

PRIMARY DYSMENORRHEA

GENERAL INFORMATION

Primary dysmenorrhea is defined as painful menstruation that begins with or shortly after menarche. It is physiologic in nature due to either excessive secretion of prostaglandin by the endometrium or structural abnormality of the uterus. Studies of uterine contractions with primary dysmenorrhea reveal uterine pressures that are similar to those found during the second stage of labor.

Secondary dysmenorrhea begins later in life and is the result of having developed other physical factors. Endometriosis is an example of secondary dysmenorrhea. Both primary and secondary dysmenorrhea can be debilitating.

SUBJECTIVE FINDINGS

The client complains of one or more of the following symptoms just before and/or as her menstrual period begins:

- Lower abdominal cramping pain with onset of menstrual flow
- Pain radiating to the lower back or down inner thigh
- Nausea, vomiting, urinary frequency, and/or diarrhea during first 48 hours of menses
- Headache, dizziness, chills
- Weakness or fainting (symptoms of vasomotor instability)

OBJECTIVE FINDINGS

- Normal blood pressure
- Normal temperature
- Normal Hgb or Hct
- The client is within 1-2 years of having started her menstrual cycles

ASSESSMENT

Primary Dysmenorrhea

PLAN

1. At the earliest sign or symptom of menstruation or 1-2 days before the onset of menses begin the following:
 - IBUPROFEN 400 mg every 4 hours until relief not to exceed 3.2 g/day **OR**

- NAPROXEN SODIUM 500 mg as an initial dose, then 250 mg every 6-8 hours as needed; not to exceed 1.25 g/day
2. Discuss oral contraceptive use with the client and consult with the APN or MD if the client would like to begin COC to treat her primary dysmenorrhea. DMPA and the levonorgestrel-releasing IUD also decrease menstrual pain and menstrual flow. A consult would be necessary for these as well.
 3. Other comfort measures:
 - Apply a warm heating pad to lower abdomen
 - Avoid constipation
 - Exercise regularly between menstrual cycles

Health Teaching:

- Review the signs and symptoms of toxic shock syndrome for tampon users
- Young women who are menstruating are of reproductive age and will benefit from information regarding reproductive health and human sexuality. These can be offered at time convenient for the client and the staff.

Referral Indicators:

- Severe cramping unrelieved by OTC analgesics that persists beyond the first 2 days and/or increases in severity throughout menses
- Dysmenorrhea with fever
- Tampon users who develop sudden onset of high fever, chills, sunburn-like rash, hypertension, vomiting, and diarrhea should immediately remove the tampon and be referred for emergency medical treatment
- Dysmenorrhea that begins later in life (years after menarche)

Follow-up:

- Patient will be asked to contact a health provider if no improvement in 48 hours

REFERENCES

1. Contraceptive Technology, Hatcher, et. al. 19th revised edition, 2007.

FEVER, VACCINE ASSOCIATED

SUBJECTIVE

History of vaccine administration within 24-36 hours of fever onset (may occur 7-14 days after administration of MMR)
Seizure activity may or may not be reported

OBJECTIVE

Temperature 100.4⁰F or greater orally
99⁰F or greater axillary
101⁰F or greater rectally/ear
Please note ear thermometers are not reliable in children less than 6 months of age and must be used per manufacturer instructions to be accurate.

ASSESSMENT

Vaccine Associated Fever

PLAN

Recommend administration of **ACETAMINOPHEN** drops, elixir, or tablets according to dosage chart. Repeat dosage every 4 hours as needed. Max of 5 doses in 24 hours. Suppositories are available in 4 strengths and may be kept behind the pharmacy counter.

Weight (lb)	Dose (mg)	Drops (80 mg/0.8 ml) Dropperfuls	Children's Elixir (80 mg/1/2 tsp)	Chewable Tablets (80 mg tabs)	JR Chewable Tablets (160 mg tabs)	Adult Tablets (325 mg tabs)
6-11	40	½	¼ tsp	-		-
12-17	80	1	½ tsp	-		-
18-23	120	1 ½	¾ tsp	1 ½		-
24-35	160	2	1 tsp	2	1	-
36-47	240	3	1 ½ tsp	3	1 ½	-
48-59	320	4	2 tsp	4	2	1
60-71	400	5	2 ½ tsp	5	2 ½	1
72-95	480	-	3 tsp	6	3	1 ½

For children over 6 months of age, recommend administration of **IBUPROFEN** suspension instead of acetaminophen, but not in addition to acetaminophen, according to dosage chart. Repeat dosage every 6-8 hours as needed, max of 4 doses in 24 hours.

Weight (lb)	Dose (mg)	Drops 50mg/1.25ml	Children's liquid 100mg/5ml	Chewable Tablets 50mg	Chewable Tablets 100mg
12-17	50 mg	1.25 ml	½ tsp		
18-23	75 mg	1.875 ml	¾ tsp		
24-35	100 mg	2.5 ml	1 tsp	2	1
36-47	150 mg		1 ½ tsp	3	1 ½
48-59	200 mg		2 tsp	4	2
60-71	250 mg		2 ½ tsp	5	2 ½
72-95	300 mg		3 tsp	6	3
96-154	400 mg		4 tsp	8	4

Health Teaching

Children do not need antipyretic medication unless the fever is making them uncomfortable. In general, it is not necessary to medicate a child to prevent a fever after vaccination. If temperature is 104.6⁰F or higher, child may be cooled in tepid bath until medication takes effect. Child should NOT be sponged in alcohol or placed in ice water to combat fever.

Counsel regarding side effects of medication (i.e. GI ulceration, bleeding and perforation with ibuprofen, and liver toxicity with acetaminophen)

Inform parents that many OTC products (i.e. cold and cough, allergy relief products) may contain acetaminophen or ibuprofen. Encourage parents to read labels carefully before giving other OTC product.

Referral Indicators:

Fever exceeding 103⁰F rectally or 102⁰F orally after completing above

Seizure activity

Appearance of other illness symptoms

Continuing fever

Follow-up:

Return to clinic as needed

REFERENCES

Wolters Kluwer Health, Inc. Facts and Comparisons, February 2011;

<http://online.factsandcomparisons.com/index.aspx>.

Medscape, Drug Information, February, 2011;<http://search.medscape.com/all-search>.

**DIPHTHERIA, TETANUS TOXOID & ACELLULAR
PERTUSSIS, INACTIVATED POLIO, HAEMOPHILUS
INFLUENZAE TYPE B COMBINATION VACCINE: DTaP-IPV-
Hib (PENTACEL[®] BY SANOFI PASTEUR)**

GENERAL INFORMATION

Pentacel[®] (DTaP-IPV-Hib) vaccine is licensed for use as doses 1 through 4 of DTaP, IPV and Hib vaccine series in children **42 days through 4 years of age (up to 5th birthday)**. DTaP-IPV-Hib is *not* licensed for use as the 5th dose in the DTaP series.

The vaccine consists of lyophilized ActHIB reconstituted with liquid DTaP-IPV.

The **1st, 2nd, and 3rd doses** of DTaP-IPV-Hib should be **separated by a minimum of 4 weeks (28 days)**

For **4th dose** of DTaP-IPV-Hib, the child must be **at least 12 months of age, and less than 5 years of age, and, at least 6 months (180 days) since 3rd dose of DTaP**

Contraindications to giving the vaccine include the following:

- An immediate anaphylactic reaction following a previous dose of vaccine containing any of the components of DTaP-IPV-Hib
- Encephalopathy within 7 days of administration of previous dose of any pertussis-containing vaccine
- No pertussis-containing vaccine should be given to a child with a progressive neurological disorder (see Note below)

The following precautions, although not considered contraindications, should be carefully evaluated concerning the risks and benefits of vaccination for individuals who experienced any one of the following adverse reactions:

- Temperature of 105°F or higher within 48 hours (with no other identifiable cause) after vaccination with DTaP/DTP
- Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours after vaccination with DTaP/DTP
- Persistent, inconsolable crying lasting 3 hours or more, occurring within 48 hours after vaccination with DTaP/DTP
- Seizures, with or without fever, within 3 days after vaccination with DTaP/DTP
- Guillain-Barre syndrome within 6 weeks of a previous dose of a tetanus toxoid-containing vaccine

Defer vaccination of children with moderate to severe acute illness until they are well

NOTE: Stable/resolved neurologic condition (e.g., controlled epilepsy, cerebral palsy, or developmental delay), or a family history of convulsions is **not** a contraindication for DTaP.

