

Literature Review

National STD Curriculum Podcast

Can LGV Be Asymptomatic?

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Season 4, Episode 15

This episode discusses four recent articles about lymphogranuloma venereum (LGV) including the effectiveness of a 7-day doxycycline course and the increasing prevalence of asymptomatic LGV in the era of HIV PrEP.

Topics:

- LGV
- anorectal
- Chlamydia
- proctocolitis
- oral ulcers
- STIs

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[Disclosures](#)

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Consulting Fee: Innoviva Specialty Therapeutics

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[intro--background](#)**[00:00] Intro & Background**

Hello everyone. My name is Meena Ramchandani. I'm an infectious disease physician at the University of Washington in Seattle. This podcast is dedicated to an STD [sexually transmitted disease] literature review for health care professionals who are interested in remaining up-to-date on the diagnosis, management, and

prevention of STDs.

We haven't had an episode focusing on LGV (or lymphogranuloma venereum) and a recent article was published in *Sexually Transmitted Diseases* that caught my eye. It was about treating LGV with a shorter course of antibiotics. So, let's start with a bit of background. LGV is caused by *Chlamydia trachomatis* and specifically serovars L1, L2, or L3. The symptoms can be severe, and it ranges from genital ulcer disease, which is usually self-limited and mild, to tender inguinal or femoral lymphadenopathy, and it can even present as proctocolitis. Rectal discharge, anal pain, fever, or tenesmus are common manifestations of proctocolitis, and if left untreated, it can actually lead to fistulas and strictures. LGV is endemic in tropical and subtropical parts of the world, and the incidence is rare in the U.S. But in the early 2000s, LGV reemerged in Europe, as well as other high-income nations, primarily in gay, bisexual, or other men who have sex with men. And it mostly presented as proctitis or proctocolitis. In this episode, we are going to review some articles on this topic that were recently published.

[paper-1](#)**[01:33] Paper #1**

Bilinska J, Artykov R, White J. Effective treatment of lymphogranuloma venereum with a 7-day course of doxycycline. *Sex Transm Dis.* 2024 Jul 1;51(7):504-507. [[PubMed Abstract](#)]

The first article for review was published in *Sexually Transmitted Diseases* in July of 2024 by Dr. Bilinska and colleagues. It is titled "Effective treatment of lymphogranuloma venereum with a 7-day course of doxycycline." Current British and European LGV guidelines, as well as the CDC STI Treatment Guidelines in the U.S., recommend a 21-day course of antibiotic treatment for LGV, with the first-line regimen being doxycycline. There is limited evidence to support shorter antibiotic treatment for LGV, although we do use shorter course of treatment for other serovars of chlamydia that cause oropharyngeal and anogenital infection.

1. This was an observational study, and it was evaluating all individuals with confirmed LGV that were seen in the South London Sexual Health Service who were treated with doxycycline 100 mg orally twice a day for 7 days from 2016 through 2022.
2. The providers had access to an in-house PCR [polymerase chain reaction] assay to detect LGV-specific DNA. There were 52 individuals who were treated with 7 days of doxycycline for LGV.
3. These individuals received 7 days of antibiotics instead of the recommended 21 days for various reasons. For example, some clinicians had changed their practice to treat asymptomatic LGV infection with a 7-day course of doxycycline based on recent published findings. Some patients were treated for presumed gonococcal proctitis empirically with ceftriaxone and a 7-day course of doxycycline. And some patients were not able to be reached or chose not to extend the antibiotic treatment course after the LGV results became available.
4. All cases were male and identified as gay, bisexual, or other men who have sex with men. Some patients were being tested for symptoms, and some were undergoing routine STI screening.
5. Overall, 65% of patients were asymptomatic. Of the individuals with symptoms, 13% had urethral symptoms, 21% had rectal symptoms, 4% had other symptoms, including lymphadenopathy and sore throat, and some patients had multisite symptoms.
6. At follow-up testing, 51 of 52 cases had negative testing for *Chlamydia trachomatis*. The one person who tested positive at repeat testing for *Chlamydia trachomatis* had a negative LGV-specific DNA test. Therefore, this person likely had reinfection and not failed treatment.

