Lymphogranuloma venereum among patients presenting at the HIV/STI clinic in Antwerp, Belgium : a case series

Ludwig Apers, Eric Florence, Tania Crucitti[1], Nabila Anwar

(1) Institute of Tropical Medicine, Clinical Sciences

Abstract

Objective of this study was to describe the patient characteristics and clinical presentation of laboratory confirmed lymphogranuloma venereum (LGV) cases, diagnosed at the Institute of Tropical Medicine (ITM), Antwerp, Belgium. Demographic and biomedical characteristics of all patients with chlamydia-positive sample results were retrieved for the years 2013 and 2014. Samples were obtained from both symptomatic and asymptomatic patients who consulted at the HIV/STI clinic. Fifty four patients with laboratory confirmed LGV were detected among 3885 nucleic acid amplification tests (NAATs) performed for the detection of chlamydia during the two years under review. Fifty three were men and equally fifty three had sex with men only (MSM). HIV (87%) and HCV (31.5%) were common concomitant infections, whilst anal gonorrhoea and syphilis were detected at the moment of the LGV diagnosis among 19 (35.2%) and 6 (11.0%) cases respectively. All cases were symptomatic, except one. The most frequent symptoms that were recorded could be categorised as proctitis (in 40 patients (74%)). Lymphadenopathy, anal and genital ulcers were signs that were present in 7 (13.0%), 4 (7.4%) and 2 patients (3.7%) respectively. LGV remains an important sexually transmitted disease among MSM. In this retrospective study, the far majority of LGV was detected amongst symptomatic persons. HCV, HIV, anal gonorrhoea and syphilis were associated co-infections. Proctitis in a high risk patient should alert the clinician for the possibility of an STI. (Acta gastroenterol. belg., **2017**, 80, **385-387**).

Key words : Lymphogranuloma venereum, MSM, co-infections, and symptoms

Introduction

Since the first decade of the twenty first century LGV has emerged as a relatively frequent sexually transmitted disease among specific risk groups in industrialised countries. Whereas it was formerly known as a genital ulcerative disease in heterosexuals in tropical and subtropical regions, with gross lymphnode swelling of the groins and possible abcedation (‘tropical bubo’), it occurs in the western world mainly as a gastro-intestinal disease in MSM, with varying symptoms. If the sexual behaviour of the patient is not known, or not asked for by the health worker, these symptoms are non-specific and may not lead to a clinical suspicion of a sexually transmitted disease (1). In that case the diagnosis may be easily missed. Epidemics have been described but since a decade most STI clinics register a steady annual number of cases (2,3,4).

LGV is caused by L1, L2 and L3 serovars of Chlamydia trachomatis that can be transmitted through unprotected vaginal, anal, or oral sexual contact.

In case of suspicion one needs to take a specimen e.g ; anal swab, biopt, ulcer material, for NAAT to detect C. trachomatis. If confirmed positive, further detection of LGV-specific DNA leads to the diagnosis of LGV.

There is some controversy whether LGV may have an asymptomatic course. Several older studies have shown that the majority of rectal LGV cases are symptomatic (5,6,7). A recent study documented only one rectal chlamydia-positive sample that was equivocal for LGV when typed, among 145 patients without urethral or rectal symptoms, but newly diagnosed with HIV, HCV and syphilis (7). Other studies however, in the UK and in the Netherlands, reported one quarter of anal LGV to be asymptomatic (4,8). A high co-infection rate of HIV, HCV, gonorrhoea and syphilis has been described, as well as an association with recent STI diagnoses (8).

We conducted a retrospective descriptive study among attendees of the HIV/STI clinic, Institute of Tropical Medicine in Antwerp, Belgium to document specific symptoms and co-infections amongst confirmed LGV cases, diagnosed at this specialised clinic.

