

A Rare Cause of Diarrhea: Intestinal Spirochetosis in an HIV-Positive Patient

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INTRODUCTION:

- Intestinal spirochetosis (IS) is a rare infection defined by the histologic presence of spirochetal organisms colonizing the colonic epithelial cells
 - In humans, *Brachyspira aalborgi* and *Brachyspira pilosicoli* predominate
- Histopathologic specimens characteristically show a thickened brush border due to the adhesion of spirochetes to the colonic mucosa and colonic eosinophilia
- There is a higher prevalence of IS in men who have sex with men and those with a positive HIV status
- Most cases are found incidentally in asymptomatic patients, however the most common symptoms associated with IS colonization are diarrhea, abdominal pain, and bloating
- Treatment with metronidazole is helpful for symptom resolution

CASE REPORT:

56 year old male with a positive HIV status, presented to clinic with a chief complaint of diarrhea for 4 months with 3-4 episodes daily

- Denied mucous or blood in the stool, abdominal pain, nausea, vomiting, or unintentional weight loss. Denied recent antibiotic use.
- He previously had a normal screening colonoscopy 2 years prior
- Repeat colonoscopy revealed normal colonic mucosa with no evidence of inflammation or ulceration (Figure 1)
- Biopsies for histology were taken throughout the colon and terminal ileum to evaluate for microscopic colitis
- Histopathology results indicated colonic mucosa with spirochetosis with no active or chronic colitis. Warthin starry stain was performed with adequate controls and supported this diagnosis (Figure 2)
- Patient reported resolution of symptoms following a 10-day course of metronidazole

IMAGING & PATHOLOGY:



Figure 1: Colonoscopy images demonstrating normal colonic mucosa

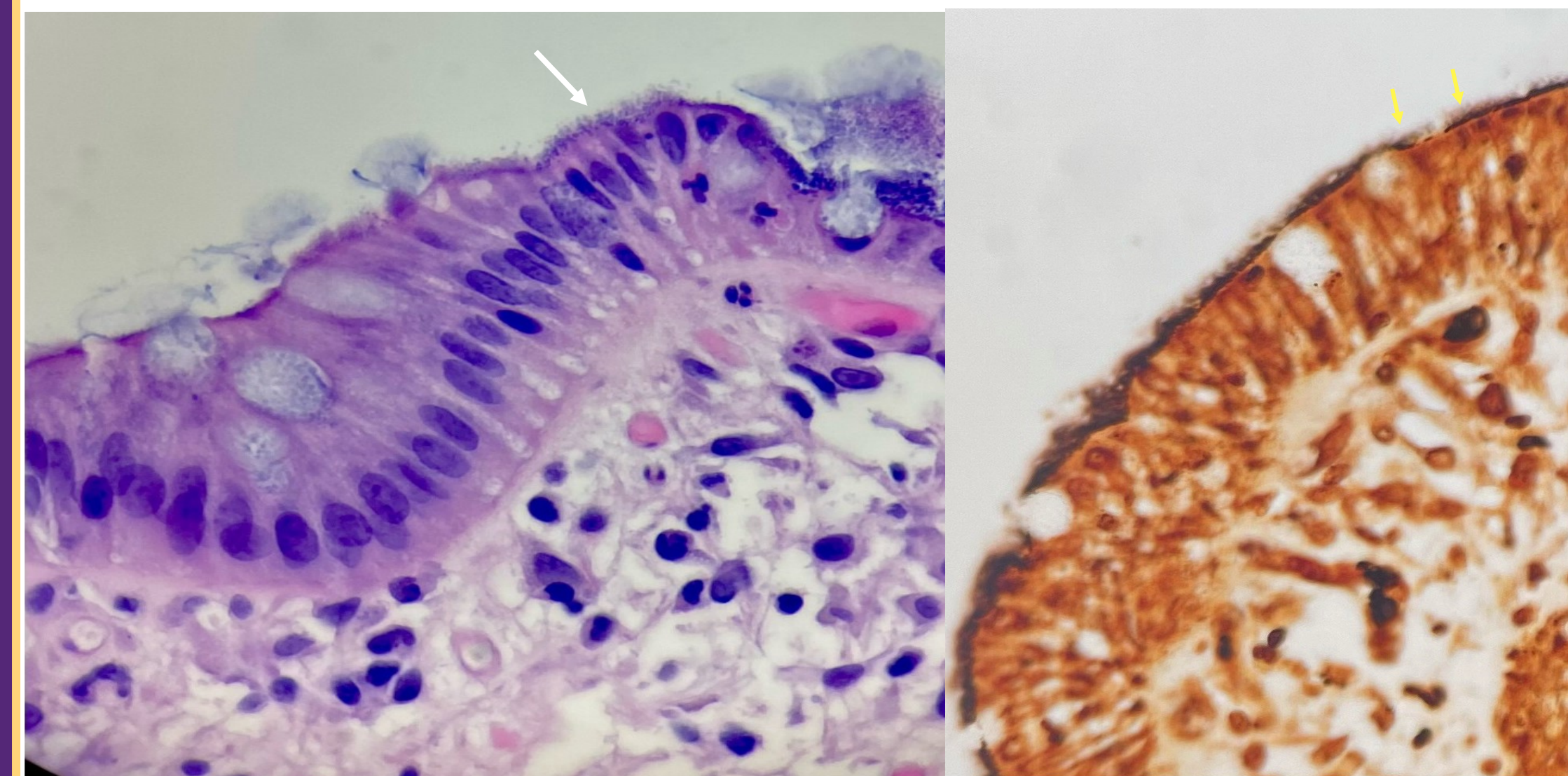


Figure 2. Colon biopsy stained with hematoxylin and eosin (H&E) and Warthin-Starry stains, respectively, show spirochetes adhered to the mucosa that resemble the thick brush border characteristic of IS

DISCUSSION:

- Intestinal spirochetosis is a rare cause of change in bowel habits, with an increased incidence among HIV-positive patients and men who have sex with men
- Invasion beyond the surface epithelium is associated with symptomatic IS
- The most common symptoms associated with IS colonization are diarrhea, abdominal pain, and bloating
- Rarely, can present with ulcerations and GI bleeding
- Symptomatic IS typically responds to metronidazole as first-line treatment
- This case highlights the importance of considering IS in the differential in HIV-positive patients with nonspecific gastrointestinal symptoms after more common etiologies have been ruled out
- Colonoscopy remains invaluable to diagnosis

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