

Shingles or herpes zoster

Shingles, or herpes zoster, is caused by the same virus that most children get when they get chickenpox in childhood. This otherwise harmless virus waits for a second chance, safely hidden in the sensory ganglia of the spinal cord, where it can lie dormant for life. Reawakened, it can cause 10% to 30% of the population to develop blisters on the part of the skin animated by the nerve in which the virus slept.

Epidemiological characteristics

There are significant differences in the prevalence of shingles between countries and races, which are thought to be related to age at first VZV infection. In general, the incidence of African wildlife disease is higher in white people than in dark skinned people. Some epidemiological studies have also reported a higher prevalence of shingles in women, while socioeconomic status, seasonality or urban/rural residence have not been identified as risk factors for shingles. However, the epidemiological face of shingles may change with the introduction of mass vaccination of children against chickenpox. Repeated contact with children with chickenpox is likely to reduce the risk of shingles outbreaks in people who have already had chickenpox.

The cause and the course of the infection

Varicella zoster virus (VZV) infects the majority of the population and causes the well-known childhood disease chickenpox.

Herpes zoster is a disease that usually occurs on a specific part of the body, i.e. the skin in a specific zone. It presents with characteristic blisters and pain. It most often affects the elderly, but even adolescents and even children are not spared. The disease is easily recognisable and even self-treatable if complications do not arise, one of which is very severe chronic pain, known as postherpetic neuralgia. However, an outbreak of the disease, especially if it occurs in a widespread form, may also indicate a weakening of the body's immune response and may thus be the first visible indicator of some serious underlying diseases that have not yet manifested themselves.

Pasavec povzroča okužba z virusom Varicela zoster (VZV). Z njim je prekužena večina prebivalstva, saj povzroča dobro znano otroško bolezen norice.

Evidence of infection

The shingles is very recognisable at first sight, due to its characteristic unilateral localisation in the form of a band, and also due to the characteristic clusters of vesicles on the skin of the affected area. A routine diagnosis of shingles is made by the physician on the basis of the course of the disease and the characteristic clinical picture. Of course, the disease can also be confirmed by targeted microbiological tests for evidence of the causative organism in the fluid of the vesicle or ulcer.

Transmission and incubation period

Shingles is not transmitted from person to person. The virus that causes shingles (varicella zoster virus) can be transmitted from a person with active shingles to a person who has never had chickenpox or the chickenpox vaccine. In this case, the person would have chickenpox, but not shingles. The virus can be transmitted by direct contact with the fluid from the vesicles on the rash of shingles person.

The incubation period is 14 to 16 days, but can be as long as 10 to 21 days.

Susceptibility to infection

All people who have ever had chickenpox are susceptible to infection. The outbreak is most likely due to an altered balance between the human host and the virus, but the specific triggers are unknown. The key factor is probably a transient or permanent weakening of the host cellular immune response.

Shingles occurs in individuals, not in epidemics. It is more common in people over 60 years of age and in people with weakened immune responses, such as HIV/AIDS patients, cancer patients, bone marrow transplant recipients and those receiving immunosuppressive drugs.

Symptoms and signs of the disease

The patient usually first feels a severe burning pain on a specific "stripe" of skin, which is animated by an infected sensory nerve. After two to three days, reddening of a few millimetres appears on the sore skin, which sprouts transparent vesicles with clear fluid that may coalesce into larger blisters. The lesions are relatively sharply localised and confined to one half of the body. The bubbles burst, leaving wounds that are then covered by scabs, which fall off after a week or two, leaving a slight redness that eventually fades. Usually, the shingles heal without affecting the skin. If there is a bacterial infection of the affected skin (e.g. if the patient scratches the wounds), the site may become purulent and the healing process is more time-consuming and may leave scars. The disease usually lasts between 10 and 15 days. In less than 4% of patients, the disease may recur. In the case of recurrent blistering of the skin, we should also think about a possible other disease, perhaps an infection with another virus, Herpes simplex virus (HSV), rather than VZV. Shingles most commonly appears on the chest, but can also appear on the neck, face, abdomen or lumbar region. The blisters can also spread to the nearest neighbouring 'strips'.

