Opportunistic Infections

Herpes Zoster Virus (shingles)

Shingles is an infection caused by a herpes virus called varicella-zoster, which also causes chickenpox. Of those who had chickenpox earlier in life, 3–5 percent of them will develop shingles, usually after the age of 50. Even though the chickenpox healed, the virus lives quietly in nerves near the spinal cord. If the immune system weakens enough, the virus can become active. Instead of coming back as chickenpox (varicella), it comes back as shingles (zoster).

Up to 95 percent of people in the U.S. have antibodies for varicella-zoster.

For people living with HIV, shingles is more than 15 times more likely to occur, at any CD4 count but more often in those with counts below 200. For CD4 counts below 50, there’s a higher risk of zoster infection in other parts of the body such as the retina of the eye, which can result in rapid blindness.

What are the symptoms?

When shingles occurs, it only affects one side of the body, usually in the form of a belt-like streak along a single line of nerves. The most common site is the back, upper abdomen, neck or face. It can also affect the eyes and more rarely the inner ear. Shingles can be very painful, but it can be treated.

The first symptoms are often fever, chills, tiredness, headache, and upset stomach, which can lead people to think they have the flu. These are often followed by sensations of numbness, tingling or pain on one side of the body or face. Many describe the pain as burning, throbbing and stinging, with intermittent sharp stabs of severe pain. Some people experience severe itching or aching rather than pain.

After several days of symptoms, a rash develops that extends from the middle of the body outward. The rash will be made up of clusters of small, clear, fluid-filled blisters on reddened skin. Within several days, the blisters will turn yellow, dry up, and crust over. This may take longer in those with weakened immune systems. It can then take two or more weeks for the crusted shingles to heal completely, sometimes leaving scars.

In 10–25 percent of cases, shingles can occur in the eye. Symptoms range from pain and redness of the eye to impaired vision and chronic twitching of the eyelid. In worst cases, this can lead to permanent damage and blindness. Also, rarely, shingles can spread to the nerves in the inner ear, which can lead to hearing loss, vertigo and loss of balance.
It can take up to six weeks for shingles pain to disappear. Sometimes, shingles can do long-lasting damage to a nerve, which may result in pain, numbness, or tingling for months or years afterwards, called post-herpetic neuralgia. Shingles recurs in about 1 out of 3 people living with HIV. And 10–15 percent report ongoing neuralgia from the previous shingles outbreak.

How is shingles diagnosed?

Initial flu-like symptoms can be mistaken for other diseases. As soon as the rash develops, however, shingles is fairly easy to diagnose, as it is rather unique in its look. Your doctor may diagnose it by simply by looking at it and have you start treatment immediately. To be sure, your doctor can swab the rash and send the sample to a lab to look for the virus.

How is shingles treated?

Like most herpes viruses, varicella-zoster cannot be cured. However, shingles can be treated, which can speed up healing time, reduce pain, and delay or prevent shingles from recurring. Most of the time, pills are taken by mouth. However, if the infection is severe or doesn’t respond to the pills, IV treatment in a hospital may be necessary.

Treatment works best if it is started within the first three days of symptoms. Thus, it’s best to contact your health provider as soon as you notice burning, sharp pain, tingling, or numbness in or under your skin on one side of your body or face. Three treatments are available:

Acyclovir (Zovirax). Acyclovir has been studied in people living with HIV and herpes simplex but not shingles, and rarely causes side effects. The oral dose is taken five times a day, usually for 7–10 days. Acyclovir has been studied during pregnancy and appears safe to use.

Valacyclovir (Valtrex): Valacyclovir has been studied in people living with HIV and herpes simplex but not shingles, and is a preferred choice of treatment. It is taken three times a day for 7–10 days. Valacyclovir rarely causes side effects, appears safe to use during pregnancy, and offers better dosing.

Famciclovir (Famvir): Famciclovir is also a preferred choice and is taken by mouth three times a day for 7–10 days. Famciclovir appears safe to use during pregnancy, and offers better dosing options.