If a child has any of the following conditions, vaccination should be delayed until the child has been evaluated, treatment initiated, and the condition stabilized: (1) an evolving neurologic disorder (uncontrolled epilepsy, infantile spasms or progressive encephalopathy); (2) a history of seizures which has not been evaluated; or, (3) a neurologic event which occurs between doses of pertussis containing vaccine.

Adverse events include the following:

- Local reactions (pain, redness, swelling at injection site)
- Increased chance of injection site swelling following 4th dose (not harmful, resolves spontaneously)
- Nodule at injection site
- Hypersensitivity reactions (Arthus-type)
- Fever
- Severe systemic reactions are rare

PLAN

- Ask parent or guardian about the medical history and recent health status of the child to determine the existence of any contraindications
- Ask parent or guardian about adverse reaction after previous dose
- Counsel regarding benefits, side effects, and management; recommend that parent may administer acetaminophen if a fever develops and the child is uncomfortable. If the child does not show signs of discomfort, medication is not necessary.
- Have accompanying adult read “Vaccine Information Statement” (VIS)
- Reconstitute vaccine according to manufacturer’s instructions
- Administer vaccine INTRAMUSCULARLY according to recommended schedule:

VACCINE	DOSE #	AGE
DTaP-IPV- Hib	1	2 months (minimum age 6 weeks)
	2	4 months (or at least 4 weeks since dose #1)
	3	6 months (or at least 4 weeks since dose #2)
	4	12-18 months (must be at least 12 mos but less than 5 yrs of age, and at least 6 mos since dose #3)

- Advise to wait in clinic for 20 minutes after injection
- Record manufacturer and lot number of the vaccine administered, date that vaccine and VIS were given, name, address, and title of person administering vaccine
- Instruct parent to contact Health Department if adverse reaction occurs (complete VAERS form)

Referral Indicators:

- Unstable neurological conditions
- Allergic hypersensitivity to any component of the vaccine
- Severe reaction to previous DTaP, IPV, Hib or other vaccine component

If severe reaction is reported as occurring within 30 days following vaccine administered by health department personnel, VAERS Report form must be completed
If history of more than one seizure, consult with patient's private physician or public health physician
Refer for DTaP 5th dose and IPV final dose at age 4-6 years – The complete primary IPV series requires that the final dose be given on or after the 4th birthday. A 5th dose of IPV is necessary if the 4th dose was administered more than 4 days before the 4th birthday.

Follow-up:

Return for next DTaP appropriate interval
The 5th dose is omitted if DTaP #4 was given on or after the 4th birthday
The child will need a final dose of IPV after the 4th birthday (or up to 4 days before)

REFERENCES:

Diphtheria and Tetanus Toxoids and Acellular Pertussis Adsorbed, Inactivated Poliovirus and Haemophilus b Conjugate (Tetanus Toxoid Conjugate) Vaccine (Pentacel®) by Sanofi Pasteur. Package Insert. June 2008.

MMWR, Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) Vaccine from the Advisory Committee on Immunization Practices (ACIP), January 14, 2011/60(01);13-15.

http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6001a4.htm?s_cid=mm6001a4_w

MENINGOCOCCAL VACCINE

MENINGOCOCCAL CONJUGATE VACCINE (MCV4)

(MENACTRA™, MENVEO™)

GENERAL INFORMATION

Meningococcal disease is caused by bacteria (*Neisseria meningitidis*) that infect the bloodstream and the linings of the brain and spinal cord, causing serious illness. Meningococcal disease is rare in the United States, but is now the leading cause of bacterial meningitis in children. Of people with meningococcal disease, 10% die and 11-19% of survivors have permanent disabilities (such as mental retardation, hearing loss, and loss of limbs). Meningococcal disease is most likely to occur in infants and toddlers, although the type (serogroup B) that causes most disease in this age group is not preventable by vaccine. After infancy, the next period of increased risk is from 16-21 years. Infection is spread by direct contact with infected individuals (e.g., sharing a glass or cigarette, or kissing), or via droplets of respiratory secretions (e.g., coughing or sneezing). Symptoms include the sudden onset of fever, chills, severe headache, stiff neck, rash, nausea, vomiting and lethargy.

Meningococcal vaccine is inactivated and contains no live organisms. The vaccine is designed to prevent infections from serogroups A, C, Y and W-135. Protective antibody levels may be achieved within 7-10 days after vaccination. Meningococcal vaccine may be given at the same time as other immunizations, if needed.

Meningococcal Conjugate Vaccine (MCV4)

There are 2 MCV4 vaccines: Menactra™ by Sanofi Pasteur and Menveo™ by Novartis

Both are licensed for use in persons aged 2 through 55 years

Immunity is expected to last 3-5 years following a single dose. Children vaccinated at age 11 or 12 may be susceptible during the period of highest risk (16-21y) if they do not receive the recommended booster dose of vaccine.

MCV4 is recommended for routine use in preteens and certain individuals who are at elevated risk for meningococcal disease and are between 2 and 55 years of age

Where MCV4 is not available, Meningococcal Polysaccharide Vaccine (MPSV4, Menomune™) is an acceptable substitute for some, not all, persons for whom MCV4 is recommended; refer to Meningococcal Polysaccharide vaccine (MPSV4, Menomune) protocol as needed for additional information. MCV4 is always preferred to MPSV4.

ACIP Recommended Populations include the following:

Adolescents (First dose routinely for children 11 through 12 years and as catch up for any children 13 through 18 years not previously vaccinated with MCV4)

College freshmen living in dormitories, including those enrolled in college who present for immunization before moving on campus, if not previously vaccinated or if booster dose indicated

Persons age 2 through 55 years who have anatomic or functional asplenia or terminal complement component deficiencies, including such persons who had received one dose of MPSV4 three (3) or more years earlier (with physician order)

Persons age 2 through 55 years who travel to, or reside in, countries in which *N. meningitidis* is hyperendemic or epidemic, particularly if contact with local populations is prolonged

(continued on next page)

Military recruits (Health departments should refer)

Microbiologists routinely exposed to isolates to *N. meningitidis* (Health departments refer)

Contraindications to giving the vaccine include the following:

Persons under 2 years or over 55 years of age

Hypersensitivity to any component of the vaccine, including diphtheria toxoid

Menactra only: hypersensitivity to dry natural latex (contained in vaccine vial stopper)

Menveo packaging does not contain latex.

