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Authors:
María del Mar Díaz Alcázar, Alicia Martín-Lagos Maldonado, Javier Luis López Hidalgo

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Intestinal spirochetosis: ¿normal intestinal flora or etiology of diarrhea?

Díaz Alcázar, María del Mar[1]; Martín-Lagos Maldonado, Alicia[1]; López Hidalgo, Javier Luis[2].

[1] UGC Aparato Digestivo. Hospital Universitario Clínico San Cecilio of Granada (Spain). Address: Avenida de la Investigación, s/n, 18016 Granada.

[2] Unidad Provincial de Anatomía Patológica de Granada. Hospital Universitario Clínico San Cecilio of Granada (Spain). Address: Avenida de la Investigación, s/n, 18016 Granada

Correspondence: María del Mar Díaz Alcázar. E-mail: mmardiazalcazar@gmail.com

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Dear Editor,

A 22-year-old man begins with up to 12 loose stools per day, with mucus but without blood. They are present for two months, even during the night. Moreover, he complains of abdominal pain and weight loss. Blood tests without any findings. Fecal calprotectin 225 µg/g. Stool microbiology tests are negative. Ileocolonoscopy displays normal mucosa, but the histological study of the biopsies shows Treponemas genus Brachispira (figure 1). The patient recognises sexual risk behavior. Treatment with metronidazole is initiated with clinical improvement.

Intestinal spirochetosis is the presence of spirochetes of the Brachyspiraceace family attached to the apical cell membrane of the colorectal epithelium.[1-4] Transmission generally occurs by fecal-oral route, but sexual transmission is also described in homosexuals.[3,4] Prevalence is up to 5-7 % in developed countries with higher rates in developing countries.[1-4] The majority of the cases are reported in homosexuals or HIV-positive patients.[1-3] Current theories suggest that spirochetes are normal flora but they can become pathogenic due to immunosuppression.[2]

The clinical presentation varies from typically asymptomatic to non-specific symptoms like diarrhoea, abdominal pain or bleeding.[1-4] Most cases are mild, although fatal course has been reported.[1,2] Endoscopic findings are variable and nonspecific ranging from normal to erythematous or polypoid mucosa.[1,3,4] The histological study is diagnostic, showing spirochetes embedded in the epithelial cell border, in a strip-like structure of 2-6 µm in the intercrypt epithelial zones with destruction of microvilli and inflammation of the lamina propria, as a "false brush border".[1,3,4] This produces a basophilic fringes on hematoxylin and eosin sections that Warthin-Starry silver, Giemsa and PAS stain confirm.[1,3,4] For symptomatic patients the treatment with metronidazole has been shown beneficial and is of choice.[1,2,4]

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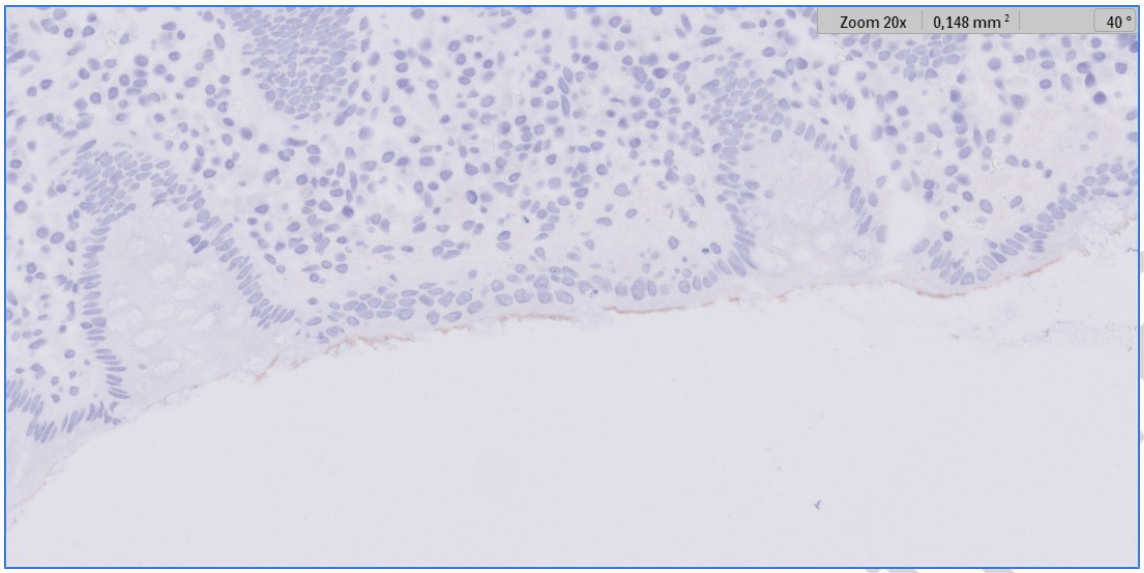

Figure 1. Histological cut with immunohistochemical staining with anti-Treponema antibody. It is positive in the layer of microorganisms of the colonic surface by cross-reaction.