So, in this study, 7 days of doxycycline was an effective treatment for asymptomatic and uncomplicated LGV infections. All individuals cleared LGV infection following this shorter course of antibiotic treatment. I think it does bring up the question of whether asymptomatic or mild cases of rectal chlamydia infections actually need specific LGV genotyping if patients clear with a 7-day course of doxycycline, similar to other chlamydia serovars. The authors point out a randomized control study is still needed to compare the effectiveness of treating LGV with varied antibiotic durations in a prospective study.

[paper-2](#)[04:40] Paper #2

Gupta AK, Lyons B, Hunter I, et al. The resurgence of lymphogranuloma venereum: Changing presentation of lymphogranuloma venereum in the era of HIV preexposure prophylaxis, 2004 to 2022. *Sex Transm Dis*. 2024 Apr 1;51(4):233-238. [[PubMed Abstract](#)]

The next article to discuss was also published in *Sexually Transmitted Diseases* in April of 2024 by Dr. Gupta and colleagues. This article is titled “The resurgence of lymphogranuloma venereum: Changing presentation of lymphogranuloma venereum in the era of HIV preexposure prophylaxis, 2004 to 2022.”

1. This was a retrospective case series of all individuals in British Columbia, Canada, who were diagnosed with LGV, before and after widespread HIV PrEP [preexposure prophylaxis] availability. HIV PrEP became publicly funded in British Columbia in 2018.
2. Now, LGV is a reportable infection in British Columbia. Prior to 2011, specific LGV testing was performed when requested by a provider based on clinical suspicion. But starting in 2011, all rectal specimens positive for *Chlamydia trachomatis* were routinely tested for specific LGV serovars.
3. In this study, there were 545 positive LGV cases; 38% occurred prior to widespread HIV PrEP availability, and 62% occurred during the HIV PrEP era.
4. Prior to HIV PrEP use, 62% of the LGV cases occurred in persons with HIV, and in the HIV PrEP era, cases shifted to occur more frequently among persons without HIV.
5. In the HIV PrEP era, a higher proportion of cases were asymptomatic: 39% of cases were asymptomatic in the PrEP era compared to 19% of cases prior to widespread PrEP use.
6. The number of sexual partners and previous syphilis infection were not associated with an increased prevalence of asymptomatic LGV.

In this study, the authors found increasing prevalence of asymptomatic LGV after HIV PrEP became widely available, and it suggests the increase in number of cases might be, at least in some part, due to an increase in STI screening while on HIV PrEP. Asymptomatic LGV infections in the PrEP era were detected at twice the frequency of infections prior to widespread PrEP use. It's unclear if these infections will always remain asymptomatic or spontaneously resolve, but the authors do point out that frequent STI screening might be detecting pre-symptomatic or early-incubating infections. So, in my mind, detection by routine screening might be a great way to diagnose and treat patients before severe disease occurs.

[paper-3](#)[07:09] Paper #3

Peuchant O, Laurier-Nadalié C, Albucher L, et al. Anorectal lymphogranuloma venereum among men who have sex with men: A 3-year nationwide survey, France, 2020 to 2022. *Euro Surveill*. 2024 May;29(19):2300520. [[PubMed Abstract](#)]

The next article to discuss was published in *Eurosurveillance* in May 2024 by Dr. Peuchant and colleagues, and it is titled “Anorectal lymphogranuloma venereum among men who have sex with men: A 3-year nationwide survey, France, 2020 to 2022.” Now, let's start with a bit of background. Prior to 2015, specific LGV testing was performed on all *Chlamydia trachomatis*-positive anorectal specimens in France. But, from 2010 to 2015, epidemiologic data indicated the cases of LGV were actually associated with rectal symptoms and persons living with HIV. For example, 94% of LGV-positive individuals had anorectal symptoms. Therefore, starting in 2016, selective LGV testing was only done for those persons with anorectal symptoms and/or persons with HIV who were diagnosed with rectal chlamydia.

