Evaluation and Management of Pregnant Women with Syphilis

Congenital syphilis is a preventable condition; failure to detect and appropriately treat maternal syphilis can result in serious sequelae for the fetus and infant. Routine syphilis screening of pregnant women and appropriate management of syphilis in pregnancy are two critical components of congenital syphilis prevention. All patients diagnosed with syphilis should also be tested for HIV.

Syphilis Screening in Pregnancy

- **ALL** pregnant women should be screened for syphilis at their first prenatal visit.
- Women at high risk for syphilis and women who live in areas with high syphilis morbidity should be re-tested for syphilis between 28 and 32 weeks and at delivery. Contact your local health department to find out about areas with high syphilis morbidity.
- Stat RPR should be performed at delivery for women with no prenatal care.
- No infant or mother should leave the hospital without having maternal syphilis status documented at least once either during pregnancy or at delivery.
- Any woman who delivers a stillborn fetus after 20 weeks' gestation should be tested for syphilis.
- Pregnant women who are seropositive should be considered infected unless they have documentation of adequate treatment with appropriate serologic response to treatment and titers are low and stable.
    - Women with prior adequate treatment, appropriate response to treatment and low serofast titers (VDRL<1:2; RPR<1:4) may not require retreatment.
    - Women with persistent higher antibody titers may indicate reinfection.

Management of Syphilis in Pregnancy

Staging

For treatment, follow-up and partner management purposes, syphilis has been divided into a series of stages:

- Primary infection is characterized by an ulcer or chancre.
- Secondary infection has numerous manifestations including: rash, constitutional symptoms, lymphadenopathy, mucous patches, condyloma lata, and alopecia.
- Latent infection is detected by serologic testing and has no clinical manifestations
    - Early latent syphilis: criteria demonstrate infection acquired in past year
    - Late latent syphilis or latent syphilis of unknown duration: do not meet criteria for infection within past year
- Tertiary infection is characterized by gummas, aortitis, iritis, and other clinical manifestations
- Neurosyphilis can occur at any stage of syphilis.

See CDC 2010 STD Treatment Guidelines (www.cdc.gov/std/treatment/) for detailed information on syphilis staging and criteria to distinguish early latent infection from late latent syphilis and latent syphilis of unknown duration.

Ultrasound

Women diagnosed with syphilis after 20 weeks of pregnancy should have an ultrasound to evaluate for signs of congenital syphilis. Sonographic signs of fetal syphilis (i.e., ascites, hepatomegaly, hydrops, fetal anemia or thickened placenta) may indicate greater risk of fetal treatment failure. Ultrasound evaluation should not delay maternal treatment.

Treatment

All women should have a titer on or close to the day of treatment. This titer is important as it will be compared to follow-up titers to assess treatment response.

Recommended regimen for Primary, Secondary and Early Latent Syphilis

Benzathine Penicillin G 2.4 million units intramuscular in a single dose
(*Some specialists recommend a second dose of benzathine penicillin G 2.4 million units intramuscular 1 week after the initial dose for pregnant women with primary, secondary, or early latent syphilis.)*

Recommended regimen for Late Latent Syphilis or Latent Syphilis of Unknown Duration

Benzathine penicillin G 7.2 million units, administered as 3 doses of 2.4 million units intramuscular at 1-week intervals
(*Missed doses are not acceptable; pregnant women who miss any dose of therapy should repeat the full course of treatment.)*

Recommended regimen for Neurosyphilis

Aqueous crystalline penicillin G18-24 million units daily, administered as 3-4 million units intravenous every 4 hours for 10-14 days
(*Some specialists provide additional treatment with 2.4 million units of benzathine penicillin G once per week for up to 3 weeks after completion of neurosyphilis treatment for patients with late latent syphilis or latent syphilis of unknown duration.)*

- Pregnant women allergic to penicillin should be treated with penicillin after desensitization.
- Treatment in the second half of pregnancy may precipitate the Jarisch-Herxheimer reaction, possibly including uterine contractions, preterm labor, and/or fetal distress. Women should be advised to seek obstetric attention for fever, contractions, or decrease in fetal movement.

Follow-up

Follow-up serologic tests should be performed using the same test type (RPR or VDRL). RPR titer results cannot be compared to VDRL titer results as RPR titers are frequently slightly higher.

- All women should have repeat serologic titers at 28-32 weeks' gestation and at delivery.
- It is acceptable to repeat serologic titers monthly for women at high risk for reinfection or if in geographic region with high syphilis prevalence.
- Follow-up intervals for primary or secondary syphilis:
    - Clinical exam at approximately 1 week to confirm symptom improvement.
    - Serologic titer at 6 and 12 months. Expect a fourfold drop in titers at 6-12 months.
- Follow-up intervals for latent infection:
    - Serologic titer at 6, 12 and 24 months. Expect a fourfold drop in titer by 12-24 months (if initially high > 1:16).

HIV-infected patients need closer follow-up intervals. See CDC 2010 STD Treatment Guidelines for details.

Partner Management

- All sex partners of pregnant women with syphilis should be evaluated clinically and serologically with treatment provided based on contact management guidelines. See CDC 2010 STD Treatment Guidelines (www.cdc.gov/std/treatment/) for detailed information on management of sex partners.
- Sexual partner management is critical to prevent reinfection of the pregnant women.

Evaluation of Additional Family Members

Pregnant women with syphilis who have children from prior pregnancies should be advised to discuss syphilis screening of these children with their primary care provider.

For more detail on diagnosis, treatment and management of STDs, refer to the STD Treatment Guidelines (www.cdc.gov/std/treatment).

For further questions, contact the California STD Control Branch clinician warm line at (510) 620-3400.