SYPHILIS EDUCATION TODAY

JULY, 2008

CSI Medical Education, LLC, in conjunction with Jeffrey D. Klausner, MD, MPH, Director of STD Prevention and Control Services of the San Francisco Department of Public Health, is pleased to announce ***Syphilis Education Today***, a series of upcoming audio conferences and newsletters providing information on syphilis diagnosis and treatment.

During each audio conference, Dr. Klausner, along with other leading infectious disease experts, will present real case histories and outcomes on prevention, management and treatment of syphilis. There will be ample time for Q&As from listening participants. If you have difficult cases or questions that you would like discussed during the Q&A session, please feel free to send them in advance of the audio conference to **meded@ csimeded.com.** You will receive an email regarding registration information prior to each conference.

Each audio conference will be followed by an electronic newsletter. The newsletter will cover in more detail some of the topics and questions discussed during the audio conference. We encourage you to pass this newsletter on to your colleagues. ■

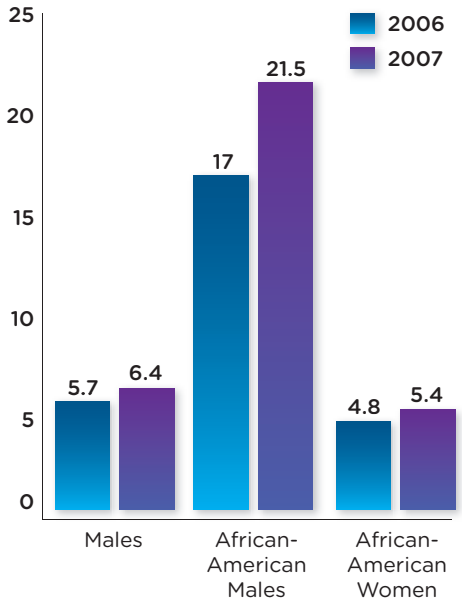
AUDIO CONFERENCE DATES

September 4	1:00 pm (EST)
September 5	11:00 am (EST)

"Preventing Syphilis Exposure in HIV+ Individuals" and "A Review of New Guidelines for Prevention and Treatment of Syphilis in HIV-Infected Populations"

Update on Syphilis

As you continue to observe in your own practices, syphilis infections are on the rise again. From 2006 to 2007, there was a 12% increase in primary and secondary syphilis. In March, the CDC reported the following increases:



(data are based on cases per 100,000)

The CDC is still examining the reasons for the third consecutive annual increase among females. After seeing a decline in female syphilis cases for more than a decade, this emerging trend might result in increases in congenital syphilis. ■

For more information on the *Syphilis Education Today* program please contact meded@csimeded.com.

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Serological Response to Treatment

During a recent audio conference conducted by Dr. Klausner, the most pressing concern raised by listeners was how to interpret serologic test results.

Following effective syphilis treatment, the RPR* or VDRL* titer (non-treponemal test) declines and may become non-reactive or negative. In treating early syphilis such a response can occur in 6 months. In treating late syphilis that response can occur in 12 months or more.[1] HIV-infected patients generally have a slower decline in titers than HIV-uninfected patients.[2,3,4] As a result, most experts recommend determining the serological response to treatment at 6 and 12 months in HIV-uninfected patients in early and late syphilis respectively. Because of the slower serological response in HIV-infected patients some experts recommend determining treatment outcomes at 12 months in early syphilis and 24 months in late syphilis.[1,2,3,4] The CDC guidelines recommend clinical and serological post-therapy follow-up at 3, 6, 9, 12 and 24 months in HIV-infected patients.

However, a reactive serologic titer may persist after the titer declines in up to 20% of patients. A persistently reactive non-treponemal (RPR or VDRL) serologic test for syphilis after treatment for syphilis may represent treatment failure or a "serofast" reaction.[1,2]

One of the most challenging aspects in syphilis management is determining whether a persistently reactive titer represents treatment failure or a serofast reaction.

A 4-fold decrease in non-treponemal titer post-treatment demonstrates a therapeutic response. In some patients, after the initial 4-fold decline, a low, serofast (less than or equal to 1:8) will remain for a long period or for life.