If known to be pregnant, consult with health officer or refer to medical provider

Precautions include the following:

Immunization should be deferred during the course of any moderate to severe illness

Anyone who has ever had Guillain-Barre Syndrome

Adverse Reactions include the following:

COMMON

Mild injection site pain and redness (within 1 -2 days of vaccination)

Mild systemic reactions such as headache, and malaise (within 7 days of vaccination)

RARE

Fever (within 7 days of vaccination)

Severe systemic reaction

PLAN

Administration of Vaccine:

Vaccinate according to the following table [Use federally-funded vaccine, in accordance with current guidance for its use (see cover letter). If state or locally-purchased vaccine is available, persons with an indication who are ineligible for federally-funded vaccine may be vaccinated in accordance with local policy]:

Risk group	First dose (age in years)	Booster dose (age in years)
Persons aged 11 through 18 years	11 through 12	16
	13 through 15	16 through 18
	16 or older	-none-
HIV-infected persons age 11 through 18 years	11 through 12 (primary 2-dose series, at least 8 weeks apart*)	16
	13 through 15 (primary 2-dose series, at least 8 weeks apart*)	16 through 18
	≥16 (primary 2-dose series, at least 8 weeks apart*)	-none-
Persons aged 2 through 55 years with persistent complement component deficiency (such as C5-C9, properidin or factor D) or asplenia (functional or anatomic)	At earliest opportunity (primary 2-dose series, at least 8 weeks apart)	Every 5 years following the second primary series dose.
Persons age 2-55 years with prolonged increased risk for exposure to <i>N. meningitidis</i> **	1 dose	If aged 2 through 6 years, after 3 years, if still at increased risk If aged 7 years or older, after 5 years <i>if still at increased risk</i>
<i>*Calculate need for booster dose based upon age at receipt of the second dose in the primary 2-dose series.</i>		
<i>**Microbiologists routinely working with <i>Neisseria meningitidis</i> and travelers or residents of countries where meningococcal disease is hyperendemic or epidemic.</i>		

If using Menveo, reconstitute product according to manufacturer package insert prior to administration.

Administer a single dose of vaccine, 0.5 ml **INTRAMUSCULARLY**

Health Teaching:

Provide current Vaccine Information Sheet (VIS) about meningococcal disease and the benefits of vaccination

If the vaccine is used in persons receiving immunosuppressive therapy, the expected immune response may not be obtained

Counsel regarding side effects of vaccine

Educate recipients for whom a booster dose is recommended about the timing and importance of the booster dose

Referral:

Pregnancy

Military recruits

Microbiologists occupationally exposed to isolates of *N. meningitidis*

Travelers (to a travel clinic)

REFERENCES

Menactra® [Meningococcal (Groups A, C, Y and W-135) Polysaccharide Diphtheria Toxoid Conjugate Vaccine] package insert, Sanofi Pasteur (Aventis Pasteur), April 2008

MENVEO® [Meningococcal (Groups A, C, Y and W-135) Oligosaccharide Diphtheria CRM197 Conjugate Vaccine] package insert, Novartis, January 2011

MMWR, Prevention and Control of Meningococcal Disease, Recommendations of the Advisory Committee on Immunization Practices (ACIP), U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Atlanta, GA 30333, May 27, 2005/Vol.54/No. RR-7

MMWR, Notice to Readers: Recommendation from the Advisory Committee on Immunization Practices (ACIP) for Use of Quadrivalent Meningococcal Conjugate Vaccine (MCV4) in Children Aged 2--10 Years at Increased Risk for Invasive Meningococcal Disease. December 7, 2007 / 56(48);1265-1266

MMWR, Updated Recommendations for the Use of Meningococcal Conjugate Vaccines – Advisory Committee on Immunization Practices (ACIP) 2010, January 28, 2011. <http://www.cdc.gov/mmwr/pdf/wk/mm6003.pdf>

**TETANUS, DIPHTHERIA, AND PERTUSSIS VACCINE
TETANUS, DIPHTHERIA, AND ACCELLULAR PERTUSSIS
(Tdap) VACCINE FOR ADULTS (19 and up)
(ADACEL™ OR BOOSTRIX™)**

GENERAL INFORMATION

Tdap vaccine is inactivated and contains no live organisms. The vaccine protects from tetanus (“lockjaw”), diphtheria, and pertussis (“whooping cough”). Like tetanus and diphtheria, immunity to pertussis wanes following childhood immunization or natural infection. With pertussis, adults may suffer prolonged coughing illness and may infect others, including infants at risk for severe complications. ADACEL™ (Sanofi Pasteur) was licensed in 2005 by the U.S. Food and Drug Administration (FDA) for use in persons aged **11 through 64 years** as a **ONE-TIME DOSE**.

BOOSTRIX™ (GlaxoSmithKline) is licensed for ages **10 through 64** as a **ONE-TIME DOSE**.

Tdap is routinely recommended by the Advisory Committee on Immunization Practices (ACIP) for routine use in persons 11 and older who have contact with infants. It may be given to any adult (including adults over 64) who has not yet had Tdap. (See the Tdap protocol for adolescents for recommendations ages 11 through 18 years). **Subsequent routine Td BOOSTERS are recommended every 10 years** (see Td protocol).

Tdap vaccine may be given at the same time as other immunizations, including meningococcal vaccine. It may be given before or after meningococcal vaccine if both vaccines cannot be given simultaneously.

Tdap SHOULD NOT BE GIVEN TO PERSONS WHO HAVE ALREADY RECEIVED it.
Tdap may be given if the patient cannot verify that he or she has received Tdap.

Note: In January 2011, CDC published revised ACIP recommendations for the use of Tdap, with respect to recipient age and dose interval. The ACIP guidelines differ from the manufacturer package insert and take priority over information contained in the package insert.

ACIP Recommendations for Use:

Tdap may be used **ONE TIME** either as a routine **BOOSTER** dose, **OR** as one of a **PRIMARY** vaccine series, **OR** for tetanus **PROPHYLAXIS** in accordance with standard guidelines for wound management. See specific guidance for adults 65 and older:

Adults (19 through 64 years) DUE FOR A ROUTINE TETANUS BOOSTER - A single dose of Tdap is routinely recommended to replace a single dose of Td for booster immunization if they received the last dose of tetanus toxoid-containing vaccine ≥ 10 years earlier. Certain individuals should be given Tdap < 10 years after their last Td; see below

Adults (19 through 64 years) WITHOUT A COMPLETE PRIMARY SERIES of Td-containing vaccine - A single dose of Tdap should be **substituted for one Td** in the primary series; it is preferred as the first dose

Adults (19 through 64 years), REQUIRING TETANUS PROPHYLAXIS FOR WOUND MANAGEMENT - A **single dose** of Tdap is preferred to Td if the patient has not had Tdap before (See Protocol for Wound Management)

Adults 65 and older: Tdap is ACIP-recommended for those needing pertussis protection because of contact or anticipated contact with an infant under age one year, regardless of time since last tetanus-containing vaccine. Tdap **may be given** to all adults over 65 who need a tetanus vaccine and have not received Tdap previously.

DOSING INTERVALS since last tetanus vaccine dose: Adults who need protection from pertussis should receive a single dose of Tdap regardless of the interval since the last tetanus-containing vaccine:

- (a) Adults of any age (including age 65 or older) who have contact or anticipate close contact with infants <1 year of age (e.g., parents, grandparents, childcare providers, healthcare workers, post-partum mothers, women planning to become pregnant). Administration one month or more before exposure to the infant is ideal, if possible
- (b) Health-care personnel of any age with direct patient contact in hospitals and outpatient facilities

PREGNANCY: Pregnancy is not a contraindication to Td or Tdap; if tetanus vaccination during pregnancy is indicated, Td is preferred. Td should be given to pregnant women if they have had an incomplete primary series of tetanus vaccine, require tetanus immunization for wound management, or if it has been ≥ 10 years since their last tetanus shot. Otherwise, advise pregnant women to receive Tdap as soon as possible post-partum. If a pregnant woman needs protection from pertussis (e.g., during an outbreak of pertussis in the community), Tdap may be given with an MD or NP order.

