

# Human intestinal spirochetosis, histological finding associated with diarrhea with poor clinical evolution

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*Sanid. mil.* 2022; 78 (3): 178-179, ISSN: 1887-8571

## Declaración de intereses:

Los autores declaran no tener conflictos de intereses ni percibir becas en la publicación.

## ABSTRACT

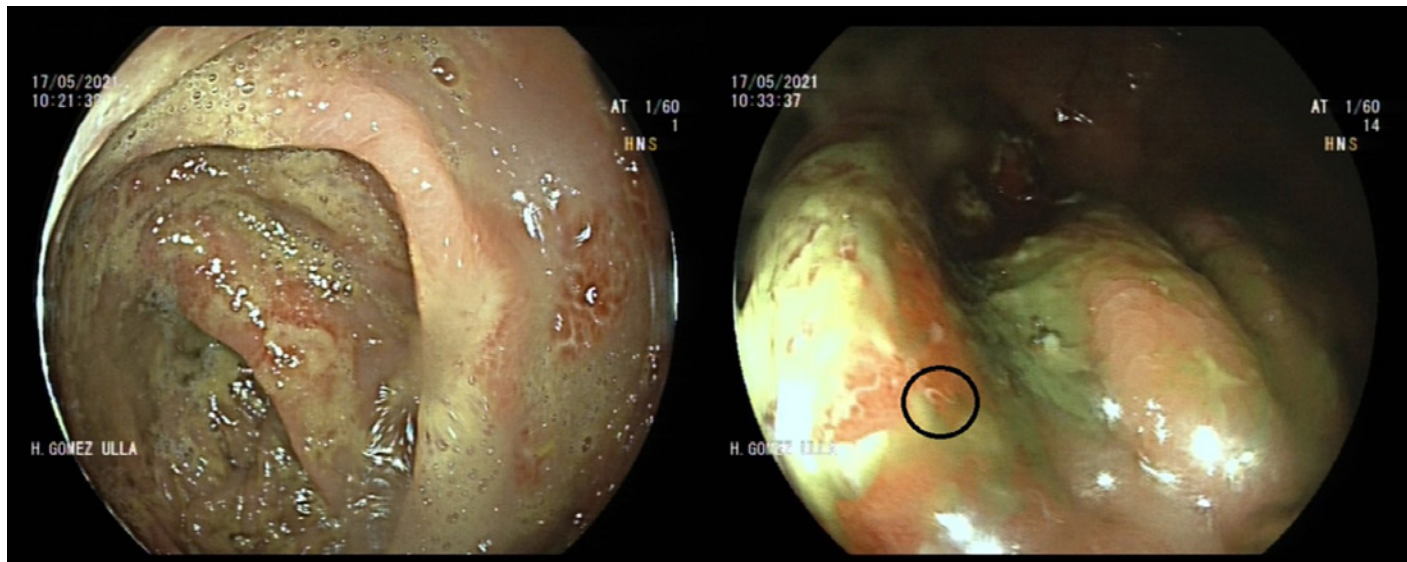
Human intestinal spirochetosis was described by Harland and Lee in 1971, after observing colonization of the apical membrane of the intestinal mucosa by spirochetes. The clinical importance of these findings is not clear, since it is unknown whether the presence of these microorganisms is pathogenic or commensal. The clinical presentation is variable. It can be asymptomatic or manifest with abdominal pain, changes in intestinal rhythm and rectal bleeding. The prevalence of intestinal spirochaetosis is notably higher in developing countries than in developed countries, with the most likely route of transmission being fecal-oral, although sexual transmission has also been suggested as it is more prevalent in homosexual men. We present the case of a 42-year-old man, in treatment for 3 years with Tenofovir, with an HIV-positive partner, who went to the hospital for persistent diarrhea associated with eating a hamburger.

**KEYWORDS:** Spirochetosis, Human intestinal spirochetosis, enterobius, and diarrhea.

## CASE REPORT

42-year-old male patient who came to the hospital for diarrhea with 5-6 bowel movements a day. The patient associates the onset of clinical eating a hamburger. The clinic gets worse with

new intakes, and it did not improve with dietary measures. As usual treatment, the patient was intake Tenofovir (1-0-0) for 3 years in pre-exposure therapy due to contact with his HIV partner. Endoscopy was performed with ulcers and parasites (figure 1) and multiple biopsies were performed (figure 2).