The course of the disease can be quite uncomfortable, either due to the localisation of the skin lesions or due to the spread of the virus. Shingles can also affect the central nervous system. Inflammatory cells were found in the cerebrospinal fluid of one third of the patients with shingles, but few patients showed signs of disease. Particularly dangerous is the outbreak of shingles, which occurs on the part of the skin innervated by the optic nerve branch of the facial nerve. The bubbles cover the eyelid, half of the forehead and the nose. The disease can also spread to the eye, causing inflammation of the cornea, iris, glaucoma and even loss of vision, and in very rare cases even unilateral inflammation of the cerebral vasculature. In such cases, an eye examination by an ophthalmologist is a must, as early treatment can prevent the worst from happening. Shingles can also affect half of the face and half of the mouth, causing severe pain in the mouth and difficulty eating. It is much less common to find shingles in the ear area. It involves pain and bubbles in the external auditory canal, disturbances in balance, loss of taste and paralysis of the facial nerve on the same side. Other nerves of the brain may also be affected. If the shingles occur in the genital area or the anus, it can cause problems with wetting. VZV can also cause paralysis in rare cases.

In rare cases, however, the spread of the shingles throughout the body (generalised zoster) occurs. It is more common in people with a weakened immune response and may be the first indicator of it in a previously "healthy" person. On the skin, the rash appears as a chickenpox-like rash, as it affects not just one or a few 'strips' of skin, but is spread all over the body. Especially in immunocompromised people, the disease can also affect internal organs (lungs, liver).

The most common and most serious complication of shingles, which can severely impair quality of life in the long term, is postherpetic neuralgia. Pain is the leading symptom of shingles and is caused by inflammation of the nerve that animates the affected 'strip' of skin. It is mostly present before the outbreak of blisters, during their development, and may subside and completely disappear as the skin lesions disappear. However, if the pain lasts for a month or more, we speak of postherpetic neuralgia. It can be very severe and unresponsive to conventional painkillers; it can bring the patient to the brink of despair. It is more common in the elderly, with as many as half of patients aged 50 and over with shingles complaining of it. Once postherpetic neuralgia is present, it is difficult to manage.

Infectiousness

A person with shingles is contagious when bubbles appear, but is not contagious before the bubbles appear, when the bubbles are gone, or when only crusts are still present.

Treatment

Treating shingles is primarily about preventing complications of the disease. It is very important to protect the affected part of the skin where the outbreak has occurred from bacterial infection by covering it sterilely. If there is also severe inflammation of the area around the blisters, the site is cooled for a few days with saline compresses, which are changed very frequently. Otherwise, no ointments or creams should be applied to the affected part of the skin.

Shingles can be treated in a targeted way with antiviral drugs. They can reduce the duration of the rash and the time it takes for the virus to clear, i.e. the infectiousness of the patient, and prevent or reduce complications. Medicines are available in tablet form and, for more severe cases, in a form suitable for intravenous administration. The dosage and duration of treatment depend on the age and immune status of the patient, and the course of the disease itself. Treatment should be started as soon as possible, and at the latest within the first three days after the outbreak of vesicles.

Postherpetic neuralgia should be treated as soon as possible. It often turns out that postherpetic neuralgia is not only the patient's fault, but also the doctor's. That is why timely action and a sufficiently rapid introduction of an antiviral drug are also very important, as they can often prevent this serious and painful complication of the shingles.

Prevention of infections

The chickenpox vaccine has been available for many years and is already part of the routine childhood immunisation programme in some countries. In Slovenia, there is no such mass vaccination yet, but there is a vaccine against shingles.

A person with shingles should cover the rash, avoid touching it and wash their hands frequently to prevent spreading the virus to other people. It is also important to avoid pregnant women who have

not had chickenpox or have been vaccinated against chickenpox, premature or low birth weight newborns, and all immunocompromised persons (persons on immunosuppressive therapy, chemotherapy, organ transplant recipients, HIV-infected persons).

Vaccination against shingles

Since spring 2016, a live attenuated vaccine against shingles has been available in Slovenia, and since autumn 2023, a newer recombinant (inactivated) vaccine against shingles (herpes zoster) is also available. The vaccines reduce the risk of developing shingles and the long-term pain (known as postherpetic neuralgia) that the disease can cause. The recombinant vaccine is more effective than the live attenuated vaccine, protection is longer lasting and, unlike the live attenuated vaccine, it is also suitable for vaccination of immunocompromised persons.

Vaccination with a recombinant shingles vaccine is particularly recommended for the prevention of herpes zoster and associated postherpetic neuralgia for the most vulnerable immunocompromised persons (aged 18 years and older), and is also recommended for persons aged 60 years and older. For the most vulnerable immunocompromised people, vaccination is covered by compulsory health insurance. For others (including those aged 60 and over), vaccination is self-funded. The vaccination is given with two doses of vaccine.

Vaccination with live attenuated vaccine against shingles is recommended for people aged 60 years and over and is self-paid. The vaccine is administered in a single dose.

Vaccinations can be administered at you selected physician's clinic or at the outpatient clinics of the NIJZ regional units (by prior telephone appointment).