Rising or persistent titers greater than or equal to 1:32 are problematic and raise concerns about treatment failure, but in some cases could be a serofast reaction, in particular if the prior titer was substantially elevated (greater than 1:256) and the 1:32 represents at least a 4-fold decline.[1,2,6]

The following are some additional tips on interpreting syphilis test results:

- Allow an adequate amount of time for follow-up of syphilis tests.
- Syphilis titers represent an immunologic reaction to infection and may take 1-2 years to decline.
- Titer response in long-standing infection usually takes longer to decline than the titer response in recently acquired infection.
- If treatment failure is a consideration, CSF analysis should be considered to rule out neurosypilis.[3,5]
- If there is doubt about whether the persistent titer represents treatment failure or a serofast response, many experts would recommend re-treating the patient with a repeat course of therapy, usually a series of 3 injections of penicillin G benzathine (Bicillin® L-A) 2.4 MU intramuscular weekly for 3 weeks. Again, CSF analysis should be considered to rule out neurosyphilis, a cause of treatment failure.
- In the case of late syphilis, which is usually diagnosed as late latent syphilis detected through a routine screening test and the non-treponemal serologic test titer is low (e.g., 1:2), a 4-fold decline in titer may take years. At 24 months should the titer not have declined 4-fold, and persists at 1:2 or 1:1, there are no clinical data to dictate best practice. Some experts would recommend continuing observation and others would re-treat with penicillin G benzathine 2.4 MU intramuscular once weekly for 3 weeks.[1]

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Serological Response to Treatment (CONTINUED)

The Treatment Response Chart on page 3 is a helpful resource when treating syphilis in all patient types.

Remember that the syphilis titers one follow over time to evaluate the response to treatment are the non-treponemal test titers, the RPR or VDRL. The treponemal test titers (TPPA* or FTA-ABS*) once reactive usually remain reactive for the life of the patient. Although in primary syphilis, treponemal titers can become non-reactive (after 2-3 years) in about 15%-25% of patients after successful treatment.[1] ■

RPR	=	RAPID PLASMA REAGIN
VDRL	=	VENEREAL DISEASE RESEARCH LABORATORY
TPPA	=	TREPONEMA PALLIDUM PARTICLE AGGLUTINATION
FTA-ABS	=	FLUORESCENT TREPONEMAL ANTIBODY ABSORBED

REFERENCE

1 Centers for Disease Control and Prevention, 2006 STD Treatment Guidelines. Syphilis Section. Available at www.cdc.gov/std.

2 Augenbraun, M. Syphilis. Lange, McGraw Hill. "Current Diagnosis & Treatment of Sexually Transmitted Diseases," Jeffrey D. Klausner; Edward W. Hook, III, 2007.

3 Rolfs, et al (1997). A randomized Trial of Enhanced Therapy for Early Syphilis Patients with and without Human Immunodeficiency Virus Infection. NEJM 337:307-314.

4 Zetola MZ, Engelman, J. Jensen P, Klausner JD. Syphilis in the United States: An Update for Clinicians With an Emphasis on HIV Coinfection. Mayo Clin. Proc. September 2007:82(9):1091-1102.

5 Hook, EW. Principles of serological testing for syphilis; Lange, McGraw Hill, "Current Diagnosis & Treatment of Sexually Transmitted Diseases," Jeffrey D. Klausner; Edward W. Hook, III, 2007.

6 Zetola MZ, Klausner JD. Syphilis and HIV Infection: An Update. CID 1007:44 (1 May), HIV/AIDS.

New STD Resource

McGraw-Hill recently added a new title to its well-known Current Diagnosis and Treatment series entitled Sexually Transmitted Diseases. Edited by the internationally renown STD experts Jeffrey D. Klausner, MD, MPH (San Francisco Department of Public Health and University of California, San Francisco) and Edward W. Hook, III, (University of Alabama Birmingham), the easy-to-read and practical text contains over 30 chapters with 3 specifically focused on syphilis (syphilis, neurosyphilis and interpretation of syphilis tests) for the practicing clinician. A recent review of the book in Clinical Infectious Diseases, stated "It is highly recommended reading for clinicians as an excellent and authoritative overview in terms of diagnostic, management, and treatment considerations for STDs."

