

## APPROACH TO GASTROINTESTINAL BLEEDING

**MORTALTY HAS REMAINED UNCHANGED SINCE THE 1960s, EVEN THOUGH DIAGNOSTIC MODALITIES HAVE IMPROVED SUBSTANTIALLY**

**THE APPROACH DEPENDS ON WHETHER THE HAEMORRHAGE IS LOCATED PROXIMALLY OR DISTALLY WITHIN THE BOWEL**

### DIAGNOSTIC APPROACH:

#### **DIFFERENTIAL CONSIDERATIONS:**

- ¾ of UGIB accounted for by peptic ulcer disease, gastric erosions and varices
- Diverticulosis and angiodysplasia account for ~80% of lower GI bleeding
- In kids <2, massive LGIB most often a result of Meckels' diverticulum or intussusception
- At all ages, anorectal abnormalities are the most common cause of minor LGIB
- Despite improved diagnostic modalities, no cause is found in 10%
- In patients with aortic grafts who present with GI bleeding → consider AORTOENTERIC FISTULA → bleeding can be massive and fatal

#### Other causes (UGI):

- Mallory-Weiss tear
- Oesophagitis
- duodenitis

#### Other causes (LGI):

- Massive UGIB
- Cancer/polyps
- IBD
- Anorectal disease

#### **RAPID ASSESSMENT AND STABILISATION:**

- Most are easy to diagnose as they complain of melaena/bloody stool or haematemesis
- After crystalloid resuscitation and taking bloods for FBC, EUC, Coags, G+H → if patient remains unstable → call gastro for UGIB, surgeons for LGIB

#### **HISTORY:**

- Haematemesis (vomiting of blood or coffee-ground emesis) occurs with bleeding of oesophagus, stomach or proximal small bowel
  - Occurs in ~50% of UGIB
  - Coffee-ground appearance occurs with acid conversion of haemoglobin to haematin
- Melaena (black tarry stool) will result from the presence of ~150-200mL of blood in the GIT for a prolonged period
  - Seen in ~70% of UGIB and 1/3 patients with LGIB
  - Blood from duodenum/jejunum must remain in bowel for ~8 hours before turning black

- Stool may remain black for days, even though bleeding has stopped
- Haematochezia (bloody stool) → bloody or maroon → most often signifies LGIB but may be due to BRISK UGIB with rapid transit time (10-15% patients) → often accompanied with signs and symptoms of SHOCK!
- Address duration/quantity of bleeding, associated symptoms, prior GI bleeding, current medications, alcohol, long term NSAID/aspirin use
- Symptoms of hypovolaemia → dizziness, weakness, LOC (orthostatic)
- One in five will have very non-specific complaints
- Estimates of blood loss are notoriously inaccurate and patients with previously documented GI lesion bleed from the same spot in only 60% circumstances

#### **PHYSICAL EXAMINATION:**

- Postural changes in HR/BP are insensitive/non-specific → beware persistent changes in BP/HR with changes in posture
- Normal vitals do not exclude significant haemorrhage and postural changes may occur in normal individuals
- Rectal exam is key → finding of red/black/melaena stool is helpful in prompting early recognition → occult blood testing is indicated

#### **ANCILLARY TESTING:**

- **HAEMOCCULT → positive for up to 14 days post major UGIB**
  - False positives with some fruit (rockmelon, grapefruit, figs), uncooked vegetables (broccoli, cauliflower) and red meat
  - False-negatives uncommon but can be caused by bile or magnesium-containing antacids
- In newborns, swallowed maternal blood may produce bloody stools → Apt test shows if blood is maternal in origin
- Obvious blood tests include FBC, Coags, G+H
  - Initial haemoglobin may be misleading in patients with pre-existing anaemia or polycythaemia
  - Also, changes in haematocrit may lag significantly behind actual blood loss

#### **MANAGEMENT:**

- Quick identification, aggressive resuscitation, risk stratification and prompt consultation are the keys to appropriate emergency management
- After initial resuscitation → it is important to identify whether the haemorrhage is proximal or distal to the ligament of Treitz (i.e. UGI or LGIB)
- NG tube of limited value in diagnosis and risk stratification → even in UGIB, blood may be in duodenum and spasm of pylorus prevents passage back up into stomach
  - No evidence that NG placement aggravates haemorrhage from varices or Mallory-Weiss tears
  - Lavage does not reduce blood loss in patients with UGIB
- In patients with mild rectal bleeding who do not have obviously bleeding haemorrhoids should undergo anoscopy or proctosigmoidoscopy

- If bleeding internal haemorrhoids are found and the patient does not have portal hypertension, the patient may be discharged
- ENDOSCOPY:
  - Most accurate diagnostic tool for evaluation of UGIB → identifies lesion in 78-95% patients with UGIB if performed within 12-24 hours of haemorrhage
    - Allows for risk stratification → predicts rebleeding and mortality
- ANGIOGRAPHY:
  - Used most commonly in patients with LGIB
    - Rarely diagnoses cause, but identifies site in ~40%, and 65% in those who undergo surgical intervention
    - Ideally performed during active bleeding
    - Arterial embolisation used in selected cases
- OCTREOTIDE → those with documented varices and acute UGIB should receive 50microg/hour for 24 hours. Reduces rebleeding occurrences.
- VASOPRESSIN → in variceal haemorrhage. No positive effect and high rate of serious complications → limited use only
- SENGSTAKEN-BLAKEMORE TUBE → stops haemorrhage in ~80% cases of variceal bleeding. Not to be used without endoscopic confirmation, as mortality 3%, 14% major complications

#### **DISPOSITION AND RISK STRATIFICATION:**

- Very low risk criteria, i.e. those who can be discharged:
  - No comorbidities, normal vitals
  - Trace or normal stool guaiac testing
  - Normal/near-normal Hb
  - Good social supports
  - Follow up within 24 hours
- Low risk:
  - Age <60, SBP ≥100, normal vitals for 1 hour, no liver disease, no transfusion requirement → discharge
- Moderate risk:
  - Age >60, initial SBP <100, mild ongoing tachycardia >1 hour, transfusion required, mild liver disease (PT near normal), no high risk features → advise 48-72 hour inpatient stay and discharge if no re-bleeding and no further transfusion requirement
- High risk:
  - Persistent SBP <100, persistent moderate-severe tachycardia, transfusion required >4 units, unstable comorbid disease, decompensated liver disease (i.e. coagulopathy, encephalopathy, ascites)
  - Advise ICU monitoring
- Endoscopy crucial in risk stratification
- Consider emergent vascular surgical input for patients with abdominal aortic grafts and GI bleeding, due to possibility of aortoenteric fistula