Chlamydia trachomatis in Cervical Lymph Node of Man with Lymphogranuloma Venereum, Croatia, 2014

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We report an HIV-infected person who was treated for lymphogranuloma venereum cervical lymphadenopathy and proctitis in Croatia in 2014. Infection with a variant L2b gonovar of Chlamydia trachomatis was detected in a cervical lymph node aspirate. A prolonged course of doxycycline was required to cure the infection.

Results from this study were presented as a poster at the IDWEEK 2017 Conference, October 4–8, 2017, San Diego, CA, USA. Abstracts of the IDWEEK 2017 Conference have been published in a supplement issue of Open Forum Infectious Diseases (https://idsa.confex.com/idsa/2017/webprogram/POSTER.html).
DNA from the lymph node specimen was frozen and sent to Public Health England (London, UK) in February 2017. LGV-specific DNA was detected by using an in-house TaqMan RT-PCR. The sequence of the outer membrane protein gene from lymph node punctate was identical to that of the C. trachomatis L2 reference strain L2/434/Bu.

At the initial visit, the patient was treated with intravenous ceftriaxone (2 g) and oral doxycycline (2 × 100 mg). After NAATs showed C. trachomatis infection, only doxycycline therapy was continued. Symptoms of proctitis subsided in 2 days. However, because cervical lymphadenitis persisted, we treated the patient with a prolonged course (6 weeks) of doxycycline. Eventually, the patient showed a full recovery.

Our report indicates that LGV might be present in MSM in Croatia. The first NAAT-confirmed case of LGV in southeastern Europe was reported in Slovenia and described as an HIV-negative MSM who was ill in 2015 (2). LGV is probably underdiagnosed in southeastern Europe because of lack of diagnostics and awareness of the infection.

There have been only a few case reports of LGV with associated cervical lymphadenopathy (3–8) (Table). Some cases had generalized lymphadenopathy (axillar, supraclavicular, and retroperitoneal) with constitutional symptoms (3); pharyngitis/odynophagia/proctitis/tongue soreness (4,7); constitutional symptoms (5,7); tonsillitis (6); or skin lesions (8). Case reports have also been described of LGV with supraclavicular and mediastinal lymphadenopathy without cervical involvement (9). In all of these cases, infection with LGV caused by C. trachomatis was established by serologic testing or an NAAT for a pharyngeal specimen. It is essential to maintain a high level of clinical suspicion for LGV in MSM even if noninguinal/femoral lymph nodes are affected.

The recommended treatment for LGV is doxycycline for 21 days. However, several clinical observations have suggested that a 21-day course of doxycycline therapy is insufficient for treating inguinal bubonic LGV (2,10). Recommendations have been given to carefully follow up with patients and continue doxycycline treatment until symptoms resolve (10). We followed these recommendations for our patient who had bubonic cervical lymph node LGV.

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**Table. Characteristics of 8 patients with lymphogranuloma venereum and cervical lymphadenopathy***

