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Lymphogranuloma venereum: the Italian experience

M Cusini,1 V Boneschi,1 L Arancio,1 S Ramoni,1 L Venegoni,1 F Gaiani,1 H J C de Vries2

ABSTRACT

An epidemic of lymphogranuloma venereum (LGV) has been described in men who have sex with men (MSM) in the western world, particularly in western Europe. The first Italian case was reported by the authors in 2006, and up to March 2008 there have been 13 symptomatic cases, all in MSM. Ten cases had LGV proctitis and three cases had inguinal adenopathy as their clinical presentation. The initial three cases reported receptive anal intercourse in metropolitan areas of northern Europe, Turkey and eastern Europe, whereas the later cases were infections acquired locally. Diagnosis was by LGV-specific real-time PCR in nine cases, by symptoms and PCR for Chlamydia trachomatis in three cases, and in one case clinically and epidemiologically.

Only sporadic imported cases of lymphogranuloma venereum (LGV) were reported in Europe and North America until 2004, when a new epidemic of LGV, presenting with erosive proctitis, was reported from Rotterdam, The Netherlands,1 affecting men who have sex with men (MSM).2 Chlamydia trachomatis LGV serovars cause a severe inflammation with invasion of the submucosal tissue and of the lymphatic system. The ano-genito-rectal syndrome is characterised by proctitis and hyperplasia of the intestinal lymphatic tissue. Complications, such as local abscesses and rectal strictures or stenoses, are reported.3

We observed the first Italian case at the Sexually Transmitted Disease (STD) Centre of Milan in March 2006.4 Up to March 2008 we collected a series of 10 patients and three more cases were observed during 2007 in Florence.

We describe the main epidemiological and clinical features of our series.

METHODS

The study design was a descriptive case series. The patients were MSM attendees of two STD centres in Milan and Florence with signs of proctitis and/or genital ulcerative disease, or inguinal syndrome. Screening culture for gonorrhoea, nucleic acid amplification tests for urogenital chlamydia, syphilis serology and HIV tests in HIV-negative patients were performed. Ulcer swabs were tested with nucleic acid amplification tests for herpes simplex virus5 and Treponema pallidum.6

C trachomatis was first diagnosed by a commercial kit with reverse transcriptase PCR after cell lysis. We used the C trachomatis 16S-real time test (ref AA842; Nuclear Laser Medicine srl, Milan, Italy). This kit provides reagents for contemporaneous amplification and detection of 560 bp 16S rRNA gene and a 154 bp internal control, which is a human sequence codifying factor V through ‘real time’ PCR.

Table 1 Case series: clinical, epidemiological and laboratory features

<table>
<thead>
<tr>
<th>Patient</th>
<th>Positive PCR</th>
<th>Sexual contacts abroad</th>
<th>Clinical signs</th>
<th>HIV infection</th>
<th>HAART</th>
<th>CD4 cells/ml</th>
<th>STI history</th>
<th>No of partners in past 6 months</th>
<th>LGV diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Milan</td>
<td>Anal swab</td>
<td>Northern Europe</td>
<td>Anal discharge, rectal erosion</td>
<td>No</td>
<td>No</td>
<td>nd</td>
<td>Negative</td>
<td>10</td>
<td>PCR L2</td>
</tr>
<tr>
<td>2 Milan</td>
<td>Inguinal aspirate</td>
<td>Only Italy</td>
<td>Inguinal abscess (right and left)</td>
<td>No</td>
<td>No</td>
<td>nd</td>
<td>Negative</td>
<td>Unknown</td>
<td>CT serology</td>
</tr>
<tr>
<td>3 Milan</td>
<td>Penile swab</td>
<td>Unknown</td>
<td>Penile chancre and inguinal abscess (left)</td>
<td>No</td>
<td>No</td>
<td>nd</td>
<td>Negative</td>
<td>3</td>
<td>PCR L2</td>
</tr>
<tr>
<td>4 Milan</td>
<td>Perianal swab</td>
<td>Unknown</td>
<td>Perianal erosion</td>
<td>Yes</td>
<td>Yes</td>
<td>300</td>
<td>Syphilis I</td>
<td>10</td>
<td>PCR L2</td>
</tr>
<tr>
<td>5 Milan</td>
<td>Anal swab</td>
<td>Unknown</td>
<td>Perianal discharge and anal erosions</td>
<td>Yes</td>
<td>Yes</td>
<td>n.d.</td>
<td>Genital warts</td>
<td>Unknown</td>
<td>PCR L2</td>
</tr>
<tr>
<td>6 Milan</td>
<td>Perianal swab</td>
<td>Turkey</td>
<td>Anal discharge and perianal erosions</td>
<td>Yes</td>
<td>Yes</td>
<td>n.d.</td>
<td>Genital warts</td>
<td>Unknown</td>
<td>PCR L2</td>
</tr>
<tr>
<td>7 Milan</td>
<td>Penile swab</td>
<td>Unknown</td>
<td>Nodular erosive lesion</td>
<td>Yes</td>
<td>Yes</td>
<td>nd</td>
<td>Genital warts</td>
<td>Unknown</td>
<td>PCR L2</td>
</tr>
<tr>
<td>8 Milan</td>
<td>Penile swab</td>
<td>Unknown</td>
<td>Nodular erosive lesion</td>
<td>No</td>
<td>No</td>
<td>nd</td>
<td>Syphilis late latent</td>
<td>30</td>
<td>PCR L2</td>
</tr>
<tr>
<td>9 Milan</td>
<td>Anal swab</td>
<td>Ukraine</td>
<td>Anal discharge and rectal erosion</td>
<td>Yes</td>
<td>No</td>
<td>600</td>
<td>Syphilis I</td>
<td>1</td>
<td>PCR L2</td>
</tr>
<tr>
<td>10 Milan</td>
<td>Anal and perianal swab</td>
<td>Only Italy</td>
<td>Anal discharge and perianal erosion</td>
<td>Yes</td>
<td>No</td>
<td>n.d.</td>
<td>Syphilis II</td>
<td>2</td>
<td>PCR L2</td>
</tr>
<tr>
<td>11 Florence</td>
<td>Anal swab</td>
<td>Unknown</td>
<td>Anal discharge and rectal erosion</td>
<td>Yes</td>
<td>Yes</td>
<td>500</td>
<td>Hepatitis B, gonorrhoea</td>
<td>6</td>
<td>PCR</td>
</tr>
<tr>
<td>12 Florence</td>
<td>Anal swab</td>
<td>Only Italy</td>
<td>Anal discharge</td>
<td>Yes</td>
<td>Yes</td>
<td>500</td>
<td>Syphilis II, gonorrhoea</td>
<td>2</td>
<td>PCR</td>
</tr>
<tr>
<td>13 Florence</td>
<td>Anal swab</td>
<td>Only Italy</td>
<td>Anal discharge</td>
<td>No</td>
<td>No</td>
<td>nd</td>
<td>Syphilis II</td>
<td>4</td>
<td>PCR</td>
</tr>
</tbody>
</table>

