Chickenpox and Shingles

Chickenpox (varicella) is a viral infection caused by the varicella-zoster virus. Symptoms include slight fever and cold-like symptoms, followed by a rash. The rash appears as blisters which crust to form scabs (colour plate no.1). Crops of blisters may appear over several days and various stages of blisters may be present. The rash is more noticeable on the trunk than on the limbs and may affect the scalp and the inside of the mouth, nose, and throat. The rash is usually itchy.

In childhood, chickenpox is usually a mild illness and can be so mild it might not be noticed. Infection in adults is uncommon, since more than 95% of Australians get the infection in childhood, but infection in adults is more severe and may be complicated by pneumonia.

Chickenpox may be particularly severe in children with leukaemia, pregnant women and young babies. If chickenpox occurs in early pregnancy, the foetus may also be infected, resulting in congenital malformations in up to 2%. If it occurs around the time of delivery, the baby may become infected and up to 30% of newborns will become severely ill.

Chickenpox has a typical appearance and is usually diagnosed by clinical examination. A blood test can detect if someone has protection from chickenpox infection in the past, but the test may not be helpful in determining if there is adequate immunity to varicella following vaccination.

Chickenpox is spread when mucous membranes (lining of nose and mouth) come into contact with the virus in airborne droplets produced by coughing or sneezing, or with fluid from the blisters. Following infection, the virus will remain dormant (resting, as if asleep) in nerve cells of the spinal cord for the rest of the person's life. Reactivation of this virus causes shingles rather than a second attack of chickenpox.

Shingles (herpes-zoster) follows a previous chickenpox infection, usually several decades later. Shingles occurs when the body's immunity to the virus drops and the virus becomes active again after resting in the spinal cord. The elderly, children and adults being treated for cancer and persons infected with HIV virus are at greater risk of developing shingles.

A blistering rash, usually associated with severe pain, occurs on bands of skin overlying the area supplied by the spinal nerves carrying the dormant virus. The rash may be followed by persistent pain in the area, lasting for weeks.

The varicella-zoster virus is present in the shingles blister fluid. Direct contact with the blister fluid can cause chickenpox in a non-immune person. There is no airborne droplet spread from cases of shingles, except perhaps in some very severe cases of disseminated (widespread) shingles. Contact with chickenpox or shingles cannot lead to shingles in the exposed person since shingles can only follow the reactivation of a previous chickenpox infection.

Incubation period

(time between becoming infected and developing symptoms)

2 – 3 weeks, usually 14 – 16 days, but may be longer.

Infectious period

(time during which an infected person can infect others)

For chickenpox, from 2 days before the rash appears until at least 5 days after the rash first appears and all blisters have crusted over. For shingles, a person is infectious from when the rash appears until all blisters have dried up.

Treatment

Specific antiviral treatment for both chickenpox and shingles is available. Treatment is only given to those with severe disease or at risk of severe disease, and to be effective must be commenced early, usually within 24 hours of onset of the rash. Medical advice should be sought if:

- a child or adult with chickenpox has a high fever, cough, shortness of breath, or chest pain
- a pregnant woman has chickenpox
- a newborn baby (up to one month of age) is exposed to chickenpox
- a person over 50 years of age has shingles
- chickenpox develops in a child or adult with an immune deficiency (including a history of leukaemia, even if in remission).