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Chancroid (soft chancre)

Chancroid (soft chancre) is an infectious, ulcerative STD

caused by the gram-negative bacillus Haemophilus ducreyi.

EPIDEMIOLOGY

- Chancroid is most common in developing countries, especially in Africa and Asia
- The prevalence of chancroid is higher in lower socioeconomic groups.
- Lower-class prostitutes appear to be a reservoir in all reported outbreaks of this disease and men have a markedly higher incidence of chancroid than women.
- Several studies in Africa showed that chancroid-ulcer is an important risk factor for the spread of HIV-1

CLINICAL FINDINGS

- The incubation period is between 3 and 7 days, rarely more than 10 days.
- The chancre begins as a soft papule surrounded by erythema.
- After 24–48 hours it becomes pustular, then eroded and ulcerated; vesicles are not seen
- The edges of the ulcers are often ragged and undermined. The ulcer is usually covered by a necrotic, yellowish-gray exudate, and its base is composed of granulation tissue that bleeds readily on manipulation.

CLINICAL FINDINGS

- In contrast to syphilis, chancroid ulcers are usually tender and or painful not indurated (soft chancre).
- The diameter varies from 1mm to 2 cm.
- Half of the males present with a single ulcer and most lesions are found on the external or internal surface of the prepuce, on the frenulum, or on the glans. Meatus and shaft of the penis and the anus are involved less frequently. Edema of the prepuce is often seen. Rarely, if the chancre is localized in the urethra, Haemophilus ducreyi causes purulent urethritis.

CLINICAL FINDINGS

- In females the lesions are mostly localized on the vulva, especially on the fourchette, the labia minora, and the vestibule. Vaginal, cervical, and perianal ulcers have also been described.
- Extragenital lesions of chancroid have been reported on the breast, finger, thigh, and inside the mouth. Trauma and abrasion may be important for such extragenital manifestations.
- Autoinoculation frequently forms kissing lesions on the genitalia, and women are apt to have more numerous lesions.

CLINICAL FINDINGS

- Painful inguinal adenitis (bubo) occurs in up to 50% of patients within a few days to 2 weeks (average1 week) after onset of the primary lesion. The adenitis is unilateral in most patients, and erythema of the overlying skin is typical. Buboes can become fluctuant and may rupture spontaneously. The pus of bubo is usually thick and creamy. Buboes are less common in female patients
- Mild systemic symptoms can rarely accompany chancroid, but systemic infection by H. ducreyi has never been observed.

