

Study examines bacterial susceptibility to antibiotics used to treat gonorrhea

November 3 2015

Although gonorrhea susceptibility to the antibiotic cefixime has been improving in recent years, suggesting a halt of a drift towards antibiotic resistance, data for 2014 indicates a worsening of susceptibility, according to a study in the November 3 issue of *JAMA*.

Gonorrhea is a common [sexually transmitted disease](#) that, if untreated, can cause a number of reproductive and general health complications. Treatments for [gonorrhea](#) have been repeatedly jeopardized by antimicrobial resistance. To ensure effective treatment, the U.S. Centers for Disease Control and Prevention (CDC) periodically updates guidelines based on resistance trends. Following declining cephalosporin susceptibility in several countries, the CDC updated its treatment recommendation in 2010 from single-dose cephalosporin (injectable ceftriaxone or oral cefixime) to a higher dose of ceftriaxone or cefixime plus a second antimicrobial. In 2012, the CDC again updated treatment guidelines and recommended ceftriaxone-based combination therapy as the single recommended therapy.

Robert D. Kirkcaldy, M.D., M.P.H., of the CDC, Atlanta, and colleagues examined recent gonorrhea susceptibility trends (when antibiotics are effective at killing or stopping the growth of a certain bacteria in the laboratory, the bacteria is known as susceptible to antibiotics) to third generation cephalosporin antibiotics (injectable ceftriaxone or oral cefixime). The researchers analyzed data from the CDC's Gonococcal Isolate Surveillance Project, a system that monitors antimicrobial susceptibility in urethral (opening through which urine is discharged)

isolates from men with gonorrhea treated at U.S. public clinics for sexually transmitted disease.

During 2006-2014, 51,144 isolates were collected in 34 cities. The percentage of participants treated with 250 mg of ceftriaxone intramuscularly increased from 8.7 percent in 2006 to 96.6 percent in 2014. The percentage of isolates with reduced cefixime susceptibility increased from 0.1 percent in 2006 to 1.4 percent in 2011, and then declined to 0.4 percent in 2013. In 2014, the percentage of resistant isolates increased to 0.8 percent.

"Although this improvement in susceptibility appears temporally correlated with treatment guideline changes, we cannot establish a causal relationship," the authors write. "The 2014 data, however, suggest that improvements in susceptibility may be short-lived."

"The increased prevalence of reduced cefixime susceptibility in 2014 highlights the need to maintain surveillance, search for new therapeutics, and ensure that gonorrhea is treated according to the CDC's guidelines."

More information: *JAMA* (2015). [DOI: 10.1001/jama.2015.10347](https://doi.org/10.1001/jama.2015.10347)

Provided by The JAMA Network Journals

Citation: Study examines bacterial susceptibility to antibiotics used to treat gonorrhea (2015, November 3) retrieved 27 April 2024 from <https://medicalxpress.com/news/2015-11-bacterial-susceptibility-antibiotics-gonorrhea.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.