

George W. Meyer, MD FACP MACG, Series Editor

Unusual Causes of Abdominal Pain

by Omair Atiq, Lan Peng, Christian Mayorga

CASE

A 48 year old woman presented to the emergency department with chief complaints of abdominal pain, nausea and vomiting for five days. Her abdominal pain was located in the mid epigastrium and right upper quadrant (RUQ). It was constant and burning in nature. The vomiting was approximately three times per day and consisted of watery material and food particles, and she occasionally noticed bright red blood. She also noted having one loose bowel movement which was dark in color. She otherwise denied any fevers, chills, dysphagia, odynophagia or hematochezia.

Her medical history was significant for HIV/AIDS on highly active anti-retroviral therapy (last CD4 count: 51 cells/mcL, viral load: 47377 copies/ml), oral candidiasis, disseminated varicella zoster and anemia of chronic disease. On presentation, her vitals were stable. Her abdomen was soft, non-distended, with moderate tenderness on palpation over her RUQ.

Initial laboratory values revealed WBCs: $3.92 \times 10^9/L$, Hb: 9.0 gm/dL, platelets: $225 \times 10^9/L$. Computed tomography (CT) scan of the abdomen showed concentric wall thickening involving the third part of duodenum and proximal jejunum. Her symptoms did not respond to intravenous antiemetics and analgesics. An esophagogastroduodenoscopy (EGD) showed a normal esophagus and stomach. There was patchy, mildly erythematous mucosa in the duodenal bulb. Upon entering the second portion of duodenum, the mucosa appeared markedly abnormal. There was severe villous blunting, mucosal atrophy,

diffuse erythema and scattered erosions (Figures 1 and 2). These changes persisted into the third position of duodenum and beyond. Biopsies were taken for histology and microbiology (Figures 3 and 4).

What is the Diagnosis?

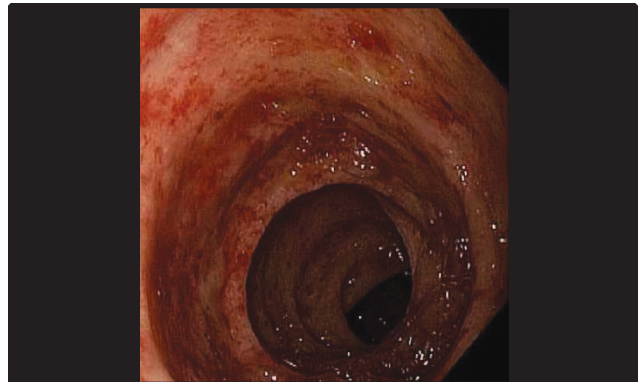


Figure 1.

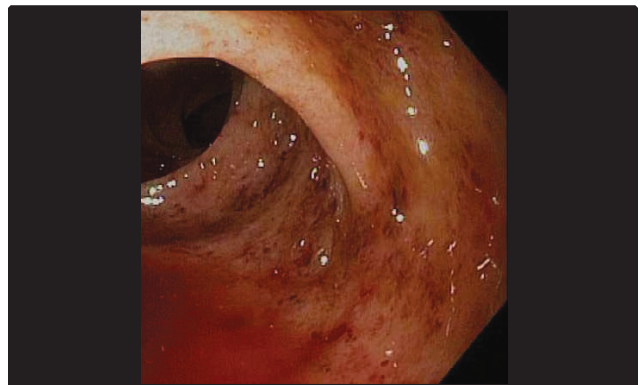


Figure 2.

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See the answer and discussion on page 76

(continued from page 64)

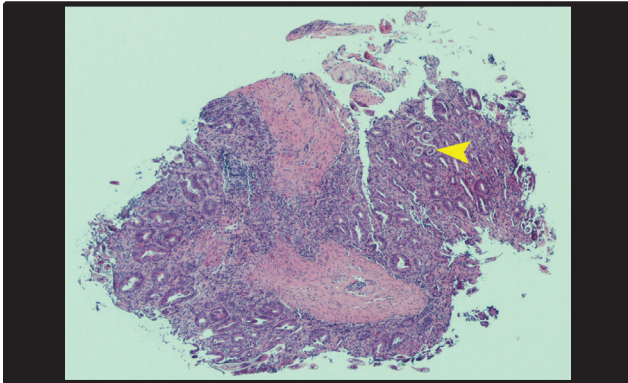
ANSWER AND DISCUSSION

Figure 3.

