



Chancroid

Disease Plan

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Last updated: June 7, 2016, by Scott White.

Questions about this disease plan?

Contact the Utah Department of Health Bureau of Epidemiology: 801-538-6191.

✓ WHY IS CHANCROID IMPORTANT TO PUBLIC HEALTH?

Chancroid is a sexually transmitted infection that can manifest as painful genital ulcers, inguinal lymphadenopathy or buboes. The global epidemiology of chancroid is not well documented; however, a global decrease in chancroid incidence is evident. Likewise, the number of reported cases in the United States has steadily declined since 1987. Genital ulcers caused by chancroid increase the risk of HIV transmission and acquisition.

✓ DISEASE AND EPIDEMIOLOGY

Clinical Description

An acute bacterial infection localized in the genital area and characterized by single or multiple painful, necrotizing ulcers at the site of the infection. The ulcers are frequently accompanied by painful swelling and suppuration of regional lymph nodes.

Causative Agent

Chancroid is caused by *Haemophilus ducreyi*, which is a gram-negative coccobacillus.

Differential Diagnosis

The differential diagnosis for chancroid includes syphilis, herpes simplex, lymphogranuloma venereum, trauma to penis, and drug eruptions.

Laboratory Identification

Chancroid is typically identified via culture by the identification of *H. ducreyi* from genital or bubo material and the exclusion of other diseases associated with similar clinical findings, especially ulcers caused by herpes simplex, syphilis, lymphogranuloma venereum or granuloma inguinale. Direct examination of clinical material by gram stain may strongly suggest the diagnosis if large numbers of gram-negative coccobacilli are seen. Confirmation by recovery of *H. ducreyi* from a genital ulcer or lymph node aspirate is an available alternative diagnostic test. Special culture media and conditions are required for isolation; if chancroid is suspected, the laboratory should be informed. Purulent material recovered from intact bubos is almost always sterile. Polymerase chain reaction (PCR) tests have been shown to be highly sensitive and specific overseas, but there is currently no FDA-approved PCR test for *H. ducreyi* available in the United States. However, some commercial labs may have developed their own PCR test.

Treatment

Empiric therapy for chancroid is reasonable if clinical and epidemiologic evidence are suggestive of this diagnosis, since laboratory diagnosis can be challenging. Successful treatment for chancroid cures the infection, resolves the clinical symptoms and prevents transmission to others. Single-dose directly observed therapy is preferred among the regimens listed below.

Recommended Regimens:

Azithromycin 1 g orally in a single dose

OR

Ceftriaxone 250 mg intramuscularly (IM) in a single dose

OR

Ciprofloxacin 500 mg orally twice a day for 3 days

OR

Erythromycin base 500 mg orally three times a day for 7 days

Case Fatality

Chancroid is not fatal.

Reservoir

Humans are the source of infection.

Transmission

Chancroid is transmitted by direct sexual contact with discharges from open lesions and pus from buboes. Auto-inoculation to non-genital sites may occur in infected persons. Beyond the neonatal period, sexual abuse must be considered when chancroid is found in children.

Susceptibility

Susceptibility is general: uncircumcised men are at higher risk than those who are circumcised. There is no evidence of natural resistance.

Incubation Period

The incubation period is typically from 3-5 days (range 1 to 35 days).

Period of Communicability

The period of communicability lasts until the original lesion or discharging regional lymph node is healed – up to several weeks without antibiotic therapy. Antibiotic therapy eliminates *H. ducreyi* and lesions heal in 1-2 weeks.

Epidemiology

The World Health Organization (WHO) estimated in 1995 that the annual global incidence of chancroid was 7 million cases. More recent global estimates are not available, as chancroid is not included in current WHO estimates of the global incidence of curable STIs; however, a global decrease in chancroid incidence is evident. Reported cases of chancroid in the U.S. have steadily declined from 4,986 cases in 1987 to 6 cases in 2014. Only three states reported one or more cases of chancroid in 2014 (California, Massachusetts, and Texas). Utah has not reported

a case of chancroid since 2004. While chancroid is not widespread, and since it is difficult to culture, it is believed to be substantially under-diagnosed and under-reported.

