



# Intestinal Spirochetosis in an Immunocompetent Patient

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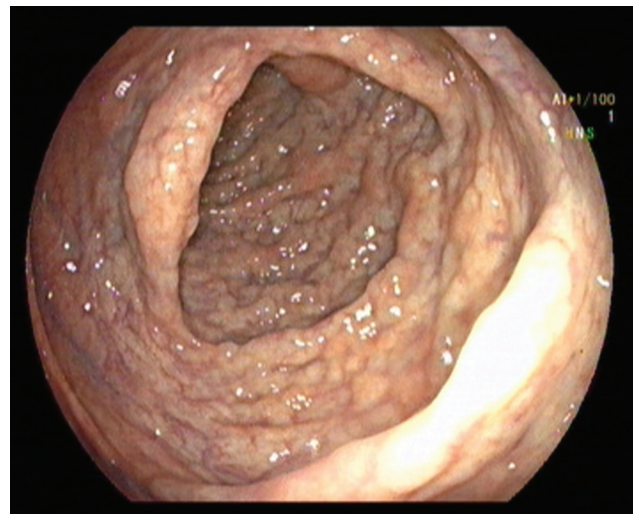
Intestinal spirochetosis (IS) is characterized by the presence of filamentous nontreponemal anaerobic spirochetes on the intestinal mucosa surface, initially documented in 1967.<sup>1</sup> IS is a rare infection of the gastrointestinal tract caused by the colonization of colonic mucosa by spirochetes. There is still much debate in the literature as to whether IS is a pathogenic entity or a commensal resident. While most cases remain asymptomatic, certain instances manifest with symptoms, including pain, diarrhea, and rectal bleeding. This is seen particularly among immunocompromised and homosexual individuals. Many organisms within the Spirochaetes phylum are pathogenic: like the *Leptospira* species, which causes leptospirosis, *Borrelia burgdorferi* which causes Lyme disease, and finally, *Brachyspira pilosicoli*, *Brachyspira aalborgi*, and *Serpulina pilosicoli* are most associated with human IS. On colonoscopy, some patients with IS have no remarkable findings, while others have had polyps, mucosal erosions, or ulcerations.<sup>2</sup> We present the case of an immunocompetent 56-year-old man with complaints of abdominal pain and mucus in stools for 3 weeks with no history of diarrhea or blood in stools. Colonoscopy revealed patchy erythema and loss of haustration in the proximal transverse colon (► **Fig. 1**). A biopsy was taken which revealed mucosa with moderate inflammatory cell infiltrations, edema and congestion, and colonic mucosal fragments with surface epithelium showing a basophilic fuzzy appearance (► **Fig. 2**). Following this special stain was done including periodic acid–Schiff and Warthin–Starry stain confirming the diagnosis of IS (► **Fig. 3**). Due to this finding, the patient underwent a rapid plasma reagin and human immunodeficiency virus tests which were found to be negative. The management decision

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is based on the presence of clinical symptoms. Metronidazole therapy is useful in symptomatic patients, while observation is sufficient in asymptomatic patients.<sup>3</sup> In our case, the patient was started on oral metronidazole, which resulted in symptomatic improvement.

## Ethical Statement

All efforts have been made to ensure the privacy and confidentiality of the patient, and any potential identifiers have been removed or anonymized.



**Fig. 1** Colonoscopy image of proximal transverse colon showing edematous mucosa with patchy erythema, nodularity, and loss of haustration.

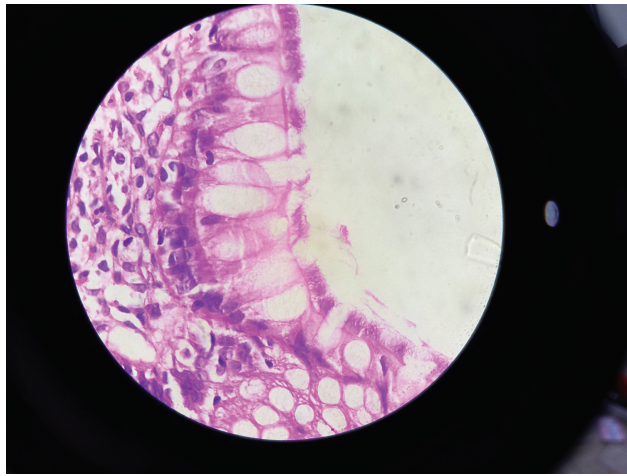
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**Fig. 2** Histopathologic image of proximal transverse colon, hematoxylin and eosin (H&E), 200 × .



**Fig. 3** Histopathology of proximal transverse colon showing numerous Warthin–Starry reactive organisms, Warthin–Starry stain, 400×.

#### Author Contributions

A.J.: Conceptualization, investigation, and writing-original draft. V.V.: Data curation, validation, and writing-review. R.R.P.: Validation and visualization. H.R.N.: Project administration, supervision, writing-review, and editing.

#### Data Availability Statement

There is no data associated with this work.

#### Informed Consent

Informed consent for the publication of identifiable information and imaging in this paper has been obtained from the patient involved. The individual was provided with detailed information about the nature and purpose of the publication, and their consent was documented voluntarily.

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#### Conflict of interest

None declared.

#### Acknowledgment

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