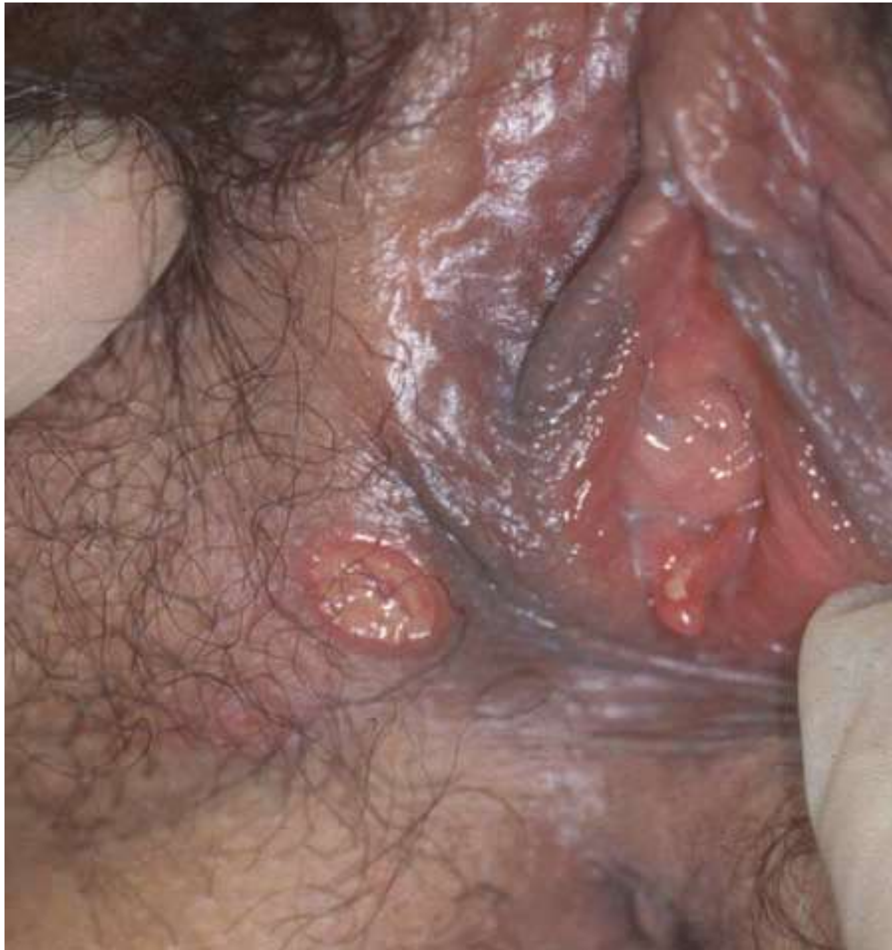
Investigations

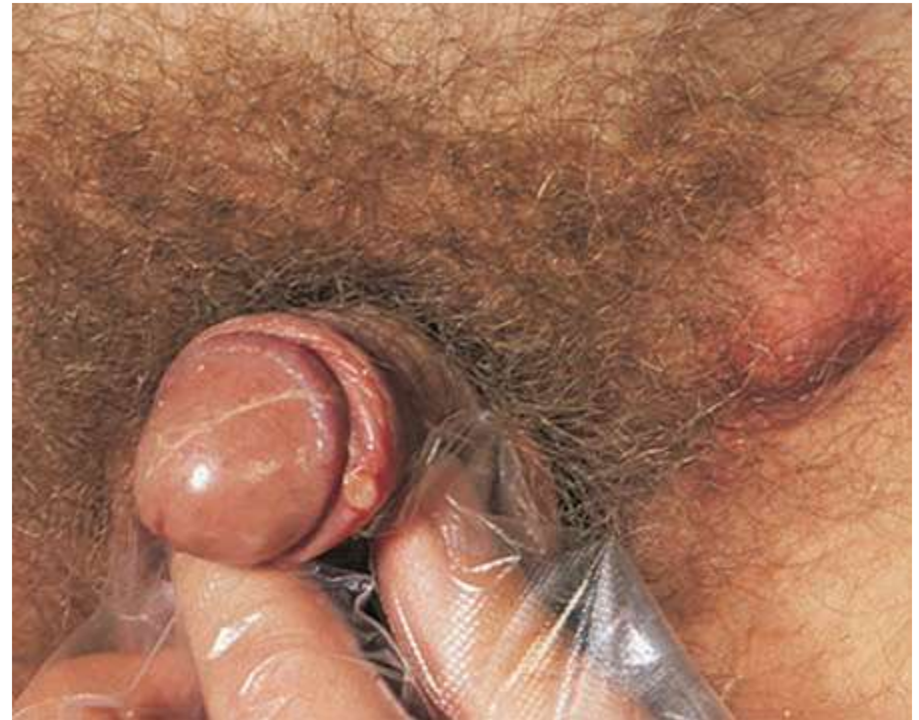
- The diagnosis should be suspected if there is a **history** of **painful ulceration** following the essential incubation period and subsequent formation of **unilateral buboes** with or without sinus formation
- Testing for H. ducreyi is not routinely available
- Direct detection by microscopy of smears from chancroid lesions typically shows sheets of the organism in a 'shoal of fish' pattern, but this has a low sensitivity and specificity and is no longer recommended

