
GENITAL HERPES SIMPLEX VIRUS (HSV)

DEFINITION

Genital herpes simplex infection is a viral infection caused by the herpes simplex virus (HSV) type 1 or 2.

POTENTIAL CAUSES

Infection is caused by inoculation of the HSV type 1 or 2 virus onto mucous membranes or through breaks in the skin during close skin-to-skin contact. The virus may be spread through sexual activities including oral sex.

Transmission may occur during periods of sub-clinical shedding when patients are asymptomatic..

PREDISPOSING RISK FACTORS

- close skin-to-skin contact with an individual who is shedding HSV virus from genital or oral secretions
- multiple sex partners
- current or past partner who has an infection with HSV
- recurrences may be associated with menses, emotional stress, sexual intercourse, surgery, medications, illness

TYPICAL FINDINGS

Sexual Health History

- at least one sexual partner
- HSV is often asymptomatic or sub-clinical and often clients are unaware that they have an HSV infection
- condoms may or may not have been used for sexual contact

The infection may present in the following ways:

Primary HSV Infection:

Approximately 50% of people who present with a first episode of symptomatic genital herpes have a primary infection. The primary infection is associated with a more prolonged and symptomatic infection than recurrent episodes of HSV.

Infection occurs in an HSV antibody negative individual. The usual incubation period is 2 - 21 days and the infection can be severe (e.g., swollen lymph nodes, multiple lesions, fever) and last up to 3 weeks. Systemic symptoms are present in 58-62% of clients.

Non-primary First Episode HSV Infection:

First clinical presentation of an HSV infection in someone who has pre-existing antibodies to HSV, but may be unaware of his or her history of infection or has a history of other HSV lesions such as cold sores. In these presentations, previous antibody development attenuates the severity of the disease. Symptoms are usually milder and shorter in duration than those associated with a Primary HSV infection and systemic symptoms are present in 16% of clients.

Recurrent HSV Infection:

Occurs in HSV antibody positive individuals where there is reactivation of existing infection. Symptoms resemble those of non-primary first episode.

Physical Assessment

A full STI screen is recommended for men and women who present with suspected HSV infection. However, symptoms associated with an HSV infection can cause extensive discomfort therefore female clients may not be able to tolerate a pelvic exam and may need to defer the exam until symptoms subside.

Both Genders:

Symptoms can range from mild to severe and may include the following:

- prodromal symptoms: prior to the appearance of lesions and includes focal burning, itching and/or tingling
- flu-like symptoms (e.g., fever, malaise)
- painful lesions that may be ulcerative, scabbed, vesicle or blisterlike appearing in clusters or as a single sore to affected skin
- swollen tender inguinal lymph nodes
- itching, burning, irritation, or discomfort to the affected skin
- ulcerative lesions persist for 4 to 15 days
- pain and erythema to affected area
- inguinal nodes may be swollen and tender bilaterally or only on one side
- urethral inflammation
- dysuria

Males:

- urethral discharge – usually clear and mucoid
- edema of penis

Females:

- edema of labia
- lesions on the cervix –
- HSV cervicitis - 90% of women with primary genital HSV
- abnormal vaginal discharge - may be purulent or bloody with primary genital HSV

Diagnostic Tests:

In many cases HSV is a clinical diagnosis based on the client's history, presentation and on clinical findings. If required for confirmation, the following diagnostic tests may be considered:

HSV Culture

- type and location specific – 70% sensitivity from ulcers, 94% from vesicles
- lesions may be swabbed for a type specific viral culture – use a swab specific to viral cultures
- when taking the swab ensure that fluid from vesicles or an ulcer is collected on the swab for best results – a scabbed lesion may need to be unroofed for the best result and to collect adequate material for culture
- a positive HSV culture of the lesion is most likely to occur when the specimen is collected within 72 hours from the onset of symptoms
- a negative HSV culture result does not rule out genital herpes. A negative result may indicate that there was not enough virus being shed to culture

Serology:

HSV IgG: Antibody Test

HSV IgG serology is not a routine STI screening test because it is not usually helpful in managing an HSV infection. A positive HSV IgG test indicates previous exposure and antibody formation to HSV. Antibodies may take 12 to 16 weeks to form after an exposure. HSV IgG is not HSV type specific.

HSV IgG antibody testing may be considered when:

- confirming or ruling out a primary HSV infection in a client with no previous history of HSV infection e.g. cold sores, or genital HSV
 - if the test is negative it is repeated in 12 to 16 weeks to assess for antibody presence representing seroconversion
 - if the test is positive it indicates antibody development to a previous HSV infection
- routine screening for HSV infection is not recommended however, when a client with no previous history of HSV would like to know his or her antibody status – testing in this context must be accompanied by:
 - thorough pre & post test counselling given the high prevalence of asymptomatic HSV in the general population
 - counselling the client of the high likelihood that the test may come back positive and that this could reflect subclinical infection from childhood or previous sexual partners and that the test is unable to detect the type or location on the body of the virus in asymptomatic infections

HSV type specific serology (TSS)

HSV type specific testing may be done by the provincial lab under the following circumstances. RNs must note on the provincial lab requisition – *send for HSV TSS*:

- a women is pregnant and her partner has HSV (diagnosed)
- for clients who are HIV positive
- for clients who have a partner who is HIV positive
- for client who have partners who have HSV (diagnosed)
- for clients who have undergone at least 2 attempts to culture lesions suggestive of HSV where results have been *HSV none found*

Client's who do not meet the provincial lab criteria and would like HSV TSS may access this test from some local labs at their cost. Refer the client to a physician or NP for the appropriate lab requisition form.

