GONORRHEA

I. DEFINITION:

Gonorrhea is a sexually transmitted disease caused by a bacterium that most commonly affects the genitourinary tract, but can infect the pharynx, conjunctiva, and/or rectum as well. Gonorrhea can also be passed from an infected female to her baby during delivery.

II. CLINICAL FEATURES:

A. Males

1. Subjective (if symptomatic)
   a. Dysuria.
   b. Urethral discharge.
   c. Testicular pain, tenderness, or unilateral swelling.
   d. Varying degrees of rectal pain, itching, scant bleeding, constipation, or tenesmus (rectal spasms accompanied by the need to empty the bowel). These complaints would indicate inoculation through receptive anal sex.

2. Objective
   a. Purulent urethral discharge usually yellow or green. Male urethral discharge is abnormal so the client should be treated presumptively.
   b. Varying degrees of urethral meatus erythema, discharge and edema.
   c. Acute epididymitis (testicular pain, tenderness, or unilateral swelling).

B. Females

1. Subjective (if symptomatic)
   a. Increased vaginal discharge.
   b. Dysuria.
   c. Bleeding between menstrual periods.
   d. Abnormally long or heavy periods.
   e. Bleeding after vaginal sex.

2. Objective
   a. Physical exam may be normal.
   b. Mucopurulent cervical discharge.
   c. Erythema and edema near the endocervical os.
   d. Friable cervix (bleeds easily when cleaned with swab).
   e. Purulent discharge from urethra, periurethral glands, Skene’s or Bartholin’s glands.

3. Other findings
   a. In clients who have had a hysterectomy, the urethra is the usual site of infection.
   b. In clients with an intact uterus, urethral infection is uncommon in the absence of endocervical infection.
III. MANAGEMENT PLAN:

A. A physical exam is recommended for all clients. For family planning clients without an indication for a pelvic exam and for clients who refuse an exam, collect urine specimen as directed under B.2. of Management Plan.

B. Laboratory Studies – collect specimens for appropriate testing: Vaginal swab is the preferred specimen collection method for females when and where available.

1. Collect vaginal swab if product is available. Refer to vaginal swab specimen collection procedure for instructions. If vaginal swab testing is not available, collect urine specimen as mentioned under #2 laboratory options.

2. Collect urine for C. trachomatis and N. gonorrhoeae. Ensure client waits 1 hour after last voiding to give sample.

3. Screening for HIV and Syphilis are recommended.

4. Gonorrhea culture via culturette swab – Only if antibiotic resistance/treatment failure is suspected. Contact STD/HIV Nurse Consultant at the Central Office (405) 271-9444 ext. 56606, or (405) 271-4636 for lab requisition and culturette.

C. Criteria to Treat:

1. Any client who is symptomatic and may not return for test results should be treated using Physician Approved Protocols for Cervicitis or Urethritis.

2. Treat any client with a positive Neisseria Gonorrhea laboratory test from CHD, Private Physician, Hospital, or urgent care facility.

3. Treat any client that states he/she is a contact to a case of gonorrhea. Contacts must be tested at the same visit and then treated.

4. If client reports they are a contact to gonorrhea and oral or rectal gonococcal infection is suspected as the only site or infection, the nurse may treat client, however the client should follow up with their physician for further testing.


6. Clients with a positive NAAT (urine or vaginal swab) ≥ 7 days post treatment when no sexual contact is reported.

   a. Symptoms indicative of GC upon exam or a positive NAAT screen ≥ 7 days post treatment should first be retreated with ceftriaxone 250mg IM plus azithromycin 1gm orally per CDC recommendations.

   b. In situations with a higher likelihood of treatment failure rather than reinfection or when clients initial treatment was with alternative dual therapy regimen, call HIV/STD Nurse Consultant at Central Office to request culturette and lab requisition, (405) 271-9444 ext 56606 or (405) 271-4636. A NAAT screen and GC culture will need to be collected simultaneously and client will have to await results of GC culture before retreatment is given.
7. Management (Treatment Failure)
   Clients returning for evaluation of unresolved symptoms within 7 days post initial treatment should:

   a. Receive sexual history assessment (include assessing for completion/compliance of medication, and appropriate regimen if treated by another facility or provider, and assess for possible sexual contact with untreated partner).

   b. Receive a physical exam; consult with APRN or nurse supervisors if symptoms assessed reflect Trichomoniasis, yeast or Herpes Simplex Virus (HSV).

