

EM CASE OF THE WEEK.

BROWARD HEALTH MEDICAL CENTER
DEPARTMENT OF EMERGENCY MEDICINE



Care Warriors

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| Vol 4 | Issue 36

Five-Step Approach to the Patient with Hematochezia

A 75-year-old woman presents to the Emergency Department with moderate-volume bright red blood per rectum (BRBPR) after waking up in the middle of the night multiples times with a sudden urge to defecate. Over the course of the past 3-4 hours, this has occurred 5 times and she notes that the toilet bowl is full of blood. She denies any abdominal or pelvic pain, lightheadedness, or pain with bowel movements. She does not take any NSAIDs or drink alcohol. Her most recent colonoscopy 1 year ago revealed 3 small polyps that were removed and diverticulosis. Overall, her vital signs are normal, abdominal exam is unremarkable, and DRE reveals perianal blood stains. What is the most likely etiology of her hematochezia?

- A. Upper GI bleeding from ruptured esophageal varices**
- B. Diverticular Bleeding**
- C. External hemorrhoids**
- D. Mesenteric ischemia**
- E. Ulcerative Colitis**

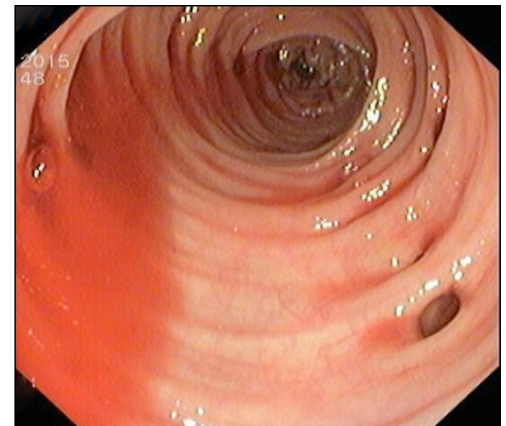


Figure 1. Bright red blood and multiple diverticula on the descending colon.

Source: ACG Case Reports Journal Vol 3, Issue 2, January 2016.

When patient's present with hematochezia, the Ddx can be categorized into:

Anatomic (diverticular bleed), Vascular (angiodysplasia, ischemic), Neoplasm, Infectious (Salmonella, Shigella), Inflammatory (IBD). Always consider a large UGIB that is moving very briskly.

EM Case of the Week is a weekly "pop quiz" for ED staff.

The goal is to educate all ED personnel by sharing common pearls and pitfalls involving the care of ED patients. We intend on providing better patient care through better education for our nurses and staff.

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Answer: **B. Diverticular Bleeding.** If we apply the 5-step approach, we can initially determine that she is hemodynamically stable. After clarifying the nature of her bleeding, we can almost be certain it is of lower GI source, as most moderate-volume BRBPR is such. In step 3 we determine she has no abdominal pain, which narrows our differential even further into diverticular bleeding, colon cancer, or AVMs. Considering her recent colonoscopy findings, diverticular bleeding is the most likely diagnosis.

Introduction

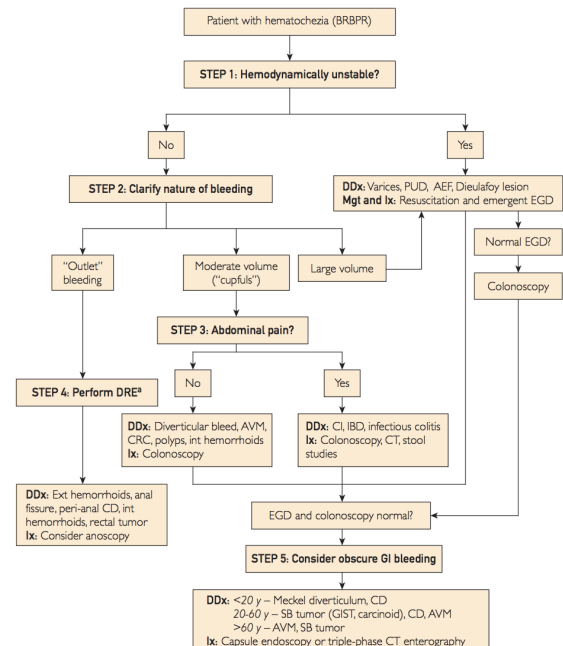
Bright red blood per rectum (BRBPR), or hematochezia, is estimated to be responsible for annual hospital admission rates of 21 per 100,000 (2). Although a terrifying presentation, the etiology can vary, with 20-55% of cases being attributable to diverticular bleeding. The evaluation of the patient with hematochezia can be daunting due to the broad differential diagnosis and number of management strategies available. Patients may have a life-threatening variceal bleed or clinically insignificant hemorrhoidal bleeding. It is therefore of utmost importance to take a thorough history and focused physical examination to evaluate patients with hematochezia in order to choose the most appropriate short- and long-term management strategy.