CLINICAL EVALUATION

The diagnosis of genital HSV is based on the health history and clinical findings.

- select appropriate testing option based on health history and clinical findings
- determine clients primary concern regarding HSV infection and provide appropriate support, and follow-up

MANAGEMENT AND INTERVENTIONS

Goals of Treatment:

- increase comfort and reduce symptoms related to viral infection
- treat viral infection
- prevent complications
- reduce transmission

TREATMENT OF CHOICE

Treatment is recommended to improve clinical symptoms. Advise clients that early initiation of anti-viral medication may reduce the length and severity of the outbreak. Discuss the options of anti-viral medication for suppressive and episodic treatment.

Clients require a consult or referral to a physician or NP for treatment.

Client Medication Treatment Options:

Antiviral treatment is not essential for genital HSV infection. However, early initiation of anti-viral treatment during an outbreak may reduce the severity of symptoms and shorten the duration of the lesions.

- antiviral medications - Acyclovir, Valacyclovir, Famvir
- for frequent recurrent episodes clients may choose daily suppressive therapy to:
 - reduce transmission
 - reduce number and severity of outbreaks
- for infrequent recurrent episodes, clients may choose to use episodic therapy (given over 3-7 days) to:
 - reduce transmission by shortening duration of outbreak
 - reduce severity of outbreak and lessen symptoms
- no treatment

Client Symptomatic Treatment:

The lesions and lymphadenopathy accompanying HSV infection may be quite painful. Analgesia and other symptomatic interventions may decrease the discomfort associated with an outbreak. Comfort measures may include:

- analgesics for pain
- bathing in warm water to soothe the sores
- wearing loose clothing and gently drying the affected areas
- applying an ice-pack wrapped in a clean covering to apply to the affected area
- urinating in warm water or pouring water over the genitals while urinating to decrease dysuria
- drinking plenty of fluids to keep urine dilute

PREGNANT OR BREASTFEEDING WOMEN

Refer to physician or NP.

PARTNER COUNSELLING AND REFERRAL

- unless symptomatic of infection, sexual partners do not require treatment
- partner notification by client

POTENTIAL COMPLICATIONS

Complications are most common when clients are experiencing a primary HSV infection and may include:

- urethritis
- cervicitis
- aseptic meningitis (rare)
- neonatal HSV infection when the mother experiences primary HSV infection during her third trimester in pregnancy

CLIENT EDUCATION AND FOLLOW-UP

Counselling is an important component of HSV care and follow-up. Upon receiving a diagnosis of HSV infection clients may feel afraid of being judged and telling their partners. Loneliness, depression, feelings of decreased self-esteem, and anxiety about the long-term impacts of the infection may be significant concerns for the client.

It is important to provide education regarding the frequent nature of HSV in the general population and that most of the time HSV is spread through asymptomatic shedding. Additionally, discussing the treatable albeit life-long nature of HSV is important.

Counsel client that:

- many HSV infections are asymptomatic – people may be unaware that they have the infection
- HSV 1 is usually associated with oral cold sores while HSV 2 is usually associated with genital infection, but both can occur orally and genitally
- that in BC 1 in 5 people have an HSV 2 infection
- that most people in BC have antibodies to HSV 1 infection
- recurrences may be preceded by warning signs such as focal itching, burning, tingling, or discomfort
- HSV may be transmitted during an outbreak and when no symptoms or lesions are present
- the importance of telling sexual partners
- methods for talking with partners about the infection
- having HSV infection can increase the risk of acquiring and transmitting HIV
- testing for other STI should be considered
- skin-to-skin contact during oral, vaginal, or anal sex may transmit both types of the HSV virus
- harm reduction (condom use) decreases the risk of transmission by approximately 50% depending on the location of the lesions
- a negative culture for HSV does not necessarily indicate the absence of HSV infection
- if the HSV culture for present symptoms is negative and symptoms recur that it is important to obtain a culture as soon as possible within 72 hours of the onset of the recurrent symptoms
- HSV infection is a life-long infection that is treatable
- most people who have HSV notice that recurrences usually subside in frequency over time

CONSULTATION OR REFERRAL

Consult or refer to physician/NP for the following:

- pregnant or breastfeeding women
- clients who require antiviral or other prescription treatments

DOCUMENTATION

- infection is not reportable in BC
- document as per agency guidelines

REFERENCES

BCCDC (2007) British Columbia Treatment Guidelines. Sexually Transmitted Infections in Adolescent and Adults. STI/HIV Prevention and Control Division, BC Centre for Disease Control.

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