

## Diseases of the Upper Gastrointestinal Tract with Bleeding. Clinic, Diagnosis, Differential Diagnosis and First AID

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**Annotation.** In this article, which is considered one of the important areas of medicine, diseases of the upper gastrointestinal tract with bleeding and their clinic, diagnosis, differential diagnosis and first aid are described in detail.

**Keywords:** stomach, bleeding, clinical condition, diagnosis, first aid, stomach ulcer, etc.

Patients with upper gastrointestinal bleeding typically vomit blood or stomach contents that resemble coffee grounds and black, tarry stools (melena). Initial diagnosis of upper gastrointestinal patients includes assessment of hemodynamic stability (blood pressure and pulse). Next, diagnostic tests (usually endoscopy) are performed to diagnose and treat the specific condition. Initially, a patient with suspected upper GI bleeding undergoes a history, physical examination, and laboratory tests. The main goals of the doctor at the first meeting with the patient are to assess the severity of bleeding, identify its potential sources and determine further treatment tactics. Vomiting blood or vomiting coffee grounds suggests bleeding from the esophagus, stomach, or duodenum. Vomiting blood indicates heavy bleeding, while vomiting coffee grounds suggests less intense bleeding. Melena (black, tarry stool) may occur with bleeding from the esophagus, stomach, or duodenum. Only 50 ml of blood is enough for this symptom to occur. Hematochezia (red or maroon blood in the stool) usually occurs when there is bleeding from the lower gastrointestinal tract. Symptoms that indicate severe bleeding include orthostatic dizziness, confusion, angina, palpitations, and cold/sticky extremities. Specific causes of upper gastrointestinal bleeding can be suggested by the presence of the following symptoms:

- Peptic ulcer – pain in the upper abdomen.
- Esophageal ulcer – gastroesophageal reflux, dysphagia.
- Mallory-Weiss syndrome - vomiting, gagging, or coughing before hematemesis.



- Variceal bleeding or portal hypertensive gastropathy: jaundice, bloating (ascites).
- Malignant neoplasms – dysphagia, early satiety, involuntary weight loss, cachexia.

Laboratory tests that should be performed in patients with acute upper gastrointestinal bleeding include a complete blood count, blood chemistry panel (including liver function tests), and coagulation tests. In addition, an electrocardiogram and blood test for cardiac enzymes are performed in patients at risk of heart attack, such as the elderly, patients with a history of coronary artery disease, or patients with symptoms such as chest pain or shortness of breath. The initial hemoglobin level in patients with acute upper GI bleeding may be at the patient's baseline level because the patient is losing whole blood. Over time, hemoglobin levels will decline as the blood becomes diluted by the influx of extravascular fluid into the vascular space and fluid administered during fluid resuscitation. Hemoglobin levels are monitored every two to eight hours, depending on the severity of the bleeding. Placement of a nasogastric tube is recommended only in patients before endoscopic examination to clear the stomach of food, fresh blood or clots.

Patients who are hemodynamically unstable or actively bleeding require treatment in the intensive care unit for resuscitation and close monitoring with automatic blood pressure monitoring, electrocardiographic monitoring, and pulse oximetry. Such patients are given infusion therapy and, if necessary, blood transfusions. Patients with critical or life-threatening bleeding and low platelet counts ( $<50,000/\mu\text{L}$ ) receive platelet transfusions. Patients hospitalized with acute upper GI bleeding are typically treated with proton pump inhibitors (PPIs). Options include IV PPI every 12 hours, continuous infusion, high-dose bolus (eg, esomeprazole 80 mg) in patients with signs of active bleeding (eg, hematemesis, hemodynamic instability). Oral and intravenous PPI therapy also reduces length of hospital stay, rebleeding rates, and the need for blood transfusions in patients with high-risk ulcers treated endoscopically. A patient with bleeding from the upper gastrointestinal tract must consult a gastroenterologist, a transfusionist if transfusion of blood components is necessary, a hematologist if there are blood coagulation abnormalities, and a therapist if it is necessary to discontinue anticoagulants.

Esophagogastroduodenoscopy is the diagnostic method of choice for acute bleeding from the upper gastrointestinal tract. Endoscopy has high sensitivity and specificity for localizing and detecting bleeding in the upper gastrointestinal tract. In addition, once a bleeding lesion has been identified, therapeutic endoscopy can provide hemostasis and prevent rebleeding in most patients. Other diagnostic tests for acute upper GI bleeding include CT angiography, which can reveal active bleeding. There is also interest in the use of capsule endoscopy for patients presenting to the emergency department with suspected upper GI bleeding. Small bowel capsule endoscopy has also been used to localize bleeding in patients with acute gastrointestinal bleeding without hematemesis. Colonoscopy is usually required for patients with hematochezia and a negative upper endoscopy unless an alternative source of bleeding is identified. Massive bleeding of the digestive tract indicates damage to blood vessels in various organs of this system and often (10-15%) is the cause of the development of life-threatening hemorrhagic shock. Bleeding in the gastrointestinal tract can develop at any level - from the oral cavity to the anus, and occur in obvious and hidden forms. The risk of bleeding is highest in patients with chronic liver failure (such as alcoholic liver disease or chronic hepatitis), inherited bleeding disorders, or while taking certain medications. Gastrointestinal bleeding is classified according to location and source, clinical course and depending on the degree of blood loss.

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