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**Dermatology** 

# **Chancroid in an Immunocompromised Patient**

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Abstract Case Report

Chancroid (or chancroid or Ducrey's chancre) is a sexually transmitted infection (STI) caused by Ducrey's bacillus (or Haemophilus ducreyi), characterized by an ulcerated inoculation chancre associated with lymphadenopathy. We report the case of a 40-year-old female patient who presented with multiple genital ulcers one week after unprotected intercourse. Haemophilus ducrey was detected on culture, and the patient was treated with antibiotics with good progress.

**Keywords:** Genital ulcers, Chancroid, Immunosuppression.

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### Introduction

Chancroid is a sexually transmitted infection. It is the leading cause of genital ulceration in endemic areas, particularly in sub-Saharan Africa, Asia, and Latin America [1]. In women, the diagnosis is much less common. This difference can be explained by several factors. Male anatomy facilitates clinical recognition, whereas cervical ulcerations are asymptomatic in some women.

### **CLINICAL OBSERVATION**

This is a 40-year-old female patient from sub-Saharan Africa, being monitored for HIV infection, receiving triple therapy, with knowledge of recent unprotected sexual intercourse with a casual partner, who consulted for genital ulcers that had been developing for two weeks. The dermatological examination revealed: multiple ulcers located on the labia majora and minora with extension to the inguinal region, large in size, painful spontaneously and on palpation, non-infiltrated, and soft in consistency. The edges are detached and inflamed, the base is sanious, covered with a purulent coating (Figure 1). There is painful, inflammatory, and voluminous left inguinal lymphadenopathy. A sample of the puriform coating taken from the edge of a lesion was taken: direct examination with Gram staining revealed Gram-negative bacilli with bipolar staining (Figure 2). Serology for treponematoses was negative. The patient was put on ceftriaxone 250 mg single dose associated with Azithromycin 1000 mg single dose with good progress.



Figure 1: Multiple genital ulcers on the vulva and thighs

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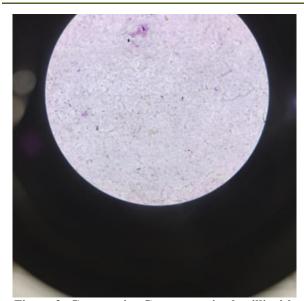


Figure 2: Gram stain: Gram-negative bacilli with bipolar staining

### **DISCUSSION**

The notion of unsafe sexual intercourse points to a sexually transmitted infection. When faced with an STI, the first infection to consider is genital herpes, which has a short incubation period (2 to 7 days). It is characterized by clustered, hyperalgesic, and often superinfected post-vesicular erosions. As a second option, primary syphilis can be considered, with a long incubation period (average 3 weeks); the ulceration is often single, clean if not superinfected, indurated, and painless, with multiple lymphadenopathy (LA), including a large, firm, non-inflammatory LA, "the groin prefect." Syphilis serology is negative. Other STIs can be considered: donovanosis or inguinal granuloma has a generally long incubation period (several weeks); there are generally several ulcero-vegetative lesions, indurated, painless, budding at the periphery, extensive; there are no satellite lymph nodes. Lymphogranuloma venereum or Nicolas-Favre disease has a variable incubation period (from 3 days to 4 weeks); genital ulceration is often inapparent or very fleeting, superficial, with inflammatory ADP on either side of the femoral arch, evolving towards "watering can" fistulization. It is the ADP that leads to the diagnosis [2,3].

This is chancroid, a venereal disease caused by Haemophilus ducreyi, or Ducrey's bacillus, which is very common in tropical areas. Its incubation period is brief, averaging 2 to 5 days. In women, the ulcer is usually located on the vulva, but vaginal and cervical locations are also common, as well as on the skin of the inner thighs. Oral and anal locations are possible [4].

Clinical manifestations begin with an erythematous or pustular papule at the site of inoculation [5, 6]. A deep and painful ulceration subsequently develops. The edge of the ulcer is erythematous but does

not present induration as in syphilitic chancre. In half of the cases, unilateral or bilateral lymphadenopathy develops. It is typically painful. If left untreated, lymphadenopathy may coalesce and become suppurative, requiring drainage of the pus.

The diagnosis is confirmed by taking a sample of the serosity from the edges of the lesion, which revealed the presence of bipolar staining NGBs measuring 1.5 to 2  $\mu m$  long and 0.5  $\mu m$  wide. The bacilli are inside the polymorphonuclear cells, sometimes extracellular, and they are grouped in chains, giving the appearance of a Morax bicycle chain. Another associated etiology must always be considered, particularly syphilis, hence the systematic performance of syphilis serology, and HIV/AIDS infection. STIs (syphilis, soft cancer, infections due to gonococcus or Chlamydia in particular) are cofactors of HIV infection. Our patient is being monitored for HIV infection.

The treatment of chancroid is based on the oral or intramuscular use of antibiotics [7-8]. According to WHO recommendations, erythromycin (500 mg 3x/day for 5-7 days, po) is used as the first line of treatment. As an alternative, or in case of therapeutic resistance, azithromycin (1,000 mg in a single oral dose) [9] or cefriaxone (250 mg in a single intramuscular injection) can be administered. It should be noted that the efficacy of these alternative treatments is lower in patients with HIV. A clinical response occurs after 48 hours, but healing of the genital ulcer is often achieved only after about ten days.

Sexual hygiene advice should be given, in particular individual prevention of STIs by using condoms. At the collective level, the methods of combating STIs in tropical environments consist of: primary prevention: lower-risk sexual behavior, in particular condom use, secondary prevention: curative treatment of STIs. Treatment of the sexual partner(s), essential but difficult, screening for other associated STIs: HIV infection, syphilis, but also viral hepatitis B and C, treatment of specific risk groups: sex workers and their clients[2,3].

#### Conclusion

Genital ulcers are a common reason for dermatology consultations. The etiologies are multiple, with sexually transmitted infections predominating. A rigorous diagnostic approach is necessary to ensure adequate management.

#### **Conflicts of Interest**

The authors declare no conflict of interest.

#### **Author Contributions**

All authors contributed to this work and read and approved the final version of the manuscript.

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