

# Diagnosing Gastric Carcinoma

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The clinical presentation of abdominal pain, fatigue, and fever represents a number of potential diagnoses. Differential diagnoses for these common signs and symptoms include appendicitis, cholecystitis, diverticulitis, gastritis, renal colic, and myocardial infarction. Presenting symptoms are more likely to represent a gastrointestinal etiology with the addition of melena, ranging from a simple gastritis to a gastrointestinal malignancy. This column will explore the diagnostic process for evaluating symptoms of abdominal pain, fatigue, fever, and melena in a 58-year-old man from the perspective of an oncology nurse practitioner. An algorithm for narrowing from a broad list of potential diagnoses at the patient's initial presentation to the most probable diagnoses is described, and the clinical reasoning process for narrowing the list is discussed.

## Patient Description

Mr. I is a 58-year-old Japanese man who presents to clinic with complaints of abdominal pain, fatigue, and fever for the past three to four days. He also states that he has had black stools for the past 24 hours. His wife and two adult children accompany him to the clinic.

## Diagnostic Process: Presumptive Diagnosis

The clinical presentation of abdominal pain, fatigue, and fever represents many potential diagnoses, some of which are benign and self-limiting, such as viral gastroenteritis caused by rotavirus. Abdominal pain with fever and fatigue in a 58-year-old man also may indicate bacterial gastroenteritis caused by organisms such as salmonella and shigella. Other

common causes include appendicitis, cholecystitis and/or gallstones, diverticulitis, or peritonitis. Important nongastrointestinal conditions include renal colic, dissecting aortic aneurysm, or even a myocardial infarction. With the addition of melena to the aforementioned constitutional symptoms, clinical suspicion for more specific pathologic conditions causing upper-gastrointestinal bleeding must be ruled out.

## Acute Abdominal Symptoms

Appendicitis is the most common cause of acute abdominal pain in the United States (Margenthaler et al., 2003) and should be considered as a possible diagnosis when a patient presents with abdominal symptoms. Acute appendicitis as a cause of intra-abdominal sepsis may have an atypical presentation in older adult patients, which may lead to a delay in diagnosis and increased morbidity and mortality because of perforation or peritonitis (Podnos, Jimenez, & Wilson, 2002). Acute appendicitis also may cause bleeding in the gastrointestinal tract.

In addition to appendicitis, Podnos et al. (2002) described diverticulitis, cholecystitis, and colon cancer perforation as potential differential diagnoses for older adult patients presenting with intra-abdominal illnesses. They noted that cholecystitis may present with Charcot's triad (fever and chills, right upper-quadrant pain, and jaundice), but 30%–45% of patients may not present with this triad of symptoms. Diverticulitis may present

with abdominal pain, low-grade fever, a change in bowel habits, and dysuria (Stollman & Raskin, 1999). Men, especially those older than 50, present with bleeding related to diverticulitis more often than women (McConnell, Tessier, & Wolff, 2003). Erosive hemorrhagic gastritis also will cause melena (Yabuki et al., 2002) and, if associated with infection and significant blood loss, may be accompanied by fever and fatigue.

## Gastrointestinal Bleeding

Common causes of gastrointestinal bleeding include duodenal or gastric ulcers, gastritis, duodenitis, esophagitis, and angiodysplasia; uncommon causes include duodenal Crohn disease, gastric polyps, or malignancy (Cappell & Friedel, 2002). However, healthcare professionals must determine whether the melena is related to conditions that mimic melena or cause short-term melena because of ingestion of small amounts of blood from food sources and is independent of the other presenting complaints. Wilcox, Alexander, & Cotsonis (1997) described studies with human volunteers and demonstrated that as little as 50 ml of blood placed in the stomach produces melena, although melena is produced more consistently with 1 unit of blood. Stool color actually depends on transit time of blood through the gastrointestinal tract, with the color of denatured blood in stool appearing darker with longer transit times. Dark stools may be attributed mistakenly to blood in the stool, which

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