CLINICAL VIGNETTE

Acute Proctitis due to Lymphogranuloma Venereum: A Re-Emerging Disease in Patients with Risk Factors

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Hospital Course

A 45-year-old male was admitted for rectal pain and worsening bloody stools. There was a 3-week history of worsening diarrhea described as frequent small volume stools mixed with bright red blood. Bowel movements were associated with intense burning rectal pain with intermittent radiation to the left lower quadrant, which occurred when bearing down but resolved between episodes. He also reported weight loss, night sweats and chills without fever. Social history was significant for daily alcohol use, methamphetamine use, and while initially reluctant to disclose sexual activity, he later reported having unprotected receptive anal sex with men.

Rectal exam on admission revealed two 1 cm pedunculated, freely mobile anal lesions without evidence of bleeding or purulence. Admission labs were significant for microcytic anemia with a hemoglobin of 8.5 g/dl. CT imaging was significant for pelvic lymphadenopathy and proctitis. Sigmoidoscopy revealed features of severe proctitis with edematous folds and disseminated pustular lesions in the rectum (Figure 1). Tissue biopsies of the sigmoid colon and rectal lesions confirmed severely active proctitis without evidence of granulomas, dysplasias, or viral inclusions. Stool infectious studies including Clostridium difficile PCR, giardia/cryptosporidia antigen, HSV1/2 PCR, and three stool ova & parasite smears were negative and stool viral and bacterial cultures grew no organism. HIV1/HIV2 antibody and RNA PCR screening were both negative, as was a Hepatitis C antibody screen. PCRs on rectal swabs returned negative for *Neisseria gonorrhea* but was positive for *Chlamydia trachomatis*.

The patient was given one dose of intramuscular Ceftriaxone 250mg, and a 21-day course of doxycycline 100mg PO BID to treat presumed LGV given the positive rectal swab lymphadenopathy, and proctitis. The patient also was transfused two units of packed red blood cells for a hemoglobin of 6.7 g/dl which developed later in admission due to ongoing bloody stools. The patient was discharged in stable condition with instructions to establish care at the local community clinic.

Discussion

***Introduction*:** Lymphogranuloma venereum (LGV) has emerged as an important cause of proctitis and proctocolitis in men who have sex with men (MSM). It is an invasive, ulcerative sexually transmitted infection (STI) caused by the L1, L2, and L3 serovars of *Chlamydia trachomatis*. LGV is endemic in many parts of Africa, Southeast Asia, Latin America and the Caribbean. While previously rare in temperate climates, in the last 15 years there has been an outbreak of LGV infections among MSM in the Western world. Starting in 2003, several cases of LGV proctitis were reported among MSM, first in the Netherlands, followed by reports from Western Europe, North America, and Australia.[1] This differs from the previously described symptomatology, primarily endemic in heterosexuals in developing countries, where it is manifested as genital ulcers and lymphadenopathy without proctitis.[2]

***Risk Factors & Epidemiology*:** In outbreaks among MSM, HIV-positive serostatus is strongly associated with risk of LGV. One case-control study found that 89% of patients with LGV proctitis were HIV seropositive. The same study also identified unprotected receptive anal sex as the key risk factor for LGV in gay men.[3] Other independent risk factors include sex with anonymous contacts, sex under the influence of gamma-butyric acid and fisting when comparing cases with asymptomatic controls. Another study in the UK found that there was a high level of coinfection with human immunodeficiency virus (76%), hepatitis C (19%), and other sexually transmitted infections (39%).[4] The significant association between LGV and HIV raises a public health concern as a strong association between LGV and HIV co-infection identified from case control studies may indicate a biological synergy.[5]

***Clinical Manifestations*:** Three stages of LGV infection have been classically described.[1,6] The first stage occurs after a 3-30 day incubation period, and presents as a small painless papule or ulcer on the genitals or anus. The primary lesion spontaneously heals within a few days and often goes unnoticed. The second stage of LGV infection occurs 2-6 weeks later, involving direct extension of the infection to regional lymph nodes, causing either inguinal or anorectal syndrome. Inguinal syndrome presents with painful inflammation of the superficial and deep inguinal lymph nodes and occurs mostly in men (only 20% of women present with inguinal syndrome).[6] In the third stage, which occurs when the disease progresses untreated, lymph node necroinflammation leads to obstruction of lymphatic drainage and genital elephantiasis. In this context, rectal involvement may be complicated by fistulae and rectal strictures.[7]