The book is available on www.amazon.com and from your local medical bookstore. ■

Important STD Meetings, 2008

OCTOBER 24-25

National Coalition of STD Directors
Phoenix AZ
ncsddc.org

OCTOBER 25-29

Infectious Disease Society of America (IDSA) and (ICAAC)
Washington DC
www.idsociety.org

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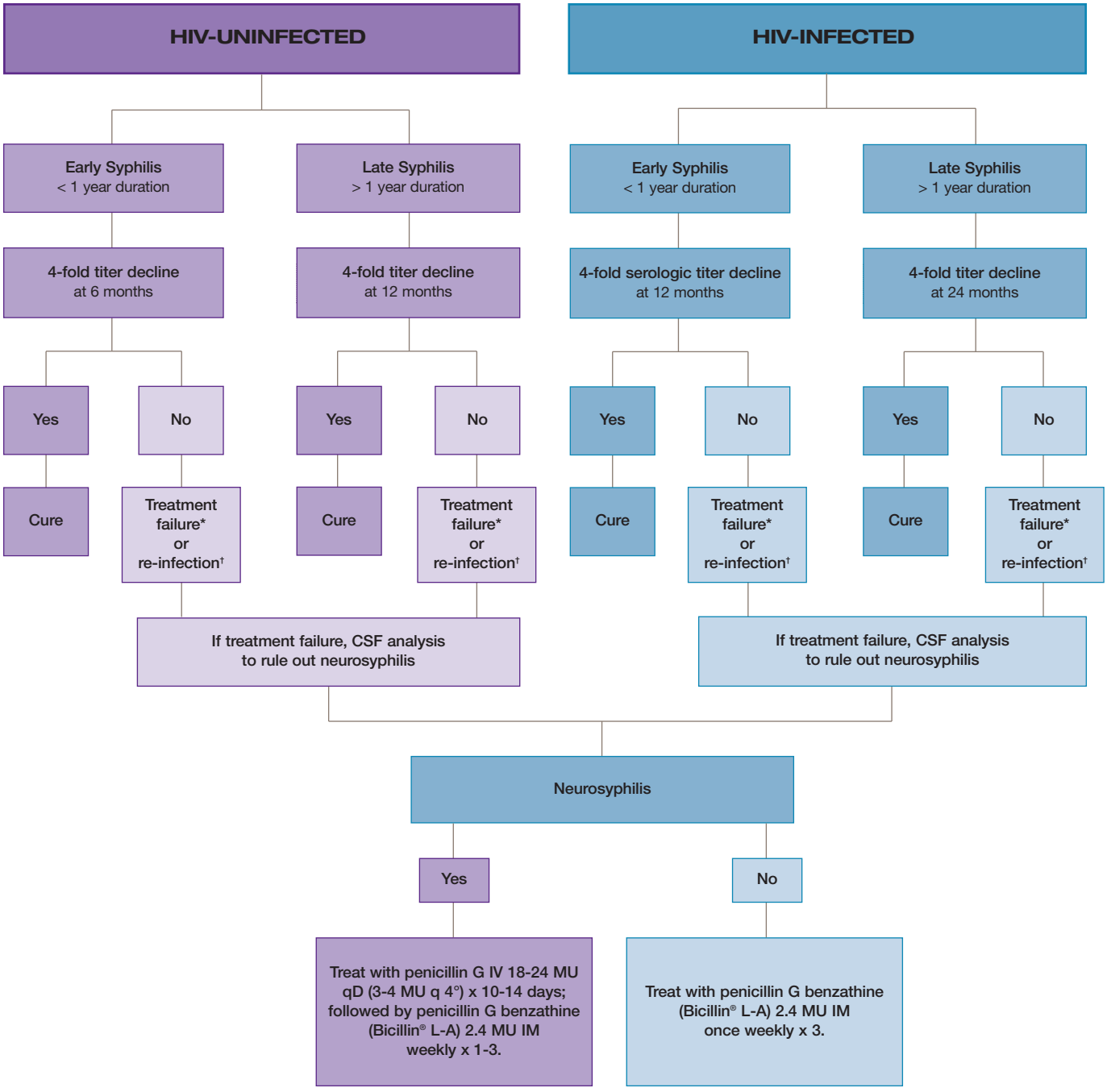
Treatment Response Algorithm

by Dr. Jeffrey Klausner, Director of STD Prevention and Control Services of the San Francisco Department of Public Health



** Treatment failure may be caused by untreated neurosyphilis.*

† Reinfection may be consistent with a 4-fold serologic titer decline followed by a 4-fold serologic titer increase and re-exposure. Treat with penicillin G benzathine (Bicillin® L-A) 2.4 MU IM once.

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