
SYPHILIS (REPORTABLE)

DEFINITION

An infection caused by the bacteria: *Treponema pallidum*. Syphilis is considered most infectious in primary, secondary and early latent (SEL) stages with the level of infectiousness decreasing in the later stages of syphilis infection.

Prior to treating, a BC Centre for Disease Control (BCCDC) STI/HIV Division physician must confirm diagnosis, treatment, and management.

POTENTIAL CAUSES

Treponema pallidum

PREDISPOSING RISK FACTORS

Sexual contact where there is skin-to-skin contact or exchange of body fluid with an individual who has a syphilis infection.

TYPICAL FINDINGS

Sexual Health History

- current or previous history skin or genital ulcer or rash
- at least one sexual partner
- may report a sexual contact as having been diagnosed with syphilis
- condoms may or may not have been used for sexual contact

Full STI screening is recommended for clients who indicate sexual contact with a person who has been diagnosed with a syphilis infection or who have clinical symptoms suggestive of syphilis infection.

Primary Syphilis:

Symptoms usually occur within 3-90 days of infection and may include:

- a nontender, indurated (rubbery, hard) lesion (may be located in the mouth, anus, perianal skin, vagina, labia, and penis)
- regional lymphadenopathy

Secondary Syphilis:

Symptoms usually occur within 2-12 weeks of infection and may consist of:

- most common manifestation is a non-itchy, non-infectious rash that is either generalized over the body or isolated to the palms, bottom of feet or on genitals
- fever
- malaise
- lymphadenopathy
- mucous membrane lesions (in or around the mouth, penis, anus, vaginal or labia). These are nontender and excrete clear infectious fluid; known as mucous patches.
- condylomata lata - large raised lesions found in moist areas, anus, vaginal or perineum (may be mistaken for genital warts)
- alopecia
- neurological symptoms including headaches, vertigo, meningitis, and ocular presentations

Early Latent Syphilis (SEL):

Infection has been present for *less* than one year and client is asymptomatic.

Late Latent Syphilis (SLL):

Infection has been present *longer than* one year and client is asymptomatic.

Tertiary Syphilis:

The infection has been present for greater than one year, usually more than ten years. Consists of a variety of symptoms and complications that may affect many body organs including the cardiovascular (e.g., aortic aneurysm), neurological (e.g., vertigo, personality changes), and other organs.

Diagnostic Tests

Syphilis Serology:

Syphilis Screen: RPR (rapid plasma reagin): Non-treponemal test (NTT) for screening purposes

- order with routine STI screening
- *Syphilis Screen* should be identified on the provincial lab requisition

Syphilis Confirmation: TP-PA (*T pallidum* particle agglutination): Treponemal confirmatory test

- order for clients who are sexual contacts to a confirmed syphilis contact
- order for clients who present with symptoms of syphilis infection
- indicate *Syphilis Confirmatory* on provincial lab requisition

NOTE - If syphilis infection is suspected then request both RPR and TP-PA serology and note on the requisition the presence of symptoms e.g. lesion.

Lesion Specimen Collection:

Collection of fluid specimen directly from lesion or mucous patch

DFA-TP Test. (Direct Fluorescent Antibody *T. pallidum* Test)

- without rubbing, directly apply each circle of the slide directly to the lesion or lesions and remove
- if the slide cannot be directly applied to the lesion, use the wooden tip of a swab to touch the lesion a few times and then transfer the swab exudate to the etched circles on the slide
- put the slide in a plastic slide cover

CLINICAL EVALUATION

All clients who have a confirmed syphilis diagnosis by a physician with the BCCDC STI/HIV Division require an assessment for testing, diagnosis, and treatment.

MANAGEMENT AND INTERVENTIONS

Goals of Treatment

- treat bacterial infection
- prevent complications
- reduce transmission

Treatment of Choice

Advise client:

- to abstain from sexual contact for 14 days after the onset of treatment with Bicillin
- to abstain for sexual contact until treatment is completed with Doxycycline
- about the possibility of a Jarisch-Herxheimer reaction. Clients should be made aware of this possible treatment reaction that presents as an acute febrile illness with headache, chills, rigour that may occur 8 to 12 hours following treatment and is expected to resolve within 24 hours. Symptoms may be treated with acetaminophen

FIRST CHOICE TREATMENT		
Stage of Infection	Treatment	Notes
Primary Secondary Early Latent	Benzathine penicillin G (Bicillin) 2.4 MU divided into 2 separate intramuscular injections 1.2 MU each. Treatment is one time only.	1. Separate dose into 2 separate injection sites into ventral gluteal or dorsal gluteal sites.
Late Latent	Benzathine penicillin G (Bicillin) 2.4 MU divided into 2 separate intramuscular injections 1.2 MU each. Repeat dose once weekly for 3 weeks 7 days apart.	1. Separate dose into 2 separate injection sites into either ventral gluteal or dorsal gluteal sites. 2. Treatment of 3 dose series is considered adequate providing there is no less than 5 days between doses and that dosing is completed within a 4 week period.

