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Haemophilus ducreyi

Haemophilus ducreyi is a fastidious Gram-negative anaerobic coccobacilli and the causative agent of chancroid. Chancroid is a sexually transmitted disease which causes genital ulcerative disease (GUD). The incubation period tends to be short (3-7 days) where an infected individual will develop a tender erythematous papule, quickly progressing to a pustule which may ruptures after a few days. This may leave a painful superficial granulomatous and purulent ulcer, typically with a necrotic base and ragged or undetermined edge, which can persist for months if left untreated[1,2]. Regional secondary superinfections, autoinoculation to opposing skin sites and lymphadenopathy are also common with further progression to buboes and spontaneous rupture not uncommon. Infection has also been shown to be a major co-factor in HIV transmission, and treatment is less effective in patients with AIDS with reports of reduced healing.

Where infections were predominantly seen in Africa, Asia, the Caribbean and Latin America; the numbers of infections have decreased markedly from the majority of countries with the exception of North India and Malawi. Cases also appear to be increasing in children in the South Pacific as non-genital cutaneous ulcers[3]. In the UK cases are related to travel or migration from these areas[4].

Diagnosis is predominantly based on clinical findings, however as genital ulcerative diseases are common throughout the world, and may also be caused by *Treponema pallidum* (syphilis and yaws), genital herpes, lymphogranuloma venereum (LGV) or *Klebsiella granulomatis* (donovanosis); misdiagnosis of chancroid and also co-infection with these organisms is common.

Laboratory diagnosis may be made from aspirates taken from the lymph node or from ulcer swabs, previously using microscopy and Gram staining (bacteria often demonstrating ‘shoal of fish’ or train track appearance); or culture which is considered the ‘gold standard’ but is difficult owing to the fastidious nutritional requirements of this organism. Therefore, NAATs (nucleic-acid amplification tests) are the assays of choice for increased specificity and sensitivity when diagnosing *H. ducreyi* infection[5].

Clients may wish to send us the accredited sample type (genital swabs) however other unaccredited/unvalidated specimen types such as tissue or aspirates from an ulcerative area or swollen lymph node may be tested and reported along with an appropriate caveat on our semi-nested assay.

References

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[3]Marks, M., Chi, K.-H., Vahi, V., Pillay, A., Sokana, O., Pavluck, A., Solomon, A. W. (2014). *Haemophilus ducreyi* Associated with Skin Ulcers among Children, Solomon Islands. *Emerging Infectious Diseases*, **20**(10), 1705–1707. http://doi.org/10.3201/eid2010.140573

[4]Lautenschlager, S., Kemp, M., Jørgen Christensen, J., Vall Mayans, M. and Moi, H. (2017) European guideline for the management of chancroid. International journal of STD and AIDS

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