SYPHILIS AND HIV INFECTION

• Some specialists recommend additional treatments for early syphilis (e.g., benzathine penicillin G administered at 1-week intervals for 3 weeks, as recommended for late syphilis).

• Because CSF abnormalities (e.g., mononuclear pleocytosis and elevated protein levels) are common in patients with early syphilis and in persons with HIV infection, the clinical and prognostic significance of such CSF abnormalities in HIV-infected persons with primary or secondary syphilis is unknown. Although the majority of HIV-infected persons respond appropriately to standard benzathine penicillin G therapy, some specialists recommend intensified therapy when CNS syphilis is suspected in these persons. Therefore, some specialists recommend CSF examination before treatment of HIV-infected persons with early syphilis, with follow-up CSF examination conducted after treatment in persons with initial abnormalities.

• HIV-infected persons who meet the criteria for treatment failure (i.e., signs or symptoms that persist or recur or persons who have fourfold increase in nontreponemal test titer) should be managed in the same manner as HIV-negative patients (i.e., a CSF examination and re-treatment). CSF examination and re-treatment also should be strongly considered for persons whose nontreponemal test titers do not decrease fourfold within 6–12 months of therapy. The majority of specialists would re-treat patients with benzathine penicillin G administered as 3 doses of 2.4 million units IM each at weekly intervals. For more on alternative regimens, treatment for tertiary and neurosyphilis, and for treatments for children and pregnant women, see www.cdc.gov/std/treatment.

TREATMENT and FOLLOW-UP

PRIMARY AND SECONDARY

Benzathine penicillin G 2.4 million units IM in a single dose.

Follow-Up To Assess Treatment Response:
• 6, 12 months; serologic follow-up for HIV negative patients
• 3, 6, 9, 12, 24 months; serologic follow-up for those HIV infected
• Treatment failure: failure of titer to decline fourfold within 6 months from titers at time of treatment.

For more on alternative regimens, and for treatments for children and pregnant women, see www.cdc.gov/std/treatment.

LATENT

Early Latent (infection of less than 1 year) Syphilis: Benzathine penicillin G 2.4 million units IM in a single dose.

Late Latent (infections of more than 1 year) Syphilis or Latent Syphilis of Unknown Duration: Benzathine penicillin G 7.2 million units total, administered as 3 doses of 2.4 million units IM each at 1-week intervals.

Follow-Up To Assess Treatment Response:
• 6, 12, and 24 months; serologic follow-up for HIV negative.
• 6, 12, 18, 24 months: serologic follow-up for those HIV infected.
• Treatment failure: titers increase fourfold, or initially high titer (>1:32) fails to decline at least fourfold within 12-24 months, or if signs or symptoms attributable to syphilis develop.

For more on alternative regimens, treatment for tertiary and neurosyphilis, and for treatments for children and pregnant women, see www.cdc.gov/std/treatment.

The widely used brand name for benzathine penicillin G is Bicillin L-A®.

BICILLIN C-R® SHOULD NOT BE USED TO TREAT SYPHILIS

REPORTING and PARTNER MANAGEMENT

• Minnesota state law requires physicians, health care facilities, and laboratories to report all laboratory-confirmed cases of AIDS, chancroid, chlamydia, gonorrhea, HIV and syphilis directly to the Minnesota Department of Health (MDH). All syphilis cases or suspected cases must be reported within one working day.

• Report cases using the MDH STD Confidential Case Report Form.

• To order Confidential Case Report Forms, please call 651-201-5414 or 877-676-5414. To order on-line, http://www.health.state.mn.us/divs/idepc/dtopics/reportable/forms/stdcasereportcard.html.

• MDH Partner Services is available to assist in partner notification and management. Call 651-201-4021 for more information about these services.

Sources:
• 2006, California STD/HIV Prevention Training Center, Primary Syphilis Algorithm; Secondary Syphilis Algorithm, www.stdhivtraining.org
• Centers for Disease Control and Prevention, Sexually Transmitted Diseases Treatment Guidelines, 2006, MMWR 2006:55.sp22-35.
• Centers for Disease Control and Prevention, Public Health Image Library, http://phil.cdc.gov/phil/home.asp
• Minnesota Department of Health, STD and HIV Section Web site, www.health.state.mn.us/divs/idepc/dtopics/reportable/.

SOURCES:

http://www.health.state.mn.us/divs/idepc/dtopics/reportable/forms/stdcasereportcard.html
http://www.health.state.mn.us/divs/idepc/dtopics/reportable/forms/reportab.html

Clinician’s Guide To Syphilis Diagnosis And Treatment

SEXUAL HISTORY, RISK ASSESSMENT and PHYSICAL EXAM

Sexual History, Risk Assessment (past year):
• gender of partners
• number of partners (new, anonymous, serodiscordant
• HIV status, exchange of sex for drugs or money)
• types of sexual exposure
• recent STDs; HIV serostatus
• substance abuse
• condom use

History of syphilis
• prior syphilis (last serologic test and last treatment)

Physical Exam
• oral cavity
• lymph nodes
• skin
• palms and soles
• neurologic
• genitalia/pelvic
• perianal

Three basic questions to easily identify patients for STD screening:
1. Do you have, or have you ever had, an STD, HIV and/or hepatitis?
2. Have you had unprotected anal/vaginal/oral sex with more than one partner in the last year?
3. Have you ever injected drugs or anything else such as hormones, steroids or non-prescription medication?

