

HERPES SIMPLEX VIRUS

REPORTING INFORMATION

Neither genital herpes nor congenital herpes are reportable. Information is included to assist with differentiating herpes simplex virus (HSV) infection from other conditions that cause lesions.

AGENTS

Herpes simplex virus (HSV) - Types I and II

- HSV I is usually associated with oral fever blisters, herpetic keratitis, and encephalitis in adults and may occur in the genital area.
- HSV II is usually associated with genital and neonatal infections and may occur above the waist, possibly due to autoinoculation by the hands of the infected person.

SIGNS AND SYMPTOMS

Genital Herpes

Vesicular lesions appear on internal and external genitalia. Lesions often ulcerate (especially in moist areas). Primary infections often produce pain, dysuria, local inflammation, tender inguinal adenopathy, vaginal discharge, and constitutional symptoms. Recurrent symptoms are believed to be milder and of shorter duration than primary symptoms. The mean duration of recurrent infections is 42 days. 62% of infections recur within six months of original infection. Recurrence rates are higher in HSV II infections. Women with cervical and vaginal infections may be asymptomatic. Possible complications involve the central nervous system and occur in several forms, including aseptic meningitis and radiculitis.

Congenital Herpes

Newborns (≤ 72 hours old) may exhibit one of the following symptom complexes:

- Disseminated disease, involving the liver and multiple other organs, which frequently includes encephalitis, and, in approximately 80% of the cases, vesicular skin lesions
- Encephalitis, in which only 60% of these cases have vesicular skin lesions at some point during their illness
- Skin, eye and/or mouth involvement, in which vesicles occur in 90% of cases; these cases generally present at an older age (10-11 days)

DIAGNOSIS

The signs and symptoms associated with HSV-2 can vary greatly. Healthcare providers can diagnose genital herpes by visual inspection if the outbreak is typical, and by taking a sample from the sore(s) and testing it in a laboratory.

EPIDEMIOLOGY

Source

Humans.

Occurrence

Data on the number of herpes cases is not available as it is not nationally notifiable. However, results of a nationally representative study show that genital herpes infection is common in the United States. Nationwide, one out of five adolescents and adults have had genital HSV infection. Over the past decade, the percent of Americans with genital herpes infection in the U.S. has decreased. Genital HSV-2 infection is more common in women (approximately one out of four women) than in men (almost one out

of eight). This may be due to male-to-female transmission being more likely than female-to-male transmission.

Mode of Transmission

HSV-1 and HSV-2 can be found in and released from the sores that the viruses cause, but they also are released between outbreaks from skin that does not appear to have a sore. Generally, a person can only get HSV-2 infection during sexual contact with someone who has a genital HSV-2 infection. Transmission can occur from an infected partner who does not have a visible sore and may not know that he or she is infected. HSV-1 can cause genital herpes, but it more commonly causes infections of the mouth and lips, so-called "fever blisters". HSV-1 infection of the genitals can be caused by oral-genital or genital-genital contact with a person who has an HSV-1 infection. Genital HSV-1 outbreaks recur less regularly than genital HSV-2 outbreaks.

Congenital infection most commonly results from intrapartum transmission during birth through an infected maternal genital tract or by ascending infection, usually after rupture of membranes. Intrauterine transmission may also occur. Postpartum transmission results in later onset of disease (neonatal herpes).

Period of Communicability

Genital HSV infection may be transmitted during periods of both symptomatic and asymptomatic shedding of virus. Patients should be advised not to resume sexual activity until lesions have completely healed. The period of time for healing appears slightly longer for women than for men.

Congenital herpes infection may be transmitted while symptoms are present. The median duration of viral shedding as defined from onset of lesions to the last positive culture is approximately 12 days.

Incubation Period

Estimated 2-12 days for HSV Type II infection.

PUBLIC HEALTH MANAGEMENT

Case

Patients infected with *Herpes simplex* should be counseled about their infection regarding sexual activity during periods of communicability and measures for preventing transmission. Barrier forms of contraception, especially condoms, may decrease transmission of disease.

Management of Pregnant Women

The management of pregnant women with genital HSV must be individualized and based on the clinical course of disease in the mother. Cesarean section is not routinely warranted for all women with recurrent genital disease. Only those women who shed HSV at or near the time of delivery need be considered for Cesarean delivery. Pregnant patients with recurrent genital HSV should be encouraged to come to the hospital early in labor so careful examination of the external genitalia and cervix may be performed.

Treatment

There is no treatment that can cure herpes, but antiviral medications can shorten and prevent outbreaks during the period of time the person takes the medication. In addition, daily suppressive therapy for symptomatic herpes can reduce transmission to

partners. Consult the most recent CDC-published "STD Treatment Guidelines" for recommended therapy (<http://www.cdc.gov/std/Herpes/treatment.htm>).

Isolation

Infants at risk of having acquired disease at birth should be placed in contact isolation. Viral cultures, liver function studies, and CSF examinations should be followed and the infant should be monitored closely for the first month of life.

Prevention and Control

The surest way to avoid transmission of sexually transmitted diseases, including genital herpes, is to abstain from sexual contact, or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected. Genital ulcer diseases can occur in both male and female genital areas that are covered or protected by a latex condom, as well as in areas that are not covered. Correct and consistent use of latex condoms can reduce the risk of genital herpes. Persons with herpes should abstain from sexual activity with uninfected partners when lesions or other symptoms of herpes are present. It is important to know that even if a person does not have any symptoms he or she can still infect sex partners. Sex partners of infected persons should be advised that they may become infected and they should use condoms to reduce the risk. Sex partners can seek testing to determine if they are infected with HSV. Women should have annual pelvic examinations and pap smears. Encourage women to inform their physician of their herpes infection to reduce the possibility of neonatal infection.

