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What is causing this man's rectal pain and urinary retention?

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CASE

A 23-year-old man presented to an urgent care office with a 2-week history of rectal pain and scant rectal bleeding. In the few days leading up to his presentation, he also had a fever of 101° F (38.3° C), inguinal lymphadenopathy, and urinary retention.

History

About 6 months earlier, the patient had been treated for an unknown type of lymphoma and was now in remission. He is bisexual and has been in an exclusive relationship with another man for the past 6 months. Both men had been screened for sexually transmitted infections (STIs) before becoming intimate and all testing was negative. They used condoms irregularly, and the patient had engaged in receptive anal intercourse. Neither the patient nor his partner had a history of STIs, nor any lesions or symptoms concerning for STIs.

Physical examination

The patient had tender inguinal lymphadenopathy and exquisite rectal pain that precluded a digital rectal examination beyond the tip of the examiner's finger. He had a small, healing anal fissure at the 6 o'clock location and no other lesions elsewhere on the body or anogenital region. Examination of the rest of the body (including the genitals) was unrevealing.

Diagnostic testing

Due to the patient's lack of health insurance, the diagnostic workup was restricted to rectal testing for gonorrhea, chlamydia, and herpes simplex virus (HSV). Testing for HIV and syphilis was deferred so he could obtain this testing at a free clinic. Other tests that were considered but not done in the interest of cost reduction were a complete blood cell count and CT imaging of the pelvis to rule out an abscess or other abnormality. Urinalysis was considered but not done because the patient was unable to provide a spontaneous sample at the time of his visit.

DIFFERENTIAL DIAGNOSIS

- gonorrhea
- chlamydia
- proctitis caused by HSV
- abscess of the colon

OUTCOME

The patient was treated empirically for gonorrhea and chlamydia with azithromycin (1 g orally) and ceftriaxone (250 mg IM), as well as HSV (acyclovir 400 mg orally every 8 hours). A colonic abscess was considered due to the anal fissure and history of anal intercourse; ciprofloxacin and metronidazole were prescribed empirically to cover this possibility. Two days later, polymerase chain reaction (PCR) testing isolated HSV type 2 from the rectal sample. The patient was diagnosed with proctitis caused by HSV type 2. Chlamydia and gonorrhea testing was negative.

Acyclovir was continued, while ciprofloxacin and metronidazole were discontinued. Over the 10 days of therapy, his symptoms gradually resolved.

DISCUSSION

HSV is a globally prevalent infection that exists as types 1 and 2. HSV type 1 typically is associated with nonsexual transmission during childhood and usually causes orolabial lesions; HSV type 2 is more commonly transmitted sexually and classically causes genital lesions. Both HSV types can cause symptoms in other areas (for example, oral HSV type 2) due to sexual behaviors.

About 50 million Americans are infected with HSV type 2.¹ Infected persons experience symptomatic flares throughout their lifetime, with the virus otherwise remaining dormant in the sacral ganglia. HSV infections also may be subclinical, so many infected patients are not diagnosed.² Fewer than 20% of patients with HSV type 2 have recognized genital herpes.³ Unbeknownst to many infected individuals, HSV type 2 can be sexually transmitted due to subclinical intermittent shedding of the virus via anterograde axonal transport to the skin and mucosal epithelia in the anogenital region.² Studying a large cohort of HSV type 2-seropositive patients, Tronstein and colleagues found that on average, asymptomatic patients shed the virus on 10% of days compared with symptomatic patients, who shed the virus on 20% of days.⁴ Although rates varied, the quantity of virus shed was similar between patient groups; therefore, transmission risk does not differ between asymptomatic and symptomatic patients during these subclinical genital shedding episodes.⁴

Transmission occurs through direct contact with infected mucocutaneous surfaces or genital/oral secretions. Inoculation of the virus most commonly occurs at mucous membranes such as the orogenital regions or through small disruptions in the skin where epithelial cells and nerve endings become infected. Primary infection is followed by retrograde axonal transport to the sacral ganglia where the virus establishes its chronic infection.

