Perianal ulcer and proctocolitis in an immunocompromised patient

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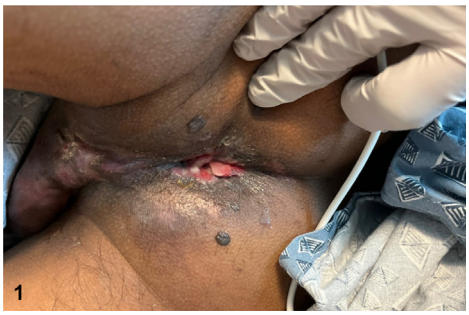

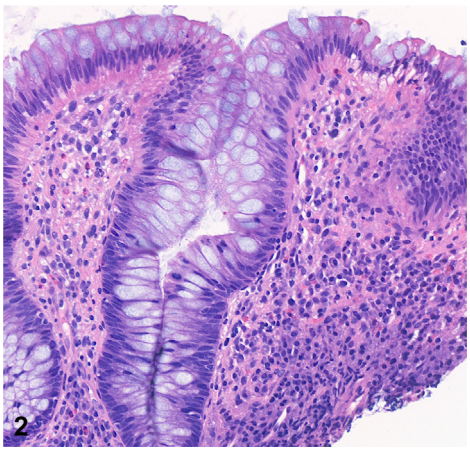

HISTORY

A 30-year-old man who has sex with men, HIV (CD4 count, 100 cells/mm^3; viral load, 220,000 copies), and Kaposi sarcoma (KS) presented with a perianal ulcer (Fig 1). Disease was complicated by hemorrhagic proctocolitis and inguinal lymphadenopathy. The patient previously received doxycycline 100 mg orally twice daily for 1 day and azithromycin 1 g intravenously for a prior positive urine nucleic acid amplification test (NAAT) for *Chlamydia*. Rectal NAAT for *Chlamydia* and *Neisseria gonorrhoeae*, *Treponema pallidum* serology, and polymerase chain reaction for Mpox were negative. Rectal biopsy demonstrated lymphoplasmacytic infiltrate and scattered eosinophils, consistent with a sexually transmitted proctocolitis without histopathologic features of viral cytopathic changes or *Entamoeba* trophozoites (Fig 2).

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Question 1: What is the most likely cause of the proctocolitis?

A. Lymphogranuloma venereum

B. KS

C. Herpes simplex virus

D. Cytomegalovirus

E. Mpox

Answers:

A. Lymphogranuloma venereum — Correct. Lymphogranuloma venereum (LGV) is an infection caused by *Chlamydia trachomatis* serovars L1, L2, or L3. LGV is characterized by painful inguinal lymphadenopathy and proctocolitis, most commonly in men who have sex with men or in patients with a history of sexually transmitted infections, including HIV.[1] Ulcerations at the site of inoculation are also characteristic findings.[2] As our patient had already received a partial antibacterial course of therapy for a prior positive urine NAAT for *Chlamydia*, negative rectal swab NAAT does not exclude LGV.

B. KS — Incorrect. Cutaneous KS presents as vascular plaques frequently affecting the extremities or oral mucosa, and gastrointestinal involvement can cause hemorrhagic nodules, tenesmus, and diarrhea that can mimic ulcerative colitis.[3] KS does not account for the histopathology or the perianal ulceration.

C. Herpes simplex virus — Incorrect. In an immunocompromised individual, herpes simplex virus can be complicated by disseminated infection, erosions, or proctocolitis. Biopsy from the edge of the perianal ulcer was not performed. However, the absence of viral cytopathic changes on histopathology of rectal biopsy makes this a less likely explanation for the proctocolitis.

D. Cytomegalovirus — Incorrect. Cytomegalovirus manifests in immunocompromised individuals as anogenital ulcerations or, more rarely, as nodules or maculopapular eruptions. It can cause proctitis with abdominal pain, diarrhea, and bleeding. However, the absence of viral cytopathic changes on histopathology makes this a less likely explanation.[3]

E. Mpox — Incorrect. Mpox colitis presents with rectal pain accompanied by perianal ulcers or rectal bleeding following a viral prodrome of fever, myalgia, or pharyngitis. Negative polymerase chain reaction for Mpox excludes this diagnosis.

Question 2: Which of the following is most appropriate for diagnostic confirmation of lymphogranuloma venereum in this patient?

A. LGV-specific molecular testing

B. Culture by rectal swab

C. Biopsy of perianal ulcer

D. Therapeutic response

E. Repeat *C trachomatis* NAAT of rectal swab

Answers:

A. LGV-specific molecular testing — Incorrect. LGV-specific molecular testing (polymerase chain reaction) can distinguish LGV from non-LGV serovars in rectal specimens. However, these tests are not widely available and are typically not completed in a timeframe that would influence clinical management.

B. Culture by rectal swab — Incorrect. Chlamydial culture has a lower sensitivity than NAAT and is not routinely performed.

C. Biopsy of perianal ulcer — Incorrect. Similar to the findings of the rectal biopsy, histopathology of LGV would be consistent but nonspecific.

D. Therapeutic response — Correct. In this patient with perianal ulceration, inguinal lymphadenopathy, and proctocolitis, diagnosis is established by clinical signs, patient risk factors, and exclusion of other diagnoses. Treatment should not be delayed by further testing, and establishing therapeutic response (observed in this patient at 12-day follow-up) is sufficient to make the diagnosis.[4]

E. Repeat *C trachomatis* NAAT of rectal swab — Incorrect. Although NAAT is the preferred approach for testing because it can detect both LGV and non-LGV serovars, it may be negative in the setting of previous antibiotic administration. Furthermore, it is not necessary to obtain more specific testing to diagnose or treat LGV.

Question 3: Which of the following is the most appropriate treatment for this patient's proctocolitis?

A. Azithromycin 1 g single dose

B. Bictegravir 50 mg-emtricitabine 200 mg-tenofovir alafenamide 25 mg antiretroviral therapy indefinitely

C. Doxycycline 100 mg twice daily for 21 days

D. Acyclovir 400 mg 3 times daily for 7 days

E. Imiquimod 12.5 mg 3 times weekly until clearance

Answers:

A. Single 1 g dose azithromycin — Incorrect. Single-dose azithromycin is effective against chancroid and urogenital *Chlamydia* infection. A 3-week course is recommended for LGV.

B. Bictegravir 50 mg-emtricitabine 200 mg-tenofovir alafenamide 25 mg antiretroviral therapy indefinitely — Incorrect. Multidrug antiretroviral therapy is the first-line therapy for KS in association with HIV/AIDS.

C. Doxycycline 100 mg twice daily for 21 days — Correct. Doxycycline 100 mg twice daily for 21 days is the recommended treatment for LGV.[5] The cure rate for this treatment course is estimated to be >98.5%, but longer courses may be indicated in more severe disease complicated by buboes. Asymptomatic LGV only requires a 7-day course of therapy. In patients with risk factors for LGV who present with suggestive symptoms (proctocolitis or severe inguinal lymphadenopathy), it is reasonable to administer presumptive therapy concurrently with diagnostic testing.

D. Acyclovir 400 mg 3 times daily for 7 days — Incorrect. Acyclovir would be effective for herpes simplex virus infection.

E. Imiquimod 12.5 mg 3 times weekly until clearance — Incorrect. Imiquimod can be effective for condyloma acuminatum in immunocompetent hosts.

Abbreviations used:

KS: Kaposi sarcoma
LGV: lymphogranuloma venereum
NAAT: nucleic acid amplification test

Conflicts of interest

None disclosed.

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