A different clinical picture has emerged mostly among men who have sex with men in the recent 15 years. Hemorrhagic proctitis is the most commonly described primary clinical manifestation following direct transmission to the rectal mucosa. One report found that 96% of all cases of MSM with LGV present with proctitis.[6] Symptoms include anorectal bleeding, rectal pain, tenesmus, mucoid discharge, constipation, hematochezia, and other symptoms of lower gastrointestinal inflammation.[2,6]

As the clinical presentation of LGV proctitis in MSM resembles and is often mistaken for inflammatory bowel disease, many patients will present for gastroenterology consult and undergo anoscopic and colonoscopic evaluation.[2,6] Colonoscopy will often reveal mucopurulent exudates with a hyperemic and friable mucosa, multiple ulcers and erosions, and granulation tissue in the rectum.[8] Longstanding LGV, when untreated, causes a chronic inflammatory response and tissue destruction. This may be associated with stricture and fistula formation, again mimicking Crohn's disease.

Diagnosis: Numerous novel molecular methods have been developed to confirm LGV infection using clinical material, particularly anorectal swabs in MSM.[2] A two-step procedure is usually followed. The first step includes the widely available *C. trachomatis* nucleic acid amplification test (NAAT), which confirms the presence of *C. trachomatis* but does not allow serogroup identification. If detected, the second step is LGV biovar-specific DNA NAAT from the same sample.[6] Unfortunately, LGV-specific amplified sequencing tests are not commercially available or cleared by the FDA for use in the U.S. In most circumstances, the diagnosis of LGV is typically based on epidemiological and clinical findings.

Our patient presented with severe proctitis,pelvic lymphadenopathy, and a positive Chlamydia PCR raising concern for LGV proctitis. As LGV-specific tests were not available, the diagnosis of LGV proctitis rather than non-LGV proctitis was based off clinical presentation and risk factors. Of note, the non-LGV serovars of *C. trachomatis* that cause genital infection (serovars D through K) can also cause infection of the rectum, particularly in MSM, but in contrast to LGV, these infections are usually asymptomatic. As an example, in a study that screened MSM for rectal chlamydial infection, only 49 of 301 cases (16%) of non-LGV infection were symptomatic compared with 58 of 62 cases (95%) of rectal LGV infection.[4]

Treatment: The Center for Disease Control recommends that persons with a clinical syndrome consistent with LGV, including proctocolitis or genital ulcer disease with lymphadenopathy, should be presumptively treated for LGV.[9] Proper treatment of LGV proctitis cures the infection and prevents further damage to tissues. Both the CDC and the United Kingdom guidelines for the treatment of sexually transmitted diseases recommend doxycycline 100 mg twice daily for 21 days as preferred first line treatment regimen for an LGV infection in patients.[9] This is considerably longer than the 7 days recommended for anorectal non-LGV *C. trachomatis* infections. In pregnant women and those with a contraindication to doxycyline therapy (eg allergic reactions), the alternative treatment option for LGV is erythromycin 500 mg four-times daily for 21 days.

Regarding follow-up and further care, patients should be followed clinically until symptoms resolve. All patients who receive an LGV diagnosis should be tested for HIV and other STIs, especially gonorrhea and syphilis because of high co-infection rates.[9] The CDC also recommends testing and co-treatment of persons who have had sexual contact with a patient who has LGV within the 60 days before onset of the patient's symptoms

Conclusion

While previously rare in industrialized countries prior to the early 2000s, LGV has more recently emerged as an important cause of morbidity among men who have sex with men, and clinicians must maintain a high index of suspicion in patients who present with proctitis or symptoms suggestive of inflammatory bowel disease. A presumed diagnosis of LGV proctitis based on history and exam should prompt broad testing for HIV and other STIs, as well as antibiotic treatment of the patient and co-treatment of sexual partners.

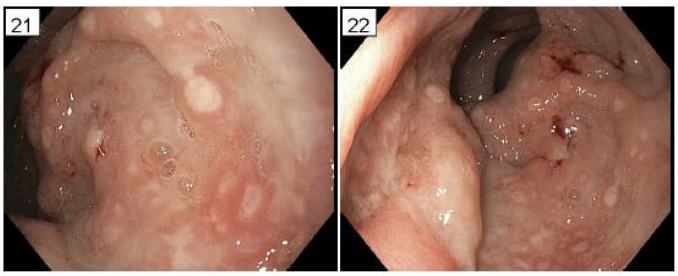

Figure 1: Sigmoidoscopic features of severe proctitis with edematous folds and disseminated pustular appearing lesions in the rectum-colon

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