Background

Gonorrhea causes significant morbidity in Arizona. The case rate of gonorrhea in Arizona is rising; in 2014, 7,585 cases were reported statewide representing a case rate of 114.5/100,000, a 15.4% increase from the year before.

Gonorrhea resistance to cephalosporins and other antimicrobials is emerging. Gonorrhea has already gained resistance to penicillins and tetracyclines; treatment failure with cephalosporins has been seen in Asia, South Africa, Australia, Europe and Canada. In the United States, decreased susceptibility to cephalosporins has been noted and is expected to continue. Currently, two-drug therapy that includes a cephalosporin is recommended for gonorrhea treatment.

Goal

To enhance the surveillance and control of suspected cephalosporin-resistant gonorrhea in Arizona through clinician and public health protocols.

CDC Recommended Therapy for Gonorrhea (2015)

Uncomplicated anogenital and pharyngeal gonorrhea should be treated with dual antibiotic treatment with Ceftriaxone 250 mg IM plus Azithromycin 1 g orally.

CDC Alternative Therapy for Gonorrhea (2015)

If ceftriaxone is not available, an alternative regimen of Cefixime 400mg orally plus Azithromycin 1 g orally may be used for anogenital gonorrhea, but not pharyngeal gonorrhea.

*If severe cephalosporin or penicillin allergy, dual therapy is recommended with a) gentamicin 240mg IM plus azithromycin 2 g orally or b) gemifloxin 320 mg orally plus azithromycin 2 g orally.

** A Test-of-cure is not needed for persons with uncomplicated urogenital or rectal gonorrhea who are treated with any of the recommended or alternative regimens. Any person with pharyngeal gonorrhea who is treated with an alternative regimen should return 14 days after treatment for a Test-of-cure using either culture or NAAT. All positive cultures for test-of-cure should undergo antimicrobial susceptibility testing.
Criteria for Suspected Treatment Failure of Gonorrhea

Treatment failure should be suspected for a patient with confirmed gonorrhea infection if:

1) Symptoms* persist or recur following CDC-recommended antibiotic therapy OR
2) A Test-of-cure performed 7 days or more after CDC-recommended treatment is positive for anogenital gonorrhea, and 14 days or more after treatment for pharyngeal gonorrhea.

*Symptoms include persistent urethral discharge, dysuria, and/or pyuria (leukocyte esterase on urine dipstick); persistent pharyngitis or odynophagia; persistent rectal discharge, pain, bleeding, pruritus, tenesmus, or painful defecation; persistent vaginal discharge, dysuria, or post-coital spotting.

Clarification (1): Patients with persistent or recurrent symptoms who report interim sexual exposure to untreated or new partners have likely been reinfected and are not subject to treatment failure. Patients with reinfection should be treated with Ceftriaxone 250 mg IM plus Azithromycin 1 g orally.

Clarification (2): Treatment failure in this document refers to after dual therapy with ceftriaxone or cefixime. Patients with persistent symptoms or a positive Test-of-cure after noncompliance or treatment with azithromycin monotherapy or a non-recommended regimen (e.g. fluoroquinolones) should be treated with Ceftriaxone 250 mg IM plus Azithromycin 1 g orally.

Clinician Management of Suspected Cephalosporin Treatment Failure of Gonorrhea

For patients with suspected treatment failure after CDC-recommended treatment, the following steps should be taken to ensure adequate testing, treatment, partner management and follow-up.

- Notify the Arizona Department of Health Services of the suspected case of treatment failure (See Contacts).
- Obtain specimens for NAAT and culture at sites of sexual exposure (i.e., genital, rectal, pharyngeal). If gonorrhea culture is not available at your local laboratory, contact the Arizona Department of Health Services for testing assistance (See Contacts).
- Contact the local public health department to report the case and arrange for Antimicrobial Susceptibility Testing. (See Contacts).
- Retreat the patient with Ceftriaxone 500 mg IM plus Azithromycin 2 g orally in a single dose.*
- Ensure that all the patient’s partners in the last 60 days are notified and referred for testing and empiric treatment with Ceftriaxone 500 mg IM plus Azithromycin 2 g orally in a single dose.* Assistance with this may be provided by the local public health department.
- Instruct the patient to abstain from oral, vaginal or anal sex until 1 week after the patient and, if the partner(s) is(are) not treated at the same time, 1 week after all of his/her partners are treated and all symptoms have resolved.
- Ask the patient to return for a Test-of-cure with NAAT AND CULTURE, one week after treatment for genital and rectal gonorrhea, 14 days for pharyngeal gonorrhea.
Reinfections are more likely than actual treatment failure. If there is a higher likelihood of treatment failure than reinfection, dual treatment Gemifloxacin 320 mg orally plus Azithromycin 2 g orally in a single dose OR dual treatment with Gentamicin 240 mg IM plus Azithromycin 2 g orally in a single dose can be considered.

Public Health Management of Suspected Gonorrhea-Resistant Cases

For specimens that require Antimicrobial Susceptibility Testing (AST), the following steps should be taken to ensure proper handling and submission of specimens.

- For providers in Maricopa County, provide the patient with a written order for AST and refer them to the County Health Department located at 1645 E. Roosevelt for further evaluation and testing.
- For providers outside of Maricopa County, contact the Arizona Department of Health Services: STD Control Program at (602) 364-3858 for further instructions.

References

California Department of Public Health, Gonorrhea Treatment Guidelines (Last revised 2/2015)

CDC 2015 Sexually Transmitted Diseases Treatment Guidelines (Last revised 6/2015)

Arizona Department of Health Services, STD Reports (Last revised 2014)

Contacts

Arizona Department of Health Services
STD Control Program
150 N 18th Avenue, Suite 110, Phoenix, AZ 85007
602-364-3858

Gila County Health Department
5515 S. Apache Street, Suite 100
Globe, AZ 85501
928-402-8811

Maricopa County Department of Public Health
1645 E Roosevelt
602-506-1678

Graham County Health Department
826 W. Main
Safford, AZ 85546
928-428-0110

Apache County Health Department
323 S. Mountain Avenue, Suite 102
Springerville, AZ 85938
928-333-2415

Greenlee County Health Department
P.O. Box 936
253 5th and Leonard Street
Clifton, AZ 85533
928-865-2601

Cochise County Health Department
1415 Melody Lane, Bldg. A
Bisbee, AZ 85603
520-586-8200

La Paz County Health Department
1112 Joshua Avenue, Suite 206
Parker, AZ 85344
928-669-1100

Coconino County Health Department
2625 N. King Street
Flagstaff, AZ 86004
928-679-7222