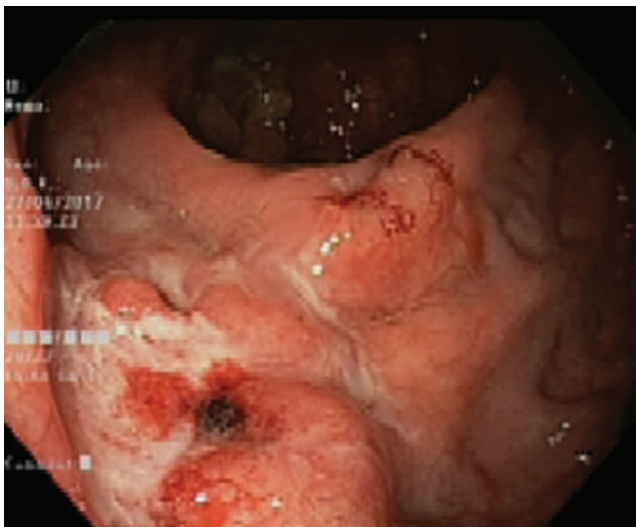


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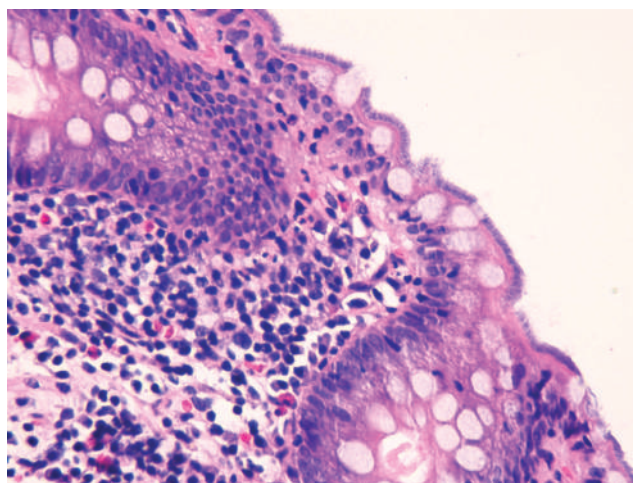
## Two Birds, One Stone: Two Unusual Causes of Diarrhea in a Nonimmunocompromised Human Immunodeficiency Virus–Infected Patient



**Figure 1.** Colonoscopy picture: at 5 cm from the anal margin, an indurated and ulcerated area is observed.

A 46-year-old white homosexual man was diagnosed with human immunodeficiency virus (HIV) infection 6 years ago, following successfully treated secondary syphilis. Baseline blood tests showed a CD4<sup>+</sup> count of 490 cells/mL (43%) and a plasma HIV RNA load of 43 000 copies/mL. Since then, correct antiretroviral therapy had been maintained (currently with Genvoya), with full virological suppression and a CD4<sup>+</sup> count of >600 cells/mL.

In the year before presenting to the doctor, the patient experienced chronic, nonbloody, watery diarrhea (2–3 bowel movements a day) with abdominal cramps that worsened prior to



**Figure 2.** Microscopic appearance (hematoxylin and eosin, ×40).

defecation. In the 4 weeks before presenting to the doctor, the diarrhea had worsened, with the patient experiencing rectal pain and the diarrhea sometimes containing traces of blood. Stool cultures and microscopic screening both proved negative for ova, cysts, and parasites. The HIV RNA load remained undetectable, the CD4<sup>+</sup> count was 700 cells/mL (50.4%), and the rapid plasma reagent test was negative.

Colonoscopy revealed an indurated and ulcerated area located 5 cm from the anal margin (Figure 1). The microscopic appearance is shown in (Figure 2; hematoxylin and eosin, ×40).

Doxycycline for 21 days resolved both infections.

What are your diagnoses?

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Diagnosis: Lymphogranuloma venereum and intestinal spirochetosis.

The colon biopsy showed cell infiltration of the lamina propria and an accentuated brush border–like layer coating the microvilli of the superficial epithelium. Polymerase chain reaction (PCR) testing proved positive for *Chlamydia trachomatis* L genotype (Allplex TM), with a diagnosis of lymphogranuloma venereum. Warthin–Starry staining of the brush border on the surface epithelium confirmed the diagnosis of intestinal spirochetosis (IS) (Figure 3).

Treatment with oral doxycycline at a dose of 100 mg/12 hour for 21 days resolved the symptoms, with endoscopic healing a month later, negative PCR test results, and no IS in the biopsy.

Lymphogranuloma venereum develops as a result of sexually transmitted *Chlamydia trachomatis* infection corresponding to genotype L. Outbreaks of coloproctitis in homosexuals coinfecting with human immunodeficiency virus (HIV) have been documented in Europe [1–5]. The diagnosis must be suspected on the basis of consistent clinical findings, and the confirmatory technique of choice is PCR testing of the rectal exudate and lymph node aspirate or biopsy, which can detect *Chlamydia* and determine the genotype. The treatment of choice is oral doxycycline for 21 days.

Intestinal spirochetosis [5–10] is a frequent animal infection occasionally seen in humans. It is most prevalent in developing countries, among homosexual males, and in HIV-infected individuals. The mechanism of transmission is not completely understood, although it is likely related to diet, sanitation, and poor living conditions. It

is also possible that IS may be sexually transmitted; higher rates of infection are seen in homosexual men and HIV-positive individuals. The condition may be asymptomatic, being evidenced only in colonoscopic biopsy specimens, or can cause chronic diarrhea, pain, flatulence, or blood in stools. The diagnosis is based on routine hematoxylin-and-eosin staining of colonic mucosa biopsies, evidencing a 3-mm thick hematoxyphilic fringe producing a brush border on the surface epithelium. Warthin–Starry staining of biopsy specimens confirmed the presence of spirochetes. The recommended treatment for IS is metronidazole or penicillin benzathine via the intramuscular route, although in our experience doxycycline may also be useful.

### Note

**Potential conflicts of interest.** All authors: No reported conflicts of interest. All authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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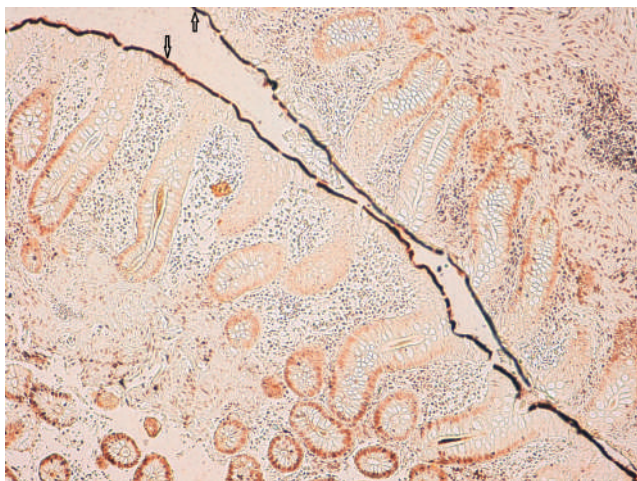


Figure 3. Warthin–Starry stain of the brush border on the surface epithelium.

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