REFERRAL INDICATORS (PER ACIP)

Contraindications to giving the vaccine include the following:

History of an immediate severe allergic reaction (anaphylaxis) to any of the three components of Tdap (i.e., tetanus, diphtheria, or pertussis vaccines) or to any combination vaccine containing Tdap components

History of encephalopathy (e.g., coma, prolonged seizures) within 7 days of administration of a pertussis-containing vaccine that is not attributable to another identifiable cause; tetanus/diphtheria vaccine (Td) should be used instead of Tdap in such patients

Precautions which may require referral include the following:

History of Arthus-type hypersensitivity reactions (extensive painful limb swelling within hours of injection) following tetanus vaccination administered <10 years previously; such patients should not be given any tetanus-containing vaccine more frequently than every 10 years

A current unstable neurologic disorder, uncontrolled epilepsy, or progressive encephalopathy; defer vaccination with pertussis-containing vaccine until treatment regimen is established and condition is stabilized; Td may be used

Guillain-Barre syndrome (GBS) within 6 weeks after a previous dose of a tetanus toxoid-containing vaccine

Defer immunization if the patient has an acute moderate-to-severe illness, with or without fever, until illness has resolved

PLAN

Provide current Vaccine Information Sheet (VIS) about Tdap and the benefits of vaccination

Counsel regarding benefits, side effects, and management

Shake the vial well, administer 0.5 ml of vaccine INTRAMUSCULARLY

Remind that tetanus/diphtheria vaccine boosters are recommended every 10 years

Advise to wait in clinic 20 minutes after injection

Record manufacturer and lot number of the vaccine administered, date, name, address and title of the person administering vaccine

Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate form)

Referral Indicators:

History of an immediate severe allergic reaction (anaphylaxis) to prior tetanus, diphtheria, or pertussis vaccines

History of encephalopathy (e.g., coma, prolonged seizures) within 7 days of administration of a pertussis-containing vaccine

Refer or defer immunization for precautions as indicated

Pregnancy (MD or NP order only)

Follow-up:

Return for Td booster in 10 years

Return for wound management as required

REFERENCES

Advisory Committee on Immunization Practice (ACIP) Votes to Recommend Use of Combined Tetanus, Diphtheria and Pertussis (Tdap) Vaccines for Adults, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), Atlanta, GA 30333, March 2, 2006. http://www.cdc.gov/nip/vaccine/tdap/tdap_adult_recs.pdf Last accessed May 12, 2006

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine Adsorbed (ADACEL™) Vaccine package insert, Sanofi Pasteur (Aventis Pasteur), June 2005

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine, Adsorbed (BOOSTRIX™) Prescribing information, GlaxoSmithKline, May 2005, revised January 2009. http://us.gsk.com/products/assets/us_boostrix.pdf

Centers for Disease Control and Prevention, Updated Recommendations for Use of Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis (Tdap) Vaccine from the Advisory Committee on Immunization Practices, 2010. MMWR. <http://www.cdc.gov/mmwr/pdf/wk/mm6001.pdf> Last accessed January 14, 2011.

Screening Criteria for Chlamydia and Gonorrhea

Effective September 1, 2010

The screening criteria for chlamydia and gonorrhea have been revised based on risk criteria, national recommendations, and availability of funds. The screening criteria for Tennessee are:

1. Family Planning:

- Screen at the routine initial/annual exam:
 - all clients less **than age 26**
 - all clients ages **26-29** who receive family planning services in a county with a chlamydia positivity rate of 3 percent or higher for 2009. (***See below for these counties.**)
- For clients ages **26 and over** (regardless of county where family planning services are received), only screen the following:
 - a client being prepared for IUD insertion;
 - a client with documented NEW signs or symptoms;
 - a client named as a contact;
 - a client using drugs;
 - a client exchanging sex for money or drugs.
- Regardless of age, a female client who has been treated for a positive chlamydia test should be retested 3 months after treatment or whenever she next seeks medical care within the following 3-12 months regardless of whether the client believes her partner was treated.

2. STD:

- **Test all STD clients:**
 - if contact to any STD;
 - symptomatic for any STD;
 - who request an examination for any STD.
- Notable exception:** Chlamydia testing is not required but *should be offered* to clients requesting only an HIV test and who are asymptomatic for any other STD.

3. EPSDT:

- All sexually active clients 11 years and older should be screened for sexually transmitted diseases (STDs) during routine EPSDT visits.

4. Adult Health/Other:

- Offer testing to any sexually active client less than age 26.
- Test clients with signs or symptoms suggestive of gonorrhea or chlamydia.

5. Pregnancy Testing:

- All women under age 30 reporting to clinic for a urine pregnancy test should be offered chlamydia and gonorrhea screening from their pregnancy test urine sample. Considering the sequelae that might occur in the mother and neonate if the infection persists, repeat testing is recommended 4 - 6 weeks after completion of therapy for all pregnant women to ensure therapeutic cure.

*The counties with positivity rates of 3 percent or higher in women ages 26 – 29 for 2009 are:

Northeast Region – Johnson and Unicoi

East Tennessee Region – Anderson, Jefferson, Campbell, Cocke, Grainger, and Sevier

Southeast – Franklin and Marion

Upper Cumberland – Overton and Smith

Mid Cumberland – Sumner, Cheatham and Dickson

South Central – Giles, Lawrence and Marshall

West Tennessee – Chester, Crockett, Dyer, Fayette, Gibson, Hardeman, Haywood, Henry, Lake, Lauderdale,
Obion, Tipton, and Weakley

Memphis/Shelby County – Health Department clinics, Memphis Planned Parenthood

Nashville/Davidson

Knoxville/Knox

Jackson/Madison

CHLAMYDIA TRACHOMATIS, Case (0798), Contact (V016)

SUBJECTIVE

Symptoms may include:

FEMALES-

Vaginal discharge
Dysuria, pelvic pain
Changes in menses
Intermenstrual spotting
Postcoital bleeding
Commonly asymptomatic

MALES -

Dysuria
Penile discharge
Commonly asymptomatic

“A friend told me to come in”

Sexual contact to confirmed or suspected case of chlamydia, gonorrhea, NGU, or non-specific cervicitis

Private physician or other health care provider referral

OBJECTIVE

Muco-purulent discharge from urethra or cervix

Laboratory positive for *Chlamydia trachomatis*

ASSESSMENT

Confirmed or suspected case of *Chlamydia trachomatis*

Contact to confirmed or suspected case of *Chlamydia trachomatis*

Last menstrual period

Assess sites exposed (vaginal, oral, rectal, and urethral)

PLAN

Screen¹ for chlamydia and gonorrhea using currently available test; refer to “*Laboratory Policies and Procedures Manual for Local Health Departments*” for information on specimen storage and mailing.

Draw blood for syphilis serology.

¹ Several studies of different test technologies have shown various post-treatment intervals wherein a false positive test result may occur. Therefore, repeat testing should not be performed within 3 weeks of appropriate treatment. Patients that have been exposed to an infected person within 3 weeks of treatment should be retreated, but not retested.

Consider need for hepatitis B vaccination and provide (if available) or refer as indicated
Offer HIV counseling and literature for all clients; offer testing for high-risk individuals or those requesting service.

Interview patient for sexual contacts and encourage all contacts to obtain treatment:

Obtain name, address, phone number, age, sex, race, and date of exposure of all contacts within the last 60 days; do not write the information in the patient's record; if a contact to confirmed case, do not write the original case name in the contact's chart.

Notify the public health representative of the original positive case name and contact information
Counsel, examine, and test all persons exposed.

TREATMENT

Use dual treatment on the person to be treated, unless you have a confirmed negative test for gonorrhea (see protocol for gonorrhea).

If the chlamydia test is positive, refer to the treatment guidelines found in the PHN Protocol for **Chlamydia Partner Delivered Treatment**.

AZITHROMYCIN is the drug of choice for chlamydia.

Treatment for Chlamydia Only²

Adult/Adolescent:

Azithromycin 1 gm orally as a single dose

OR

Doxycycline 100 mg orally BID x 7 days³

Pregnant Adult/Adolescent or Nursing Mothers:

(if unprotected coitus since LMP, suspect pregnancy and treat accordingly):

Azithromycin 1 gm orally as a single dose

OR

Amoxicillin 500 mg orally TID x 7 days

Allergic Pregnant Individuals:

Consult with physician regarding choice of above antibiotics

Dual Treatment for Chlamydia and Gonorrhea (regardless of site of exposure)⁴

² Patients and/or sex partners presenting for treatment of laboratory confirmed chlamydia, and are **known to have a negative gonorrhea test**, are to be treated for chlamydia only.