Investigations

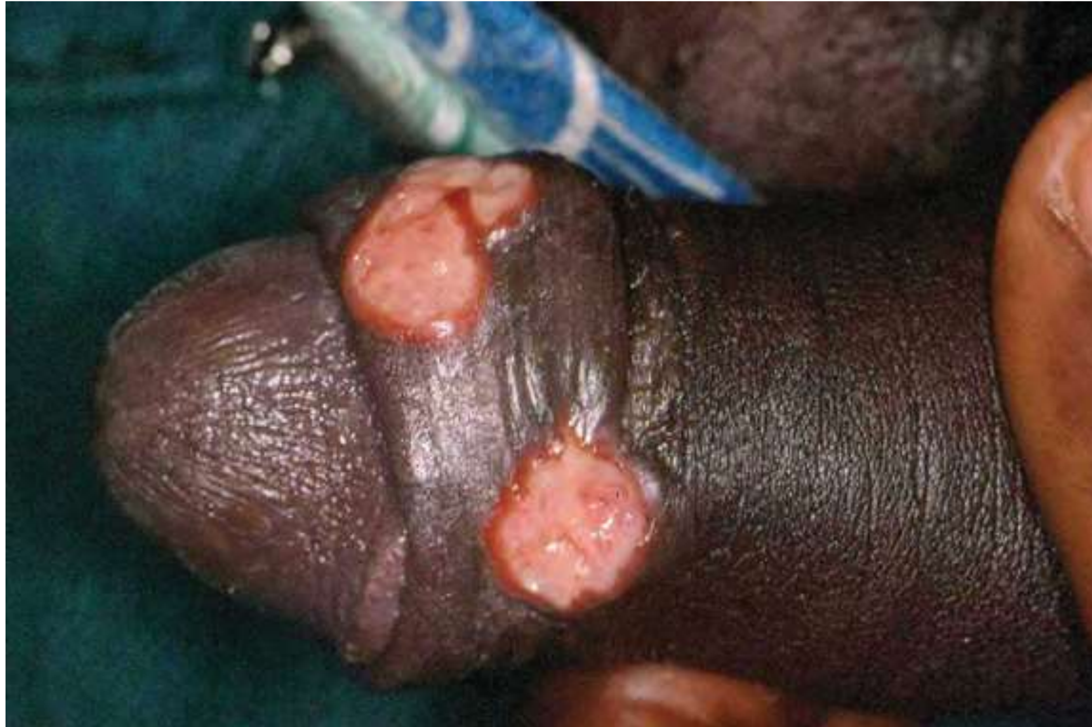
- H. ducreyi is a fastidious bacterium and is very difficult to culture.
- The use of PCR. Some of these tests have the advantage of simultaneously testing for other pathogens, in specially Treponema pallidum and herpes simplex virus.
- testing for syphilis and HIV infection should be performed

Vulvar chancroid with undermined edge. Small soft ulcer on the internal surface of the prepuce with painful, fluctuant inguinal adenitis (bubo).





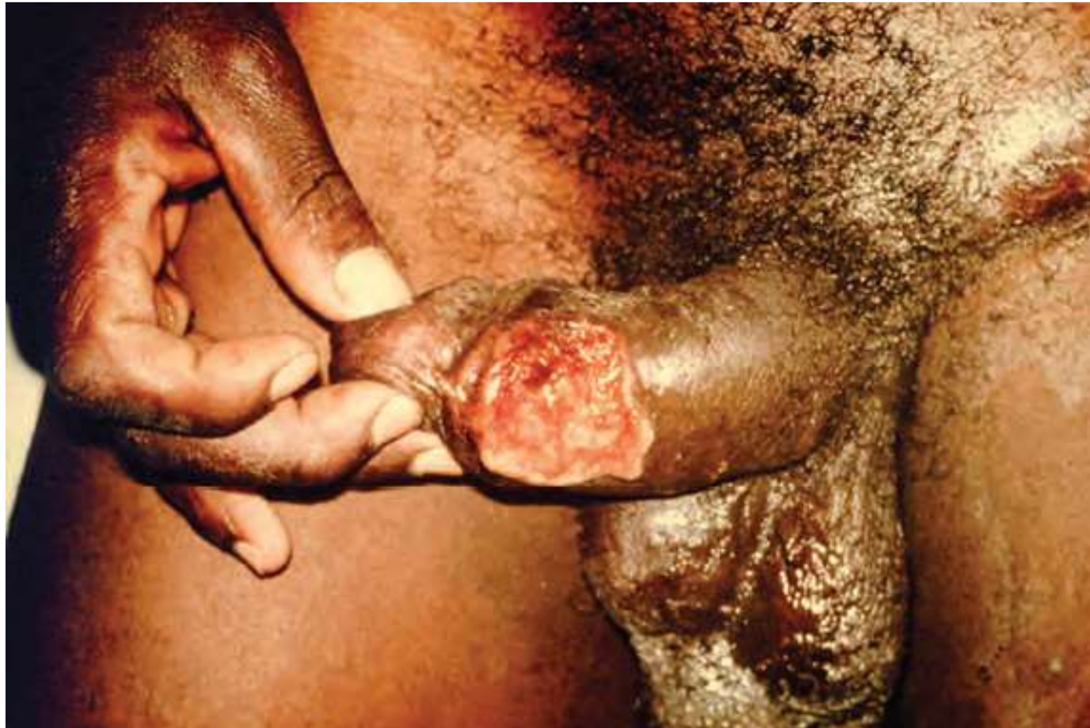
Chancroid (penile ulceration)



Chancroid (ulceration in a female)

Penile chancroid with inguinal bubo

Giant penile chancroid with inguinal bubo.



