

# A Case of Asymptomatic Syphilitic Proctitis

Lao-Tzu Allan-Blitz, MD,\*† Omer E. Beaird, MD,‡ Sarah M. Dry, MD,§  
Marc Kaneshiro, MD,¶ and Jeffrey D. Klausner, MD, MPH‡\*\*

**Abstract:** The incidence of syphilis is increasing. Syphilitic proctitis involving the rectal mucosa often presents with pain on defecation, rectal bleeding, or ulceration. We present a case of asymptomatic syphilitic proctitis diagnosed upon a routine screening colonoscopy.

## CASE SUMMARY

Our patient is a 50-year-old man with human immunodeficiency virus (HIV) infection that has been well controlled on antiretroviral therapy who underwent a routine colonoscopy for colorectal cancer screening in June 2018. At the time of colonoscopy, he was well and had no gastrointestinal complaints including absence of rectal pain, abdominal pain, bloating, nausea, vomiting, or diarrhea. He reported having a normal appetite and stable weight. He had no fevers or rash. On colonoscopy, he was found to have a rectal polyp and nodular areas in the distal rectum. Biopsies were taken and histopathology revealed a marked expansion of the lamina propria and submucosa by a chronic lymphoplasmacytic infiltrate, including reactive lymphoid hyperplasia. Using immunohistochemical stains with a monoclonal antibody to *Treponema pallidum* (Biocare Medical, Pacheco, CA), *T. pallidum* spirochetes were identified in specimens from the rectal polyp and nodular mucosa. Figure 1 shows imaging of the polyp and histology from the nodule. Stains were negative for lymphoma. He was then referred to infectious diseases for evaluation and management.

On further history, the patient reported being in a stable relationship with his male partner of 10 years. His sexual practices included condomless receptive oral and anal intercourse. Other than HIV infection, he recalled being treated for *Chlamydia trachomatis* in the remote past but denied any other history of sexually transmitted infections, including knowledge of prior syphilis diagnosis or treatment. His last syphilis screening was performed 2 years before presentation at which time he had a negative rapid plasma reagin test.

He was diagnosed with HIV infection 3 years before presentation, after presenting with severe fatigue. His CD4 cell count at that time was 15 cells/mm<sup>3</sup>. He had no history of opportunistic infections. He was started on fixed dose combination therapy with

elvitegravir, cobicistat, emtricitabine, and tenofovir disoproxil fumarate at the time of diagnosis and was transitioned to fixed dose combination therapy with elvitegravir, cobicistat, emtricitabine, and tenofovir alafenamide one year prior to presentation, which he reported taking with good adherence. From two months prior to presentation his viral load was undetectable and he had a CD4 cell count of 514 cells/mm<sup>3</sup>.

Upon referral to Infectious Diseases, he was found to have a positive rapid plasma reagin with a titer of 1:256 and reactive confirmatory *Treponema pallidum* Particle Agglutination test, which confirmed the diagnosis of syphilitic proctitis. Urine, rectal, and throat *Neisseria gonorrhoeae* and *Chlamydia trachomatis* nucleic acid amplification testing was negative. He was treated with weekly intramuscular Benzathine Penicillin G 2.4 million units for 3 weeks for management of syphilis of unknown duration. At the time of diagnosis, the patient was encouraged to ensure his partner received testing and treatment as well.

## DISCUSSION

We report a case of asymptomatic syphilitic proctitis discovered on a routine screening colonoscopy. The incidence of syphilis has been increasing since the beginning of the 21st century, particularly among men who have sex with men and transgender women.<sup>1</sup> Syphilitic proctitis is a rare presentation of the disease, and most often is associated with pain on defecation, rectal bleeding, diarrhea, and ulceration.<sup>2,3</sup> Such symptoms, along with nonspecific histologic findings, can make syphilitic proctitis difficult to distinguish from malignancy or inflammatory bowel disease.<sup>3-5</sup> *T. pallidum* organisms are not visible without specific stains, and thus a high degree of suspicion is required.

Asymptomatic rectal infection has been described commonly for other sexually transmitted infections such as *Neisseria gonorrhoeae* and *Chlamydia trachomatis*,<sup>6</sup> and syphilitic proctitis may often be asymptomatic as well.

One review of proctitis cases among men who have sex with men found syphilis to be the causative disease among 2% of cases.<sup>7</sup> Rectal involvement as a result of syphilis can occur in either primary or secondary infection.<sup>8</sup> Given the high serologic titers in our patient, and the isolation of involvement at the rectum, our patient likely had secondary syphilis. The lesions in the rectum were thought to represent mucosal condyloma lata. However, latent syphilis of unknown duration could not be excluded. Therefore, he was treated with Benzathine Penicillin G 2.4 million units intramuscularly weekly for 3 weeks in accordance with Centers for Disease Control and Prevention recommendations.<sup>9</sup>