³ Doxycycline is contraindicated in pregnancy and nursing mothers.

Non-Allergic Adult/Adolescent:

Ceftriaxone 250 mg IM as a single dose

PLUS ONE OF THE FOLLOWING:

Azithromycin 1 gm orally as a single dose

OR

Doxycycline 100 mg orally BID x 7 days⁵

Non-Allergic Pregnant Adult/ Adolescent/ Nursing Mothers:

Ceftriaxone 250 mg as a single dose

PLUS ONE OF THE FOLLOWING:

Azithromycin 1 gm orally as a single dose

OR

Amoxicillin 500 mg orally TID x 7 days

Allergic Adult/Adolescent:

Azithromycin 2 grams (tablets only) orally as a single dose⁶

Allergic Pregnant Adult/Adolescent/Nursing Mothers :

Azithromycin 2 grams (tablets only) orally as a single dose

OR

Azithromycin 1 gm orally as a single dose for chlamydia and refer to physician for cephalosporin desensitization and treatment (an infectious disease physician experienced in the procedure should be selected)

DILUENT- Use 1% lidocaine solution, sterile water for injection, or 0.9% sodium chloride solution and document accordingly (if allergic to lidocaine, mix with sterile water or normal saline). Lidocaine allergy includes allergies to local anesthesia such as Nupercaine[®], Xylocaine[®], Carbocaine[®], Marcaine[®] or Atanert[®]. There has been no cross sensitivity shown to para-aminobenzoic derivatives such as procaine, tetracaine, and benzocaine.

Penicillin or Cephalosporin Allergies: Ceftriaxone is the drug of choice for gonorrhea. If the patient alleges an allergy to penicillin or cephalosporins, the nurse should take a thorough history

⁴ When the laboratory results for both diseases are not available on the person being treated, dual treatment (for chlamydia and gonorrhea) should be administered. Do not refer for desensitization treatment in absence of lab confirmed gonorrhea.

⁵ Doxycycline is contraindicated in pregnancy and nursing mothers.

⁶ Studies have indicated increase frequency of gastrointestinal problems with a 2 gram dose of azithromycin. According to the PDR, azithromycin tablets can be taken with food to lessen the occurrence of GI symptoms. Patients should be advised to return for repeat treatment if vomiting occurs.

of allergic response to determine if there is a history of severe allergic reaction such as anaphylaxis or Stevens Johnson syndrome. If the history indicates a non-anaphylactic reaction, (i.e. mild to moderate rash, itching, etc.), the patient should be treated with ceftriaxone. If history indicates a severe reaction such as anaphylaxis, or nurse is unable to gain a history consistent with a non-anaphylactic reaction the patient should be treated with 2 grams azithromycin.⁷ Since there is little to no incidence of ceftriaxone resistant gonorrhea reported in the United States, all patients returning with gonorrhea and persistent or recurring symptoms should be considered reinfected and retreated with ceftriaxone.⁸

Health Teaching

- Offer condoms and encourage use during any sexual activity.
- Encourage all sexual contacts to obtain care.
- Stress completion of all medicines and advise to avoid intercourse until patient and their sex partner(s) have completed treatment including 7 days after single-dose therapy or completion of 7 or 14-day treatment regimen.
- Warn patient that until medication is completed and all sex partners are treated, chlamydial infection may be transmitted and reinfection is likely.
- If using oral contraceptive, encourage use of barrier method until two weeks following completion of treatment. Offer condoms.
- Discuss HIV and STD prevention.
- Encourage voiding before and after intercourse.
- Increase water intake with medications.
- Avoid antacids and exposure to sun when taking doxycycline.
- Stress hygiene, including wearing cotton underwear, loose clothing, avoidance of underpants while sleeping, wiping front to back, and avoid feminine hygiene sprays and deodorants.
- Stress need for follow-up exam if symptoms persist, recur, or exacerbate.

Referral Indicators

- Pregnant individuals with **significant** medical issues (consultation with private physician or Health Officer prior to treatment)
- Prepubertal children as indicated (refer to HSA Child Abuse Policy)

⁷ Studies indicate that 10% of patients alleging an allergy to PCN are actually allergic when testing is done. Only 5-10% of patients allergic to PCN will have a cross reaction/sensitivity to cephalosporins. Therefore, only 0.5-1% of patients that allege an allergy to PCN would actually be allergic to a cephalosporin. With a thorough history taken on those patients alleging PCN allergy, a risk of an allergic reaction to ceftriaxone will be extremely rare.

⁸ There is no need for the laboratory to perform sensitivity testing on isolates unless the CDC begins reporting an increased incidence of ceftriaxone-resistant gonorrhea from their Gonorrhea Isolate Surveillance Program GISP).

No response to treatment
Dyspareunia and/or moderate to severe abdominal pain
Complications (i.e., PID, postpartum infection, abnormal Pap)

