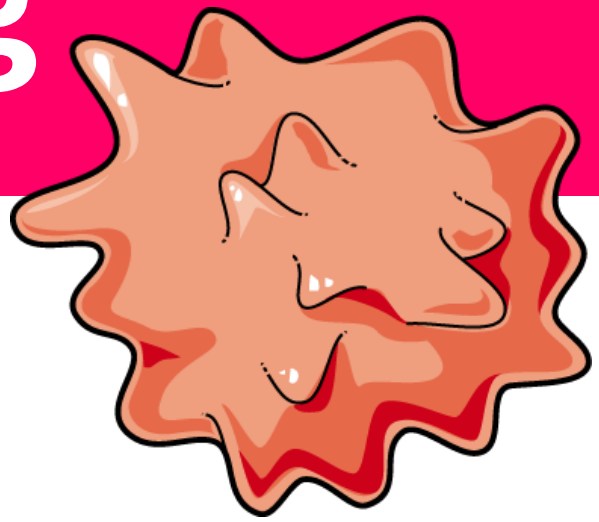
Upper Gastrointestinal Bleeding



Upper Gastrointestinal Bleeding

- Acute gastrointestinal (GI) bleeding is a potentially life-threatening abdominal emergency
- Defined as bleeding derived from a source proximal to the ligament of Treitz
- Hospital mortality of 5–10%
- This rises to 33% when bleeding is first observed in patients who are hospitalised for other reasons

Epidermiology

- Incidence over 100/100 000 per year
- Increase with increasing age
- Strongly associated with NSAID use
- More common than lower gastrointestinal (GI) bleeding
- Hospitalization rate for UGIB is estimated to be six fold higher than for lower GI bleeding
- Incidence of UGIB is higher in men than in women

Causes

1. Gastric and/or duodenal ulcers
2. Severe or erosive gastritis/duodenitis
3. Severe or erosive esophagitis
4. Esophagogastric varices
5. Portal hypertensive gastropathy
6. Angiodysplasia (also known as vascular ectasia)
7. Mallory-Weiss syndrome
8. Mass lesions (polyps/cancers)
9. No lesion identified (10 to 15 percent of patients)

Other less common causes of UGIB include:

1. Dieulafoy's lesion
2. Gastric antral vascular ectasia
3. Hemobilia
4. Hemosuccus pancreaticus
5. Aortoenteric fistula
6. Cameron lesions
7. Ectopic varices
8. Iatrogenic bleeding after endoscopic interventions

Clinical features

- Hematemesis
- Melena
- Hematochezia
- Syncope
- Presyncope
- Dyspepsia
- Epigastric pain
- Heartburn
- Diffuse abdominal pain
- Dysphagia
- Weight loss
- Jaundice

Investigations

- Orthostatic blood pressure
- Complete blood cell count with differential
- Hemoglobin level
- Type and crossmatch blood
- Basic metabolic profile, blood urea nitrogen, and coagulation profile
- Risk scoring assessment
- Calcium level

- Gastrin level
- Endoscopy
- Chest radiography
- Nasogastric lavage
- Computed tomography (CT) angiography (CTA)
- Angiography (if bleeding persists and endoscopy fails to identify a bleeding site)

- Standard CT scanning and ultrasonography may be indicated for

1. Liver disease with cirrhosis
2. Cholecystitis with hemorrhage
3. Pancreatitis with pseudocyst and hemorrhage
4. Aortoenteric fistula

Treatment

- Goal of medical therapy –

1. Correct shock
2. Coagulation abnormalities
3. Stabilize the patient
4. Further evaluation and treatment

Emergency management

- Patient should be adequately resuscitated
- Investigated urgently to determine the cause of the bleeding

For any significant gastrointestinal bleed,

- Intravenous access
- Central venous pressure monitoring
- Bladder catheterization
- Blood should be cross-matched
- Ptransfused as clinically indicated (usually when >30% of blood volume has been lost)

- There is no evidence for the use of intravenous proton pump inhibitors prior to endoscopy
- Most gastrointestinal bleeding will stop, albeit temporarily
- Sometimes instances resuscitation, diagnosis and treatment should be carried out simultaneously

- Sometimes life-saving manoeuvres have to be undertaken without the benefit of an absolute diagnosis
- Known oesophageal varices and uncontrollable bleeding - a Sengstaken–Blakemore tube (before an endoscopy)
- Coagulopathy should be corrected

1. Fresh-frozen plasma
2. Concentrated clotting factors

- Upper gastrointestinal endoscopy - After the patient has been stabilized
  - **Mild bleeding -** carried out on the morning after admission
  - **Severe bleeding -** carried out immediately

Rebleeding risk

Various methodologies to quantitate rebleeding risk

- Most useful of these is the **Rockall score**

Rockall score

- Pre-endoscopy - stratify patients to safe early discharge
- Postendoscopy - predict rebleeding and death

Bleeding peptic ulcer

- Commonly associated with the ingestion of NSAIDs
- Diagnosis – Endoscopically

Treatment

- Medical treatment has limited efficacy

H2-antagonist , proton pump antagonist

Tranexamic acid, Inhibitor of fibrinolysis

Therapeutic endoscopy to achieve haemostasis

- Combination of adrenaline injection with heater probe and/or clips
- Source of bleeding cannot be identified or in those who rebleed after endoscopy - angiography with transcatheter embolization
- Continues to bleed requires surgical treatment

Stress ulceration

- commonly occurs in patients with major injury or illness, who have undergone major surgery or who have major comorbidity
- Prevented by prophylaxis
- Endoscopic means of treating stress ulceration may be ineffective
- Operation may be required

Mallory–Weiss tear

- Longitudinal tear at the gastro-oesophageal junction, which is induced by repetitive and strenuous vomiting
- Occasionally these lesions continue to bleed and require surgical treatment
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Dieulafoy's disease

- Gastric arterial venous malformation that has a characteristic histological appearance
- One of the most difficult cause to treat
- Lesion itself is covered by normal mucosa
- Profuse bleeding
- Injection of sclerosant
- Endoscopic clips
- local excision

Tumours

- Chronic or acute upper gastrointestinal bleeding
- Gastric stromal tumours commonly present with bleeding
- Bleeding is not normally torrential
- But can be unremitting

Portal hypertension and portal gastropathy

- Occurring from the fundus of the stomach gastro-oesophageal junction
- Banding and balloon tamponade
- Gastric balloon of the Sengstaken– Blakemore tube
- Octreotide - somatostatin analogue that reduces portal pressure in patients with varices
- Transjugular intrahepatic portosystemic shunt

Aortic enteric fistula

- Considered in any patient with haematemesis and melaena that cannot be otherwise explained
- Massive bleeding
- Well-performed CT scan - allow the diagnosis
- Secondary or primary, the morbidity and mortality are high