

## **LOWER GASTROINTESTINAL BLEEDING**

### **BLEEDING DISTAL TO THE LIGAMENT OF TREITZ**

**COMMON PROBLEM IN THE ED POPULATION (BUT OCCURS LESS OFTEN THAN UGI BLEEDING) AND SHOULD BE CONSIDERED LIFE-THREATENING UNTIL PROVEN OTHERWISE**

**MOST COMMON CAUSE IS DIVERTICULAR DISEASE, FOLLOWED BY COLITIS, ADENOMATOUS POLYPS AND MALIGNANCIES → MORE COMMON IN MALES AND INCREASES SIGNIFICANTLY IN THE ELDERLY**

**ESTIMATED THAT 80% OF CASES WILL RESOLVE SPONTANEOUSLY AND ONE STUDY ESTIMATED THAT A CAUSE WAS FOUND IN <50% CASES**

**FACTORS ASSOCIATED WITH HIGH MORBIDITY RATE → HAEMODYNAMIC INSTABILITY, REPEATED HAEMATOCHEDIA, GROSS BLOOD ON PR, INITIAL HAEMATOCRIT <35%, SYNCOPES, NON-TENDER ABDOMEN, ASPIRIN USE OR MORE THAN TWO COMORBID CONDITIONS**

### **PATHOPHYSIOLOGY:**

- Haematochezia is defined as either bright red or maroon-coloured bleeding from the rectum and historically represents LGI bleeding, but can represent BRISK BLEEDING FROM AN UGI SOURCE → usually unstable patient

### **DIVERTICULOSIS:**

- Usually painless and is thought to result from erosion in to the penetrating artery of the diverticulum
- May be massive but up to 90% resolve spontaneously
- Half of patients with diverticular bleed will RE-BLEED → left sided diverticula more common but right-sided more likely to bleed → slow bleeding from LGI source may still result in melaena
- Elderly patients, those on anticoagulants/NSAIDs, higher transfusion requirements → higher morbidity and mortality

### **VASCULAR ECTASIA:**

- Including AVM and angiodysplasia
- Increases with aging and may be inherited in origin

### **MESENTERIC ISCHAEMIC AND ISCHAEMIC COLITIS:**

- Ischaemic colitis is the most common cause of intestinal ischemia and is often transient, most cases will resolve on their own but up to 20% require surgical intervention
- HOWEVER → MESENTERIC ISCHAEMIA IS A MEDICAL EMERGENCY AND OFTEN WILL LEAD TO BOWEL NECROSIS → causes include

thrombosis or embolism of SMA, mesenteric vein thrombosis and generalised low-low states

- Diagnosis requires high index of suspicion:
  - Age >60
  - AF
  - CCF
  - Recent MI
  - Postprandial abdominal pain
  - Unexplained weight loss
- CTA is diagnostic study of choice
- Despite aggressive treatment, PROGNOSIS IS POOR WITH 50% SURVIVAL AT 24 HOURS

### MECKEL DIVERTICULUM:

- Consists of embryonic tissue, most commonly in the terminal ileum
- Over half lesions contain ectopic gastric tissue that can cause bleeding

### OTHER CAUSES OF LGI BLEEDING:

Table 79-1 Causes of Lower GI Bleeding
Upper GI bleed
Diverticulitis
GI carcinoma
Angiodysplasia
Arteriovenous malformations
Mesenteric ischemia
Ischemic colitis
Meckel diverticulum
Hemorrhoids
Infectious colitis
Inflammatory bowel disease
Polyps
Radiation colitis
Rectal ulcers
Trauma
Foreign bodies
Carcinoma
Prostate biopsy sites
Endometriosis
Dieulafoy lesions
Colonic varices
Portal hypertensive enteropathy

Although haemorrhoids are the most common source of anorectal bleeding, massive haemorrhage is rare

## **CLINICAL FEATURES:**

- **HISTORY:**
  - Lower GI bleeding may have a more subtle or nonspecific presentation → consider in the patient with hypotension, tachycardia, angina, syncope, weakness or altered mental state
  - Previous history of LGI bleeding
  - Pain, trauma, ingestion or insertion of foreign bodies
  - Recent colonoscopy
  - History of aortic graft → aortoenteric fistula
  - Weight loss or changes in bowel habit
- **PHYSICAL EXAM:**
  - Grossly abnormal vital signs should be sought for
  - Changes in vital signs may be masked by beta-blockers or poorly controlled HT → relative HT and tachycardia may represent subtle clues to ongoing bleeding
  - Thorough exam of GU area may reveal obvious source of bleeding → laceration, masses, trauma, anal fissures, haemorrhoids, vaginal source

## **DIAGNOSIS:**

- **LAB DATA:**
  - FBC, coagulation profile, x-match crucial plus the usual EUC, LFT
  - In acute, brisk bleeding, the initial haematocrit may not reflect the actual amount of blood loss
  - ECG in silent ischaemia
- **IMAGING IN DIAGNOSIS:**
  - Controversy over order of priority in terms of diagnostic imaging → CTA vs formal angiogram, red-cell nuclear medicine scan or colonoscopy
    - Angiogram guides surgical management and allows for arterial embolisation → NEEDS BRISK BLEEDING TO BE DIAGNOSTIC (AT LEAST 0.5ML/MIN) AND SERIOUS COMPLICATIONS CAN OCCUR
    - Labelled red cell scans are more sensitive and can localise the site of bleeding in low-flow states ( $>0.1\text{ml/min}$ ), but requires a minimum of 3mL of blood to pool to be detected
    - Multidetector CT scans can detect bleeding sites 79-100% of the time and shows signs of extravasation in up to 83%

## **TREATMENT:**

- **PRIMARY:**
  - Immediate resuscitative measures take priority
  - Correct coagulopathy and initiate blood transfusion as appropriate → lower threshold in elderly to transfuse
- **SECONDARY:**
  - ENDOSCOPY → flexible sigmoidoscopy can evaluate distal colonic and rectal sources of bleeding but cannot identify more proximal sources

- Colonoscopy allows more proximal visualisation and offers possibility of ablation. If colonoscopy fails to visualise a source → UGI endoscopy should be next step
- SURGERY → in patients who continue to have bleeding and in whom endoscopic haemostasis fails → emergency surgery may be required

**DISPOSITION:**

- No reliable scoring system exists to risk stratify which patients with LGI bleeding may be discharged home safely → if source obviously haemorrhoidal, or from fissures or those without gross blood and are stable → consider discharge
- Poor prognostic factors are listed previously