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Minnesota Department of Health, IDEPC Division, STD and HIV Section, Syphilis Elimination Project

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Number of early stage cases in 1999: 19.
Number of early stage cases in 2005: 116.

Of these:
• 85 (73%) were in Hennepin County;
• 109 (94%) were males;
• 100 cases were in men who have sex with men;
• 38 were HIV positive.

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PRIMARY SYPHILIS

CLINICAL PRESENTATIONS

- Lesions usually appear 2-12 weeks after contact at site of exposure; may persist for 1-5 weeks then resolve.
- Usually genital/rectal but may be extragenital, depending on exposure site.
- Single or multiple lesions; firm, round, small, and painless, and develop at the site where the T. pallidum bacteria enter the body. The chancres last 1 to 3 weeks, and heal without treatment. If adequate treatment is not administered, the infection progresses to the secondary stage.

SECONDARY SYPHILIS

CLINICAL PRESENTATIONS

- Symptomatic patients usually have rash, constitutional symptoms, and lymphadenopathy.
- Rash (Most common feature, 75-90%): Can be macular, papular, annular, or confluent, and one of the following:
  - Darkfield microscopy for T. pallidum bacteria
  - Ulcer (5-25%): Moist, heaped, wart-like lesions in genital, perianal, and oral areas.
  - Condyloma lata (5-25%): Moist, heaped, wart-like lesions in genital, perianal, and oral areas.
  - Alopecia (10-15%): Patchy hair loss, loss of lateral eyebrows.
  - Neurological (2%): Visual loss, hearing loss, cranial nerve palsies.

DIAGNOSTIC ISSUES

Darkfield
- ~80% sensitive, varies with experience of the examiner and decreased sensitivity as lesion ages.
RPR/USR
- A negative RPR/USR (or VDRL) does not exclude the diagnosis of syphilis; only ~75-85% sensitive in primary syphilis.
- Tests must be quantified to the highest titer and titer on the day of treatment must be used to assess treatment response.
- Always use the same testing method (RPR or USR) in sequential testing; cannot compare titer from the two tests.
- Tests lack specificity (biologic false positive); all reactive tests need to be confirmed by a treponemal test for syphilis diagnosis.

LATENT SYPHILIS

CLINICAL PRESENTATIONS

- Latent syphilis is defined as seroreactivity without other evidence of disease.
- Patients who have latent syphilis and who acquired syphilis within the preceding year are classified as having early latent syphilis.

DIAGNOSTIC ISSUES

- Patients’ conditions can be diagnosed as early latent syphilis if, within the year preceding the examination, they had:
  1. a documented seroconversion or fourfold or greater increase in titer of a nontreponemal test;
  2. unequivocal symptoms of primary or secondary syphilis;
  3. a sex partner documented to have primary, secondary, or early latent syphilis; or
  4. reactive nontreponemal and treponemal tests from a person whose only possible exposure occurred within the previous 12 months.
- Nontreponemal serologic titers usually are higher during early latent but not late latent syphilis. However, early latent syphilis cannot be reliably distinguished from late latent syphilis solely on the basis of nontreponemal titers.
- All patients with latent syphilis should have careful examination of all accessible mucosal surfaces (i.e., the oral cavity, the perineum in women, and perianal area, underneath the foreskin in uncircumcised men) to evaluate for internal mucosal lesions.
- All patients who have syphilis should be tested for HIV infection.
- All persons who have latent syphilis should be evaluated clinically for evidence of tertiary disease (e.g., aortitis and gumma) and syphilitic ocular disease (e.g., iritis and uveitis).

TERTIARY SYPHILIS

Tertiary syphilis refers to gumma and cardiovascular syphilis but not to all neurosyphilis. Patients who have symptomatic late syphilis should be given a CSF examination before therapy is initiated. Some providers treat all patients who have cardiovascular syphilis with a neurosyphilis regimen. The complete management of patients who have cardiovascular or gummatous syphilis is beyond the scope of these guidelines. These patients should be managed in consultation with an infectious diseases specialist.

NEUROSYPHILIS

CNS involvement can occur during any stage of syphilis. A patient who has clinical evidence of neurologic involvement with syphilis (e.g., cognitive dysfunction, motor or sensory deficits, ophthalmic or auditory symptoms, cranial nerve palsies, and symptoms or signs of meningitis) should have a CSF examination.

See www.cdc.gov/std/treatment for more information about tertiary syphilis.

See www.cdc.gov/std/treatment for more information about neurosyphilis.