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CLINICAL VIGNETTE

Lymphogranuloma Venereum (LGV): A Re-Emerging Sexually Transmitted Infection

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A 34-year-old cisgender male with past history of anal fissures and well-controlled HIV on treatment with tenofovir alafenamide/emtricitabine/bictegravir, presented to urgent care with symptoms of fever and groin pain. His symptoms started 4 days prior to presentation and had gradually worsened since that time. He reported feeling febrile every 6 hours and he felt swelling in his bilateral inguinal folds with associated pain. He had taken ibuprofen and acetaminophen which helped reduced his fevers though were minimally effective for his inguinal pain. The patient reported worsened anorectal pain over his baseline anal fissure pain. The pain was worse with bowel movements though there was no rectal discharge or bleeding. He denied headaches, neck stiffness, throat pain, cough, shortness of breath and rashes. He had no dysuria, penile discharge, testicular pain. He had no recent significant travel history and does not own pets. He reports having unprotected insertive and receptive oral and anal sex with multiple partners who identified as cisgender men approximately 3 weeks before the onset of his symptoms.

Vital signs were significant for temperature of 38.2C and heart rate 90; physical exam revealed exquisitely tender bilateral inguinal lymphadenopathy without cervical nor axillary adenopathy. There was no pharyngitis and genitourinary was other-wise normal. Anorectal exam was significant for mild tenderness upon digital examination though no evidence of lesions, bleeding or discharge.

The patient was offered conservative measures to help control fevers and pain, pending laboratory results. Recent labs included undetectable HIV RNA PCR (viral load), CD4 count of 654 and negative MTB-Quantiferon gold testing one month prior to presentation. Testing from day of presentation revealed a normal complete blood count, negative RPR and negative COVID-19 PCR testing. Pharyngeal, rectal and urine gonorrhea/chlamydia PCR testing were positive for chlamydia and negative for gonorrhea. The patient was diagnosed with lymphogranuloma venereum (LGV) and treated with Doxycycline 100mg twice daily for 21 days.

Lymphogranuloma Venereum (LGV)

LGV is a sexually transmitted infection (STI) caused by the L1, L2, and L3 serovars (antigenic type) of *Chlamydia trachomatis*.¹ These serovars are more virulent and invasive than other *C. Trachomatis* serovars, and while LGV was previously uncommon outside of tropical regions it has been

increasingly reported in Western Europe and North America since 2003.² Sporadic cases and outbreaks have become more common among men who have sex with men (MSM) and transgender women.³ LGV should also be considered in the returning traveler from endemic regions including East and West Africa, India, Southeast Asia, and the Caribbean.⁴ LGV is strongly associated with other STIs, with a prevalence of HIV coinfection as high as 80%.³

LGV infection can be classified in three stages. In the primary stage, after an incubation period of 3-30 days, a small, painless papule appears at the site of inoculation.⁴ These lesions may ulcerate, but typically heal spontaneously within a few days and may pass unnoticed by the patient. Two to six weeks later, the secondary stage is characterized by direct extension of infection to regional lymph nodes, usually in the inguinal or femoral chain, and may also involve the anus and rectum. Rare cases of oropharyngeal LGV affecting the cervical lymph nodes have also been reported.⁵ The cardinal feature is painful inguinal lymphadenopathy (buboes), which may rupture or ulcerate. Lymphadenopathy can be accompanied by fever and other systemic symptoms that are much less common with other *C. Trachomatis* serovars.⁴ The characteristic “groove sign” (Figure 1) results from enlargement and matting of lymph nodes on either side of the inguinal ligament. Proctocolitis with anorectal symptoms is more common in patients who have receptive anal sex and is characterized by rectal discharge, bleeding, pain, tenesmus, fever, and weight loss. Anorectal infection can also be asymptomatic, leading to a reservoir for the bacteria.⁶ Untreated LGV infection can progress to the late stage of disease with fibrosis and strictures of the anogenital tract. Other complications include elephantiasis, fistulae, destruction of external genitalia, and infertility.⁴

The differential diagnosis for LGV is relatively broad and primarily includes other STIs which may result in genital lesions. These include: *C. trachomatis* (non L1-3 serovars), *N. gonorrhoea*, syphilis, herpes simplex virus (HSV), chancroid and acute HIV. Tuberculous lymphadenitis should also be considered primarily in immunocompromised individuals who have lived or traveled in a TB-endemic region. Other causes of adenopathy, including CMV and lymphoma may also be considered.

Specific testing to differentiate serovars L1-L3 from other serovars of *C. trachomatis* is not widely available. Clinicians should presumptively diagnose and treat LGV based on the

clinical syndrome and patient risk factors in the setting of a positive *C. trachomatis* nucleic acid amplification test (NAAT).⁴ NAAT testing can be collected from the site of infection including genital ulcers, anorectal swabs, pharyngeal swabs, and aspirate of buboes. A positive *C. trachomatis* NAAT accompanied by systemic symptoms, lymphadenopathy, proctitis, mucosal ulcers, or a lack of response to standard treatment with 7 days of Doxycycline should prompt consideration of LGV.¹ As with other STIs, clinicians should obtain a thorough sexual history and test for concomitant infections, particularly gonorrhea and chlamydia PCR testing at all sites of sex, HIV and syphilis.

The preferred treatment of LGV is Doxycycline 100 mg orally twice daily for 21 days. Pregnant individuals may be treated with Azithromycin 1 gm orally weekly for 2 weeks and a test of cure in 3 to 4 weeks should be conducted.¹ All recent sex partners of persons diagnosed with LGV (within 60 days) should be referred for evaluation, testing, and presumptive treatment of *C. trachomatis* infection. Asymptomatic sexual partners should receive preventive therapy with Doxycycline 100mg twice daily for 7 days, which should not be delayed pending test results. Some experts recommend extending therapy to 21 days if *C. trachomatis* NAAT is positive, as LGV serovars cannot be reliably excluded in most cases.⁸ While LGV is a relatively uncommon diagnosis, given its re-emergence, early recognition of its signs and symptoms, along with comfort in clinical diagnosis are essential to avoid delays in appropriate treatment and decrease the transmission and morbidity associated with this infection.

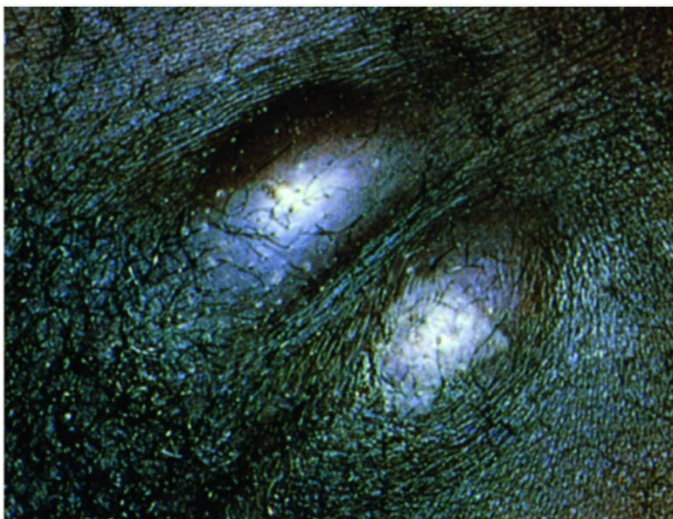


Figure 1. “Groove sign” seen in LGV with enlarged lymph nodes on either side of the inguinal ligament.⁷

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