

41

UPPER GASTROINTESTINAL BLEEDING

SYMPTOMS AND SIGNS

Ask about:

- any haematemesis or melaena before admission and its colour ^C and amount ^D
- other illnesses including:
 - previous peptic ulcers ^B
 - *H. pylori* infection ^B
 - alcohol-related disorders ^B
 - liver cirrhosis, oesophageal varices or portal vein thrombosis ^B
 - renal failure ^A
 - disseminated malignancy ^A
 - heart disease and heart failure ^A
- current medication, particularly:
 - anticoagulants ^A
 - non-steroidal anti-inflammatory drugs (NSAIDs). ^A

Common causes include: ^B

- gastric or duodenal ulcers
- gastric erosions
- varices
- a Mallory–Weiss tear
- oesophagitis.

Rarer causes include:

- tumours ^B
- angiodysplasia.

Look for:

- evidence of acute bleeding: ^B
 - + supine tachycardia
 - + supine hypotension (systolic blood pressure < 95 mmHg)
 - + postural pulse increase of > 30 beats/min or severe dizziness on sitting upright, and if normal then on standing

Note

Postural hypotension does not usefully diagnose acute blood loss. ^B

- evidence of anaemia: ^A
 - + conjunctival pallor ^A
 - + facial pallor ^B
 - + palmar pallor ^B
 - + dyspnoea ^C

- evidence of cirrhosis, specifically: ^A
 - + facial telangiectasia ^A
 - + spider naevi ^A
 - + abdominal wall veins ^A
 - + white nails ^A
 - + obesity ^A
 - + peripheral oedema. ^A

Risk of cirrhosis ^B

High (> 80%) if:

- all 6 signs present and peripheral oedema
- ≥ 4 signs if no peripheral oedema
- ≥ 3 signs if facial telangiectasia and no peripheral oedema.

Moderate if:

- any other combination.

Low (< 20%) if:

- no facial telangiectasia and ≤ 2 other signs.

Perform a rectal examination and a faecal occult blood test. ^A

Look at the appearance of any vomit or nasogastric aspirate:

- + Test it using a gastrocult dipstick. ^A

INVESTIGATIONS

- Blood count. ^D
- Clotting. ^A
- Group and save serum, or cross-match 2 to 6 units depending on blood loss. ^D
- U&E, creatinine. ^A

Urea:creatinine ratio

A urea:creatinine ratio > 100 helps diagnose an upper GI bleed. ^A

- Liver function tests. ^A
- Glucose. ^D
- Blood cultures. ^D
- Arterial blood gases. ^D

Consider inserting:

- a central venous catheter to monitor fluid resuscitation ^D
- a urinary catheter to monitor urine output. ^D

Peptic ulcer disease

Test for *H. pylori*^A using any of:

- ± CLO test^C
- ± histology, looking for antral inflammation^C
- ± urease breath test.^C

THERAPY

- Resuscitate your patient.^A
- Insert two large bore i.v. cannulas.^D
- Give blood if required.
- If PT is prolonged:
 - Give factor concentrate^C or FFP.^D
 - Stop any anticoagulants.^C
 - Consider giving 5 mg vitamin K by slow i.v. infusion.^A
- Order an endoscopy:^A
 - urgently^A to control bleeding
 - to make a diagnosis and determine future risk of bleeding or death.^A

Endoscopy

Look for evidence of endoscopic stigmata of recent haemorrhage:^A

- ± blood in the upper GI tract
- ± an adherent clot
- ± a visible or spurting vessel.

Complications of endoscopy such as perforation, aspiration and haemorrhage are very rare.^B

- While waiting for endoscopy consider giving:
 - somatostatin^A 6 mg in 500 ml saline i.v. over 24 hours for 5 days
 - octreotide^A

Octreotide

- Give a bolus of octreotide 50 µg i.v. followed by
- Octreotide 500 µg in 50 ml 0.9% saline at 5 ml/h.

- terlipressin 2 mg i.v. every 4 hours for up to 72 hours.^A
- Give thiamine 100 mg^D i.v.^C to alcoholics or malnourished patients.^D
- Discuss any patients likely to rebleed with surgeons and anaesthetists to determine criteria for surgery.^D

Note

Use the Rockall score^A (see Table 41.1) to help identify patients at risk of rebleeding or dying.