D. Treatment

Option #1 Ceftriaxone‡ 250 mg IM in a single dose (see treatment notes #2,3,6)
   Given with Azithromycin 1 G orally in a single dose (see treatment note #5)

Option #2 When client reports allergy to azithromycin, erythromycin or any macrolide antibiotic: (see treatment note #5)
   Ceftriaxone‡ 250 mg IM in a single dose
   Given with Doxycycline 100 mg orally twice a day for 7 days
   (Doxycycline is contraindicated for pregnant clients. See treatment note # 8)

Option #3 When client reports true hypersensitivity to cephalosporins, ceftriaxone, or penicillin:
   Gentamicin 240 mg IM in a single dose (see treatment note #7)
   Given with Azithromycin 2 G orally in a single dose
   (Gentamicin is contraindicated during pregnancy. See treatment note # 7) (Gentamicin for breastfeeding clients, see treatment note # 7)

Option #4 Pregnant clients with a confirmed gonorrhea test who report an allergy to cephalosporins (see treatment notes # 8 & 9):
   Azithromycin 2 G orally in a single dose

E. Special Consideration:

The public health nurse must ensure that another employee, preferably who is CPR certified, is present who can assist if an emergency occurs before any injections can be administered.

Treatment Notes:

1. True hypersensitivity reactions include: hypotension; vasodilatation, generalized flushing of the skin; urticaria, rash (hives) anywhere on the body; bronchospasm; angioedema; sense of impending doom; cardiovascular collapse; swelling of throat and mouth; alterations in heart rate; severe asthma; nausea and vomiting; sudden feeling of weakness; collapse and unconsciousness.

2. Clients with an unknown reactions to PCN that occurred >10 years ago can be safely given
Clients who have been treated with the appropriate dual therapy regimen should have complete clearance of ceftriaxone. Less than 1% will have allergic reactions and they are extremely unlikely to have anaphylaxis. Ceftriaxone is safe for clients with ampicillin or amoxicillin specific allergies due to those medications not sharing the same side chains ceftriaxone.

3. **Ceftriaxone**: Must be given with 1% lidocaine solution as a diluent to lessen injection pain unless the client reports hypersensitivity or allergic reaction to local anesthetic agents or severe liver disease. See package insert for amounts and a complete discussion of lidocaine.

4. Dual therapy should be administered together on the same day, preferably simultaneously and under direct observation. Ceftriaxone must be administered with either azithromycin or doxycycline. Ceftriaxone works by keeping bacteria from making and maintaining their cell walls while azithromycin and doxycycline prevent protein production and replication. **They must be administered at the same time to achieve the desired effect.** The use of azithromycin as the second antimicrobial is preferred to doxycycline because of the convenience and compliance advantages of single-dose therapy.

5. To maximize adherence for multidose regimens, the first dose should be dispensed on site and directly observed.

6. **Azithromycin** is contraindicated in clients with known hypersensitivity to azithromycin, erythromycin, or any macrolide antibiotic such as clarithromycin (Biaxin).

7. Clients allergic to both ceftriaxone and azithromycin must be referred to a private physician for treatment using ODH 399 Referral Form.

8. **Gentamicin**: Review and discuss client medication handout sheet prior to providing Gentamicin. Instruct clients who have sulfite sensitivity, kidney disease, hearing loss or loss of balance due to ear problems, any neuromuscular disorders such as myasthenia gravis or Parkinson's disease to talk to their doctor before they take gentamicin.

Gentamicin 240 mg will be drawn for administration by nurse in two syringes containing no more than 120 mg/3 ml of medication per syringe for intramuscular injection. The nurse will give one injection in each gluteal muscle. Remaining medication in vial will be immediately discarded. Dual therapy should be administered together with azithromycin on the same day preferably simultaneously and under direct observation. **Treatment with gentamicin must be withheld until pregnancy is ruled out in clients who think they may be pregnant. All clients with a confirmed pregnancy must be immediately referred to their PCP or OB provider for treatment.**

Breastfeeding women who are treated with Gentamicin should be encouraged to pump their breast and discard their breastfeeding for the first 6 hours following treatment to reduce the risk of medication transmission to the infant.