5-Step Approach

The 5-Step approach, proposed by the Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, MN, provides an excellent framework for the work-up of a patient presenting with hematochezia. This approach is practical and covers presentations of BRBPR from the hemodynamically significant life-threatening UGIB to anorectal "outlet" bleeding. Step 1 is to evaluate the patient for hemodynamic instability. In patients who are hemodynamically compromised presenting with hematochezia, thought should be given to the upper GI tract as the source, as up to 15% of these patients will have PUD as the culprit.

Step 2 is to clarify the nature of the bleeding by asking the color, volume, frequency, and duration of the blood. Patients with anorectal "outlet" bleeding (such as hemorrhoids) will describe "red streaks on the stool visible upon wiping" whereas those with more proximal sources in the small bowel or colon will often endorse "cup-fulls" of blood in the toilet bowl. Step 3 is to ask about abdominal pain because it will help with the differential diagnosis. Conditions such as PUD, mesenteric ischemia, and IBD will usually have varying amounts of abdominal pain.

Conversely, diverticular bleeding, internal hemorrhoids, and colorectal carcinoma is usually not associated with abdominal pain. Step 4 is to perform a digital rectal examination in order to identify any anorectal pathology such as fissures or masses and confirm stool color. Step 5 is to consider obscure GI bleeding in certain circumstances and pursue further with more invasive diagnostic testing.



For a list of educational lectures, grand rounds, workshops, and didactics please visit BrowardER.com and **click** on the **"Conference"** link.

All are welcome to attend!

Warriors

The **American College of Gastroenterology** has Clinical Guidelines for the management of patients with acute LGIB. One of the most pressing questions in the acute setting is what type of direct diagnostic intervention is required, and after hemodynamic resuscitation and stabilization, does the patient need a colonoscopy now, or later? However, in the case of a hematochezia with hemodynamic instability, there is usually an UGIB source, and an EGD should be performed.

Colonoscopy

Recommendations.

1. Colonoscopy should be the initial diagnostic procedure for nearly all patients presenting with acute LGIB (strong recommendation, low-quality evidence).
2. The colonic mucosa should be carefully inspected during both colonoscope insertion and withdrawal, with aggressive attempts made to wash residual stool and blood in order to identify the bleeding site. The endoscopist should also intubate the terminal ileum to rule out proximal blood suggestive of a small bowel lesion (conditional recommendation, very-low-quality evidence).

Non-Colonoscopy Interventions

Recommendations

1. A surgical consultation should be requested in patients with high-risk clinical features and ongoing bleeding. In general, surgery for acute LGIB should be considered after other therapeutic options have failed and should take into consideration the extent and success of prior bleeding control measures, severity and source of bleeding, and the level of comorbid disease. It is important to very carefully localize the source of bleeding whenever possible before surgical resection to avoid continued or recurrent bleeding from an unresected culprit lesion (conditional recommendation, very-low-quality evidence).
2. Radiographic interventions should be considered in patients with high-risk clinical features and ongoing bleeding who have a negative upper endoscopy and do not respond adequately to hemodynamic resuscitation efforts and are therefore unlikely to tolerate bowel preparation and urgent colonoscopy (strong recommendation, very-low-quality evidence).
3. If a diagnostic test is desired for localization of the bleeding site before angiography, computed tomographic (CT) angiography should be considered (conditional recommendation, very-low-quality evidence).

Take Home Points

- The 5-step approach, when used appropriately with patients' clinical history and presentation, is valuable in both the ambulatory and hospital setting.
- A history of syncope at presentation or objective findings of tachycardia, hypotension, or orthostatic hypotension are all suggestive of hemodynamically substantial blood loss.
- The presence or absence of abdominal pain is crucial in refining the differential diagnosis
- The digital rectal exam is an essential step in the evaluation, always to the digital rectal exam!



ABOUT THE AUTHOR

This month's case was written by Bhavik Gupta. Bhavik is a 4th year medical student from NSU-COM. He did his ER rotation at BHMC in January 2018. Bhavik plans on pursuing Residency in Internal Medicine, followed by Fellowship in Gastroenterology and Hepatology after graduation.

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