

## Upper Gastrointestinal Bleeding

Upper GI bleeding refers to bleeding that occurs in the upper gastrointestinal tract, which includes the esophagus, stomach, and duodenum. The causes of upper GI bleeding can be life-threatening, and it requires prompt diagnosis and treatment.

### Common Causes of Upper GI Bleeding:

- Peptic Ulcers: Ulcers in the stomach or duodenum caused by *H. pylori* infection or NSAID use.
- Esophageal Varices: Dilated blood vessels in the esophagus, typically due to portal hypertension (e.g., cirrhosis).
- Gastritis: Inflammation of the stomach lining.
- Mallory-Weiss Tear: A tear at the junction of the stomach and esophagus caused by severe vomiting.
- Esophagitis: Inflammation of the esophagus, often due to acid reflux.
- Gastric Cancer: Tumors can bleed into the GI tract.

### Symptoms of Upper GI Bleeding:

- Hematemesis: Vomiting of blood. The blood may be bright red (fresh) or dark (like coffee grounds, indicating partially digested blood).
- Melena: Black, tarry stools, indicating digested blood.
- Hematochezia: Bright red blood in the stool, although this is more commonly associated with lower GI bleeding, it can occur in massive upper GI bleeding.
- Hypotension: Low blood pressure due to blood loss, which can lead to dizziness, weakness, and fainting.
- Tachycardia: Increased heart rate due to blood loss and compensatory mechanisms.
- Abdominal Pain: Often associated with ulcers or gastritis, can be epigastric (upper abdomen).
- Fatigue or weakness: Resulting from anemia due to blood loss.
- Shock: In severe cases, patients may present with shock, characterized by hypotension, tachycardia, and altered mental status.

### Investigations for Upper GI Bleeding:

- Clinical Assessment
- History: Review of symptoms, use of NSAIDs, history of liver disease (e.g., cirrhosis), alcohol use, or a history of gastro esophageal reflux disease (GERD) or *H. pylori* infection.

- Physical Examination: Assessment of hemodynamic stability, abdominal tenderness, and signs of chronic liver disease (e.g., jaundice, ascites).
- Endoscopy (Esophagogastroduodenoscopy - EGD): Gold standard for diagnosing the cause of upper GI bleeding. Allows direct visualization of the esophagus, stomach, and duodenum.
- Therapeutic Interventions: Endoscopy not only helps in diagnosis but can also be used to treat the bleeding (e.g., banding varices, injecting hemostatic agents, or clipping ulcers).
- Laboratory Tests: CBC, Liver function test, Coagulation Studies
- Blood Type and Cross match.
- Blood transfusion may be required.
- Nasogastric (NG) Tube Aspiration
- CT Angiography
- Capsule Endoscopy

### Management of Upper GI Bleeding:

Management is divided into initial stabilization, diagnosis, and specific treatment based on the underlying cause of the bleeding.

- Resuscitation: IV fluid, Blood transfusion, Monitoring and oxygen therapy.
- Endoscopic Treatment Endoscopic Hemostasis, clipping, banding, injection therapy, cauterization, sclerotherapy
- TIPSS (Trans jugular Intrahepatic Porto systemic Shunt)

### Conservative Treatment

- H. pylori Eradication
- Beta-blockers
- Liver Disease Management
- Treatment of underlying causes (e.g., stopping NSAIDs, eradicating H. pylori) and use of H2 blockers or PPIs to promote healing.

### Surgical management

- Surgical Intervention may be required for:
- Massive bleeding that cannot be controlled endoscopically.
- Perforation or peritonitis.
- Gastric Cancer if the tumor is the source of bleeding.
- Bariatric Surgery: In some cases of portal hypertension or bleeding ulcers, surgical options like gastrectomy may be considered.