If you’re preparing for the United States Medical Licensing Examination® (USMLE®) Step 2 exam, you might want to know which questions are most often missed by test-prep takers. Check out this example from Kaplan Medical, and read an expert explanation of the answer. Also check out all posts in this series.

This month’s stumper

A 22-year-old man presents with a six-month history of non-bloody diarrhea, malaise, recurrent abdominal cramps, and temperatures to 38.5 °C (101.3 °F). At this time, he is afebrile. Examination reveals a palpable, ill-defined mass in the right lower quadrant of the abdomen. Palpation causes local tenderness without guarding. Oral ulcers are also noted. Laboratory studies show:

- Hemoglobin: 11.5 g/dL
- Leukocyte count: 12,800/mm3
- Albumin: 2.8 g/dL
- Sedimentation rate: 45 mm/h

An upper gastrointestinal series with small bowel follow-through reveals a sharply demarcated stenotic segment in the terminal ileum. The patient undergoes laparotomy, and the involved segment of ileum is resected. Which of the following is the most likely diagnosis?

A. Carcinoma.

B. Celiac disease.

C. Chronic appendicitis.
D. Crohn disease.
E. Pseudomembranous colitis.
F. Ulcerative colitis.

The correct answer is D.

Kaplan Medical explains why

The clinical picture is consistent with Crohn disease (CD). Non-bloody diarrhea, abdominal pain and cramps, malaise and low-grade fever are the most common, but rather nonspecific, presenting symptoms. CD affects the terminal ileum most frequently, so that tenderness and a mass can often be detected on palpation in the lower left quadrant of the abdomen.

The most characteristic signs of CD include sharp demarcation of affected segments from adjacent noninvolved loops and presence of non-necrotizing granulomas in biopsies. Strictures resulting in bowel obstruction may necessitate surgical resection, as in this case.
Why the other answers are wrong

**Choice A:** Carcinoma is highly unlikely, considering the clinical picture, location of lesion (small bowel cancer is rare), and young age of the patient.

**Choice B:** Celiac disease is a chronic diarrheal disease that is characterized by intestinal malabsorption and precipitated by indigestion of gluten-containing foods. The disease also presents with non-bloody diarrhea, cramps, and abdominal distension due to fluid- and gas-filled intestinal loops.

Distinguishing features on small bowel series are flocculation of barium, small bowel dilatation, and flattening of normal mucosal fold pattern. Occasionally, ulceration and strictures may occur.

**Choice C:** Chronic appendicitis is a rather controversial entity. Repeated bouts of acute appendicitis, especially when incompletely controlled with antibiotic therapy, may rarely result in periappendiceal and pericolic adhesions.

**Choice E:** Pseudomembranous colitis is due to the toxins produced by *Clostridium difficile*. This condition develops as a complication of broad-spectrum antibiotic treatment, particularly in hospitalized patients. It affects the colon (not the ileum) and manifests with greenish, foul-smelling diarrhea. Endoscopic and pathologic examinations reveal the characteristic yellow-green plaques adherent to the mucosa.

**Choice F:** Ulcerative colitis (UC) shares many clinical and pathologic features of CD, so that an "umbrella" designation of inflammatory bowel disease is used to refer to both conditions when a specific diagnosis is not yet made. Features not consistent with UC (thus favoring CD) include involvement of ileum (which is exceptional in UC), sharp demarcation of the affected bowel segment, and presence of granulomas on histologic examination.

For more prep questions on USMLE Steps 1, 2 and 3, view other posts in this series.

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