SYPHILIS

(primary, secondary, latent, early latent, late latent, latent of unknown duration, neurosyphilis, late, syphilitic stillbirth, congenital)

REPORTING INFORMATION

- Class A(2)
- Report by end of next business day
- Confidential Case Report Card (3812.11, rev. 12/81), lab report (3833.11), or telephone

AGENT

Treponema pallidum - Spirochete, classified as a bacterium. Motile, 6-14 spirals.

CASE DEFINITION

Clinical description

Syphilis is a complex sexually transmitted disease that has a highly variable clinical course. Classification by a clinician with expertise in syphilis may take precedence over the following case definitions developed for surveillance purposes.

Syphilis, primary

Clinical description

A stage of infection with *Treponema pallidum* characterized by one or more chancres (ulcers); chancres might differ considerably in clinical appearance.

Laboratory criteria for diagnosis

Demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, direct fluorescent antibody (DFA-TP), or equivalent methods

Case classification

Probable: a clinically compatible case with one or more ulcers (chancres) consistent with primary syphilis and a reactive serological test (nontreponemal: Venereal Disease Research Laboratory [VDRL] or rapid plasma reagin [RPR]; treponemal: fluorescent treponemal antibody absorbed [FTA-ABS] or microhemagglutination assay for antibody to *T. pallidum* [MHA-TP]).

Confirmed: A clinically compatible case that is laboratory confirmed.

Syphilis, secondary

Clinical description

A stage of infection caused by *T. pallidum* and characterized by localized or diffuse mucocutaneous lesions, often with generalized lymphadenopathy. The primary chancre may still be present.

Laboratory criteria for diagnosis

Demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, DFA-TP, or equivalent methods.

Case classification

Probable: a clinically compatible case with a nontreponemal (VDRL or RPR) titer of 4.
Confirmed: a clinically compatible case that is laboratory confirmed.

Syphilis, latent

Clinical description

A stage of infection caused by *T. pallidum* in which organisms persist in the body of the infected person without causing symptoms or signs. Latent syphilis is subdivided into early, late and

unknown categories, based on the duration of infection.

Case classification

Probable: no clinical signs or symptoms of syphilis and the presence of one of the following:

- No past diagnosis of syphilis, a reactive nontreponemal test (i.e., VDRL or RPR), and a reactive treponemal test (i.e., FTA-ABS or MHA-TP)
- A past history of syphilis therapy and a current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer.

Syphilis, early latent

Clinical description

A subcategory of latent syphilis. When initial infection has occurred within the previous 12 months, latent syphilis is classified as early latent.

Case classification

Probable: latent syphilis (see Syphilis, latent) in a person who has evidence of having acquired the infection within the previous 12 months based on one or more of the following criteria:

- Documented seroconversion or fourfold or greater increase in titer of a nontreponemal test during the previous 12 months.
- A history of symptoms consistent with primary or secondary syphilis during the previous 12 months
- A history of sexual exposure to a partner who had confirmed or probable primary or secondary syphilis or probable early latent syphilis (documented independently as duration <1 year)
- Reactive nontreponemal and treponemal tests from a person whose only possible exposure occurred within the preceding 12 months.

Syphilis, late latent

Clinical description

A subcategory of latent syphilis. When initial infection has occurred >1 year previously, latent syphilis is classified as late latent.

Case classification

Probable: latent syphilis (see Syphilis, latent) in a patient who has no evidence of having acquired the disease within the preceding 12 months (see Syphilis, early latent) and whose age and titer do not meet the criteria specified for latent syphilis of unknown duration.

Syphilis, latent, of unknown duration

Clinical description

A subcategory of latent syphilis. When the date of initial infection cannot be established as having occurred within the previous year and the patient's age and titer meet criteria described below, latent syphilis is classified as latent syphilis of unknown duration.

Case classification

Probable: latent syphilis (see Syphilis, latent) that does not meet the criteria for early latent syphilis, and the patient is aged 13-35 years and has a nontreponemal titer >32.

Neurosyphilis

Clinical description

Evidence of central nervous system infection with *T. pallidum.*

Laboratory criteria for diagnosis

- reactive serologic test for syphilis and reactive VDRL in cerebrospinal fluid (CSF)

Case classification

Probable: syphilis of any stage, a negative VDRL in cerebrospinal fluid (CSF), and both the following:

- Elevated CSF protein or leukocyte count in the absence of other known causes of these abnormalities
- Clinical symptoms or signs consistent with neurosyphilis without other known causes for these clinical abnormalities.

Confirmed: syphilis of any stage that meets the laboratory criteria for neurosyphilis

Syphilis, late, with clinical manifestations other than neurosyphilis (late benign syphilis and cardiovascular syphilis)

Clinical description

Clinical manifestations of late syphilis other than neurosyphilis may include inflammatory lesions of the cardiovascular system, skin, and bone. Rarely, other structures (e.g., the upper and lower respiratory tracts, mouth, eye, abdominal organs, reproductive organs, lymph nodes, and skeletal muscle) may be involved. Late syphilis usually becomes clinically manifest only after a period of 15-30 years of untreated infection.

Laboratory criteria for diagnosis

Demonstration of *T. pallidum* in late lesions by fluorescent antibody or special stains (although organisms are rarely visualized in late lesions)

Case classification

Probable: characteristic abnormalities or lesions of the cardiovascular system, skin, bone, or other structures with a reactive treponemal test, in the absence of other known causes of these abnormalities, and without CSF abnormalities and clinical symptoms or signs consistent with neurosyphilis

Confirmed: a clinically compatible case that is laboratory confirmed

Comment: Analysis of CSF for evidence of neurosyphilis is necessary in the evaluation of late syphilis with clinical manifestations.

