Gastrointestinal Hemorrhage: Review Questions

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QUESTIONS

Choose the single best answer for each question.

1. A 60-year-old man comes to the emergency department vomiting bright red blood. Severe retching preceded the bleeding. Esophagogastroduodenoscopy (EGD) is performed, revealing a clean-based but clearly visible laceration of the mucosa at the gastroesophageal junction (Mallory-Weiss tear). No active bleeding is present at the time of endoscopy. Which of the following is the most appropriate next step in this patient's treatment?

A) Observation
B) Endoscopic heater probe therapy
C) Blakemore tube (balloon tamponade)
D) Surgical oversewing of the tear
E) Transjugular intrahepatic portosystemic shunt (TIPS) placement

2. A 45-year-old man has iron deficiency anemia and guaiac-positive stools. He takes prednisone, acetaminophen, and ibuprofen to treat his rheumatoid arthritis, smokes 2 packs of cigarettes daily, and drinks several cups of coffee each morning. EGD and colonoscopy are unremarkable. Small bowel enteroscopy reveals multiple shallow ulcers and several areas of stricturing with inflammation in the jejunum. Use of which of the following substances is the most likely cause of the findings in this patient?

A) Acetaminophen
B) Cigarettes
C) Coffee
D) Ibuprofen
E) Prednisone

3. A 50-year-old woman with cirrhosis is admitted to the intensive care unit because of gross hematemesis. EGD reveals multiple esophageal varices and portal hypertensive gastropathy. One of the esophageal varices that is acutely bleeding is successfully treated with endoscopic band ligation. Which of the following is the best treatment plan for this patient upon discharge from the hospital?

A) Administration of propranolol only
B) Administration of propranolol and endoscopic band ligation of the remaining varices
C) Administration of propranolol and endoscopic sclerotherapy of the remaining varices
D) Endoscopic band ligation of the remaining varices only
E) Endoscopic sclerotherapy of the remaining varices only

4. A 70-year-old man with severe atherosclerosis who takes 1 baby aspirin (81 mg) daily undergoes cardiac catheterization because of chest pain. Later in the day, he develops severe abdominal pain and passes a large amount of bloody diarrhea. Physical examination reveals no peritoneal signs. Which of the following is the most likely cause of the patient's bleeding?

A) Colon cancer
B) Diverticulitis
C) Hemorrhoids
D) Mesenteric ischemia
E) Nonsteroidal anti-inflammatory drug enteropathy

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5. **A 50-year-old man with cirrhosis comes to the hospital with massive upper gastrointestinal bleeding. EGD reveals actively bleeding gastric varices, but the gastroenterologist is unable to stop the bleeding. Despite vigorous blood and fluid replacement, the patient remains profoundly hypotensive. Which of the following is the most appropriate next step in this patient's treatment?**
   A) Emergent TIPS placement
   B) Insertion of a Blakemore tube
   C) Octreotide administration
   D) Propranolol administration
   E) Surgery

EXPLANATION OF ANSWERS

1. **(A) Observation.** Mallory-Weiss tears are often, but not always, seen in patients with severe retching or vomiting. More than 80% of such tears will stop bleeding and ultimately heal, and only 2% to 5% of patients will experience rebleeding. Endoscopic therapy or surgical oversewing of the tear might be useful if severe recurrent bleeding occurs. Transjugular intrahepatic portosystemic shunt (TIPS) placement would not be beneficial, because the tear is not a result of portal hypertension. The use of a Blakemore tube, commonly available in most emergency departments, is unnecessary in a patient who is not bleeding.
2. **(D) Ibuprofen.** Nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen can cause a syndrome of diffuse intestinal inflammation and increased bowel permeability known as NSAID enteropathy. Patients can have multiple abnormal lesions in the small bowel even when esophagogastroduodenoscopy and colonoscopy show normal results. Discontinuing use of NSAIDs often results in resolution of symptoms and healing of lesions. The use of acetaminophen, prednisone, cigarettes, or coffee does not cause diffuse small bowel inflammation.
3. **(B) Administration of propranolol and endoscopic band ligation of the remaining varices.** Nonselective β-blockers such as propranolol provide good prophylaxis against bleeding in cirrhotic patients with portal hypertension. However, endoscopic obliteration of esophageal varices also is warranted to reduce the chance of recurrent hemorrhage, and band ligation has been shown to be superior to sclerotherapy for obliteration of these varices.
4. **(D) Mesenteric ischemia.** Mesenteric ischemia and small bowel infarction can develop as a consequence of mesenteric artery embolization. Patients with atherosclerosis who are undergoing cardiac catheterization are at risk for embolic events triggered by dislodgement of plaque fragments within the aortic lumen by the catheters themselves. These patients often have intense pain without peritoneal signs, because the peritoneum is not inflamed. Diverticulitis, NSAID enteropathy, hemorrhoids, and colon cancer are all unlikely causes of these findings post-catheterization.
5. **(B) Insertion of a Blakemore tube.** The patient is exsanguinating. The fastest way to control the bleeding is to insert a Blakemore tube to tamponade the bleeding gastric varices, thus markedly slowing or stopping the blood loss. TIPS placement is effective for treating portal hypertension, but the procedure has an unacceptably high mortality rate in actively bleeding, unstable patients. Octreotide administration can slow blood flow to the varices but would take too long to act in this patient's situation. Propranolol can be used to treat portal hypertension, but it is contraindicated in bleeding patients. Surgery could result in definitive treatment via the creation of a decompressing shunt, but the patient needs urgent stabilization.

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