

Letter to the Editor

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Abstract

The emergence of Streptococcal toxic shock-like syndrome (STSS) poses a global health challenge after the COVID-19 pandemic. As of June 2024, the number of STSS cases in Japan has risen to 977, surpassing the previous year's total. *Streptococcus pyogenes* (group A strep) can cause superficial infections as well as more severe conditions, including necrotizing fasciitis and STSS. It mainly spreads through respiratory droplets and open wounds, with overcrowded living conditions and poor sanitation exacerbating transmission. With no definitive treatment currently available, good hygiene and effective clinical management is the key to prevention. Public education on risk factors and preventive measures, as well as disease monitoring and adherence to treatment guidelines is crucial in reducing transmission and preventing the development of complications. The potential for STSS to transform into a global pandemic necessitates international cooperation in taking actions to limit the disease. Improved health-care infrastructure and proactive public health measures can help mitigate the risk of another global health crisis.

Dear Editor,

The way of life followed by COVID-19 pandemic is marked by unprecedented global health crises which is characterized by a strained health care system and potentially weakened immune systems increasing our vulnerability to serious illnesses. In this post-COVID era, we might be facing another potential health threat: Streptococcal toxic shock-like syndrome (STSS).

The alarming spread of STSS in Japan is a reminder of how susceptible we are to these emergent diseases. As of June 2, 2024, 977 cases have been reported of STSS, according to Japan's National Institute of Cardiovascular Diseases.¹ This number has already surpassed the total number of reported cases in the year 2023, emerging as a “deadly flesh-eating bacteria” (i.e., STSS with flesh-eating infections).

Streptococcus pyogenes, known as Group A Strep, can cause diseases ranging from superficial infections to more lethal conditions known as invasive Group A Streptococcal (iGAS) infections, which include necrotizing fasciitis and STSS. Invasiveness occur when GAS penetrates sterile sites, and the progression to iGAS infections require certain conditions. Children, elderly, and people with underlying medical illnesses are more susceptible to contracting iGAS infections.² Moreover, diabetes, acute kidney injury, and cardiac disease increase the incidence of iGAS infections. It has also been noted that the incidence of iGAS infections has increased over the previous years in the post-COVID era, especially in children. Respiratory human syncytial virus and other respiratory viruses have been discovered to coincide in iGAS patients, most likely due to reduced immunity to iGAS during the COVID-19 isolation era.³

The 2 main ways iGAS infections spread are through respiratory droplets or directly via surface contact through open wounds. A major risk factor for disease transmission is compromised hygiene conditions in hospital settings and low-income areas with overcrowded living conditions. Unlike COVID-19, iGAS infections require direct contact or conductive environment to spread however, the conditions for iGAS to become a worldwide pandemic have been idealized by hypervirulent strains of GAS and shortcomings in public health protocols following COVID-19. The spread of iGAS infections as seen by the large increases in cases worldwide could overwhelm health care systems around the world if prompt and coordinated action is not taken.

There is no definite treatment currently available for STSS; linezolid is currently under extensive research as the most effective choice. The only way to prevent these infections is by maintaining adequate personal hygiene and medically ensuring proper management of clinical and surgical procedures.⁴ Early diagnosis of the disease and effective timely management of the systems can reduce transmission and prevent the development of complications.^{5,6}

The possibility of STSS evolving into another global pandemic must be considered. The number of infections in Japan alone are estimated to rise to 2500.¹ Approximately 1000 cases have been reported in just 6 months in Japan, with deaths occurring in about 48 hours. There has been

a considerable rise in iGAS infections worldwide after the COVID-19 pandemic. It is essential to monitor the cases and follow treatment guidelines for better patient management. Along with that, intensive public health campaigns educating the public about risk factors and disease occurrence may be crucial in controlling the incidence and complications of symptoms.

International organizations need to join hands to avoid the occurrence of another health crisis. Having learned from COVID-19, we need to improve our health care systems and take swift actions to ensure that any new infectious risks are dealt with quickly and efficiently.

Data availability statement. The data and materials supporting the findings of this study are available upon request.

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