Other gastrointestinal manifestations of syphilis include involvement of the gastric mucosa, terminal ileum, and colon.<sup>10</sup> Presenting symptoms most often include abdominal pain, early satiety, vomiting, and weight loss, depending on the region affected.<sup>11</sup> The stomach is one of the more common areas of involvement, where symptoms can often mimic dyspepsia and be confused for gastritis. Furthermore, there have been cases of simultaneous gastric syphilis and *Helicobacter pylori* peptic ulcer disease, making a correct diagnosis even more complicated.<sup>11</sup> Abnormalities described on endoscopic evaluation of the stomach among cases of syphilis with gastric involvement include

From the \*Department of Medicine, Brigham and Women's Hospital; †Department of Medicine, Children's Hospital of Boston, Boston, MA, ‡Division of Infectious Diseases, §Department of Pathology and Laboratory Medicine, David Geffen School of Medicine, ¶Vatche and Tamar Manoukian Division of Digestive Diseases, Department of Gastroenterology, and \*\*Department of Epidemiology, Fielding School of Public Health, University of California, Los Angeles, CA

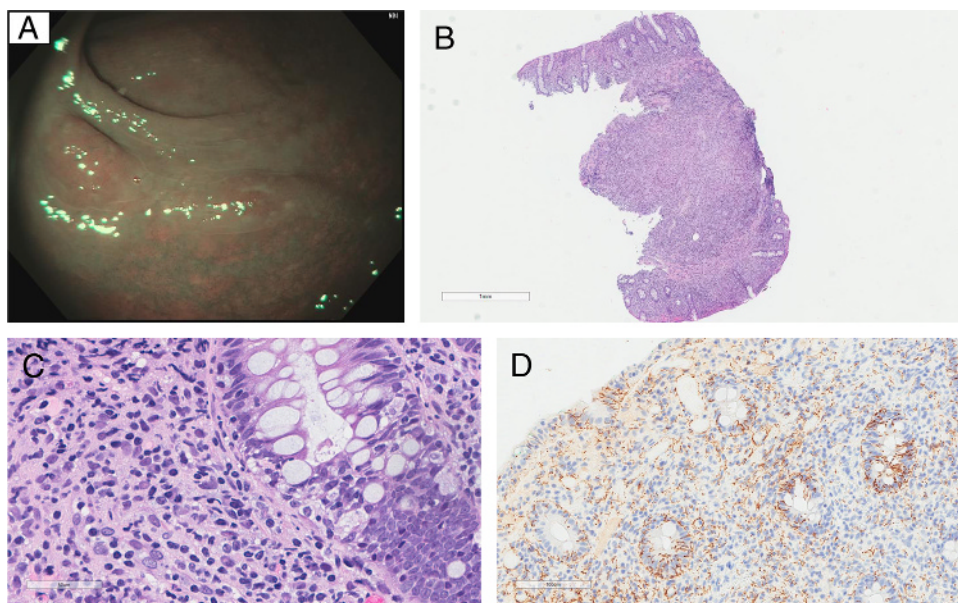
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Correspondence: Lao-Tzu Allan-Blitz, Department of Medicine, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115. E-mail: lao.allanblitz@gmail.com; Jeffrey D. Klausner, Department of Medicine, Infectious Diseases, 10833 Le Conte Ave, Los Angeles, CA 90095. E-mail: jdklausner@mednet.ucla.edu.

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**Figure 1.** A, Narrow band image view of the rectal polypoid lesions. B, Low power (2× magnification) examination shows a marked expansion of the lamina propria and submucosa by a dense inflammatory infiltrate, with some loss of glands in the lower portion of the mucosa. C, High power (40× magnification) demonstrates the infiltrate is composed of lymphocytes and plasma cells. D, Spirochete immunohistochemical stains at 20× magnification highlights numerous organisms invading into the surface epithelium, gland epithelium and lamina propria, and into the submucosa (not shown).

hypertrophic and irregular rugae, mucosal nodules or even mass-like lesions, fibrotic narrowing and rigidity of the gastric wall, or even fibrosis of the entire stomach.<sup>11</sup>

Intestinal spirochetosis is another condition in which spirochetes are observed on histology from intestinal biopsies and is most often caused by spirochetes of the *Brachyspiraceae* family.<sup>12</sup> In that condition, spirochetes are present on the surface epithelium, often diffusely throughout the colon, resulting in a characteristic fuzzy basophilic border. Intestinal spirochetosis is seen in both immunocompetent and immunocompromised individuals; in one study, children were more likely to be symptomatic than adults, although HIV-infected adults are more likely to be symptomatic than HIV uninfected individuals.<sup>12</sup> Unlike gastrointestinal treponematoses, gastrointestinal spirochetosis is not associated with a chronic inflammatory infiltrate in the lamina propria or submucosa; however, among individuals infected with HIV, a higher degree of intestinal invasion has been noted.<sup>12</sup>

We present a case of asymptomatic syphilitic proctitis diagnosed on routine colonoscopy. It is important to consider syphilitic proctitis in the differential diagnosis of rectal lesions, particularly among high-risk populations.

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