Materials and Methods

Demographic and biomedical data of all patients with Chlamydia-positive sample results were gathered from the clinical and laboratory files for the years 2013 and 2014. Samples were obtained from both symptomatic and asymptomatic patients who consulted at the HIV/STI clinic. Cases were defined as patients that had a positive NAAT for LGV (Chlamydia L1-L3 serovar group). The Chlamydia tests were done in the context of an STI screening or because of suggestive symptoms. As the study was retrospective in nature, ‘proctitis’ was not well defined, nor confirmed by proctoscopy. When a combination of two or more of the symptoms ‘rectal pain, rectal discharge, bloody stools, constipation or tenesmus’ was found in the clinical notes, this was notified as proctitis. Beside routine data no other data were collected and all data were handled anonymously. Ethical clearance was not required, but the institutional review board of ITM approved the study.

Results

A total of 3885 NAATs for the detection of chlamydia were performed during the two years under review. Fifty

Correspondence to : Ludwig Apers, Nationalestraat 155, 2000 Antwerpen, Belgium
E-mail : lapers@itg.be

Submission date : 09/03/2016
Acceptance date : 22/05/2017

four patients had laboratory confirmed LGV, 53 of them were men, one was a genotypic male transgender. Equally fifty three men were MSM and one was a bisexual man. The median age was 38.5 years (interquartile range : 21-45). The following concomitant infections were present or detected at the moment of diagnosis: HIV among 47 patients (87%), HCV among 17 (31.5%), anal gonorrhoea among 19 (35.2%) and syphilis among 6 (11.0%). All cases were symptomatic, except one. The most prevalent symptoms that were recorded were the following: proctitis in 40 patients (74,0%), perineal pain in 9 (16.7%), abdominal pain in 8 (14.8%), urethritis and discharge was present in 3 (5.5%) and 2 (3.7%) patients, respectively. Lymphadenopathy, anal and genital ulcers were signs that were present in 7 (13.0%), 4 (7.4%) and 2 patients (3.7%) respectively. The results are summarised in table 1. All patients were treated with doxycycline 100mg orally twice a day for 21 days, the standard treatment for LGV(9). One patient that presented with a grossly swollen inguinal lymph node was aspirated twice after ultrasound diagnosis of an abscess ('bubo'). All patients recovered without complications.

Table 1. — **Patient characteristics of confirmed LGV cases diagnosed in 2013 and 2014**

Patient characteristics	Nr (%) or median (Interquartile range) N = 54
Demographics	
Age	38.5 (21 - 45)
Sex	
Male	53 (98.1%)
Female	1 (1.9%)
Sexual preference	
Homosexual	53 (98.1%)
Bisexual	1 (1.9%)
Heterosexual	0 (0%)
Symptoms and signs	
Asymptomatic	1 (1.9%)
Symptomatic	53 (98.1%)
Symptoms	
Urethritis	3 (5.5%)
Discharge	2 (3.7%)
Proctitis	40 (74,0%)
IM bleeding	0 (0%)
PC bleeding	0 (0%)
Abdominal pain	8 (14.8%)
Perineal pain	9 (16.7%)
Testicular pain	0 (0%)
Signs	
Genital ulcer	2 (3.7%)
Anal ulcer	4 (7,4%)
Lympadenopathy	7 (13,0%)
Co-infections	
HIV (chronic)	47 (87.0%)
HCV (chronic)	17 (31,5%)
Gonorrhoea	19 (35,2%)
Syphilis	6 (11,0%)
Herpes Simplex	0 (0%)
Sample site	
Anal	48 (88,9%)
Urethral	3 (5.5%)
Lymphnode	2 (3.7%)
Urine	1 (1.8%)
Cervical	0 (0%)
Throat	0 (0%)

Discussion

In this retrospective study we identified fifty four cases of laboratory confirmed LGV out of 3885 chlamydia tests performed. The profile and characteristics of the LGV patients confirm the findings in the international literature. It concerns a middle aged MSM with concomitant or pre-existing other STIs, reflecting unsafe sexual practices. The most frequent reasons for consulting are signs and symptoms of proctitis. A limitation of this study is the definition of proctitis, which was purely based on clinical symptoms, not confirmed by colonoscopy. This retrospective survey was indeed based on routine clinical management, and in this particular risk group of MSM, a diagnosis of a sexually transmitted infection has a high a priori chance. This determines the choice of investigations. CDC guidelines state: 'At the time of the initial visit (before diagnostic tests for chlamydia are available), persons with a clinical syndrome consistent with LGV, including proctocolitis or genital ulcer disease with lymphadenopathy, should be presumptively treated for LGV' (9). Only if STIs (including common bowel pathogens) are excluded, a colonoscopy is performed. We also want to repeat that our series of patients only concerns laboratory confirmed LGV cases. The fact that all patients responded well to adequate treatment, was considered as a sufficient argument not to do further investigations.

