



## CLINICAL DISEASE: MENINGOCOCCAL DISEASE



*Neisseria meningitidis* normally colonise the nasopharynx of most humans without causing any disease. However, there are cases where the organisms leave the nasopharynx and invade the bloodstream leading to a wide spectrum of clinical manifestations. Meningococcaemia can be classed into different categories.

### **(i) Mild transient bacteraemia**

The incubation period is between 1 and 10 days before clinically apparent symptoms. The onset is insidious with fever and malaise. Only a few petechial skin lesions occur and there is no meningeal involvement. Symptoms resolve spontaneously within 24 to 48 hours.

### **(ii) Acute meningococcaemia**

This follows after several days of respiratory symptoms. The temperature rises abruptly accompanied by:

- chills
- malaise
- weakness
- myalgia
- arthralgia
- nausea
- vomiting
- and headache

Nuchal rigidity is a common sign except in infants. The characteristic petechial skin lesions develop, often appearing in crops on the ankles, wrists and armpits, but may also involve the entire body. The palms, soles and head are usually spared. The skin lesions can also be macular or maculopapular.

### **(iii) Fulminant meningococcaemia**

This is also known as the Waterhouse-Friderichsen syndrome and is the toxic extension of acute meningococcaemia, occurring in 5% to 15% of cases, and is characterised by restlessness, apprehension and delirium. Skin lesions become widespread, purpuric and haemorrhagic. Vascular collapse ensues. Acute renal failure and pulmonary and cardiac insufficiency are secondary complications. Mortality rate is very high.

#### **(iv) Chronic meningococcaemia**

This is a rare manifestation occurring in intermittent febrile episodes lasting 2 to 10 days associated with a variety of skin lesions and migratory arthralgias and myalgias. The infection may last for several months and may resolve spontaneously.

For all conditions there is meningeal involvement except for mild bacteraemia. Meningococcal meningitis in infants is characterised by:

- intermittent fever
- vomiting
- marked irritability
- convulsions
- somnolence
- and excessive crying.

A significant physical finding is a bulging fontanelle, which usually occurs late during the course of illness. Manifestations of invasive meningococcal infection include arthritis, pericarditis, myocarditis, endophthalmitis and pneumonia.

**Where to find us:**

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