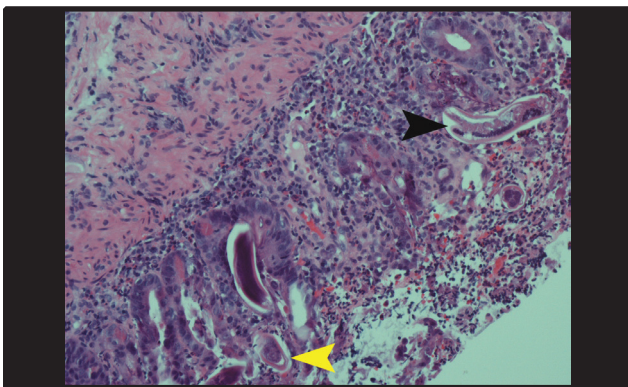


Figure 4.

Enterocolitis Caused by *Strongyloides Stercoralis* (Threadworm)

The pathology report showed duodenal mucosa with inflammation and significant architecture distortion including villous loss (Figure 3). Both strongyloides adult (black arrow) and larvae (yellow arrow) are seen within crypts. Mucosal ulcer and eosinophilic and neutrophilic infiltration are present (Figure 4).

The patient was diagnosed with enterocolitis caused by *Strongyloides stercoralis*. She received a course of ivermectin. Her abdominal pain completely resolved within a week, and she remained asymptomatic at two months after hospital discharge.

Strongyloides stercoralis (threadworm), an unsegmented helminth of class Nematoda, was first described in 1876 when it was identified in the feces of French colonial troops suffering from diarrhea in Cochinchina.¹ *Strongyloides* is prevalent in the tropical and sub-tropical regions of the world and is endemic in the southeastern United States. Immunosuppressed patients are at greatest risk because impaired cellular and humoral immunity alter parasite proliferation,

resulting in increased parasitic burden and possible dissemination to other organs. Studies have reported the incidence of strongyloidiasis in patients with HIV to be near 2.5%.² The most common gastrointestinal (GI) symptoms result from involvement of the upper GI tract and include nausea, vomiting, diarrhea, weight loss, and abdominal pain. Additional manifestations of GI strongyloidiasis include malabsorption, GI hemorrhage, colonic pseudopolyposis, granulomatous hepatitis, biliary obstruction, and eosinophilic ascites. Endoscopic findings include ulcerations, gastritis or duodenitis as evident in our patient. Diagnosis can be made with stool examination, enzyme linked immunosorbent assay or a duodenal or jejunal biopsy (~90% diagnostic yield). Ivermectin (200 mcg/kg/day) is the first-line agent for treatment, and a course of five to seven days has been suggested in immunosuppressed patients with systemic disease. Lifelong suppressive therapy may be indicated for both gastrointestinal and pulmonary infections in patients with relapses.³ Intestinal strongyloidiasis is not an uncommon infection in immunosuppressed patients and should be in the differential diagnosis for patients presenting with nausea, vomiting and abdominal pain. Endoscopy should be considered if symptoms are not resolving with conservative management. ■

References

1. Singh S. Human strongyloidiasis in AIDS era: its zoonotic importance. *J Assoc Physicians India* 2002; 50:415-22.
2. Cimerman S, Cimerman B, Lewi DS. Prevalence of intestinal-parasitic infections in patients with acquired immunodeficiency syndrome in Brazil. *Int J Infect Dis* 1999; 3:203-6.
3. Igual-Adell R, Oltra-Alcaraz C, Soler-Company E, et al. Efficacy and safety of ivermectin and thiabendazole in the treatment of strongyloidiasis. *Expert Opin Pharmacother* 2004; 5:2615.

UNUSUAL CAUSES OF ABDOMINAL PAIN

We solicit our readers to submit interesting and unusual cases of abdominal pain for consideration for publication. The case should be well documented, include images (if possible), at least one reference and no more than two authors.

Send your manuscript to
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