A second limitation is the study population: a mix of symptomatic and asymptomatic individuals of which the majority was followed because of HIV infection.
Only one third of all consultations in the HIV/STI clinic are in HIV non-infected individuals.

This patient mix probably explains the fact that almost all LGV cases were symptomatic, gastro-intestinal

symptoms being most common: diarrhoea/constipation with or without abdominal pain and perineal pain. Literature data differ but it is estimated that approximately 20% of LGV cases show no symptoms at all and can only be detected through screening. Systematic screening for other STIs, including LGV, is done among all HIV positive MSM in follow-up, but this does not always include routine anal swabbing: besides hepatitis and syphilis serology, only urine testing is done, at a six monthly interval. It is thus possible that asymptomatic anal cases are missed, but this is the consequence of reimbursement strategies that are applied by the national health insurance system: only two NAAT for the detection of C. trachomatis are reimbursed per patient per year.

The 'classical' symptom of LGV, (unilateral) lymphadenopathy, was present in seven out of the 54 LGV cases. In six out of these seven patients LGV was detected on a urine or urethral sample, or on lymph node aspirate, not on an anal sample. The patient with a positive anal swab and concomitant lymphadenopathy, was also HIV and HCV infected, had confirmed anal gonorrhoea and suffered from an anal ulcer. This observation confirms that testing should be guided by the profile of the patient, and the most common presentation, gastro-intestinal complaints. Screening of first void urine or a urethral swab however is equally important, as this might harbour undiagnosed LGV bacteria that may be a reservoir for transmission. If budgets or reimbursement procedures do not allow for this, pooling of samples may offer a solution. Instead of carrying out separate tests on three samples, so called triple site testing (pharyngeal, rectal and urethral/first void urine), one may opt to do one test on a pooled sample from these three sites per patient. Recent research has demonstrated that pooling of self-taken samples could be an effective and cost-saving method, with high negative predictive values (10). However, this research did not include LGV-testing on all positive chlamydia samples. It is beyond the scope of this article to comment on the cost-effectiveness of this method in our patient population.

Our finding of predominant anorectal forms of LGV, rather than urogenital, is indeed in agreement with most literature data: only three positive samples were obtained from the urethra, and one from first void urine. However, de Vrieze et al. demonstrated that asymptomatic urethral LGV infections among partners of index patients with anorectal LGV are a reality (11). Apart from shedding some light on the mode of transmission, it calls for partner treatment, with the recommended three weeks course of doxycycline 100mg twice a day. This is common practice in our clinic, but only when the partner is known. A substantial proportion of infections are the result of anonymous sex in high risk settings, whereby it is impossible to trace back the source patient.

In conclusion, LGV should be considered as a possible STI in all vulnerable patients that present with gastro-intestinal symptoms, especially if signs of proctitis are observed in a HIV or HIV/HCV infected MSM. LGV identification should be part of routine laboratory procedures in all positive chlamydia tests in MSM with persistent high risk sexual behaviour.