1. This author group conducted a 3-month prospective study in which *Chlamydia trachomatis*-positive anorectal specimens were tested for LGV serovars, regardless of HIV status or symptoms. And this was done at 59 laboratories distributed throughout France.

2. These specimens were tested for LGV for 3 months out of each year in 2020, 2021, and 2022. Overall, they had more than 3,000 *Chlamydia trachomatis* anorectal samples that were analyzed, and more than 90% of specimens were obtained from men. The LGV positivity was around 13% in 2020, 15% in 2021, and 13% in 2022. They had no cases of LGV that occurred in women.
3. The authors found that the proportion of cases in persons without HIV was actually higher than those persons with HIV.
4. Thirty-six percent of people with rectal LGV were asymptomatic in 2020, but this number increased to 52% in 2022.
5. Up to 50% of LGV-positive persons on HIV PrEP reported no anorectal symptoms.
6. The authors also sequenced the outer membrane protein A gene for 94% of the LGV specimens that they collected. There is some data that some genetic variants of this gene carry an amino acid change that is associated with fluoroquinolone resistance. The authors identified 18 different LGV outer membrane protein A genotypes. I won't go into the specifics for each variant but encourage you to take a look at the manuscript if you'd like to learn more.
7. The authors did not find an association between outer membrane protein A genotypes and anorectal symptoms, HIV status, or HIV PrEP use.

So, the main finding from this article was that the rate of LGV was stable in France from 2020 to 2022, but there was increased detection of asymptomatic rectal LGV over time. Most cases of LGV occurred in persons without HIV, and this indicates a shift in epidemiology of LGV in France from what was historically seen. The authors suggest universal LGV testing in France should be considered again.

[paper-4](#)[10:22] **Paper #4**

Sobral-Costas TG, López-Alcázar S, Escudero-Tornero R, et al. Single case of lymphogranuloma venereum on the tongue. *Sex Transm Infect.* 2024 Feb 19;100(2):108-109. [[PubMed Abstract](#)]

Briefly, I'd like to also mention a case report that was published in *Sexually Transmitted Infections* in February of 2024 by Dr. Sobral-Costas and colleagues, and it is titled "Single case of lymphogranuloma venereum on the tongue." This case has a great picture and it depicts lymphogranuloma venereum of the tongue, which presented as a painful, white indurated plaque with an irregular ulcerated surface.

1. Samples of this lesion were sent for LGV NAAT [nucleic acid amplification test] and it returned positive. All the other STI testing was negative.
2. Social and medical history of the patient was not provided, but the patient was treated with and responded to doxycycline for 21 days.

I think it's a great reminder that while most patients with LGV present with anorectal symptoms, LGV can present as an oral ulcer, and it might be associated with cervical adenopathy. It's something to keep on your differential diagnosis of an oral ulcer in men who have sex with men, especially if your patient is not responding to therapy treating other causes of oral ulcers.

[summary](#)[11:26] **Summary**

To conclude, I'd like to summarize some key points from this session:

1. Seven days of doxycycline might be an effective treatment for asymptomatic or uncomplicated LGV infection.
2. After widespread HIV PrEP availability in British Columbia, the number of asymptomatic LGV cases increased and occurred more frequently among persons with HIV.
3. The epidemiology of LGV is changing in France, with a higher proportion of cases in persons without HIV and those who are asymptomatic.
4. The diversity of LGV outer membrane protein A genotypes was higher than previously reported in

France, but there was no association between genotypes and anorectal symptoms, HIV status, or HIV PrEP use.

5. LGV can rarely present as an ulcerated lesion of the tongue.

[credits](#)**[12:15] Credits**

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