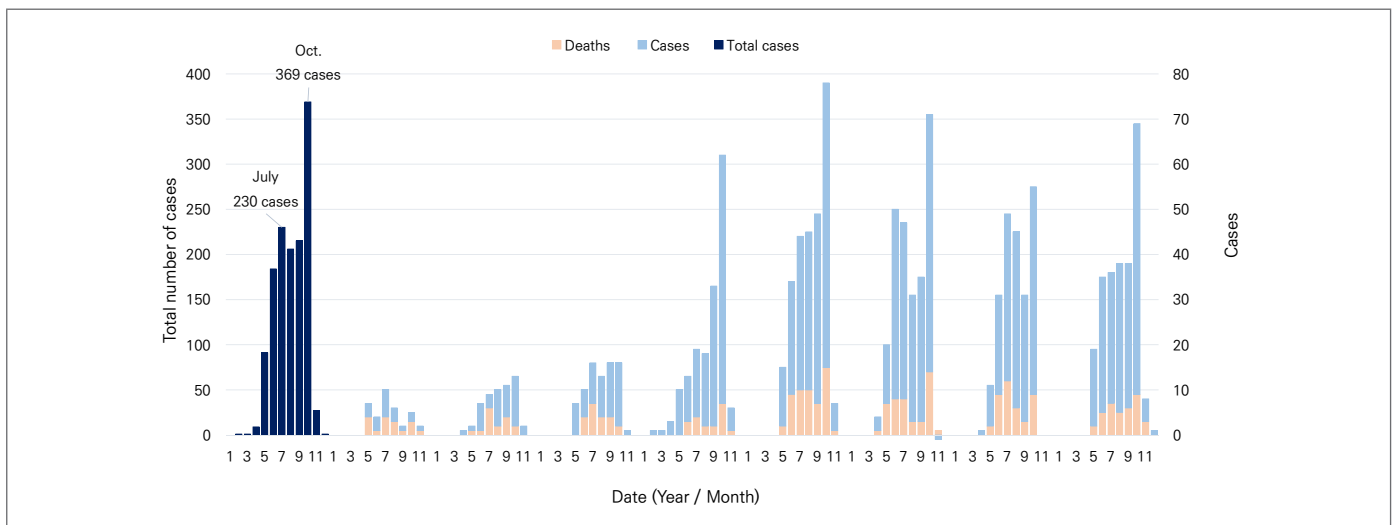


Figure 1. Total number of SFTS cases/death in Korea (2013–2020)

