

Scarlet fever

Scarlet fever, *scarlatina*, is a infectious exanthema disease caused by beta-hemolytic group A streptococcus - *Streptococcus pyogenes*, which most often affects preschool and school children age. It is a streptococcal sore throat with a sore throat rash.

Burn occurs in a child susceptible to a given streptococcal serotype and its pyrogenic exotoxin. ^[1] The resulting exanthema is the result of an interaction between exotoxin. and antibody me at the capillary level.

Originator

Streptococcus pyogenes – group A beta-hemolytic streptococcusgroup A beta-hemolytic streptococcus;



- according to the structure of the M protein, it has about 80 serotypes;
- consists of 3 types of **pyrogenic exotoxin** (A, B, C) - formerly referred to as *burn*, ie *erythrogenic toxin* (functionally superantigen).

Epidemiology

- **Source:** patient or exotoxin-producing streptococcal carrier;
- **transmission:** droplets;
- **entrance road:** nosohltan, but also broken skin ("morning sleep");
- **incidence in the Czech Republic** (2000–2009): 3000–4500/year, ie. 28-43 patients per 100 000 population and year.;^[2]
- most often aged 3-10 years;
- **incubation period:** 2-5 days.

Clinical picture

- **Streptococcal angina with a spinal rash;**
- fever, vomiting, abdominal pain;^[3]
- rash is mainly in the lower abdomen, groin, inner thighs, armpits and elbows;
- the skin is rough to the touch ("goosebumps" symptom);
- in the face is **diffuse erythema with circumoral fading** ("Filat's symptom");
- **raspberry tongue, on the palate petechiae**, edematous uvula;^[3]
- small papules in the area of the nail beds and on the arches ("Šrámek's flag");^[4]
- mild **lymphadenopathy** of the anterior cervical nodes;^[3]
- currently **the course is light:**
 - angina is bluetongue, low fever;
 - rash few, lasts a short time;
 - Complications are rare.



Raspberry tongue

Diagnostics

- **Cultivation** almond swab;
- blood count: leukocytosis, left shift, mild eosinophilia;
- serological evidence of antistreptococcal antibody (ASLO) rise in convalescent serum (*antistreptolysin* and *antideoxyribonuclease*).

Differential diagnostics

- They can cause scarlatiform rash:
 - staphylococci;
 - *Arcanobacterium haemolyticum*;
 - *Corynebakterium ulcerans*;
 - *Mycoplasma pneumoniae*;
 - enteroviruses;
 - adenoviruses;
 - allergies.

Therapy

The drug of choice is **penicillin** for at least 10 days, for allergies macrolides, cephalosporins and erythromycin. However, erythromycin resistance is becoming more common.<ref name="Goering2">

- isolation of the patient (in the infection department or at home).

Complication

- peritonsillar abscess
- retropharyngeal abscess
- acute glomerulonephritis
- rheumatic fever ^[3]

Prevention

- if present, tonsils are swabbed at contacts → in case of a positive finding of streptococcus A treatment penicillin
- **subject to report**

Links

related articles

- **Rod Streptococcus:** Streptococcus pyogenes • Streptococcus agalactiae • Streptococcus pneumoniae • Streptococcus mutans • Oral streptococci
- **Streptococcal infections:** Group A streptococcal infection • Scarlet fever • Sleep angina • Erysipel • Impetigo • Infections caused by virulent streptococci • Complications and treatment of streptococcal infections • Rheumatic fever

External links

- DermNet Scarlet fever (<https://www.dermnetnz.org/bacterial/scarlet-fever.html>,)
- Pediatrie pro praxi: Virové exantémy dětského věku (<http://www.pediatriepropraxi.cz/pdfs/ped/2008/06/03.pdf>)
- Pediatrie pro praxi: Infekční exantémová onemocnění v dětském věku (<http://www.pediatriepropraxi.cz/pdfs/ped/2009/03/09.pdf>)

Reference

- <http://www.szu.cz/tema/prevence/spala-manual-iv>
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1. <http://www.szu.cz/tema/prevence/spala-manual-iv>
- 2.
- 3.
- 4.