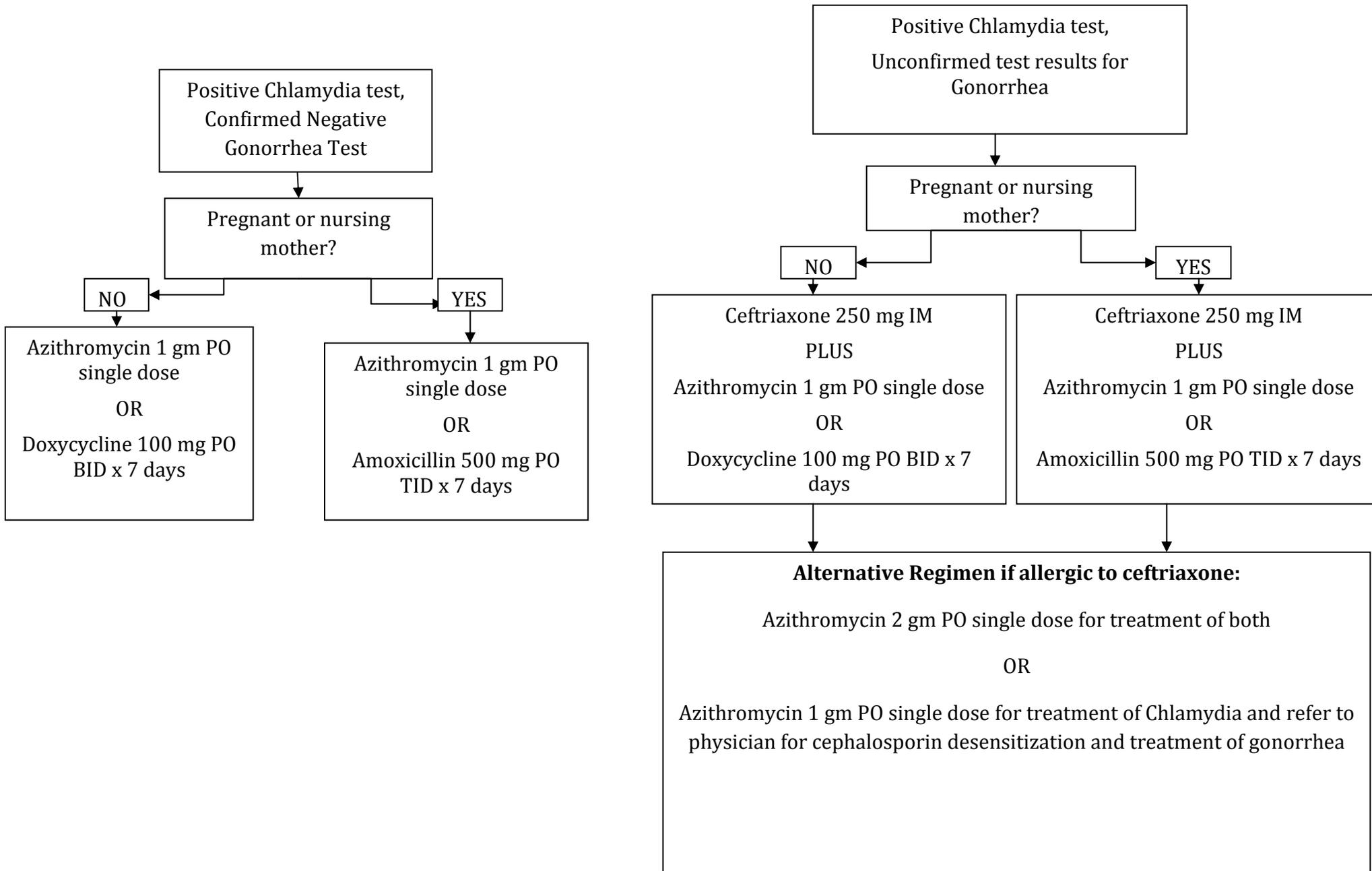
Follow-Up

Return if no improvement after treatment.
Counsel infected patient to return for retesting 3 months after completion of treatment. If this does not occur, retest all persons treated for chlamydia infection if they present for care within 12 months following treatment.
In cases of treatment failure, consult with nurse practitioner or physician.
Report all cases to Sexually Transmitted Disease Program representative.
Test of cure is not appropriate except in pregnant women who should be tested 4-6 weeks after completing therapy.

REFERENCE

Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines, 2010. MMWR 2010; 59(No. RR-12).

Chlamydia and Gonorrhea Treatment Decision Tree



GONORRHEA, Case (098); Contact (V016)

SUBJECTIVE

Symptoms may include:

FEMALES- (a large percentage of infected women are asymptomatic in the early stages of disease)

Early Symptoms

- Dysuria
- Leukorrhea, change in vaginal discharge
- Unilateral labial pain and swelling
- Lower abdominal discomfort
- Pharyngitis

Later Symptoms

- Purulent, irritating vaginal discharge
- Fever (possibly high)
- Rectal pain and discharge
- Abnormal menstrual bleeding
- Increased dysmenorrhea
- Nausea, vomiting
- Lesions in genital area
- Joint pain and swelling
- Upper abdominal pain

MALES -

Early Symptoms

- Dysuria with increased frequency
- Whitish discharge from penis
- Pharyngitis

Later Symptoms

- Yellowish/greenish discharge from penis
- Epididymitis
- Proctitis

“A friend told me to come in”

Pain, tenderness in pelvic organs

Sexual contact to confirmed or suspected case of gonorrhea

Private physician or other health care provider referral

OBJECTIVE

Purulent discharge from urethra or cervix noted on exam

Laboratory positive for *Neisseria gonorrhoeae*

ASSESSMENT

Confirmed or suspected case of *Neisseria gonorrhoeae*

Contact to confirmed or suspected case of *Neisseria gonorrhoeae*

Last menstrual period

Assess sites exposed (vaginal, oral, rectal, and urethral)

PLAN

Screen¹ for chlamydia and gonorrhea using currently available test; refer to “*Laboratory Policies and Procedures Manual for Local Health Departments*” for information on specimen storage and mailing.

Draw blood for syphilis serology.

Consider need for hepatitis B vaccination and provide (if available) or refer as indicated

Offer HIV counseling and literature for all clients; offer testing for high-risk individuals or those requesting service.

Interview patient for sexual contacts and encourage all contacts to obtain treatment:

Obtain name, address, phone number, age, sex, race, and date of exposure of all contacts within the last 60 days; do not write the information in the patient’s record; if a contact to confirmed case, **do not write the original case name in the contact’s chart.**

Notify the public health representative of the original positive case name and contact information
Counsel, examine, and test all persons exposed.

TREATMENT

It is recommended that all patients being treated for gonorrhea receive dual treatment for both gonorrhea and chlamydia.²

Treatment for Gonorrhea and Chlamydia (regardless of site of infection)

Non-Allergic Adult/Adolescent:

Ceftriaxone 250 mg IM as a single dose

PLUS ONE OF THE FOLLOWING:

Azithromycin 1 gm orally as a single dose

OR

Doxycycline 100 mg orally BID x 7 days³

Non-allergic Pregnant Adult/Adolescent or Nursing Mothers:

(if unprotected coitus since LMP, suspect pregnancy and treat accordingly):

Ceftriaxone 250 mg IM as a single dose

PLUS ONE OF THE FOLLOWING:

Azithromycin 1 gm orally as a single dose

OR

Amoxicillin 500 mg orally TID x 7 days

Allergic Adult/Adolescent:

Azithromycin 2 grams (tablet only) orally as a single dose

Allergic Pregnant Adult/Adolescent or Nursing Mothers:

Azithromycin 2 grams (tablets only) orally as a single dose

¹ Several studies of different test technologies have shown various post-treatment intervals wherein a false positive test result may occur. Therefore, repeat testing should not be performed within 3 weeks of appropriate treatment. Patients that have been exposed to an infected person within 3 weeks of treatment should be re-treated, but not re-tested.

² Patients infected with *N. gonorrhoeae* frequently are co-infected with *C. trachomatis*; this finding. Because most gonococci in the United States are susceptible to doxycycline and azithromycin, routine co-treatment might also hinder the development of antimicrobial-resistant *N. gonorrhoeae*. Limited data suggest that dual treatment with azithromycin might enhance treatment efficacy for pharyngeal infection when using oral cephalosporins.

³ Doxycycline is contraindicated in pregnancy and nursing mothers.

OR

Azithromycin 1 gm orally as a single dose for chlamydia and refer to physician for cephalosporin desensitization and treatment. An infectious disease physician experienced in the procedure should be selected.

DILUENT- Use 1% lidocaine solution, sterile water for injection, or 0.9% sodium chloride solution and document accordingly (if allergic to lidocaine, mix with sterile water or normal saline). Lidocaine allergy includes allergies to local anesthesia such as Nupercaine®, Xylocaine®, Carbocaine®, Marcaine® or Atanert®; there has been no cross sensitivity shown to para-aminobenzoic derivatives such as procaine, tetracaine, and benzocaine.

Penicillin or Cephalosporin Allergies: Ceftriaxone is the drug of choice for gonorrhea. If the patient alleges an allergy to penicillin or cephalosporins, the nurse should take a thorough history of allergic response to determine if there is a history of a severe reaction such as anaphylaxis or Stevens Johnson syndrome. If the history indicates a non-anaphylactic reaction, (i.e. mild to moderate rash, itching, etc.), the patient should be treated with ceftriaxone. If history indicates a severe reaction such as anaphylaxis, or the nurse is unable to gain a history consistent with a non-anaphylactic reaction; the patient should be treated with azithromycin 2 grams.⁴ Since there is little to no incidence of ceftriaxone resistant gonorrhea reported in the United States, all patients returning with gonorrhea and with persistent or recurring symptoms should be considered reinfected and should be retreated with ceftriaxone.⁵

Health Teaching

Offer condoms and encourage use during any sexual activity.

Encourage all sexual contacts to obtain care.

Stress completion of all medicines and advise to avoid intercourse until patient and their sex partner(s) have completed treatment including 7 days after single-dose therapy or completion of 7 or 14-day treatment regimen.

Warn patient that until medication is completed and all sex partners are treated, gonococcal infection may be transmitted and reinfection is likely.

If using oral contraceptive, encourage use of barrier method until two weeks following completion of treatment. Offer condoms.

Discuss HIV and STD prevention.

Encourage voiding before and after intercourse.

Increase water intake with medications.

Avoid antacids and exposure to sun when taking doxycycline.

⁴ Studies indicate that 10% of patients alleging an allergy to PCN are actually allergic when testing is done. Only 5-10% of patients allergic to PCN will have a cross reaction/sensitivity to cephalosporins; therefore, only 0.5-1% of patients that allege an allergy to PCN would actually be allergic to a cephalosporin. With a thorough history taken on those patients alleging PCN allergy, a risk of an allergic reaction to ceftriaxone will be extremely rare.