9. Pregnant clients with an allergy to azithromycin, erythromycin, or any macrolide antibiotics must be referred to their PCP or OB/GYN for treatment because both alternative treatment options (Doxycycline and Gentamicin) are contraindicated during pregnancy.

10. Pregnant women with a confirmed gonorrhea test and a cephalosporin allergy who are treated with Azithromycin 2 gram monotherapy must return to the clinic in 14 days for a test-of-cure.

11. Clients returning to CHD within 3 weeks after initial treatment:

    Clients who have been treated with the appropriate dual therapy regimen should have significant improvement in symptoms within 3-5 days of treatment. Complete clearance of
N. gonorrhoeae can take 8 days (endocervix) and 15 days (urethra) when treated with dual therapy regimen. In some, mild symptoms may linger until complete clearance is achieved. NAAT urine and vaginal swab can be positive when only dead organisms are present and should not be performed prior to 7 days post treatment.

Treatment Failure:
Most suspected treatment failures in the United States are likely to be re-infections rather than actual treatment failure. Treatment failure should be considered for:

a. Clients who report no sexual contact with unresolved/ worsening symptoms 3-5 days post treatment (symptoms could also reflect infection with Trichomoniasis, yeast, or HSV which would not be covered by treatment for GC/CT).

F. Expedited Partner Therapy (EPT):
For adult clients with a positive test result; offer EPT to adult clients who report their adult partners/contacts are unable to access timely evaluation and treatment. EPT is not issued to clients who are minors to take to their sex partners, and EPT is not issued for treatment of partners who are minors. See EPT Treatment Protocol for Gonococcal and Chlamydial infections.

IV. CLIENT EDUCATION:
A. Take prescribed oral medication appropriately (give handout).
B. Refer all sex partner(s) for testing and treatment if their last sexual contact with the client was within 60 days before onset of symptoms or diagnosis. If a client’s last sexual intercourse was > 60 days before onset of symptoms or diagnosis, the client’s most recent partner should be tested and treated.
C. Abstain from sex until client and partner(s)
   1. Have completed a 7-day regimen or
   2. 7 days after a single dose regimen
D. Return for evaluation should symptoms persist or recur.
E. Nurses should advise all clients with gonorrhea to be retested 3 months after treatment.
F. Prevention measures (e.g., condoms) to prevent future infections

V. CONSULTATION/REFERRALS:
A. Notify HIV/STD Nurse and DNM
   1. If client presents with signs and symptoms of epididymitis, disseminated gonorrhea, or PID.
   2. Treatment failure is suspected
B. Refer to private physician for follow up (and assist client in gaining access to care) if:
   1. Client reports a medication allergy which prohibits them from taking the dual medication treatment options listed above.
2. Suspect sexual abuse in minor.

3. Signs and symptoms of PID and disseminated gonorrhea.

4. If pharyngeal and rectal gonococcal infection is suspected as the only site of infection.

5. Spermatic cord (testicular) torsion, a surgical emergency, should be considered in all cases in adult and adolescent males presenting with severe sudden onset unilateral testicular pain and swelling and referred using ODH 399 Referral Form to nearest emergency facility for further evaluation for torsion, testicular infarction, abscess, and necrotizing fasciitis. Spermatic cord (testicular) torsion occurs frequently among adolescent males and men without evidence of inflammation or infection.

VI. FOLLOW-UP:

A. A high prevalence of *N. gonorrhoeae* infection is observed in clients who have had gonorrhea in the preceding several months. Repeat infection might confer an elevated risk for PID and other complications. Clinicians should consider advising all clients with gonorrhea to be retested 3 months after treatment.

B. Pregnant women with gonorrhea infection should have a test-of-cure 2-4 weeks after treatment and be retested within 3 months.

REFERENCES:


*Sexually Transmitted Infections and HIV*. Clutterbuck, Dan

Clinical Infectious Diseases (2016) *Test of cure for Anogenital Gonorrhoea Using Modern RNA-Based and DNA Based Nucleic Acid Amplification Tests: A Prospective Cohort Study.*