✓ PUBLIC HEALTH CONTROL MEASURES

Public Health Responsibility

- Investigate all suspect cases of disease and fill out and submit appropriate disease investigation forms.
- Provide education to the general public, clinicians, and first responders regarding disease transmission and prevention.
- Identify clusters or outbreaks of this disease.
- Identify sources of exposure and stop further transmission.

Prevention

Emphasis should be placed on early detection and effective treatment of patients and their contacts.

- Educate the community in general health promotion measures;
 - Provide health and sex instruction that teaches the value of delaying sexual activity until the onset of sexual maturity as well as the importance of establishing mutually monogamous relationships and reducing the numbers of sexual partners;
 - Protect the community and control STDs in sex workers and their clients;
 - Discourage multiple sexual partners and anonymous or casual sexual activity;
 - Teach methods of personal prophylaxis applicable before, during and after exposure, especially the correct and consistent use of condoms;
- Provide healthcare facilities for early diagnosis and treatment;
 - Encourage their use through education of the public about symptoms of sexually transmitted infections and modes of spread;
 - Make these services culturally appropriate and readily accessible and acceptable, regardless of economic status;
 - Establish intensive partner notification;
 - Follow cases serologically to exclude other sexually transmitted infections such as syphilis and HIV.

Chemoprophylaxis

Contacts of patients who have chancroid are those who have had sexual contact during the time period from 10 days preceding the patient's onset of symptoms until the date of diagnosis. All contacts should be examined and treated, regardless of whether symptoms of the disease are present. See treatment for more information.

Vaccine

No vaccine exists.

Isolation and Quarantine Requirements

Isolation: Avoid sexual contact until all lesions are healed.

Hospital: Body substance precautions.

Quarantine: Not applicable.

✓ CASE INVESTIGATION

Reporting

Chancroid is a reportable disease. Below is a table that should be used to determine whether a case should be reported to public health authorities:

Criterion	Reporting			
<i>Clinical Evidence</i>				
Painful, genital ulcer	N	N	N	
Genital ulcer(s) is not typical of disease caused by herpes simplex virus		N		
Healthcare record contains a diagnosis of chancroid				S
<i>Laboratory Findings</i>				
Isolation of <i>H. ducreyi</i> from a clinical specimen (genital ulcer or inguinal lymph node)	N			
No evidence of <i>Treponema pallidum</i> infection by darkfield microscopic examination of ulcer exudate		O	O	
No evidence of <i>Treponema pallidum</i> infection by serologic test for syphilis performed greater than or equal to 7 days after onset of ulcers: <ul style="list-style-type: none"> • Current serologic test for syphilis is nonreactive* or • Current serologic test for syphilis is reactive with a titer ≤ titer (within one dilution) of prior reactive serologic test for syphilis 		O	O	
Negative culture for herpes simplex virus from a clinical specimen			N	

Notes:

S = This criterion alone is sufficient to report a case.

N = All “N” criteria in the same column—in conjunction with at least one of any “O” criteria in each category (e.g., clinical presentation and laboratory findings) in the same column—are required to report a case.

O = At least one of any “O” criteria in each category (e.g., clinical presentation and laboratory findings) in the same column—in conjunction with all other “N” criteria in the same column—is required to report a case.

*A current reactive treponemal serologic test for syphilis and a current nonreactive nontreponemal serologic test for syphilis are indicative of past—but not current—syphilis

infection. A current reactive nontreponemal serologic test for syphilis and a current nonreactive treponemal serologic test for syphilis are indicative of a false positive test.