<table>
<thead>
<tr>
<th>Reference</th>
<th>Patient age, y/sex</th>
<th>Clinical presentation</th>
<th>Method of laboratory confirmation</th>
<th>Therapy/duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrada et al. (7)</td>
<td>30/M</td>
<td>Mouth ulcer, weight loss, cervical lymphadenopathy</td>
<td>Serologic analysis</td>
<td>Tetracycline/5 wk</td>
</tr>
<tr>
<td>Thorsteinsson et al. (3)</td>
<td>31/M</td>
<td>Fever, supraclavicular, axillary, retroperitoneal, and cervical lymphadenopathy</td>
<td>Serologic analysis</td>
<td>Tetracycline/4 wk</td>
</tr>
<tr>
<td>Watson et al. (6)</td>
<td>19/F</td>
<td>Sore throat, tonsillitis, arthritis, erythema nodosum, cervical lymphadenopathy</td>
<td>Serologic analysis</td>
<td>Phenoxymethylpenicillin, indomethacin†, erythromycin†</td>
</tr>
<tr>
<td>Albay and Mathisen (5)</td>
<td>18/F</td>
<td>Fever, cervical lymphadenopathy</td>
<td>Serologic analysis</td>
<td>Ampicillin/subbactam, doxycycline†</td>
</tr>
<tr>
<td>Tchernev et al. (8)</td>
<td>36/M</td>
<td>Facial skin lesions, cervical and axillary lymphadenopathy</td>
<td>NAAT: <em>Chlamydia trachomatis</em> DNA in skin lesions and serologic analysis</td>
<td>Surgical excision of cervical lymph nodes; pentamidine and doxycycline/3 wk</td>
</tr>
<tr>
<td>Dosekun et al. (4)</td>
<td>32/M</td>
<td>Sore throat, cervical lymphadenopathy, odynophagia, mouth ulcer, proctitis, cervical lymphadenopathy</td>
<td>NAAT: LGV-specific DNA in pharyngeal swab specimen</td>
<td>Azithromycin/1 g, doxycycline/1 wk</td>
</tr>
<tr>
<td>Dosekun et al. (4)</td>
<td>27/M</td>
<td>Sore throat, cervical lymphadenopathy, odynophagia, mouth ulcer, proctitis, cervical lymphadenopathy</td>
<td>NAAT: LGV-specific DNA in pharyngeal and rectal swab specimens</td>
<td>Ceftriaxone/5 d, doxycycline/6 wk</td>
</tr>
<tr>
<td>This study</td>
<td>48/M</td>
<td>Fever, cervical lymphadenopathy, proctitis</td>
<td>NAAT: LGV-specific DNA in cervical lymph node sample obtained by fine-needle aspirate; serologic analysis</td>
<td>Ceftriaxone/5 d, doxycycline/6 wk</td>
</tr>
</tbody>
</table>

*LGV, lymphogranuloma venereum; NAAT, nucleic acid amplification test.
†Duration of therapy not reported.
Zika Virus MB16-23 in Mosquitoes, Miami-Dade County, Florida, USA, 2016

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We isolated a strain of Zika virus, MB16-23, from Aedes aegypti mosquitoes collected in Miami Beach, Florida, USA, on September 2, 2016. Phylogenetic analysis suggests that MB16-23 most likely originated from the Caribbean region.

In 2016, outbreaks of locally transmitted Zika virus occurred in Miami (Wynwood neighborhood) and Miami Beach, in Miami-Dade County, Florida, USA (/). During these outbreaks, a Centers for Disease Control and Prevention (CDC) emergency response team was deployed to assist Miami-Dade County disease surveillance and control efforts. CDC entomologists within the CDC emergency response team worked with Miami-Dade County Mosquito Control and sampled mosquito populations using BG-Sentinel type-2 traps (Biogents AG, Regensburg, Germany) to determine basic entomological parameters. Routinely, mosquitoes were collected, identified to species on the basis of the morphological characteristics described by Darsie and Ward (/), and shipped inactivated and preserved in RNAlater (Ambion Inc., Austin, TX, USA) to the Bronson Animal Disease Diagnostic Laboratory (Kissimmee, FL, USA) for Zika virus testing.

In addition to the routine outbreak protocol, 2 BG-Sentinel type-2 traps were placed at a construction site near the intersection of James Avenue and Lincoln Road (25°47′25.68″N, 80°07′50.24″W) in Miami Beach on September 1, 2016. This site was selected because it was adjacent to a site where Zika cases had been detected. On September 2, 2016, the mosquitoes captured were frozen and shipped on dry ice to the CDC laboratory in Fort Collins, Colorado, USA. In the laboratory, the mosquitoes were identified to species on chill tables; female Aedes aegypti mosquitoes were separated into pools of 50 mosquitoes or less. A total of 293 female Ae. aegypti mosquitoes were collected (146.5/trap/day), grouped into 7 pools, and processed for presence of arboviral agents by cytopathic effect (CPE) assay.

We triturated pools of mosquitoes in 500 µL of Dulbecco’s modified Eagle medium complete with penicillin

References
Technical Appendix.

Technical Appendix Figure. Right cervical lymphadenopathy in 48-year-old man with lymphogranuloma venereum, Croatia 2014.