Acute Gastrointestinal Bleeding

15c – Acute gastrointestinal bleeding

Acute GI bleeding presents with :

1. hematemesis (vomitting of blood) and/or
2. melena (the passage of black tarry stool that has a very characteristic smell) results from the digestion of blood by enzymes and bacteria

Causes:

- peptic ulceration - 50%
- mucosal lesions (gastritis, duodenitis, erosions) 30%
- Mallory-weiss tear 5-10%
- Varices 5-10%
- Reflux oesophagitis 5%
- Angiodysplasia 2%
- Carcinoma, coagulopathies, aortoduodenal fistula, dieulafoy syndrome (https://en.wikipedia.org/wiki/Dieulafoy%27s_lesion) (rupture of a large tortuous submucosal artery on stomach)

History & examination:

- Past medical history (peptic ulcer disease, previous bleeding, liver disease, previous surgery, coagulopathies)
- Drug history (NSAIDs, anticoagulant)
- Social history (alcohol abuse)
- Signs of acute substantial blood loss and shock (hypotension, tachycardia, tachypnea, pallor)
- Signs of liver disease and portal hypertension (spider neavi, portosystemic shunting and bruising)
- Blood test (anemia, urea, coagulation derangement)
- FBC might be normal immediately after an acute bleed but will fall once heamodilution has occurred

Management:

- **Resuscitation:**

1. Administration high flow of oxygen
2. Intravenous access + blood sample taken for cross match + iv fluid
3. Nasogastric tube – to monitor the bleeding + prevent aspiration
4. Urinary catheter
5. Central or arterial line
6. Volume replacement is gauged against pulse, blood pressure, urine output and central venous pressure

- Over or rapid transfusion with compromised cardiac function can lead to pulmonary edema
- Detection and endoscopic treatment:

1. Aim: identify the bleeding point, arrest the bleeding and prevent recurrence
2. Once resuscitation established, endoscopy is used to detect the site of bleeding
3. Endoscopy may be used to stop or prevent further bleeding
4. Risk of further bleeding : active bleeding from ulcer base, presence of visible vessel, and adherent of clot overlying the ulcer
5. Sclerotherapy injection (adrenaline, sclerosant) commonly used
6. Heat probs and clips
7. Therapeutic endoscopy used in management of oesophageal and gastric varices and vascular malformation
8. Angiography – only detect active bleeding greater 1ml/min -> selective embolization (may lead to mesenteric ischemia)

- **Surgical management:**
- Emergency surgery may be indicated if:

1. endoscopy reveals bleeding from major artery
2. attempted injection sclerotherapy is unable to control

- When bleeding recurs after therapeutic endoscopy, a further endoscopy may be able to control the bleeding
- Recurrent bleeding is associated with significant morbidity and mortality, particularly in elderly
- Continuing bleeding is particularly common in those with chronic ulcer and more common in gastric ulceration

- Duodenal ulcer :

1. Simply be under-run with sutures, through a duodenectomy

2. Once tolerating oral fluids, patient should be started on H.pylori eradication therapy empirically

- Gastric ulcer :

1. The possibility of malignancy must be considered
2. Ulcer must be biopsied to determine the nature
3. Young, fit patient – ulcer should be excised completely by taking small wedge resection.
4. Elderly – under-running of the ulcer may be preferable
5. If confirmed malignancy – accurate staging and further treatment
6. If benign – H.pylori eradication indicated
7. NSAIDs should be avoided

References :

- Principles & Practise of Surgery – Chapter 17, Gastroduodenal disorders, page 232
- OHCM – Gastroenterology, page 244