Micropathology Ltd

Tel 24hrs: +44 (0) 24 - 76 – 323222

Fax / Ans: +44 (0) 24 - 76 - 323333

University of Warwick Science Park, Venture Centre, Sir William Lyons Road, Coventry CV4 7EZ

Website: www.micropathology.com E-mail: info@micropathology.com

Molecular diagnosis of Lymphogranuloma venereum (LGV) infection

Lymphogranuloma venereum (LGV) is a sexually transmitted infection caused by 3 serovars of *Chlamydia trachomatis* (Serovars L1, L2, and L3).

LGV has been a rare occurrence in industrialized countries since the mid-1960s. Since 2003, however, there have been a series of LGV outbreaks reported across Europe mostly among HIV positive men who have sex with men.

In the UK almost all cases (99%) occur among MSM, these cases are often linked to dense sexual networks and are not to LGV-endemic countries (Southern Africa, west Africa, Madagascar, India, southeast Asia and the Caribbean).

The clinical course of LGV is classically divided into three (BASHH, 2013):

Primary lesion: following inoculation, the incubation period is between 3 to 30 days. Infection may present as a painless papule or pustule or shallow erosion or ulcer. When inoculation occurs onto rectal mucosa, haemorragic proctitis is the primary manifestation leading to rectal pain, anorectal bleeding, mucoid and/or haemopurulent rectal discharge as well as other symptoms of lower gastro-intestinal inflammation. It is possible for rectal LGV cases to present asymptomatically.

Secondary lesions the most common clinical manifestation of genital LGV in heterosexuals is tender inguinal or femoral lymphadenopathy which is generally unilateral. Lymphadenopathy is often preceded by a self-limiting genital ulcer or papule (primary lesion) at the site of inoculation (10-30 days prior). Lymphadenopathy can lead to bubo formation. These buboes may ulcerate and discharge pus.

Tertiary stage. Persistence or progressive spread of *C. trachomatis* in anogenital tissues incites a chronic inflammatory response and destruction of tissue resulting in fistulae, strictures, chronic granulomatous disfiguring fibrosis and scaring. Infection rarely progresses to this stage with the majority of patients recovering after the second stage without sequelae.

The recommended diagnostic technique for the LGV detection is NAATs such as PCR as they are highly sensitive and specific across multiple specimen types (BASHH, 2013). The 2023 BASHH guidelines for STI testing recommends testing all *C.*

trachomatis positive rectal, pharyngeal, and ano-genital ulcer swabs from MSM for LGV (BASHH, 2023).

At Micropathology Ltd we use a probe-based PCR to identify LGV serovars.

UKAS accredited sample types for this assay are swabs (endocervical, vaginal, rectal, throat, genital), first catch urine, and biopsies (rectal, lymph).

Other sample types, for example lymph node or buboe aspirate, may be tested and will be reported along with an appropriate caveat stating that the sample type is not accredited.

References

BASHH UK National Guideline for the management of LGV (*Lymphogranuloma verenreum*), 2013.

BASHH Summary Guidance on Testing for Sexually Transmitted Infections, 2023.