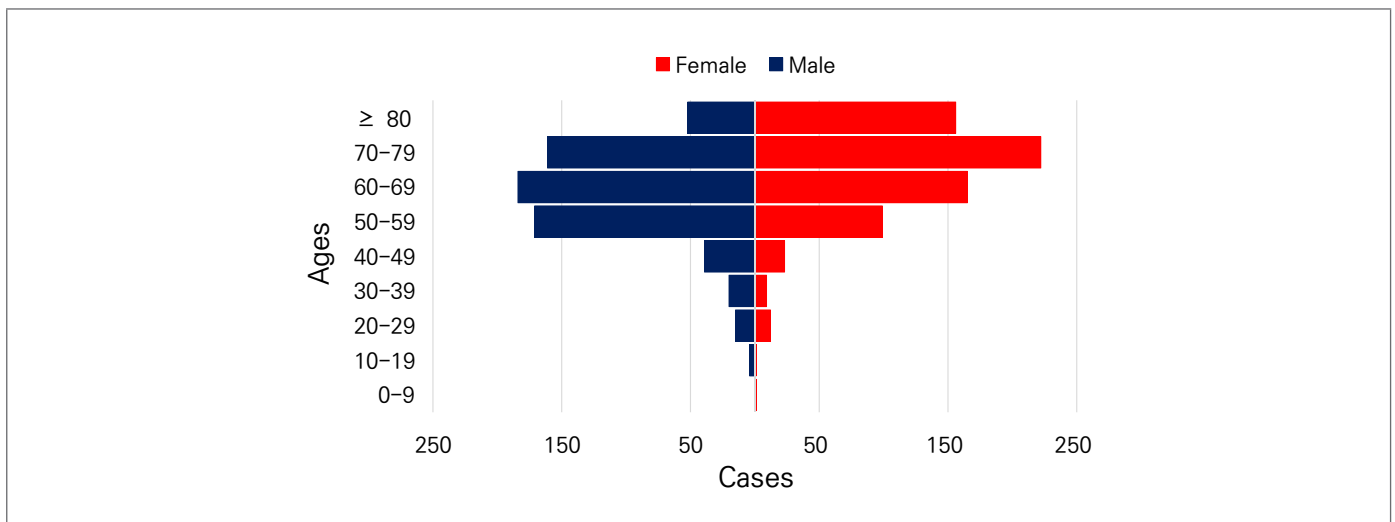


Figure 2. Number of SFTS cases by age and gender (2013–2020)

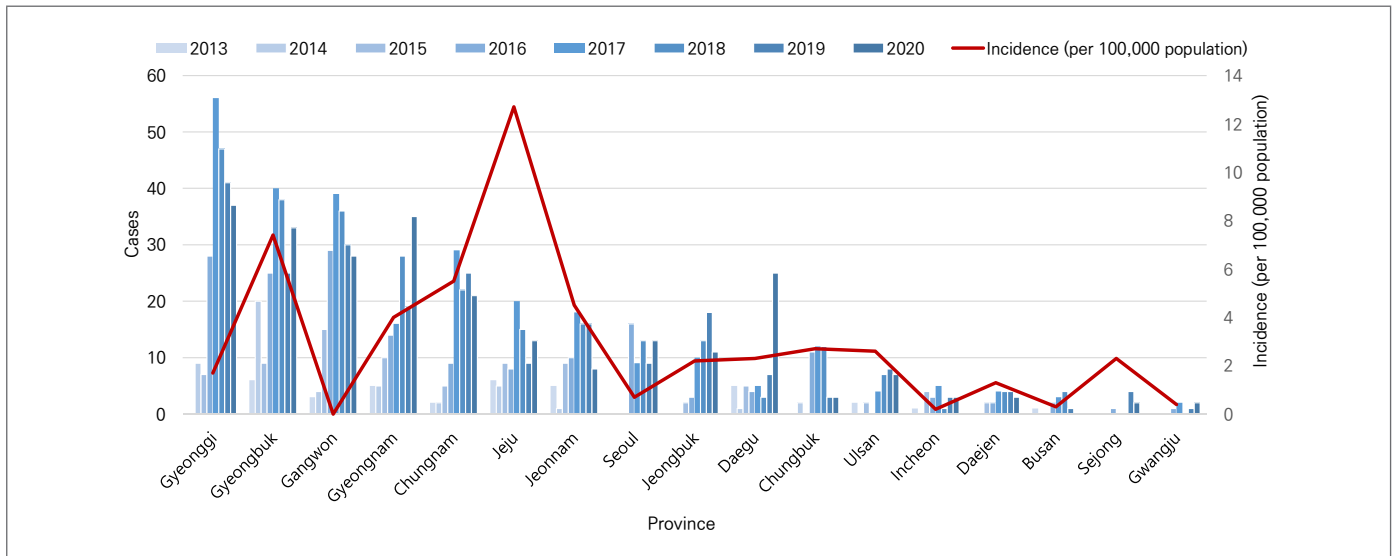


Figure 3. Number of SFTS cases by province in Korea (2013–2020)

