

Toxic Shock-Like Syndrome

Shocked Fever-beaver

Toxic shock syndrome caused by *Streptococcus pyogenes* is commonly called toxic shock-like syndrome, and it typically presents in people with prior skin infections with *Strep pyogenes*. Individuals commonly experience pain at the site of infection, followed by rapid onset of symptoms of high fever, low blood pressure and confusion.

Scarlet Fever

Scarlet-scarf of Fever-beaver

Scarlet fever is caused by a bacterial exotoxin called erythrogenic toxin, which is released by *Streptococcus pyogenes*. Symptoms include sore throat, bright red tongue with a strawberry appearance and a characteristic rash that is rough-textured with circumoral pallor. As the rash fades, desquamation and peeling of the skin can occur. This disease was extremely feared before widespread availability of antibiotics, due to associations with post infectious glomerulonephritis and endocarditis.

Sandpaper Rash

Sandpaper rash

A classic feature of Scarlet fever is a characteristic rash that feels rough, like sandpaper, when touched.

Strawberry Tongue

Strawberry tongue

The red and bumpy tongue texture that forms during Scarlet fever is described as a "strawberry tongue."

Immunologic

Immunologic

Moon-with-antibodies

Two of the major complications of a group A *Strep* infection, including rheumatic fever and acute glomerulonephritis, are mediated by immunologic mechanisms.

Rheumatic Fever

Roman Fever-beaver

Acute rheumatic fever is a feared complication of respiratory infections caused by *Streptococcus pyogenes*. This disease develops when individuals develop antibodies to the M protein embedded in the bacterial cell wall, which facilitates attachment to host cells and inhibits opsonization by the alternative pathway. The antibodies to the M protein cross react with autoantigens in the body, including the endocardium and synovium. Symptoms include migratory polyarthritis, subcutaneous nodules, erythema marginatum and sydenham's chorea, along with endocarditis with vegetations along valve closure lines.

Antibodies to M Protein

Ant-tie-body to M Protein-jar

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Acute Glomerulonephritis (Post Streptococcal Glomerulonephritis)

Acute Glow-mare

Post Streptococcal glomerulonephritis is a rare complication of Streptococcal pharyngitis or Streptococcal skin infections. It is classified as a type III hypersensitivity reaction, with symptoms developing approximately ten days after a throat infection, or three weeks following a skin infection. Deposition of immune complexes in the kidneys can lead to dark colored urine, edema and high blood pressure.