⁵ There is no need for the laboratory to perform sensitivity testing on isolates unless CDC begins reporting an increased incidence of ceftriaxone-resistant gonorrhea from their Gonorrhea Isolate Surveillance Program GISP.

Stress hygiene, including wearing cotton underwear, loose clothing, avoidance of underpants while sleeping, wiping from front to back and avoid feminine hygiene sprays and deodorants.

Stress need for follow-up exam if symptoms persist, recur, or exacerbate.

Referral Indicators

Pregnant individuals with **significant** medical issues (consultation with private physician or Health Officer prior to treatment)

Prepubertal children as indicated (refer to HSA Child Abuse Policy)

No response to treatment

Dyspareunia and/or moderate to severe abdominal pain

Complications (i.e. PID, postpartum infection, abnormal Pap)

Follow-Up

Return if no improvement after treatment.

In cases of treatment failure, consult with nurse practitioner or physician.

Report all cases to Sexually Transmitted Disease Program representative.

Counsel infected patient to return for retesting of gonorrhea 3 months after completion of treatment. If this does not occur, retest all persons treated for infection if they present for care within 12 months following treatment.

Test of cure is not appropriate within 3-4 weeks following treatment.

REFERENCE

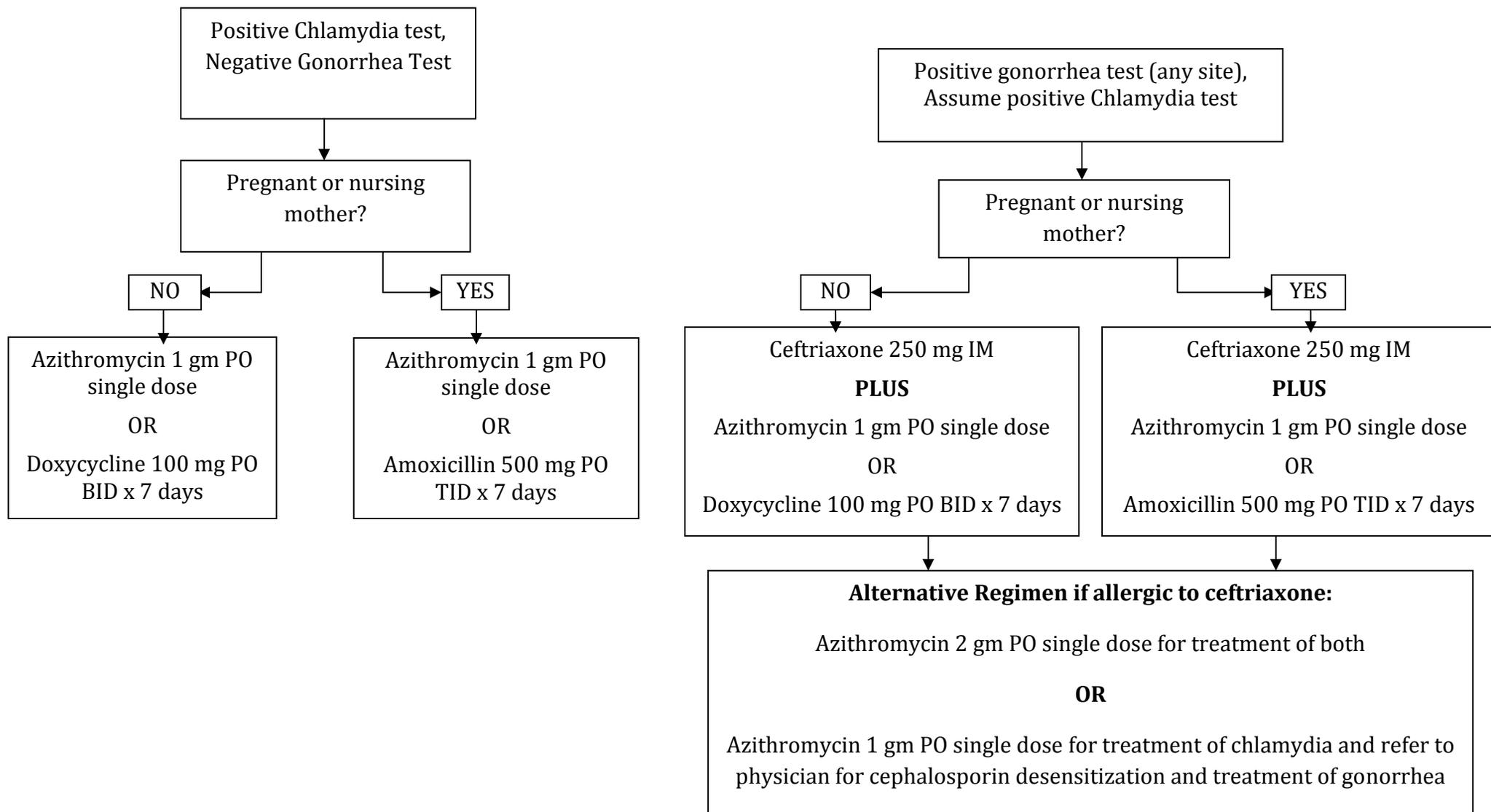
Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines, 2010. MMWR 2010; 59 (No. RR-12).

Lyss SB, Kamb ML, Peterman TA, et al. *Chlamydia trachomatis* among patients infected with and treated for *Neisseria gonorrhoeae* in sexually transmitted disease clinics in the United States. Ann Intern Med 2003;139:178–85.

Sathia L, Ellis B, Phillip S, et al. Pharyngeal gonorrhoea—is dual therapy the way forward? Int J STD AIDS 2007;18:647–8.

Golden M, Kerani R, Shafii T, Whittington W, Holmes K. Does azithromycin co-treatment enhance the efficacy of oral cephalosporins for pharyngeal gonorrhea? Presented at: 18th International Society for STD Research (ISSTD) Conference, London, UK, June 2009.

Gonorrhea and Chlamydia Treatment Decision Tree



PEDICULOSIS PUBIS (PUBIC LICE) (1322)

SUBJECTIVE

Severe itching in genital area
“Bugs down there”
“Crabs”

OBJECTIVE

Visible nits and/or lice on pubic hair
Excoriation of skin may be present (crusts or scales in pubic area)
Black dots (representing excreta) on surrounding skin and underclothing
Nits in eyebrows, eyelashes, scalp hair, axillary hair, and other body hair

ASSESSMENT

Pediculosis Pubis (Pubic Lice)

PLAN

Treatment:

Permethrin 1% creme rinse - Apply to affected area and wash off after 10 minutes.

OR

OTC pyrethrin with piperonyl butoxide – per package instructions.

In difficult cases, refer to nurse practitioner. In all cases, removal of nits is encouraged. Concurrently with treatment, machine launder all washable clothing and bed linens in hot water and detergent. Dry in high heat for at least 20 minutes.

Dry-clean clothing that is not washable.

Place items that cannot be washed or dry-cleaned in a large, heavy duty plastic bag, and securely seal for 10-14 days.

Both sexual and close personal or household contacts within the preceding month should be examined and treated.

Suspect other STDs and offer counseling and testing as appropriate.

Referral Indicators

Secondary bacterial infection
Pregnant or lactating women
Neurological disorders (in lindane only)
Known sensitivity to permethrin/pyrethrin products
Coexisting dermatological conditions
Lice found in eyelashes since shampoo cannot be used
Treatment failure

Follow-Up

Patient should be evaluated after one week if symptoms persist
Retreatment may be necessary if lice are found or if eggs are observed at the hair-skin junction. Do not retreat with lindane without consulting a provider.
Patients who do not respond to one of the recommended regimens should be referred to a provider for treatment with an alternative regimen.

REFERENCES

CDC. Sexually Transmitted Diseases Treatment Guidelines, 2010. MMRW 2010; 59(No. RR-12).