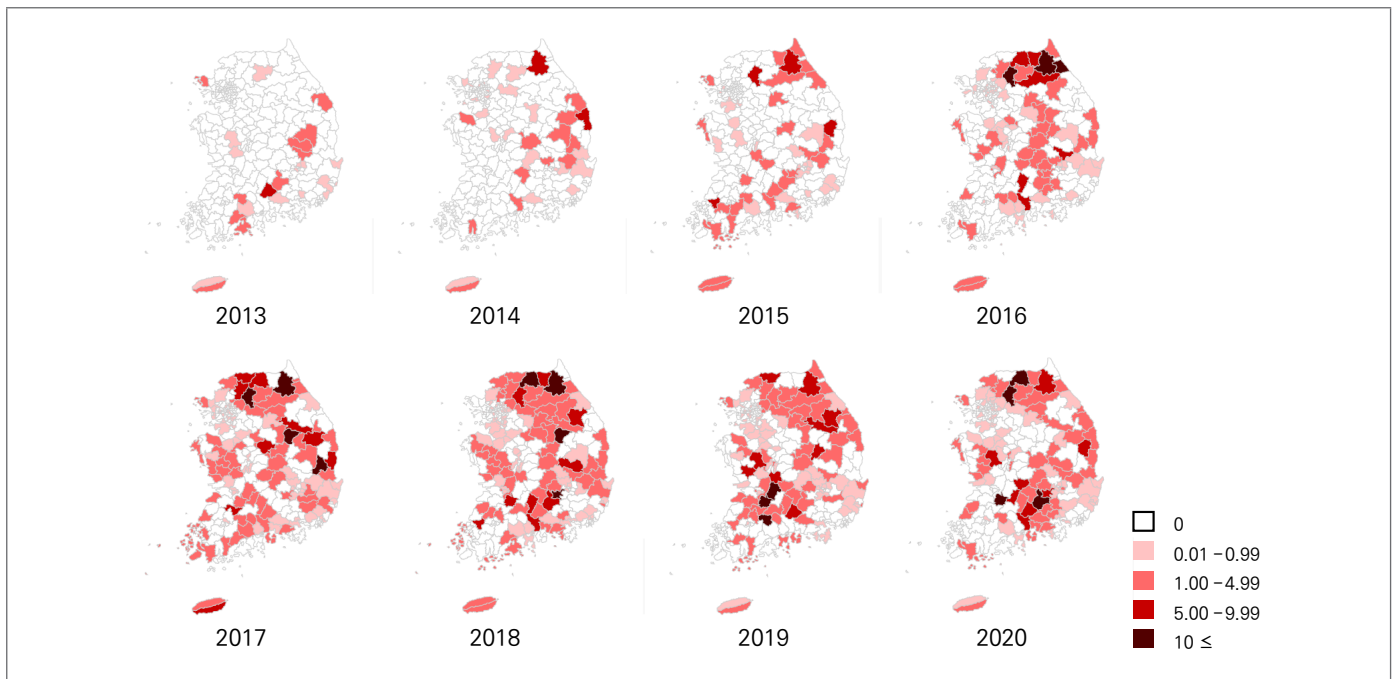


Figure 4. Incidence (per 100,000 population) of indigenous SFTS cases, 2013–2020

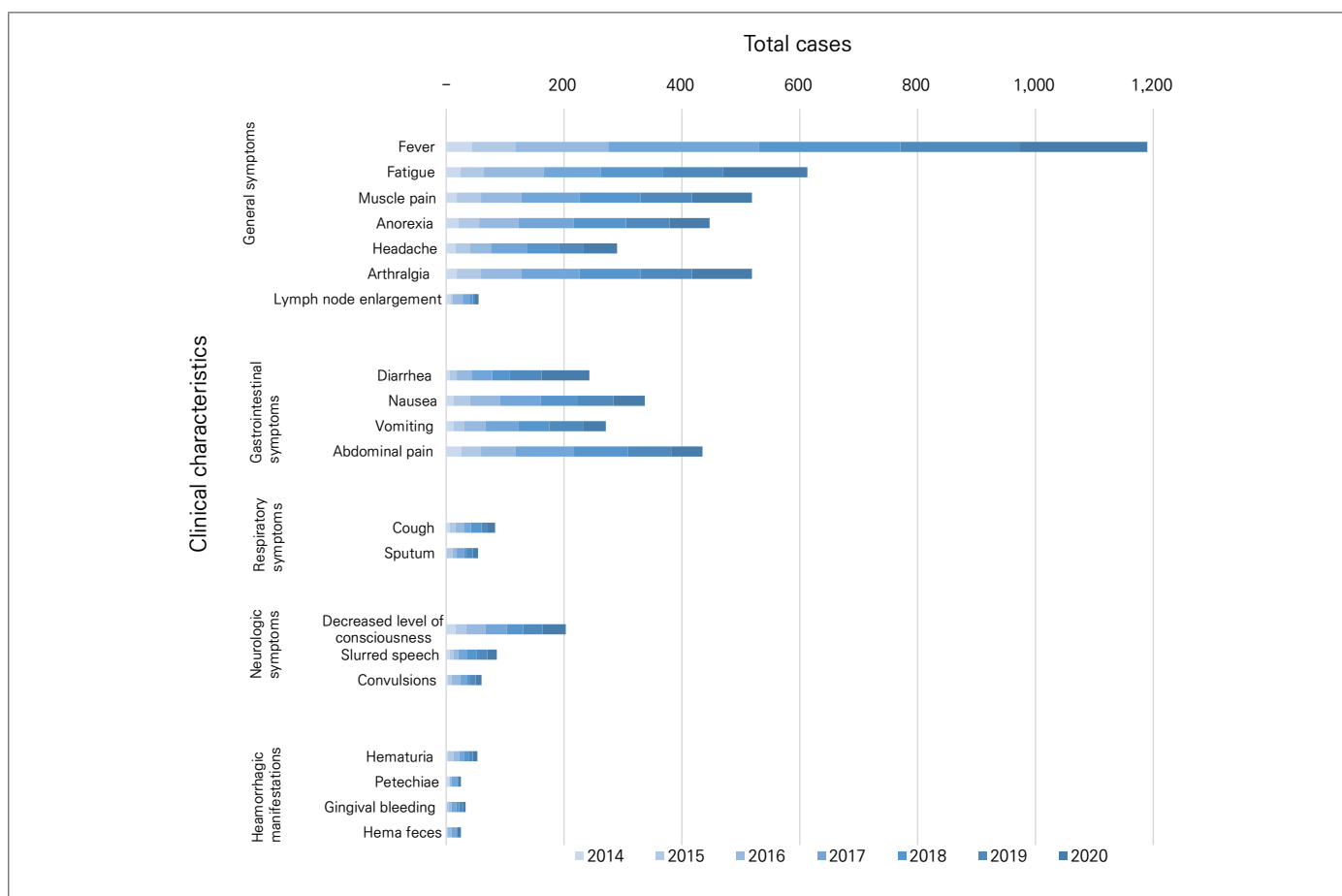


Figure 5. Clinical characteristics of SFTS cases, 2013–2020

Table 1. Total number of SFTS cases by bug and tick bites in Korea

Unit: Case

	Year								
	2013* (n=36)	2014 (n=55)	2015 (n=79)	2016 (n=166)	2017 (n=272)	2018 (n=259)	2019 (n=223)	2020 (n=244)	Total (n=1,334)
Tick bites									
Yes	–	8	8	16	36	26	27	28	149
No	–	9	22	54	88	78	70	61	382
Null	36	38	49	96	148	155	126	153	801
Bug bites									
Yes	–	14	30	46	103	81	83	78	435
No	–	34	49	118	169	178	140	159	847
Null	36	7	–	2	–	–	–	7	52

*In 2013, the epidemiological investigation report was not registered.

