



## Scarlet Fever猩紅熱(英文)

### Definition

Scarlet fever is an exotoxin-mediated disease arising from group A beta-hemolytic streptococcal infection. Transmission usually occurs via airborne respiratory particles that can be spread from infected patients and asymptomatic carriers. Peak incidence of scarlet fever occurs in children aged 3 - 10 years old and it rarely happens to children younger than 1 year because of the presence of maternal anti-exotoxin antibodies and lack of prior sensitization. Males and females are affected equally. It occurs mostly during winter to spring but it could be seen four seasons in Taiwan.

### Etiology

Scarlet fever caused by infection of group A beta-hemolytic streptococci (GABHS).

### Clinical Manifestations

1. Scarlet fever generally has a 1- to 4-day of incubation period.
2. Emergence of the illness tends to be abrupt and usually heralded by sudden onset of fever associated with sore throat, headache, nausea, vomiting, abdominal pain, myalgia, and malaise.
3. Rash appears 12-48 hours after onset of fever. Typically, the rashes are begins as small, red, and flat, which gradually become sandpaper-like. There may be a pale area around the mouth, and red streaks around axillae, elbows, and groins, which called Pastia's lines. The rashes usually fades in about 7 days, and the skin may begin to peel.
4. With the untreated patient, fever peaks by the second day of temperature as high as 103-104 degree Fahrenheit and gradually returns to

normal in 5-7 days.

5. Fever abates within 12-24 hours after initiation of antibiotic therapy.

## Diagnosis

Scarlet fever is usually diagnosed by the typical symptoms and signs. Your doctor may order some blood test including complete blood count, C-reactive protein level, antistreptolysin O titer, and blood culture. Your doctor may do a throat culture because the streptococci can usually be demonstrated in throat culture.

## Treatment

Penicillin is used to prevent complications like rheumatic fever and it is a 10 days treatment course; for patients allergic to penicillin, clindamycin and erythromycin are successful though it is highly resistant in Taiwan. Patients should no longer be infectious after taking antibiotics for 24 hours.

## Complications

Complication from scarlet fever may include :

- Rheumatic fever ( inflammatory disease that affect heart, soft tissue, and brain )
- Post-streptococcal glomerulonephritis ( inflammation of kidneys )
- Infections of other system including ear, skin, throat, lung ( pneumonia ), brain ( meningiti ), joint, or blood ( septicemia ).

Most of these complications can be prevented by treatment with antibiotics except post-streptococcal glomerulonephritis.

## Prognosis

The prognosis of appropriately treated GABHS infection is excellent and most patients have complete recovery. Nowadays, severe complications are very rare in developed country. When antibiotic therapy is provided within 9 days of disease onset, rheumatic fever is preventable. However, there is no evidence that post-streptococcal glomerulonephritis can be prevented while the patient is infected by nephritogenic strain of GABHS.

