# Approach to the Patient With Hematochezia

Thomas G. Cotter, MD; Niamh S. Buckley; and Conor G. Loftus, MD

From the Department of Internal Medicine (T.G.C.) and Division of Gastroenterology and Hepatology (C.G.L.), Mayo Clinic, Rochester, MN; and School of Medicine, Trinity College Dublin, The University of Dublin, Dublin, Ireland (N.S.B.).

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**Learning Objectives:** On completion of this article, you should be able to (1) identify the key questions to ask a patient with hematochezia; (2) describe the differentiating physical examination findings; and (3) outline the appropriate investigations and treatment.

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## Abstract

The evaluation of the patient with hematochezia can be complex because of the broad differential diagnosis and the number of management strategies available. In this article, a simplified approach to the history and physical examination is presented, with management illustrated in a case-oriented manner.

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Hematochezia, or the passage of bright red blood per rectum (BRBPR), is a common clinical presentation, present in up to 20% of adults,[1] and estimated to be responsible for an annual hospital admission rate of 21 per 100,000.[2] The underlying etiology can vary from life-threatening variceal bleeding to clinically insignificant hemorrhoidal bleeding. The most common etiology is diverticular bleeding, which accounts for 20% to 55% of cases, followed by intestinal ischemia, anorectal disorders, and neoplasia, which each accounting for around 10% of cases.[3] A thorough history and focused physical examination are vital tools for the physician to evaluate patients with hematochezia. In this review, we present a concise and practical case-based approach to the patient with hematochezia. Although many aspects of this review are more applicable to the hospital setting, there are still a number of elements relevant to the outpatient setting.

## 5-STEP APPROACH TO HEMATOCHEZIA

A focused history, physical examination, and laboratory evaluation should be obtained at the time of patient presentation to assess the severity of bleeding and its possible location and etiology. We propose a 5-step approach

**TABLE. Five-Step Approach to Hematochezia**

| |
|---|
| 1. Evaluate for hemodynamic instability |
| 2. Clarify the nature of bleeding |
| 3. Ask about abdominal and pelvic pain |
| 4. Perform a rectal examination |
| 5. Consider obscure gastrointestinal bleeding in certain circumstances |

(Table) to help direct the work-up of the patient with hematochezia.

## Evaluate for Hemodynamic Instability

A history of syncope at presentation, presyncopal symptoms, or objective findings of tachycardia, hypotension, or orthostatic hypotension are all suggestive of hemodynamically substantial blood loss. In patients presenting with hemodynamic instability, stabilizing patients should take precedence over diagnostics. Aggressive intravenous (IV) fluid resuscitation should be commenced with the goal of normalization of blood pressure and heart rate before endoscopic evaluation. Patients with underlying cardiac and renal disease should receive more cautious fluid resuscitation. Packed red blood cells (RBCs) should be transfused to maintain the hemoglobin level above 7 g/dL or even higher in the presence of significant comorbidities (discussed below). Patients should be risk-stratified promptly and admitted to the intensive care setting if high-risk features are present. A recently developed risk-scoring system included systolic blood pressure less than 100 mmHg, syncope, and antiplatelet drug use as correlates of severe lower gastrointestinal bleeding (LGIB).[4]

In unstable patients with hematochezia, the first consideration should be that the blood is emanating from the upper gastrointestinal (GI) tract, given the associated high mortality.[5] In this setting, up to 15% will have upper gastrointestinal bleeding (UGIB),[6] with peptic ulcer disease (PUD) being the most common etiology.[6] Other differential diagnoses include esophageal or gastric varices, aortoenteric fistula, and Dieulafoy lesion. Patients should be asked about nonsteroidal anti-inflammatory drug (NSAID) use, a strong risk factor for PUD.[7] Liver disease, preexisting diagnosis of hepatitis, and alcohol consumption may point toward variceal hemorrhage. Isolated gastric varices may be seen in patients with cirrhosis as well as in patients with acute or chronic pancreatitis.[8] Known abdominal aortic aneurysm or prosthetic intra-aortic grafts increase the likelihood of an aortoenteric fistula.[9] Although Dieulafoy lesion accounts for only 1% to 2% of acute GI bleeding, its serious nature necessitates inclusion in the differential diagnosis.[10] At the time of examination, it is important to identify any peripheral stigmata of liver disease.

A nasogastric aspirate/lavage may be used to assess possible UGIB,[11] although it has failed to document superior outcomes.[12] The nasogastric tube can be left in situ to facilitate subsequent colon preparation. Other clues to a UGIB source include an elevated blood urea nitrogen (BUN)-to-creatinine ratio (likelihood ratio of UGIB with BUN-to-creatinine ratio >30:1 is 7.5).[13] In recent years, mortality from acute UGIB has decreased, with recent epidemiological studies revealing a mortality rate of 4% (5.4% in variceal bleeding and 3.9% in nonvariceal bleeding),[5] likely reflecting treatment advances. Nevertheless, given the associated mortality rate, emergent intervention with esophagogastroduodenoscopy (EGD) should be performed when UGIB is suspected.[11]

Lastly, colonic diverticular bleeding should also be considered, as these can also result in hemodynamically significant LGIB. To this end, patients should be asked about diverticulosis on previous colonoscopy.

## Clarify the Nature of Bleeding

The duration, frequency, volume, and color of blood may help identify the severity and location of bleeding. As outlined above, UGIB can present with hemodynamically significant bleeding (as hematochezia), rather than more modest bleeding (as melena). Patients with small bowel and colonic abnormality typically present with moderate visible bright red blood loss, often described in terms of "cupfuls." Anorectal "outlet" bleeding may leave bright red streaks on the stool or be visible upon wiping, suggestive of internal or external hemorrhoids or anal fissure.[14]

## Ask About Abdominal and Pelvic Pain

The presence or absence of abdominal or pelvic pain, and its associated features, is crucial in refining the differential diagnosis. Colorectal carcinoma, diverticular bleeding, colonic


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