References

1. CEOVIC R., GULIN S.J. Lymphogranuloma venereum : Diagnostic and treatment challenges. *Infect. Drug. Resist*., 2015, **8** : 39-47.
2. VANDENBRUAENE M., OSTYN B., CRUCITTI T., DE SCHRIJVER K., SASSE A., SERGEANT M, *et al.* Lymphogranuloma venereum outbreak in men who have sex with men (MSM) in Belgium, January 2004 to July 2005. *Euro Surveill*. [Internet], 2005 Sep 29 [cited 2017 Feb 28] ; **10** (9) : E050929.3. Available from : http://www.ncbi.nlm.nih.gov/pubmed/16788240.
3. NIEUWENHUIS R.F., OSSEWAARDE J.M., GÖTZ H.M., DEES J., THIO H.B., THOMEER M.G.J. *et al*. Resurgence of Lymphogranuloma Venereum in Western Europe : An Outbreak of Chlamydia trachomatis Serovar L 2 Proctitis in The Netherlands among Men Who Have Sex with Men. *Clin. Infect. Dis*. [Internet], 2004 Oct 1 [cited 2017 Feb 28], **39** (7) : 996-1003. Available from : http://www.ncbi.nlm.nih.gov/pubmed/15472852.
4. DE VRIEZE N.H.N., VAN ROOIJEN M., VAN DER LOEFF M.F.S., DE VRIES H.J.C., SCHIM VAN DER LOEFF M.F. Anorectal and inguinal lymphogranuloma venereum among men who have sex with men in Amsterdam, The Netherlands: trends over time, symptomatology and concurrent infections. *Sex Transm. Infect.* [Internet], 2013, **89** (7) : 548-52. Available from : http://www.ncbi.nlm.nih.gov/pubmed/23427272 5.
5. ANNAN N.T., SULLIVAN A.K., NORI A., NAYDENOVA P., ALEXANDER S., MCKENNA A. *et al*. Rectal chlamydia – a reservoir of undiagnosed infection in men who have sex with men. *Sex Transm. Infect*. [Internet], 2009 Jun 1 [cited 2017 Feb 28], **85** (3) : 176-9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/19176570.
6. WARD H., ALEXANDER S., CARDER C., DEAN G., FRENCH P., IVENS D. *et al*. The prevalence of lymphogranuloma venereum infection in men who have sex with men: results of a multicentre case finding study. *Sex Transm. Infect*. [Internet], 2009 Jun 1 [cited 2017 Feb 28], **85** (3) : 173-5. Available from : http://sti.bmj.com/cgi/doi/10.1136/sti.2008.035311.
7. PALLAWELA S., BRADSHAW D., HODSON L., REHILL K., WONG F., ROCKWOOD N. *et al*. Screening for asymptomatic lymphogranuloma venereum co-infection in men who have sex with men newly diagnosed with HIV, hepatitis C or syphilis. Int. J. STD. AIDS, 2015, **0** (0) :1-3.
8. SAXON C., HUGHES G., ISON C. Asymptomatic lymphogranuloma venereum in men who have sex with men, United Kingdom. *Emerg. Infect. Dis.*, 2016, **22** (1) : 112-6.
9. Centers for Disease Control and Prevention. Lymphogranuloma Venereum (LGV) - 2015 STD Treatment Guidelines [Internet]. [cited 2017 Mar 31]. Available from: https://www.cdc.gov/std/tg2015/lgv.htm
10. SULTAN B., WHITE J.A., FISH R., CARRICK G., BRIMA N., COPAS A. *et al*. The "3 in 1" Study : Pooling Self-Taken Pharyngeal, Urethral, and Rectal Samples into a Single Sample for Analysis for Detection of Neisseria gonorrhoeae and Chlamydia trachomatis in Men Who Have Sex with Men. Munson E, editor. *J. Clin. Microbiol*. [Internet], 2016 Mar [cited 2017 Feb 28], **54** (3) : 650-6. Available from : http://www.ncbi.nlm.nih.gov/pubmed/26719439
11. DE VRIEZE N.H.N., VAN ROOIJEN M., SPEKSNIJDER A.G.C.L., DE VRIES H.J.C. Urethral Lymphogranuloma Venereum Infections in Men With Anorectal Lymphogranuloma Venereum and Their Partners. *Sex Transm. Dis*. [Internet], 2013, **40** (8) : 607-8. Available from : http://content.wkhealth.com/linkback/openurl?sid=WKPTLP:landingpage&an=00007435-201308 000-00001.