Proctitis, or inflammation located in but not confined to the rectum, is an uncommon manifestation of HSV type 2 (**Figure 1**). Acute proctitis among patients who have recently practiced receptive anal intercourse usually is sexually acquired.² Typical pathogens for sexually transmitted proctitis include *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, HSV, and *Treponema pallidum*.² Symptoms of HSV proctitis typically begin 1 to 3 weeks after exposure and include anorectal pain, tenesmus, difficulty in urination, sacral paresthesias, fever, and inguinal adenopathy.⁵ The classic vesicular lesions associated with HSV type 2 may not be visible on direct physical examination and can sometimes be indistinguishable from an anal fissure.⁵

Modalities used to diagnose HSV (regardless of the anatomic site) include viral cultures, PCR, and herpes serology. PCR has a greater sensitivity than the traditional viral culture, and results can be available within hours.⁶ The CDC recommends additional testing for *N. gonorrhoeae*,

C. trachomatis, and *T. pallidum*, as well as examination by anoscopy in patients suspected to have sexually transmitted proctitis.² Mucosal friability or ulcerations, mucopurulent exudate, and external or perianal vesicles may be visualized through the anoscope in patients with HSV proctitis.⁵ Patients with severe rectal pain may not be able to tolerate such a procedure; consider

general anesthesia or sedation if necessary.⁵ Alternatively, less-invasive testing may be performed as was done in this case.

In a case of suspected sexually transmitted proctitis, empiric therapy should be initiated for *N. gonorrhoeae* and *C. trachomatis* before results of laboratory tests are available. If clinical suspicion of HSV infection is high, also start therapy for HSV. Treatment regimens vary with initial versus recurrent episodes of genital HSV, as well as suppressive therapy for patients with six or more outbreaks per year (**Table 1**). Men treated for sexually transmitted proctitis should abstain from sexual intercourse until they and their partner(s) have been treated and symptoms resolved. In addition to chlamydia, gonorrhea, and HSV, all patients with suspected sexually transmitted proctitis should be tested for HIV and syphilis, with repeat HIV testing in 3 months.²

Because the anogenital lesions of sexually transmitted proctitis are associated with a 50% to 700% increase in HIV transmission, the diagnosis of sexually transmitted proctitis in an HIV-negative man who has sex with men should be considered a sentinel event necessitating education and risk-reduction counseling.⁷

Despite the high prevalence of HSV worldwide, routine screening is not recommended, and HSV testing is not part of general testing for STIs.² Patients who participate in high-risk sexual behaviors should receive one-on-one counseling about preventing STIs and HIV. Additional counseling should involve education about HSV prevalence, chronicity, subclinical shedding, transmission, and typical/atypical presentations as that information may not be well understood in the general population. Because most patients who are seropositive for HSV type 2 are unaware of their infection status and screening is not recommended, patients must understand how to protect themselves.

CONCLUSION

As this case illustrates, the presentation of HSV infections can be variable and include neurologic abnormalities such as urinary retention. A high index of suspicion is essential for recognizing this very common infection in its less common manifestations.

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TABLE 1. Oral treatment regimens for HSV infections²

Therapy for initial genital HSV infections

- Acyclovir 400 mg three times a day for 7 to 10 days
- Acyclovir 200 mg five times a day for 7 to 10 days
- Valacyclovir 1 g twice a day for 7 to 10 days
- Famciclovir 250 mg three times a day for 7 to 10 days

Episodic therapy for recurrent genital HSV infections

- Acyclovir 400 mg three times a day for 5 days
- Acyclovir 800 mg twice a day for 5 days
- Acyclovir 800 mg three times a day for 2 days
- Valacyclovir 500 mg twice a day for 3 days
- Valacyclovir 1 g once a day for 5 days
- Famciclovir 125 mg twice a day for 5 days
- Famciclovir 1 g twice a day for 1 day
- Famciclovir 500 mg once, followed by 250 mg twice a day for 2 days

Suppressive therapy for recurrent genital herpes

- Acyclovir 400 mg twice a day
- Valacyclovir 500 mg once a day
- Valacyclovir 1 g once a day
- Famciclovir 250 mg twice a day