

# Toxic shock syndrome

**Toxic shock syndrome (TSS)** is a serious condition caused by exotoxins (superantigens). For a condition caused by streptococci, the name streptococcal toxic shock syndrome (STSS) can be used.

It can be caused by the following bacteria and their toxins:

- *Staphylococcus aureus* - toxic shock syndrome toxin (TSST-1) or enterotoxin
- *Streptococcus pyogenes* (M serotype) - pyrogenic exotoxins

## History

The first described cases date back to 1978 in adolescents between the ages of 8 and 17. The toxin was identified from peeling skin on the feet, palms and skin. In the 1980s, cases of menstruating women using highly absorbent tampons were added. Subsequently, cases were observed when the source of infection was another place on the body. In the Czech Republic, this syndrome was first described in 1983.

## Patogenesis

It is the body's systemic response to the presence of a toxin. Toxins (superantigens) bind directly to lymphocytes and thus activate the immune system. It will cause a large amount of cytokines to be flushed out. This condition can occur as a result of any infectious disease caused by the bacteria mentioned above. *Staphylococcus aureus* is the more common causative agent of the menstrual form. The non-menstrual form is often associated with previous surgery or injury.

## Clinical image

Symptoms can range from mild febrile symptoms to multiorgan failure. Typical symptoms include increased temperature, erythema, erythroderma, hypotension and other non-specific symptoms of other organs (increased liver markers, diarrhea, vomiting, myalgia, altered consciousness, coagulation disorders, etc.). Serious complications can result - ARDS, MODS, encephalopathy, ABR disorders and acute renal failure. The risk group is patients who do not have antibodies against the toxin.

## Diagnosis and treatment

Microbiological or culture evidence from the site of infection, evidence of toxin production, and a blood culture may also be positive. Treatment is based on immediate administration of antibiotics. Furthermore, it is necessary to remove the focus of the infection (removal of the tampon, surgical treatment of the infected wound). The Erythema-Dick test is based on local redness after intradermal administration of erythrotoxin in patients who do not have antibodies.

## Sources

### Links

BEDNÁŘ, Marek. *Lékařská mikrobiologie : bakteriologie, virologie, parazitologie*. 1. edition. Praha : Triton, 1996. ISBN ISBN 978-80-7553-844-4.

### Externals links

- Syndrom toxického šoku (<https://www.solen.cz/pdfs/int/2009/09/09.pdf>)