In some cases, shingles does not respond to these drugs, probably due to the forming of drug-resistant virus. Fortunately, this has occurred in only a few people living with HIV. Because these drugs are similar, simply switching them is not usually effective.

Currently, foscarnet (Foscavir) is the most common treatment for acyclovir-resistant shingles. It must be given by IV, usually three times a day, often in a hospital or under close supervision of an in-home nurse.

Painkillers (Tylenol, Advil, etc.) can also be used to manage the discomfort of shingles. Stronger painkillers, including those taken by mouth or applied to the skin (Lidoderm, etc.), are available
with a doctor’s prescription. Corticosteroids, like prednisone, may also be prescribed. However, there are no data on the use of immune suppressing drugs like prednisone to treat shingles in people with HIV.

During a case of shingles, keep the sores and area around the sores as clean and dry as possible. This will help it heal well. Keeping them clean can also prevent bacterial infection. Some doctors recommend warm showers to clean the affected area. Afterwards, towel dry gently, or use a hair dryer on a low or cool setting. To prevent chaffing, avoid tight-fitting clothes. Most creams and lotions do no good and may even irritate the area.

Can shingles be prevented?

Yes. Shingles can be prevented through vaccines and good hygiene.

A person cannot transmit shingles to someone who has already had chickenpox or has been vaccinated for it. However, the shingles rash can “shed” the virus and infect a person who has not had chickenpox or has not been vaccinated. Therefore, refrain from touching shingles sores and cover the rash to prevent exposure to others.

If an adolescent or adult living with HIV who has never had chickenpox (or antibodies to varicella-zoster) but has been exposed to shingles, they could take post-exposure prophylaxis. In this case, VariZIG should be used within 10 days but ideally within 96 hours of the exposure to reduce symptoms if transmission occurred. Since VariZIG is an investigational new treatment, the prescribing doctor would need to make an application to the expanded access program.

There are three vaccines available. The first, Varivax, is typically recommended for children and prevents initial infection and chickenpox. Another vaccine, called Zostavax, is used to protect a person from developing shingles who has had chickenpox. A third vaccine, Shingrix, was approved by the FDA in early 2018.

Varivax is a live virus vaccine and is recommended for children living with HIV who’ve never had chickenpox, are at least eight years old, and have a CD4 count of at least 200. While there aren’t any studies of adolescents and adults with HIV who’ve never had chickenpox, many experts recommend it for older people with HIV, provided that their CD4 count is at least 200. If the Varivax vaccine causes disease—which is rare but possible—acyclovir treatment is recommended. Pregnant women should not get the live vaccine.

Zostavax is a live virus vaccine used to prevent shingles in people who have already had chickenpox. It prevents shingles by 51 percent and neuralgia by 67 percent. However, it is not recommended for adults living with HIV, especially in those with lower CD4 counts. It is probably best that the vaccine be avoided by all people with HIV, regardless of their immune system status, until proper clinical studies are done. Pregnant women should not get the live vaccine.

The Shingrix vaccine provides higher levels of protection than Zostavax (more than 90 percent), and the CDC recommends its use over Zostavax. Although Shingrix is a dead virus vaccine, it has
not been studied in people living with HIV or in pregnant women.

Keeping the immune system healthy is the best way to prevent shingles. This means keeping your viral load low and your CD4 cells high using HIV treatment and by adopting a healthy lifestyle. Also, taking lower doses of acyclovir, valacyclovir or famciclovir over time can help prevent shingles from recurring. However, this is usually recommended only for those who have a history of frequent recurrences.

Are there any experimental treatments?

If you would like to find out if you are eligible for any clinical trials involving new treatments for shingles, visit ClinicalTrials.gov, a site run by the U.S. National Institutes of Health. The site has information about all HIV-related clinical studies in the United States. For more info, you can call their toll-free number at 1-800-HIV-0440 (1-800-448-0440) or email contactus@aidsinfo.nih.gov.

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