What is genital herpes?

Genital herpes is a sexually transmitted disease (STD) caused by the herpes simplex viruses type 1 (HSV-1) or type 2 (HSV-2). Most genital herpes is caused by HSV-2. Most individuals have no or only minimal signs or symptoms from HSV-1 or HSV-2 infection. When signs do occur, they typically appear as one or more blisters on or around the genitals or rectum. The blisters break, leaving tender ulcers (sores) that may take two to four weeks to heal the first time they occur. Typically, another outbreak can appear weeks or months after the first, but it almost always is less severe and shorter than the first outbreak. Although the infection can stay in the body indefinitely, the number of outbreaks tends to decrease over a period of years.

How common is genital herpes?

Results of a nationally representative study show that genital herpes infection is common in the United States. Nationwide, 16.2%, or about one out of six, people 14 to 49 years of age have genital HSV-2 infection. Over the past decade, the percentage of Americans with genital herpes infection in the U.S. has remained stable.

Genital HSV-2 infection is more common in women (approximately one out of five women 14 to 49 years of age) than in men (about one out of nine men 14 to 49 years of age). Transmission from an infected male to his female partner is more likely than from an infected female to her male partner.

How do people get genital herpes?

HSV-1 and HSV-2 can be found in and released from the sores that the viruses cause, but they also are released between outbreaks from skin that does not appear to have a sore. Generally, a person can only get HSV-2 infection during sexual contact with someone who has a genital HSV-2 infection. Transmission can occur from an infected partner who does not have a visible sore and may not know that he or she is infected.

HSV-1 can cause genital herpes, but it more commonly causes infections of the mouth and lips, so-called "fever blisters." HSV-1 infection of the genitals can be caused by oral-genital or genital-genital contact with a person who has HSV-1 infection. Genital HSV-1 outbreaks recur less regularly than genital HSV-2 outbreaks.

What are the signs and symptoms of genital herpes?

Most people infected with HSV-2 are not aware of their infection. However, if signs and symptoms occur during the first outbreak, they can be quite pronounced. The first outbreak usually occurs within two weeks after the virus is transmitted, and the sores typically heal within two to four weeks. Other signs and symptoms during the primary episode may include a second crop of sores, and flu-like symptoms, including fever and swollen glands. However, most individuals with HSV-2 infection never have sores, or they have very mild signs that they do not even notice or that they mistake for insect bites or another skin condition.

People diagnosed with a first episode of genital herpes can expect to have several (typically four or five) outbreaks (symptomatic recurrences) within a year. Over time these recurrences usually decrease in frequency. It is possible that a person becomes aware of the "first episode" years after the infection is acquired.

What are the complications of genital herpes?

Genital herpes can cause recurrent painful genital sores in many adults, and herpes infection can be severe in people with suppressed immune systems. Regardless of severity of symptoms, genital herpes frequently causes psychological distress in people who know they are infected.

In addition, genital HSV can lead to potentially fatal infections in babies. It is important that women avoid contracting herpes during pregnancy because a newly acquired infection during late pregnancy poses a greater risk of transmission to the baby. If a woman has active genital herpes at delivery, a cesarean delivery is usually performed. Fortunately, infection of a baby from a woman with herpes infection is rare. Herpes may play a role in the spread of HIV, the virus that causes AIDS. Herpes can make people more susceptible to HIV infection, and it can make HIV-infected individuals more infectious.

How is genital herpes diagnosed?

The signs and symptoms associated with HSV-2 can vary greatly. Healthcare providers can diagnose genital herpes by visual inspection if the outbreak is typical, and by taking a sample from the sore(s) and testing it in a laboratory. HSV infections can be diagnosed between outbreaks by the use of a blood test. Blood tests, which detect antibodies to HSV-1 or HSV-2 infection, can be helpful, although the results are not always clear-cut.

Is there a treatment for herpes?

There is no treatment that can cure herpes, but antiviral medications can shorten and prevent outbreaks during the period of time the person takes the medication. In addition, daily suppressive therapy for symptomatic herpes can reduce transmission to partners.

How can herpes be prevented?

The surest way to avoid transmission of sexually transmitted diseases, including genital herpes, is to abstain from sexual contact, or to be in a long-term mutually monogamous relationship with a partner who has been tested and is known to be uninfected.

Genital ulcer diseases can occur in both male and female genital areas that are covered or protected by a latex condom, as well as in areas that are not covered. Correct and consistent use of latex condoms can reduce the risk of genital herpes.

Persons with herpes should abstain from sexual activity with uninfected partners when lesions or other symptoms of herpes are present. It is important to know that even if a person does not have any symptoms he or she can still infect sex partners. Sex partners of infected persons should be advised that they may become infected and they should use condoms to reduce the risk. Sex partners can seek testing to determine if they are infected with HSV. A positive HSV-2 blood test most likely indicates a genital herpes infection.

Information from the Centers for Disease Control and Prevention (CDC):

<http://www.cdc.gov/std/Herpes/STDFact-Herpes.htm>