Table 41.1 Rockall score – rank your patient for risk of rebleeding or dying^A

	Score 0	Score 1	Score 2	Score 3
Age	• aged < 60	• aged 60 to 79	• aged > 80	
Shock	• pulse < 100 • systolic b.p. > 100 mmHg	• pulse > 100 and systolic BP > 100 mmHg	• pulse > 100 and systolic BP < 100 mmHg	
Co-morbidity	• no major co-morbidity		• cardiac failure • ischaemic heart disease • any other co-morbidity	• renal failure • liver failure • disseminated malignancy
Endoscopic stigmata	• none • dark spot seen		• blood in upper GI tract • adherent clot • visible or spurting vessel	
Diagnosis	• Mallory–Weiss tear • no lesion seen and no stigmata of recent haemorrhage	• all other diagnoses	• malignancy of upper GI tract	

Pre-endoscopy score	Risk of dying	Post-endoscopy score	Risk of dying	Risk of rebleeding
7	75%	8+	40%	37%
6	62%	7	23%	37%
5	35%	6	12%	27%
4	21%	5	11%	25%
3	12%	4	8%	15%
2	6%	3	2%	12%
1	3%	0 to 2	0%	6%
0	0%			

Peptic ulcers

Arrange for endoscopic haemostasis.

Give:

- a proton pump inhibitor, ^A e.g. omeprazole 40 mg daily
- antacids. ^A

Varices

- Arrange for endoscopic ligation ^B or sclerotherapy ^A within 6 hours. ^B
- Give octreotide or somatostatin. ^A

Somatostatin

Somatostatin 6 mg in 500 ml saline i.v. over 24 hours for 5 days.

Octreotide

Octreotide 500 µg in 50 ml 0.9% saline at 50 µg per hour (i.e. 5 ml/h.)

Consider:

- balloon tamponade ^A for patients who do not stop bleeding ^D
- transjugular intrahepatic portosystemic shunts (TIPS). ^D

REVIEW

Monitor: ^D

- vital signs and urine output
- blood count
- clotting
- electrolytes.

Consider:

- iron supplements, ^B e.g. ferrous sulphate 200 mg three time a day ^D
- tranexamic acid ^A for patients likely to rebleed (3 to 6 g i.v. for 3 days, followed by 3 to 6 g orally for 3 to 5 days). ^D

Patients with a Mallory–Weiss tear or an ulcer can start eating immediately on recovery from endoscopy. ^D

Rebleeding

Perform repeat endoscopy on patients with: ^A

- vomiting of fresh blood
- hypotension and melaena
- requirement for 4 units of blood in the first 72 hours after endoscopic treatment.

Consider surgery if there is persistent or recurrent haemorrhage despite endoscopic therapy. ^D

Ulcers and erosions

- A routine repeat endoscopy is not necessary. ^D
- Advise patients to stop smoking. ^B
- Stop NSAIDs. ^A If patients need to continue, consider:
 - COX-2 inhibitors, e.g. rofecoxib ^A 12.5 to 25 mg daily or celecoxib ^B
 - topical NSAIDs ^B
 - ibuprofen ^B at the lowest possible dose ^B
 - adding in regular omeprazole 40 mg daily ^A or misoprostol ^A 200 µg 2 to 4 times daily. ^D
- Give *H. pylori* eradication therapy ^A using triple therapy: ^B
 - a proton-pump inhibitor plus any two of amoxicillin, clarithromycin or a nitroimidazole ^B
 - a bismuth compound plus a nitroimidazole plus tetracycline. ^B

Sample triple therapy regimen: a 7-day course

- omeprazole 20 mg twice daily
- clarithromycin 500 mg twice daily
- amoxicillin 1 g twice daily.

- Continue proton-pump inhibitors long-term. ^A

Varices

- Arrange for endoscopic ligation ^A or sclerotherapy ^A until varices are obliterated.
- Give beta-blockers, ^A e.g. propranolol MR 80 mg daily or isosorbide mononitrate MR ^A 60 mg daily.

Outcomes

- One in seven patients dies in hospital ^A – one in 15 from further bleeding.
- Peptic ulcers heal slowly and a third of patients have a relapse within a year. ^B
- A third of patients with varices rebleed within 1 year. ^B A third are dead within 2 months. ^A

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