Case Definition

Epidemiologists classify chancroid infections according to the following:

Criterion	Case Definition		
	Confirmed	Probable	
<i>Clinical Evidence</i>			
Painful, genital ulcer	N	N	N
Inguinal lymphadenopathy	N	N	N
Genital ulcer(s) is not typical of disease caused by herpes simplex virus			N
Healthcare record contains a diagnosis of chancroid			
<i>Laboratory Findings</i>			
Isolation of <i>H. ducreyi</i> from a clinical specimen (genital ulcer or inguinal lymph node)	N		
No evidence of <i>Treponema pallidum</i> infection by darkfield microscopic examination of ulcer exudate		O	O
No evidence of <i>Treponema pallidum</i> infection by serologic test for syphilis performed greater than or equal to 7 days after onset of ulcers: <ul style="list-style-type: none"> • Current serologic test for syphilis is nonreactive* or • Current serologic test for syphilis is reactive with a titer ≤ titer (within one dilution) of prior reactive serologic test for syphilis 		O	O
Negative culture for herpes simplex virus from a clinical specimen		N	

Notes:

S = This criterion alone is sufficient to report a case.

N = All “N” criteria in the same column—in conjunction with at least one of any “O” criteria in each category (e.g., clinical presentation and laboratory findings) in the same column—are required to report a case.

O = At least one of any “O” criteria in each category (e.g., clinical presentation and laboratory findings) in the same column—in conjunction with all other “N” criteria in the same column—is required to report a case.

*A current reactive treponemal serologic test for syphilis and a current nonreactive nontreponemal serologic test for syphilis are indicative of past—but not current—syphilis infection. A current reactive nontreponemal serologic test for syphilis and a current nonreactive treponemal serologic test for syphilis are indicative of a false positive test.

Clinical Description

A sexually transmitted disease characterized by painful genital ulceration and inflammatory inguinal lymphadenopathy. The disease is caused by infection with *Haemophilus ducreyi*.

Laboratory Criteria

Isolation of *H. ducreyi* from a clinical specimen.

Case Classification

Probable: a clinically compatible case with both a) no evidence of *Treponema pallidum* infection by darkfield microscopic examination of ulcer exudate or by a serologic test for syphilis performed greater than or equal to 7 days after onset of ulcers and b) either a clinical presentation of the ulcer(s) not typical of disease caused by herpes simplex virus (HSV) or a culture negative for HSV.

Confirmed: a clinically compatible case that is laboratory confirmed

Case Investigation Process

Investigators should:

- Fill out the Utah Public Health Confidential Morbidity Report form.
- Conduct a Client Interview (STD case interview).
- Fill out a client interview record on original patient and field records for contacts identified.
- Conduct field investigations on contacts.
- Provide treatment and follow-up for contacts.
- Fill out interview record.

Outbreaks

An outbreak is defined as one case being reported.

Identifying Case Contacts

The contact investigation is an integral part of finding contacts and source of infection. All sexual contacts that were exposed within the 10 days preceding onset of symptoms should receive an examination and treatment regardless of whether symptoms of the disease are present.

Case Contact Management

A fundamental feature of programs for chancroid control is the interviewing of patients to identify sexual contacts from whom infection was acquired in addition to those whom the patient infected. Trained interviewers obtain the best results. All identified sexual contacts of confirmed case of chancroid should be examined and treated, regardless of symptoms, if they had sexual contact with the patient during 10 days preceding the patient's onset of symptoms.

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✓ **VERSION CONTROL**

V.05.16: Updated epidemiological information, added Minimum Data Set (MDS) information and added Table of Contents.

✓ **UT-NEDSS Minimum/Required Fields by Tab**

Demographic

- Date first reported to public health
- Last Name
- First Name
- Street
- Unit Number
- City
- State
- County
- Zip code
- Date of Birth
- Area Code
- Phone Number
- Birth Gender
- Ethnicity
- Race
- Disposition (if promoted contact)
- Disposition Date (if promoted contact)
- Contact Type (if promoted contact)

Clinical

- Disease
- Date Diagnosed

- Pregnant (if female)
- Expected Delivery Date (if female)
- Treatment Given
- Treatment
- Date of Treatment
- Clinician Last Name
- Clinician Area Code
- Clinician Phone
- Diagnostic Facility (DF)
- Type of facility:
- Method of Case Detection

Laboratory

- Lab
- Test Type
- Organism
- Test Result
- Specimen Source
- Collection Date

Administrative

- State Case Status (completed by UDOH)
- Outbreak Association