



CALIFORNIA CD BRIEF

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Report of meeting of 07/06/2011 (Week 27)

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- **CEPHALOSPORIN SUSCEPTIBILITY AMONG NEISSERIA GONORRHOEAE ISOLATES**

Cephalosporin Susceptibility Among Neisseria gonorrhoeae Isolates---United States, 2000-2010

A report in the July 8, 2011 issue of the U.S. Centers for Disease Control and Prevention (CDC) Morbidity and Mortality Weekly Report (MMWR) describes cephalosporin susceptibility among *Neisseria gonorrhoeae* isolates in the United States between 2000 and 2010

(http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6026a2.htm?s_cid=mm6026a2_w).

Cephalosporin antibiotics are a critical component of recommended gonorrhea treatment, but declining cephalosporin susceptibility and cephalosporin treatment failures have been reported in Asia and Europe. The data in the MMWR report are from the national Gonococcal Isolate Surveillance Project (GISP), a sentinel surveillance activity based on collection of male gonorrhea (GC) isolates from sexually transmitted disease (STD) clinic sites around the country, including four sites in California (in Los Angeles, Orange, San Diego and San Francisco counties).

The report describes significantly increasing percentage of GC isolates with elevated minimum inhibitory concentrations (MICs), a measure of GC antimicrobial susceptibility, to both ceftriaxone (injectable) and cefixime (oral), particularly among men who have sex with men (MSM) and in the western region of the U.S. While few isolates exhibited actual resistance, the epidemiologic pattern seen with increasing percentages of GC isolates with elevated cephalosporin MICs is particularly concerning since it is similar to the pattern seen with GC and fluoroquinolone susceptibility shortly before fluoroquinolone resistant GC strains emerged several years ago. Although not specifically noted in the MMWR, the trends described in the report are also observed in the California GISP data, with 9.9% of the 2010 California GC isolates showing elevated MIC values among MSM and 2.4% among men who do not have sex with men.

Because of the loss of fluoroquinolones for GC treatment, and these concerning trends in the percentage of GC isolates with elevated cephalosporin MICs, the CDC's recently revised treatment guidelines (<http://www.cdc.gov/std/treatment/2010/default.htm>) recommend treating uncomplicated gonococcal infections of cervix, urethra and rectum with ceftriaxone 250 mg (up from prior recommendations of 125 mg) as a single intramuscular dose (or if not an option, cefixime 400 mg orally in a single dose) PLUS Azithromycin 1 g as a single oral dose (or Doxycycline 100 mg orally twice daily for 7 days).

The MMWR article emphasizes that clinicians should be vigilant for treatment failures (as evidenced by persistent symptoms or a positive follow-up test despite treatment) and obtain specimens for gonococcal culture from patients with possible treatment failure. The report notes that clinicians caring for patients with gonorrhea, particularly MSM in the western United States, should consider having patients return 1 week after treatment for test-of-cure preferably with culture, or, if culture is not available, with a nucleic acid amplification test (NAAT). Any treatment failures should be reported to the local health department within 24 hours.

The MMWR article recommends that if a patient experiences cefixime treatment failure, clinicians should re-treat the patient with 250 mg ceftriaxone intramuscularly and 2 g azithromycin orally. If a patient in California experiences a cefixime or ceftriaxone treatment failure, clinicians should consult with an infectious disease expert and the CDPH STD Control Branch clinician on-call regarding re-treatment. Patients retreated after treatment failure should return for tests-of-cure within 1 week, preferably with culture, or, if culture is not available, with NAAT.

For questions about the GISP project in California, contact the CDPH STD Control Branch's Carol Kong (Carol.Kong@cdph.ca.gov) or Michael Samuel (Michael.Samuel@cdph.ca.gov). For clinical questions related to STD treatment or in the event of any apparent GC treatment failure, call the CDPH STD Control Branch at (510) 620-3400 and ask for the clinician on call.

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