Discharging inguinal bubo.

Clinical Variants of Chancroid

- Giant Chancroid: Single lesion extends peripherically and shows extensive ulceration.
- Large Serpiginous Ulcer: Lesion that becomes confluent, spreading by extension and autoinoculation. The groin or thigh may be involved (Ulcus molle serpiginosum).
- Phagedaenic Chancroid: Variant caused by superinfection with fusospirochetes. Rapid and profound destruction of tissue can occur (Ulcus molle gangraenosum).

Clinical Variants of Chancroid

- Transient Chancroid: Small ulcer that resolves spontaneously in a few days may be followed 2–3 weeks later by acute regional lymphadenitis.
- Follicular Chancroid: Multiple small ulcers in a follicular distribution.
- Papular Chancroid: Granulomatous ulcerated papule may resemble donovanosis (GRANULOMA INGUINALE) or condylomata lata (Ulcus molle elevatum).

DIFFERENTIAL DIAGNOSIS

- The three classic etiologic agents for genital ulceration are (1) H. ducreyi, (2) Treponema pallidum, and (3) herpes simplex.
- The clinical appearance of the diseases caused by these three organisms can be extremely variable in both men and women, and therefore, clinical diagnosis of genital ulcer disease can be made with acceptable confidence only for a minority of patients
- In a high percentage of genital ulcers, no pathogen can be isolated but coinfections with syphilis or herpes simplex are not uncommon as well

Differential Diagnosis of Chancroid

- Most Likely: Genital herpes; Syphilis; Lymphogranuloma venereum
- Consider: Other bacterial STI (granuloma inguinale); Viral infections (HIV infection; Genital herpes zoster); Parasitic infections (Leishmaniasis; Scabies); Inflammatory diseases (Behçet’s disease; Aphthosis; Crohn’s disease; Pyoderma gangrenosum); Drug induced (Fixed drug eruption)

A syphilitic chancre must be differentiated from chancroid

	chancre	Chancroid
incubation	3 weeks	short period of 4–7 days
pain	painless erosion, not an ulcer	extremely painful
inflammatory zone	has no surrounding inflammatory zone	has a surrounding inflammatory zone
The edge	is not undermined, and the surface is smooth and at the level of the skin.	ulcer edge is undermined and extends into the dermis
appearance	It has a dark, velvety red,; it has no overlying membrane	It is covered by a membrane
palpation	it is cartilage hard on palpation	feels soft
Lymphadenopathy	may be bilateral and is nontender and nonsuppurative	usually unilateral and tender and may suppurative

COMPLICATIONS :Due to delay in treatment, various complications may Occur.

- Painful inguinal adenitis (up to 50%)
- Spontaneous ruptures of inguinal buboes with occurrence of large abscesses and fistula formation(rare)
- Spreading of Haemophilus ducreyi to distant sites (kissing ulcers) and/or extragenital lesions due to autoinoculation) (in 50% of male patients)
- Esophageal lesions in HIV patients
- Acute conjunctivitis (very rare)
- Bacterial superinfection leading to extensive destruction (rare)
- Scarring leading to phimosis (rare)
- Erythema nodosum (very rare)
- Enhanced HIV transmission (3–10-fold increased risk)

TREATMENT

- treatment failures were common with β-lactamase , tetracycline, sulfonamides, chloramphenicol, and aminoglycosides.
- in vitro, the most active drugs against H. ducreyi are azithromycin, Ceftriaxone, Ciprofloxacin, and erythromycin.
- Local treatment consists of antiseptic dressings. Suppurative nodes should not be incised; if necessary, they can be punctured to prevent spontaneous rupture and sinus tract formation.
- In patients with phimosis, a circumcision may be necessary when all active lesions have healed.
- In pregnancy, Ceftriaxone is the preferred drug, but azithromycin can be used as well

TREATMENT

- Azithromycin: 1 g orally in a single dose
- Ceftriaxone: 250 mg IM in a single dose
- Ciprofloxacin: 500 mg orally 2 times a day for 3 days
- Erythromycin base: 500 mg orally daily for 7 days

Reference for STD examination.

- Fitzpatrick's------------Eighth Edition
- Rook's-------------ninth edition