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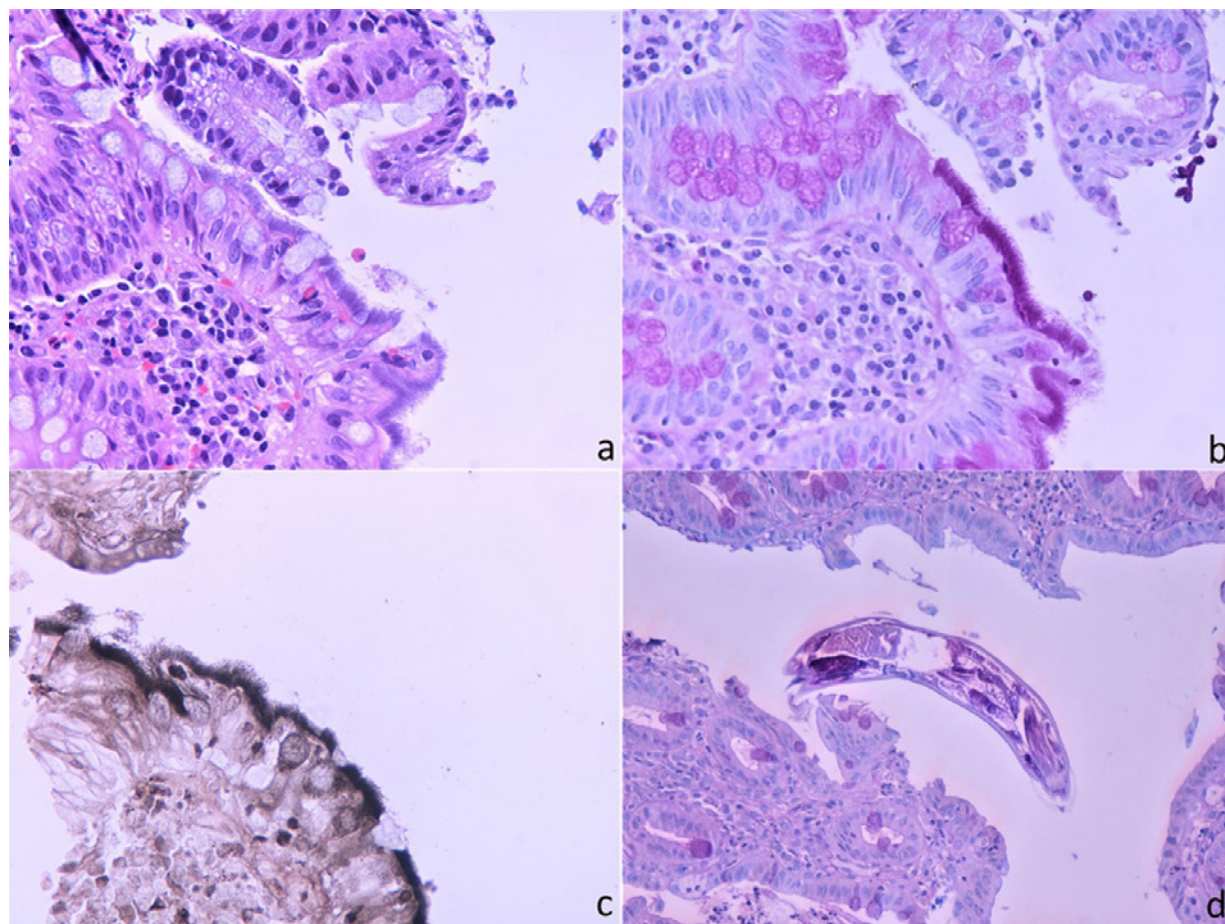
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Recibido: 18 de agosto de 2021

Aceptado: 13 de septiembre de 2021

doi: 0.4321/S1887-85712022000300008

The patient underwent endoscopy with poor preparation of the colon due to the presence of dense intraluminal fecal remains adhering to the wall, which were partially mobilized with the washes but which prevent large areas from being seen (Boston 1 + 2 + 1). He advanced until the cecal pole was intubated, observing a normal valve. Multiple stellate and serpiginous ulcers with a yellowish background and edema at the edges are observed throughout the colon and rectum. All of them presented innumerable millimeter and filiform parasites lodged in the beds



**Figure 2.** Histological examination HE 400X (a), PAS 400X (b) Silver 400x (c) and PAS 200x (d)

of the ulcers. The affectionation is more marked in the appendicular area, intensely congestive, with mucosal edema and extrusion of the tissue, producing a false appearance of friable neoformation when rubbing. A sample was taken for microbiology and pathological anatomy.

In the microbiological study, no growth was observed in the cultures, with frequent Endolimax Nana cysts being observed.

Figure 2. Histological examination HE 400X (a), PAS 400X (b) Silver 400x (c) and PAS 200x (d)

Histological examination revealed oval structures with an external cuticle compatible with enterobius and the presence of an apical fringe in the intestinal glands showing PAS and Silver staining. These findings are consistent with the spirochetes. Diagnosis: Roundworms compatible with enterobius vermicularis and human intestinal spirochetosis.

## DISCUSSION

Spirochetosis infection was described by Harland and Lee (1) in 1971 in patients without an obvious associated clinical outcome. The infection is more prevalent in men, being more frequent if there are homosexual relationships. The prevalence varies from 2 to 9% in Europe (2), although it has increased year after year in Asian studies (3). Associated symptoms are usually rare. The clinical presentation can vary from the absence of symptoms to the presence of abdominal pain (46%), diarrhea

(51%), alternating diarrhea/constipation (13%) and rectal bleeding (4). In our case, the relationship with helminths is more likely.

The interest of the case lies in the confusion due to cross-reactions with *T. pallidum* and the difficulty of diagnosis by culture and that it must be included in the differential diagnosis of a patient who presents risky contacts with an HIV partner.

The route of transmission is not clear, but there is a difference in the incidence of eating habits, sexual and hygienic-sanitary habits of the populations studied (5).

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