Alternate Treatment

SECOND CHOICE		
Stage of Infection	Treatment	Notes
Primary Secondary Early Latent	Doxycycline 100 mg po bid for 14 days.	1. Advise client to abstain from sexual contact until treatment completed.
Late Latent	Doxycycline 100 mg po bid for 28 days.	1. Advise client to abstain from sexual contact until treatment completed.

Management of Sexual Contacts

All sexual contacts of confirmed cases of infectious Syphilis are followed by the Epidemiology nurse at the BCCDC.

Primary, Secondary or Early Latent Syphilis

- perform syphilis serology and treat all sexual contacts of a client diagnosed with primary, secondary, or early latent syphilis from the 3 months preceding the infection
- perform syphilis serology on all sexual contacts of a client diagnosed with secondary syphilis within the 6 months preceding the infection
- perform syphilis serology on all sexual contacts of a client diagnosed with early latent syphilis within the 12 months preceding the infection
- perform routine sexual health history, exam, and STI screening including HIV serology
- syphilis serology requisition to include both syphilis screening and confirmatory tests
 - note on requisition “contact to syphilis” RPR and TP-PA

Late Latent Syphilis

- treat only those clients with reactive syphilis serology of a client diagnosed with late latent syphilis
- perform routine sexual health history, exam, and STI screening including HIV serology
- syphilis serology is required for all current and ongoing sexual contacts
- syphilis serology is required for children of women who have a syphilis infection
- syphilis serology requisition to include both syphilis screening and confirmatory tests
 - note on requisition “contact to syphilis” RPR and TP-PA

PREGNANT OR BREASTFEEDING WOMEN

Refer all pregnant clients to a physician for diagnosis and treatment.

PARTNER COUNSELLING AND REFERRAL

- all cases of infectious syphilis are followed by the BCCDC STI clinic physician and epidemiology nurse
- the BCCDC epidemiology nurse will follow-up to complete partner counselling and referral with local public health nurses who are treating clients for infectious syphilis
- partner notification is provided by the health care provider (public health referral as per Canadian Guidelines on Sexually Transmitted Infections pages 15-20)

POTENTIAL COMPLICATIONS

- all body organs can be affected by untreated syphilis, for example the cardiovascular and neurological
- congenital transmission
- co-infection with HIV

CLIENT EDUCATION AND FOLLOW-UP

Serology Follow-up:

Follow-up is done in collaboration with the BCCDC STI Clinic physician:

Primary, secondary, early latent syphilis (SEL):

HIV negative clients

- repeat RPR at 6 and 12 months after treatment

HIV positive clients

- repeat RPR at 3, 6, 9 and 12 months after treatment

Clients with difficulty adhering to Doxycycline treatment

- repeat RPR and monitor as per physician/NP recommendations

Late latent syphilis (SLL):

The follow-up in late latent syphilis (SLL) is based on RPR results.

Initial RPR:

- less than 1:4 – no follow-up serology is required
- higher than 1:4 – repeat RPR at 1 year and 2 years post treatment

Client Education:

Counsel client

- to return if symptoms have not disappeared in 2 to 4 weeks
- that having a current infection of syphilis increases the likelihood of becoming infected with HIV
- regarding the complications of untreated syphilis
- regarding transmission and the asymptomatic nature of the infection
- regarding partner notification process
- regarding blood work follow-up
- regarding follow-up by public health for positive syphilis results

CONSULTATION OR REFERRAL

Refer all clients to a physician for diagnosis and treatment.

DOCUMENTATION

Reportable infection:

- complete H208 forms as per reporting guidelines
- 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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Public Health Agency of Canada. (2006) Canadian Guidelines on Sexually Transmitted Infections. (updated January 2008). Retrieved from <http://www.phac-aspc.gc.ca/std-mts/sti-its/index-eng.php>