CASE REPORT

The first case record of a female patient with bubonic lymphogranuloma venereum (LGV), serovariant L2b

Stephan P Verweij,1 Sander Ouburg,1 Harry de Vries,3 Servaas A Morré,1,2 Cees J W van Ginkel,4 Hanna Bos,5 Fré W Sebens6

ABSTRACT

Since 2003, a lymphogranuloma venereum epidemic has been reported in The Netherlands and other European countries. This epidemic is caused by Chlamydia trachomatis serovariant L2b and has only been seen in men having sex with men. The authors investigated a woman presenting with a bubo in her right groin. The authors showed by real-time PCR that the woman was infected with C trachomatis, serovariant L2b. This is the first reported case study of a female patient with bubonic lymphogranuloma venereum caused by serovariant L2b, which was probably contracted via her bisexual male partner.

Chlamydia trachomatis serovars L1–L3 cause lymphogranuloma venereum (LGV). The disease classically manifests itself as an inguinal syndrome, or may cause a severe anorectal syndrome.1 In 2003, an LGV epidemic among men having sex with men (MSM) was reported in The Netherlands and other European countries; the vast majority was due to infections with the easily treatable serovariant L2b.2–3 With the ongoing epidemic, it is likely that the disease has spread to bisexual men, and, subsequently, to heterosexual women. Recently, Peuchant et al2 reported the first case of a rectal L2b infection in a female patient; there is, however, no publication about urogenital L2b infections in women. We report the first case of bubonic L2b in a female subject.

A recently healthy Caucasian female subject, aged 20, was initially referred to our surgical outpatient clinic with a lump in her right groin, and was later also seen by a dermatologist. Oral therapy with flucloxacillin proved ineffective.

At referral, we saw a female subject of a small stature. In her right groin, just below the inguinal ligament, there was a painful lump (‘bubo’) measuring 2.5 cm surrounded by several small palpable lymphnodes. The lump developed over a week without any preceding symptoms. Two months prior to referral she was seen by a gynaecologist with bloody vaginal discharge. Vaginal cultures showed a bacterial imbalance with overgrowth of Gardnerella vaginalis. She was treated accordingly.

Thirteen days later, an abscess in the lymphnodes was apparent and surgically treated by incision and drainage. Aerobic and anaerobic bacterial cultures showed no growth of pathogenic bacteria; culture and PCR for detection of Mycobacterium tuberculosis were negative. A negative serologic test for Bartonella henselae immunoglobulin (Ig)M (inhouse ELISA, National institute for Public Health and the Environment (RIVM), The Netherlands) and a negative B henselae PCR (inhouse PCR, RIVM) of the pus made cat scratch disease very unlikely, given the duration of symptoms.

Two weeks later, a new mass anterior to the pubic bone formed an abscess which was also surgically treated leaving an ulcer. Aerobic and anaerobic bacterial cultures yielded no pathogenic microorganisms.

However, C trachomatis RT-PCR from pus of this abscess tested positive. Serum taken from the patient at the same date turned out to be strongly positive (OD=2.0) for anti-C trachomatis IgG antibodies (C trachomatis-IgG plus, medac Diagnostika) suggestive of a systemic C trachomatis disease.

Given the strong suspicion of LGV, the pus sample was sent to the reference C trachomatis laboratory (Laboratory of Immunogenetics, VU Medical Center, Amsterdam, The Netherlands). This sample tested positive for LGV; additional epidemiological LGV typing resulted in subtype L2b (inhouse L2b RT-PCR5)7.

Therefore, the diagnosis of inguinal LGV was assessed and the patient was treated with doxycyclin 100 mg twice daily orally for 3 weeks. PCR analyses of urine for Neisseria gonorrhoeae and C trachomatis were negative. During the 2 months following the start of doxycyclin, the initial bubo in the groin completely resolved without any sequelae up to the last visit.

We report the first case of bubonic LGV in a Dutch female patient caused by serovariant L2b. She was treated according to European protocols8: doxycyclin 100 mg twice daily for 3 weeks. At last referral, she had no sequelae, indicating effective treatment. Both the patient and her regular partner reported multiple partnerships, both same and opposite sex, and the partner reported recent sexual contact with men.

Rapid diagnosis is nowadays possible due to newly developed RT-PCR7 abolishing the need for laborious sequencing of ompA for L2b confirmation.5

Prevalence of LGV in Europe is the highest in the UK, France, Germany and The Netherlands. Savage et al8 recently showed that 80%–100% of the diagnosed LGV cases in eight European countries were MSM. Between 2002 and 2007, 255 cases of LGV were reported in The Netherlands. The most recent figures show 183 cases in the period 2008–2009. All cases concerned MSM with anorectal infections.8
LGV is very uncommon in European women, although a few cases have been reported. The majority of these cases occur in LGV endemic areas and are mainly caused by serovar L2 or L2 variants. Of the strains sequenced, none were L2b. The cases are asymptomatic LGV cervicitis or urethritis.

In conclusion, we describe the first case of a bubonic L2b infection in a female subject. We identified the serovar by RT-PCR from a pus sample of the bubo. We expect more L2b cases will be identified in women in the near future.

Contributors SPV: analyses of sample, writing of manuscript, drafted the manuscript and performed laboratory analyses. SAM: writing of manuscript, critically revising manuscript, initiated the collaboration, supervised SPV. HdV: clinical tests, involved in patient diagnosis and treatment, critically read and revised the manuscript. SO: analyses of sample, critically revising manuscript, supervised laboratory analyses, supervised SPV. CJWvG: clinical tests, involved in patient diagnosis and treatment, critically read and revised the manuscript. HB: clinical tests, critically revising manuscript, involved in patient diagnosis and treatment, initiated the collaboration.

Competing interests None.

Patient consent Manuscript is fully anonymised. The patient cannot be identified from this manuscript.

Ethics approval This is a fully anonymised case report of one patient and not a study involving multiple patients in a clinical trial.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES
The first case record of a female patient with bubonic lymphogranuloma venereum (LGV), serovariant L2b

Stephan P Verweij, Sander Ouburg, Harry de Vries, et al.

Sex Transm Infect published online February 22, 2012
doi: 10.1136/sexttrans-2011-050298