

Case Reports

Lancet Infect Dis

2019 Sep;19(9):e313-e321.

doi: 10.1016/S1473-3099(19)30041-6. Epub 2019 May 28.

Menstrual toxic shock syndrome: case report and systematic review of the literature

Selina Berger ¹, Anika Kunerl ¹, Stefan Wasmuth ¹, Philip Tierno ², Karoline Wagner ³, Jan Brügger ⁴

Affiliations

- ¹ Department of Internal Medicine, Sonnenhofspital, Bern, Switzerland.
- ² Department of Pathology, NYU School of Medicine, NYU Langone Medical Center, New York, NY, USA.
- ³ Institute of Medical Microbiology, University of Zurich, Zurich, Switzerland.
- ⁴ Department of Internal Medicine, Sonnenhofspital, Bern, Switzerland; University of Zurich, Zurich, Switzerland. Electronic address: jan.bruegger@lindenhofgruppe.ch.
- PMID: **31151811**
- DOI: [10.1016/S1473-3099\(19\)30041-6](https://doi.org/10.1016/S1473-3099(19)30041-6)

Abstract

Menstrual toxic shock syndrome (mTSS) is a life-threatening disease caused by superantigen-producing *Staphylococcus aureus*. Incidence ranges from 0·03 to 0·50 cases per 100 000 people, with overall mortality around 8%. In this Grand Round, we present the case of a previously healthy 23-year-old menstruating woman who was diagnosed with mTSS after she presented at our hospital with a septic condition for the second time. The diagnosis was confirmed by fulfilment of the clinical criteria outlined by the US Centers for Disease Control and Prevention (CDC; fever, rash, desquamation, hypotension, and multi-system involvement) as well as a nasal swab positive for the *S aureus* strain and presence of the gene encoding for toxic shock syndrome toxin 1 (TSST-1). In the early 1980s, when mTSS was first described, use of tampons was considered the main risk factor. Today, the complex interplay between pathogenic factors of *S aureus*, immunological mechanisms of the host, and changes in the vaginal ecosystem during menstruation has broadened current understanding of the disease, and the CDC criteria have appreciable limitations in everyday clinical practice.

Copyright © 2019 Elsevier Ltd. All rights reserved.