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# Haemophilus ducreyi

*Haemophilus ducreyi* is a fastidious, gram-negative, facultative anaerobic coccobacilli and the causative agent of chancroid. Chancroid is a sexually transmitted disease which causes genital ulcerative disease (GUD).

Historically, *H. ducreyi* infections were predominantly seen in Africa, Asia, the Caribbean, and Latin America. Recently, the number of infections has decreased significantly in most of these regions, with the exception of North India and Malawi. Cases are also increasing in the South Pacific in children, presenting as non-genital cutaneous ulcers. In the UK, cases are generally related to travel or migration from these areas.

The incubation period tends to be short (3-7 days). An infected individual will develop a tender erythematous papule, most frequently on the prepuce and frenulum in men and on the vulva, cervix and perianal areas in women. Genital papules quickly progress to pustules which may ruptures after a few days resulting in a superficial ulcer with ragged and undermined edge, the bases of which are granulomatous with purulent exudate. These ulcers may persist for months if left untreated. Additional ulcers may develop due to autoinoculation of opposing skin sites (“kissing ulcers”). Other sequelae include inguinal lymphadenitis, which develops in approximately half of patients and may progress into buboes. These buboes may rupture spontaneously.

According to the CDC, a probable diagnosis of chancroid should be made if the following criteria are met (M-2751):

1. Painful genital ulcers.
2. Appearance of genital ulcers are typical for chancroid.
3. *Treponema pallidum* and HSV have been ruled out.

Ulcer swabs are frequently taken for diagnosis. Microscopy is not recommended for diagnosis due to low sensitivity and specificity. Diagnosis via culture is also difficult due to several compounding issues: firstly, *H. ducreyi* is extremely fastidious in nature and requires strain specific selective media; secondly, following the sample retrieval, the organism only survives a few hours on a swab tip. Together these factors limit the sensitivity of culture to approximately 75%. Culture of material from buboes by puncture or aspiration is less sensitive than ulcers swabs.

Nucleic acid amplification techniques are ideal for demonstrating the presence of *H. ducreyi* DNA in clinical material as the process is not limited by strain specific growth requirements and/or the viability of the organism.

At Micropathology Ltd, the presence of *H. ducreyi* DNA is assessed using a semi-nested PCR assay. Genital swabs are UKAS accredited sample types, although other samples types may be tested and reported along with an appropriate caveat stating that the sample is not validated for this assay.

## References