SYPHILIS, CASE OR CONTACT (0910)

SUBJECTIVE

Previous history of syphilis infection

History of **symptoms suggestive of syphilis:**

Painless indurated lesion on genitalia or adjacent areas or other mucous membranes such as lip, vulva, labia, cervix, or anus

Body rash or spots on palms of hands or soles of feet

Sore throat, fever, headaches, or general malaise

Sexual contact to serology proven or physician verified case

Referral from private physician

Person at risk of syphilis as identified through the course of case investigation

“My partner told me he/she has syphilis”

OBJECTIVE

Report of reactive Captia Syphilis-G test (from Blood Bank)

Primary Syphilis:

One or more chancres (hard, painless, indurated) on the genitalia; others may appear on anus, fingers, tongue, nipples, tonsils, or eyelids

Regional lymphadenopathy (unilateral or bilateral)

Secondary syphilis:

Regional lymphadenopathy (unilateral or bilateral)

Uniform rash, well defined, and generalized on trunk, arms, palms, soles, face, and scalp

Lesions enlarge and erode producing highly contagious sores that are pink or grayish-white

Reactive RPR and positive TP-PA¹ (sometimes RPR may be false positive)

Alopecia, hair may have "moth eaten look"

ASSESSMENT

Confirmed or suspected syphilis, syphilis contact, or person identified through the course of syphilis case investigation

PLAN

NOTE

If there has been an exposure within 90 DAYS prior to the exam, all known contacts to cases of syphilis, or persons identified through case investigation as being at risk for syphilis should be preventively treated.

If a report is received of an individual with a reactive Captia Syphilis-G test, an attempt should be made to locate the person to inform him or her of the test result. It is important to inform the individual that the Captia Syphilis-G tests are used for screening purposes and that further tests (RPR and TP-PA) are needed for confirmation of a current syphilis infection.

¹ The TP-PA (Treponemal pallidum-particle agglutination) test has replaced the MHA-TP test, which is no longer available

Obtain specimen from lesion(s), if present, for darkfield examination (if available) by Public Health Representative or physician.

For persons with a positive Captia Syphilis-G test, question regarding a previous history of syphilis infection, recall of symptoms suggestive of syphilis, sexual exposure to someone with symptoms, or known exposure to a confirmed case in order to make a more clear diagnosis.

After obtaining a specimen on individuals with only a positive Captia Syphilis-G test, both the RPR and the TP-PA should be concurrently ordered on the syphilis serology form (i.e. lab slip). Also indicate that it is a re-test of a Captia Syphilis-G test per State Lab protocols.

Obtain blood specimen for serologic test for syphilis. Request TP-PA if reactive RPR.

Refer all patients with syphilis for HIV counseling and testing.

Consider need for Hepatitis B vaccination and provide (if available) or refer as indicated.

Perform gonorrhea and chlamydia screening.

Ask whether patient has any drug sensitivities, especially to penicillin.

Report all prepubertal children to the Department of Human Services.

Report all cases to the STD Representative or Regional CEDS Supervisor **immediately**.

If indicated, consult physician.

TREATMENT

Early Syphilis (Primary and secondary syphilis, early latent syphilis of less than one year's duration)

Non-pregnant, Non-allergic Adult/Adolescent:

Benzathine penicillin G 2.4 million units IM (give 1.2 million units in each buttock)

Non-pregnant, Penicillin Allergic Adult/Adolescent:

Doxycycline², 100 mg orally BID x 14 days

Non-tolerance to Doxycycline:

If follow-up or compliance cannot be assured, the patient should be referred for skin testing for penicillin allergy and undergo desensitization, if necessary.

With careful follow-up and permission obtained from regional health officer, may give ceftriaxone 1gm IM once a day for 10-14 days. Caution must be used as patients who are allergic to penicillin may also be allergic to cephalosporins.

Late Latent Syphilis (over one year's duration) AND Unknown Duration Latent Syphilis

Non-pregnant, Non-allergic Adult/Adolescent:

Benzathine penicillin G 7.2 million units total, administered as one dose of 2.4 million units (1.2 million units IM in each buttock IM) at one week intervals for 3 consecutive weeks

Non-pregnant, Penicillin Allergic Adult/Adolescent:

If patient is allergic to penicillin and there are no clinical signs of neurological involvement (see next section on Neurosyphilis), the following regimen may

² Doxycycline is contraindicated in pregnancy and nursing mothers

be used following consultation with Regional CEDS Director and/or Regional Health Officer

Doxycycline, 100 mg orally BID x 28 days

Neurosyphilis (central nervous system disease may occur during any stage of syphilis)

With any clinical evidence of neurological involvement (e.g. optic and auditory symptoms, cranial nerve palsies or signs or symptoms of meningitis), consult with Regional CEDS Director and/or Regional Health Officer and refer as recommended. Neurosyphilis can occur in any stage of syphilis. Treatment should be based on the stage of syphilis. Treatment should not be withheld pending evaluation.

Syphilis in Pregnancy

All pregnant women should be screened early in pregnancy.

Seropositive pregnant women should be considered infected unless treatment history and sequential serologic antibody titers are showing an appropriate response. In areas in which the prevalence of syphilis is high, or for patients at high risk, testing should be repeated at 28 weeks and at delivery.

Tetracycline and doxycycline are contraindicated in pregnancy and nursing mothers. Erythromycin is not to be used due to high risk of failure to cure infection in fetus.

All Stages of Pregnancy, Non-allergic:

Benzathine penicillin G in dosage schedules appropriate for the stage of syphilis, as recommended for treatment of non-pregnant patients (see above).

All Stages of Pregnancy, Penicillin Allergic:

Contact Regional CEDS Director and/or Regional Health Officer and refer as recommended.

Syphilis and HIV

All syphilis patients should be screened for HIV.

HIV, Non-allergic

Benzathine Penicillin G in dosage schedules appropriate for the stage of syphilis, as recommended for treatment of non-HIV patients (see above).

Congenital Syphilis

Contact Regional CEDS Director and/or Regional Health Officer and refer according to CEDS guidelines.

Health Teaching

Offer condoms and encourage use during any sexual activity. The use of condoms is effective, but only protects the parts covered.

Wash exposed parts with soap and water as soon after contact as possible.

Advise regular check-ups when patient has more than one sexual partner or if sex partner has more than one partner.

Counsel regarding HIV and other STDs. Offer testing as indicated.

Advise women taking oral contraceptives to use condoms during, and for 2 weeks after, antibiotic treatment.

Counsel that RPR may stay reactive after treatment.

Instruct regarding potential Jarisch-Herxheimer Reaction (in 50% of cases, 6-12 hours after any therapy for syphilis, patient may develop high fever, malaise, exacerbation of symptoms lasting 24 hours and pregnant women may experience pre-term labor).

Encourage to return if primary syphilis lesion has not healed within a week

Referral Indicators

Pregnant and penicillin allergic

Continued elevated antibody titers after treatment

Prepubertal children as indicated (refer to HSA Child Abuse Policy)

A primary lesion that is not healing one week after treatment

Follow-Up

Return for repeat RPR tests at 6 and 12 months after conclusion of treatment or until 4 fold decrease (2 dilutions) (i.e., 128 dilutions to 32 dilutions) in titer is observed.

HIV infected persons should return for repeat tests at 3, 6, 9, 12 and 24 months after conclusion of treatment.

Careful follow-up serologic testing is particularly important in patients treated with antibiotics other than penicillin.

If less than 4 fold (2 dilutions) decrease in RPR (i.e. 128 dilutions to 64 dilutions) after 6 months (3 months for HIV infected patients) refer to STD/CEDS supervisor and/or clinic Regional Health Officer for evaluation of treatment or reinfection.

Counsel regarding HIV and other STDs. Offer testing as indicated.

If using oral contraceptives, counsel patient to use condoms during, and for 2 weeks after, antibiotic treatment.

Counsel that RPR may stay reactive after treatment.

Reference

Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines, 2010. MMWR 2010; 59 (No. RR-12).