A 48-Year-Old HIV-Positive Man with Chronic Intermittent Diarrhea
(See page 1174 for Photo Quiz)

Figure 1. Micrograph of a biopsy specimen of the rectosigmoid colon demonstrating a bluish brush border (hematoxylin-eosin stain; original magnification, ×400).

Diagnosis: Intestinal spirochetosis.

Results of histopathologic studies were pathognomonic for intestinal spirochetosis, a disorder that was first described in 1967 [1]. There are no distinct symptoms associated with intestinal spirochetosis other than diarrhea. The rate of colonization in humans is variable, but men who have sex with men and HIV-infected individuals appear to be at higher risk of being colonized [2, 3]. Endoscopic and gross examinations of the intestine reveal no distinctive findings.

Histopathologic studies are characterized by a fuzzy, bluish-colored, band-like fringe along the colonic brush border visible by hematoxylin-eosin staining [2, 4, 5]. Spirochetes are well stained using silver stains, such as Warthin-Starry [3] or Steiner stains, and are seen attached along the surface of the colonic epithelium (figures 1 and 2). The most commonly identified species are Brachyspira aalborgi and Serpulina pilosicoli [2, 3, 5]. PCR assays have been described for some species of intestinal spirochetes but are not clinically available and have not been validated for diagnostic purposes [6].

Although controversy exists regarding the clinical significance of this colonization [7], numerous case reports have described spirochetes in the intestines of patients with diarrhea and the elimination of spirochetes, with clinical improvement, after receipt of treatment with various antimicrobial agents, such as metronidazole [2–5]. The patient in this report was treated with oral metronidazole (500 mg t.i.d. for 10 days) and had clinical improvement, as manifested by decreased frequency of diarrhea and loose stools, although there was not complete resolution. Two weeks after completion of antibiotic therapy, colonoscopy was repeated, and no gross abnormalities were noted. The previously noted rectosigmoid mucosal erythema had resolved. Examination of colonic mucosa biopsy specimens revealed almost complete disappearance of spirochetes that had previously lined the mucosal border, with only a few organisms visualized by Steiner staining. The patient continues to be observed, and, to date, the improvement in symptoms has been maintained for 3 months.

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References