

Scarlet Fever

Scarlet fever is an upper respiratory tract infection associated with a characteristic rash.

Scarlet fever is the result of infection by **group A streptococci** that elaborate any of the 3 pyrogenic (erythrogenic) exotoxins (A, B, or C).

It is now encountered less commonly and is less virulent than in the past. The primary focus of infection is most commonly **pharyngitis**, but infection may be secondary to a wound or skin infection (**surgical scarlet fever**) or have some other focus. The incubation period: 1-7 days.

The incidence of pharyngeal infections is highest in children 5-15 yrs. of age, especially in young school-age children. Especially during winter and early spring.

Symptoms

The **onset** is acute and is characterized by fever, chills, vomiting, headache, and toxicity.

The rash appears within 24-48 hr after onset of symptoms, although it may appear with the first signs of illness. It often begins around the neck and spreads over the trunk and extremities. The rash is a diffuse, finely papular, erythematous eruption producing bright red discoloration of the skin.

A generalized sunburn like, “**scarlatiniform**” exanthem soon becomes apparent accentuated in the axillae, groin, and neck and is characterized by punctate red macules or fine papules that blanch on pressure. Petechiae may be present, especially on the distal extremities. In some individuals, it may feel like coarse sandpaper (**goose-pimple or sand paper**). Areas of hyperpigmentation that do not blanch with pressure may appear in the deep creases, particularly in the antecubital fossae (i.e., **Pastia lines**). The cheeks appear flushed, with sparing of the area around the mouth (i.e., **circumoral pallor**). The pharynx is inflamed, and the tonsils are hyperemic and edematous and may be covered with a gray-white exudate. The tongue may be edematous and reddened initially, with a white coatings through which protrude red papillae (i.e., **white strawberry tongue**).

After several days the white coat desquamates, leaving a red tongue studded with prominent papillae (i.e., **red strawberry tongue**, raspberry tongue). The palate and uvula may be reddened and covered with petechiae.

The exanthem and enanthem of scarlet fever tend to **parallel the fever (fever over 38.3° C (101° F) or higher is common)** course, lasting 5 to 7 days in the untreated patient; early antibiotic treatment may mitigate the physical findings.

After 3-4 days, the rash begins to fade and is followed by desquamation, initially on the face, progressing downward, and often resembling a mild sunburn. Occasionally, sheet-like desquamation may occur around the free margins of the fingernails, the palms, and the soles. Desquamation begins on the face in fine flakes toward the end of the first week and continues over the trunk, ultimately involving the hands and feet.

Differential diagnosis of scarlet fever

1. Kawasaki disease.
2. staphylococcal scarlatina.
3. staphylococcal scalded skin syndrome.
4. viral exanthems(including measles, rubella, human parvovirus disease, and other viral exanthems).
5. mycoplasma infection.
6. TSS, drug hypersensitivity reactions, severe sunburn.

Transmission

Getting scarlet fever Scarlet fever is highly contagious. Bacteria are present in the mouth, throat or nose of an infected person, or someone carrying the bacteria without symptoms, and are spread by contact with that person's mucus or saliva.. You can also catch the disease by breathing infected airborne droplets produced by a person's coughing, sneezing or normal breathing.

Diagnosis and treatment

Confirm diagnosis by either performing a throat culture (vigorously swab tonsils and posterior pharynx to obtain an adequate sample) or rapid antigen detection test as accurate clinical differentiation of viral and GABHS pharyngitis is not possible. A positive rapid antigen test is diagnostic; a negative test requires a throat culture. Because of the difficulty in distinguishing the causative agent, when the cause of illness is uncertain it may be prudent to treat patients with scarlet fever with a **cephalosporin** or β -lactamase– resistant **penicillin** 10 days (erythromycin for allergics). Supportive treatment is needed. Children can return to school after 24 hours of antibiotic therapy. Routine post treatment follow-up culture is not needed.