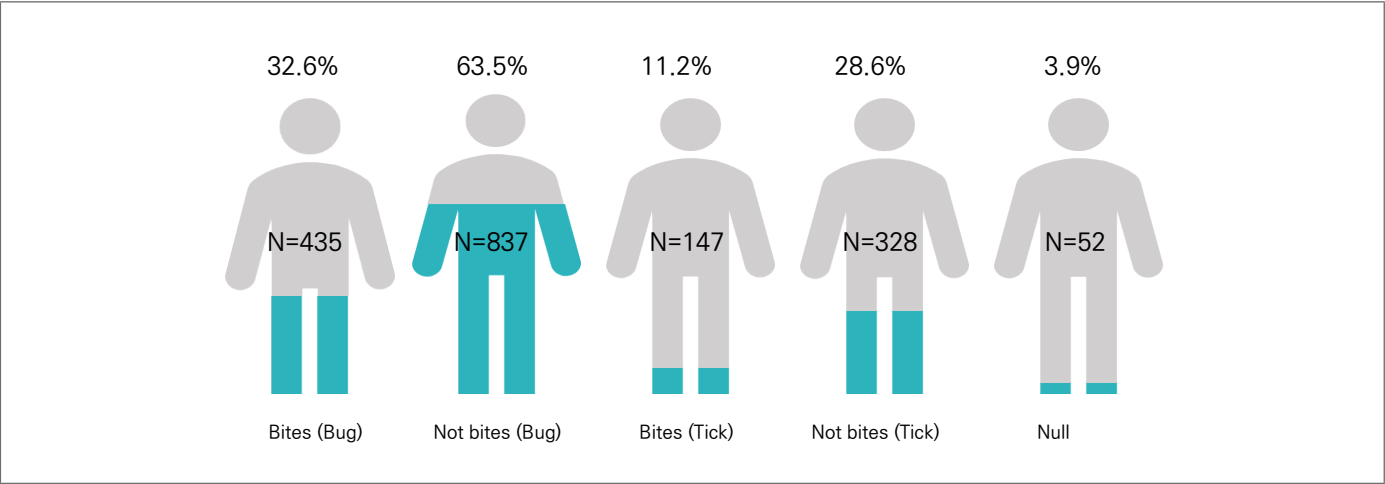


Figure 6. Bug or tick bites ratio of SFTS cases (2013–2020)

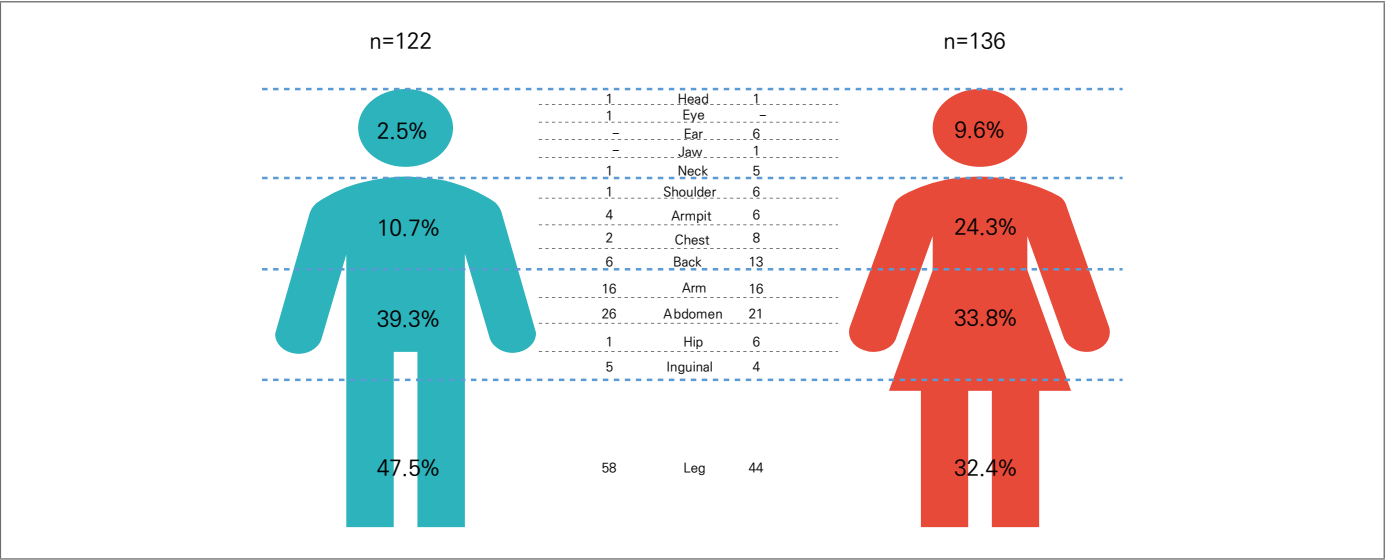


Figure 7. Anatomical distribution of tick bites