CT, C trachomatis; HAART, highly active antiretroviral therapy; LGV, lymphogranuloma venereum; L2, identification done in Amsterdam; nd, not done; STI, sexually transmitted infection.
For the Milanese samples, identification of LGV serovars was conducted in Amsterdam, and for the Florentine samples in the microbiology laboratory of Azienda Ospedaliera Universitaria Careggi Firenze, as described before.7

Chlamydia serology was performed by ELISA according to the manufacturer’s protocol (NovaLisa IgG ELISA; NovaTec Immundiagnostica GmbH, Dietzenbach, Germany).

RESULTS
From March 2006 to December 2007, 13 patients with LGV were diagnosed (table 1).

In 10 cases C trachomatis was detected from rectal or perianal swabs and in two cases from ulcerative lesions on the genitalia. In nine cases from Milan positivity for LGV C trachomatis was confirmed in Amsterdam. In one case the diagnosis was based on the history (LGV proctitis in partner), clinical symptoms (inguinal adenopathy) and C trachomatis serology positive at high titres.

All patients reported sex with men only: unprotected receptive anal intercourse was reported by two patients, whereas the inguinal LGV cases reported unprotected insertive anal sex. The rest of the patients reported protected receptive anal intercourse.

One patient had sexual contact in continental Europe, one in Turkey and one in eastern Europe.

Eight patients were HIV positive; the others were and remained seronegative during follow-up (3–6 months).

Concurrent sexually transmitted infections (STI) were found in five cases: two with external genital warts, one with primary syphilis and two with secondary syphilis. In eight patients one or more previous STI were recorded in the clinic files.

All patients attended regular follow-up for at least 6 months; two developed primary syphilis, one gonococcal urethritis and one external genital warts.

DISCUSSION
We report 13 cases of LGV in northern Italy over a period of 21 months. All were symptomatic, but three had inguinal adenopathy only. All patients were treated with doxycyclin 100 mg twice a day for 21 days with complete response.

Asymptomatic LGV has been reported, posing the question of the need to introduce anal C trachomatis screening as a routine in MSM. In addition, the inguinal presentation highlights the need to screen for LGV in all cases of genital ulcers.8

In our series, HIV seropositivity was only 62%, which is lower than in other reported series in which up to 82% of cases were HIV positive.9 10

The fact that eight of our 13 LGV patients presented in the following 6 months with another STI indicates continuing risk behaviour. They received specific counselling following their initial diagnosis, and the ineffectiveness of this, even in the short term, highlights the need for more effective intervention in this group. On an individual basis, routine rescreening and counselling for their cases should be considered. On a population basis, more public health initiatives and media awareness are required to highlight the ongoing risks of infection in all sections of the community.

Competing interests: None.

REFERENCES