

# Gastrointestinal Bleeding [103, 104, 330–337]

## 1. Introduction

Gastrointestinal (GI) bleeding is a common medical emergency accounting for 7,000 admissions per year in Scotland alone.

Gastrointestinal haemorrhage is commonly divided into:

- **Upper gastrointestinal bleeding.**
- **Lower gastrointestinal bleeding.**

## 2. Incidence

- Upper gastrointestinal bleeding is more common than lower gastrointestinal bleeding and is more prevalent in socioeconomically deprived areas.
- UPPER GI BLEEDING accounts for up to 85% of gastrointestinal bleeding events.

## 3. Severity and Outcome

- The severity of gastrointestinal bleeding can range from clinically insignificant blood loss to significant life-threatening haemorrhage.
- Death is uncommon in patients less than 40 years of age, it is estimated that the overall mortality rate in the UK for patients admitted with acute GI bleeding is approximately 7%. The majority of deaths occur in the elderly, particularly those with comorbidities. There are many factors that are associated with a poor outcome including liver disease, acute haemodynamic disturbance, clotting abnormalities, continued bleeding, haematemesis, haematochezia, and elevated blood urea.
- Upper gastrointestinal bleeding tends to be more severe and in extreme circumstances can rapidly lead to hypovolaemic shock.

## 4. Pathophysiology

- The upper gastrointestinal tract comprises the oesophagus, stomach and duodenum. For common causes of bleeding refer to Table 3.55.
- The lower gastrointestinal tract comprises of the lower part of the small intestine, the colon, rectum and anus. Common causes of bleeding include diverticular disease, inflammatory bowel disease, haemorrhoids, and tumour.

### ACUTE UPPER GI BLEEDING

- More than 50% of cases are due to peptic ulcers which, together with oesophagitis and gastritis, account for up to 90% of all upper GI bleeding in the elderly. 85% of deaths associated with upper GI bleeding occur in persons older than 65 years.
- Patients presenting with upper GI bleeding may have a history of aspirin or non-steroidal anti-inflammatory drug (NSAID) use.
  - Only 50% of patients present with haematemesis alone, 30% with melaena and 20% with haematemesis and melaena
  - Patients with haematemesis tend to have greater blood loss than those with melaena alone. Patients older than 60 years account for up to 45% of all cases (60% of these women).

**Table 3.55 – COMMON CAUSES OF UPPER GASTROINTESTINAL BLEEDING**

Common causes
Peptic ulcers: – Duodenal ulcers – Gastric ulcers
Oesophageal varices
Gastritis
Oesophagitis
Mallory-Weiss tears
Caustic poison
Tumour

### Peptic ulcers

- Peptic ulcers are commonly associated with the use of aspirin, non-steroidal anti-inflammatory drugs, corticosteroids, anticoagulants, alcohol and cigarettes.

### Oesophageal varices

- It is estimated that variceal bleeding is the cause of 10% of cases. These patients can bleed severely with up to 8% dying within 48 hours from uncontrolled haemorrhage. It is commonly associated with alcoholic cirrhosis and increased portal pressure (causing progressive dilation of the veins and protrusion of the formed varices into the lumen of the oesophagus). Spontaneous rupture of the varices will cause the patient to become haemodynamically unstable within a very short period of time due to large volumes of blood loss.

### Mallory-Weiss tears

- Approximately 10% are caused by oesophageal tears, which are more common in the young. Predisposing factors include hiatal hernia and alcoholism. Initiating factors are persistent coughing or severe retching and vomiting, often after an alcoholic binge; haematemesis presents after several episodes of non-bloody emesis. Bleeding can be mild to moderate.
- **Gastritis** – drugs, infections, illnesses, and injuries can cause inflammation of the lining of the stomach and lead to bleeding.
- **Oesophagitis** – Gastroesophageal reflux disease or alcohol can lead to inflammation and ulcers in the lining of the oesophagus which may lead to bleeding.
- **Tumour** – in the oesophagus, stomach or duodenum can cause bleeding.

### ACUTE LOWER GI BLEEDING

Patients with a lower GI bleed commonly present with bright red blood/ dark blood with clots per rectum (PR); bright red blood PR in isolation excludes upper GI bleeding in over 98% of cases (unless the patient appears hypovolaemic). Lower GI bleeding are less likely to present with signs of haemodynamic compromise, are