

Gonorrhea (*N. gonorrhoeae*)

I. INTRODUCTION

Gonorrhea is a sexually transmitted disease caused by *Neisseria gonorrhoeae*, a gram-negative, intracellular diplococcus. It most commonly involves the cervix, urethra, rectum and pharynx. Complications include pelvic inflammatory disease, ectopic pregnancy, infertility, and bartholinitis in women; prostatitis, epididymitis and proctitis in men. Gonorrhea may also invade the bloodstream leading to disseminated gonococcal infection, which is characterized by arthritis and skin lesions. If gonorrhea is transmitted to the newborn, it may result in corneal perforation and blindness.

Gonorrheal genital infection is the second most reported STI in the United States and prevalence is highest in persons less than 25 years of age. All clients found to have gonorrhea should be tested for other STIs (chlamydia, syphilis, HIV).

II. HISTORY AND EVALUATION

A. History may include:

1. Previous gonococcal infection
2. Recent change in sexual partner
3. Partner with symptoms of *N. gonorrhoeae*
4. Lack of STI protection (condom use)
5. Report of multiple sexual partners
6. Symptoms of gonococcal infection
7. Reports of engaging in commercial sex work
8. Infected partner

B. Symptoms may include (Note: men and women with *N. gonorrhoeae* infection may not have symptoms until the infection is advanced. Symptoms may also be similar to that of *C. trachomatis*):

1. In women:
 - a. Dysuria
 - b. Abdominal and/or pelvic pain
2. In men:
 - a. Dysuria
 - b. Epididymitis
 - c. Testicular Pain

C. Physical exam findings may include

1. In women:
 - a. Mucopurulent, endocervical discharge, with edema, erythema and endocervical bleeding
 - b. Tenderness, guarding or rigidity on abdominal palpation
 - c. Enlargement, tenderness and/or redness of the Skene's glands, urethra and Bartholin's glands
 - d. Cervical motion tenderness
2. In men:

- a. Discharge from penis
- b. Pain on testicular palpation

III. DIAGNOSIS

Diagnosis is made by positive urine, urethral, cervical, vaginal or rectal swab preferably using Nucleic Acid Amplification Test (NAAT).

IV. TREATMENT

A. Clients with a positive test result or patients with symptoms and/or sexual contact with confirmed positive partner should be treated following the most recent CDC Sexually Transmitted Diseases Treatment Guidelines which can be accessed at CDC website:

<http://www.cdc.gov/std/treatment/default.htm>

- B. Patients infected with *N. gonorrhoeae* frequently are coinfecting with *C. trachomatis* so these patients should also be treated routinely with a regimen that is effective against uncomplicated genital *C. trachomatis* infection
- C. To maximize compliance with recommended therapies, medications for gonococcal and chlamydial infections should be dispensed on site, and first dose should be directly observed.

V. SPECIAL TREATMENT CONSIDERATIONS

- A. Doxycycline, ofloxacin, and levofloxacin are contraindicated in pregnant women. Azithromycin is safe and effective. Repeat testing 3 to 4 weeks after completion of therapy with the following regimens is recommended for all pregnant women to ensure therapeutic cure. Pregnant women diagnosed with a gonococcal infection during the first trimester should not only receive a test 3-4 weeks after completion of treatment to document eradication, but be retested 3 months after treatment to evaluate for re-infection.
- B. Of note is that non-pregnant clients do not need a “test of cure” testing (see “Follow-up” section below).

VI. CLIENT EDUCATION/COUNSELING

- A. Sexual partner and any sexual contacts in the last 60 days preceding onset of symptoms or diagnosis must be informed of possible infection and provided with written materials about the importance of seeking evaluation for any symptoms suggestive of complications (e.g., testicular pain in men and pelvic or abdominal pain in women).
- B. Timely treatment of sex partners is essential for decreasing the risk for re-infection.
- C. Patients should be instructed to abstain from sexual intercourse until they and their sex partners have completed treatment. Abstinence should be continued

until 7 days after a single-dose regimen or after completion of a multiple-dose regimen.

- D. Provide a medication information sheet
- E. Provide STI education and information
- F. Provide current educational information on *N. gonorrhoeae*
- G. Provide contraceptive information, as indicated
- H. Encourage consistent and correct condom use to prevent STIs

VII. FOLLOW-UP

- A. Except in pregnant women, test-of-cure (i.e., repeat testing 3–4 weeks after completing therapy) is **not** advised for persons treated with the recommended or alternative regimens, unless therapeutic compliance is in question, symptoms persist, or re-infection is suspected.
- B. Clients that had a *N. gonorrhoeae* infection should be retested approximately 3 months after treatment to ensure that they are not re-infected. If retesting was not done at 3 months, clinicians should retest whenever the client next presents for medical care in the 12 months following initial treatment.
- C. The following patients should be referred to the medical director or other provider as appropriate:
 - 1. Clients with multiple re-infections
 - 2. Pregnant clients – (refer to prenatal care)

VIII. REPORTING

Maryland law requires provider and laboratory reporting of all cases of *N. gonorrhoeae* infections. Reporting instructions and forms can be accessed via the Maryland DHMH Infectious Disease and Environmental Health Administration (IDEHA) website: <http://ideha.dhmh.maryland.gov/SitePages/Home.aspx>

REFERENCES:

- 1. CDC: Sexually Transmitted Disease Treatment Guidelines, 2010
- 2. DHMH Infectious Disease and Environmental Health Administration: Diseases, Conditions, Outbreaks, & Unusual Manifestations Reportable by Maryland Health Care Providers <http://ideha.dhmh.maryland.gov/what-to-report.aspx>