Syphilitic Stillbirth

Clinical description

A fetal death that occurs after a 20-week gestation or in which the fetus weighs >500g and the mother had untreated or inadequately treated* syphilis at delivery

Comment

For reporting purposes, syphilitic stillbirths should be reported as cases of congenital syphilis.
* inadequate treatment consists of any nonpenicillin therapy or penicillin administered <30 days before delivery.

Syphilis, Congenital

Clinical description

A condition caused by infection in utero with *Treponema pallidum*. A wide spectrum of severity exists, and only the most severe cases are clinically apparent at birth. An infant or child (aged <2 years) may have signs such as hepatosplenomegaly, rash, condyloma lata, snuffles, jaundice (nonviral hepatitis), pseudoparalysis, anemia or edema (nephrotic syndrome and/or malnutrition). An older child may have stigmata (e.g., interstitial keratitis, nerve deafness, anterior bowing of shins,

frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, rhagades or Clutton joints).

Laboratory criteria for diagnosis

Demonstration of *T. pallidum* by darkfield microscopy, fluorescent antibody, or other specific stains in specimens from lesions, placenta, umbilical cord, or autopsy material

Case classification

Probable: a condition affecting an infant whose mother had untreated or inadequately treated** syphilis at delivery, regardless of signs in the infant, or an infant or child who has a reactive treponemal test for syphilis and any one of the following:

- Any evidence of congenital syphilis on physical examination
- Any evidence of congenital syphilis on radiographs of long bones
- Any reactive cerebrospinal fluid (CSF) venereal disease research laboratory (VDRL)
- An elevated CSF cell count or protein (without other cause)
- A reactive fluorescent treponema antibody absorbed--19S-IgM antibody test or IgM enzyme-linked immunoabsorbent assay

Confirmed: a case that is laboratory confirmed

Comment

Congenital and acquired syphilis may be difficult to distinguish when a child is seropositive after infancy. Signs of congenital syphilis may not be obvious and stigmata may not yet have developed. Abnormal values for CSF VDRL, cell count, and protein, as well as IgM antibodies, may be found in either congenital or acquired syphilis. Findings on radiographs of long bones may help because radiographic changes in the metaphysis and epiphysis are considered classic signs of congenitally acquired syphilis. The decision may ultimately be based on maternal history and clinical judgment. In a young child, the possibility of sexual abuse should be considered as a cause of acquired rather than congenital syphilis, depending on the clinical picture. For reporting purposes, congenital syphilis includes cases of congenitally acquired syphilis among infants and children as well as syphilitic stillbirths.

** inadequate treatment consists of any nonpenicillin therapy or penicillin administered <30 days before delivery.

PUBLIC HEALTH MANAGEMENT

Case

All early infectious primary, secondary, early latent (under one year duration), and congenital syphilis cases should be reported to ODH HIV/STD Prevention or to the nearest District office.

Treatment

Consult the most recent CDC-published "STD Treatment Guidelines" (currently *MMWR* 1998;47[RR-1]) for recommended therapy. Copies of the guidelines are available from the HIV/STD Prevention offices and on the Internet at the CDC Web Site (www.cdc.gov).

Contacts

Each case of diagnosed primary, secondary and early latent (under one year's duration) syphilis should be referred to the ODH HIV/STD Prevention office so that specialized skills and assistance in contact tracing can be immediately initiated. Physicians have a responsibility to society as well as to their patients. Untreated syphilitic patients are a health menace to themselves and others. Contact tracing will help locate infected individuals who can continue infecting others and who might develop severe manifestations of late syphilis.

Screening

The use of serologic testing for the diagnosis of syphilis continues on a large scale. A common problem in clinical practice is the management of patients with unexpected reactive serologic tests for syphilis. This situation, which excludes those patients with signs of early syphilis or a well-documented history of past treponemal infection, occurs most often with elderly patients who might reveal a reactive nontreponemal test in the course of care for other medical problems. The first step in the diagnostic evaluation of such patients is the exclusion of a false positive test result. Tests should be repeated on a second serum sample, and if the nontreponemal test is reactive, the serum should be subject to an FTA-ABS, or MHA-TP test. In taking a history for treponemal disease, the clinician should consider the possibilities both of syphilis, either congenital or acquired, and of nonvenereal treponematosis. A history of nonvenereal treponemal infection does not exclude the possibility of syphilis. Even after taking a careful history and doing a physical examination, the clinician might still not be sure if the patient has syphilis. With the exception of patients with underlying fatal illnesses, patients should be treated for syphilis, using schedules recommended for syphilis of more than one year's duration.

Prevention and Control

If control of syphilis is to be achieved, it is essential that all contacts be examined. Primary, secondary and early latent (under one year's duration) syphilis contacts and cluster suspects should be prophylactically (epidemiologically) treated during their first visit immediately after this physical examination and stat RPR serology results. All contacts, infected and not infected, should be referred to a skilled Disease Intervention specialist from ODH HIV/STD Prevention for an epidemiologic interview. Very rapid case follow-up is essential for syphilis control.

HIV coinfection: Patients with coexisting HIV infection need closer follow-up: nontreponemal titers should be checked 1,2,3,6,9, and 12 months after treatment. Patients with early syphilis whose titers increase, or whose titers fail to decrease fourfold within 6 months should be evaluated for neurosyphilis and should be retreated. In such patients, CSF abnormalities could be due to HIV-related infection, to neurosyphilis, or to both.