UPPER GASTROINTESTINAL BLEEDING

UGI BLEEDING DEFINED AS BLEEDING ORIGINIATING PROXIMAL TO THE LIGAMENT OF TREITZ

EVALUATION PROCEEDS WITH RESUSCITATION SIMULTANEOUSLY

INCREASED MORBIDITY AND MORTALITY ASSOCIATED WITH ↑G AGE, COEXISTENT ORGAN SYSTEM DISEASE AND RECURRENT HAEMORRHAGE

PATHOPHYSIOLOGY:

- PEPTIC ULCER DISEASE → most common cause of UGI bleeding
- EROSIVE GASTRITIS AND OESOPHAGITIS → accounts for 13% cases and predisposing factors include NSAIDS, alcohol and aspirin
- OESOPHAGEAL AND GASTRIC VARICES → result form portal hypertension and are most often due to alcohol. Account for 7% cases of UGI bleeding, but are the most likely to bleed and carry 16% mortality rate
- MALLORY WEISS SYNDROME → UGI bleeding secondary to longitudinal mucosal tear in the cardio-oesophageal region. Bright red haematemesis after repeated vomiting
- OTHER CAUSES → AVM, stress ulcer, malignancy. Think ENT sources as masquerade. AORTOENTERIC FISTULA IN THOSE POST ENDOGRAFT REPAIR → herald bleed followed by massive haemorrhage

DIAGNOSIS:

- **HISTORY:**
  - **CAN BE MISLEADING** → bright red or maroon rectal bleeding unexpectedly originates from UGI sources ~14% of the time
  - Ask about haematemesis, coffee-ground emesis or melaena
    - In patients without haematemesis, the presence of melaena and age<50 suggests UGI source
  - Medications → glucocorticoids, NSAIDs, anticoagulants/antiplatelets
  - Alcohol abuse → erosive gastritis, varices, PUD
  - Iron ingestion can simulate melaena
  - Beetroot → can simulate haematochezia
- **PHYSICAL EXAMINATION:**
  - Some patients can tolerate substantial volume loss with minimal or no changes in vital signs
    - Cool, clammy skin is an obvious sign of shock
  - A RECTAL EXAMINATION → detects presence of blood and its appearance → bright red, maroon, melanotic
- **LABORATORY DATA:**
  - In patients with UGI bleeding, the most important lab test to TYPE AND CROSS MATCH BLOOD

- Urea may be elevate in UGI bleed through digestion and absorption of haemoglobin
- Haematocrit early may not reflect the actual amount of blood loss
- ECG should be considered in patients with anaemia due to possibility of silent ischaemia

- **DIAGNOSTIC STUDIES:**
  - UGI endoscopy is the diagnostic study of choice in the evaluation of UGI bleeding
  - NG tube can be inserted as adjunctive information → however a negative NG aspirate DOES NOT CONCLUSIVELY EXCLUDE A UGI SOURCE AND MAY RESULT FROM INTERMITTENT BLEEDING, PYLORIC SPASM, OR OEDEMA PREVENTING REFLUX OF BLOOD FROM DUODENAL SOURCE
  - Concerns that NG passage may provoke bleeding in patients with varices are UNWARRANTED

TREATMENT OF UGI HAEMORRHAGE:

PRIMARY:

- Immediate resuscitative measures TAKE PRIORITY
- If haemorrhage is profuse, definitive airway management may be necessary to prevent aspiration
- Decision to administer blood products should be based on clinical findings of volume depletion or continued bleeding rather than initial FBC

SECONDARY:

- ENDOSCOPY:
  - Most accurate technique to identify UGI bleeding sites → predicts morbidity and can offer treatment modalities that improve outcome → injection, endoscopic clips/band ligation
- DRUG THERAPY:
  - PPI reduce re-bleeding and the need for surgery in the treatment of bleeding peptic ulcers and are best used as an adjunct to endoscopy

1 **esomeprazole 80 mg IV over 15 to 30 minutes, then 8 mg/hour by IV infusion, for up to 3 days**

OR

1 **omeprazole 80 mg IV over 15 to 30 minutes, then 8 mg/hour by IV infusion, for up to 3 days**

OR

1 **pantoprazole 80 mg IV over 15 to 30 minutes, then 8 mg/hour by IV infusion, for up to 3 days**

- Infusions of somatostain or its derivative (OCTREOTIDE) have been used in treating patients with UGI haemorrhage → inferior to endoscopic techniques but may be used as temporising measure while waiting for OT

In patients with portal hypertension and gastrointestinal bleeding, splanchnic blood flow and portal pressure can be reduced by an octreotide infusion, which should be commenced as soon as possible. Use:

octreotide 50 micrograms IV, immediately, then 25 to 50 micrograms per hour by IV infusion for 2 to 5 days.

Octreotide controls initial bleeding, but no effect on mortality has been shown.

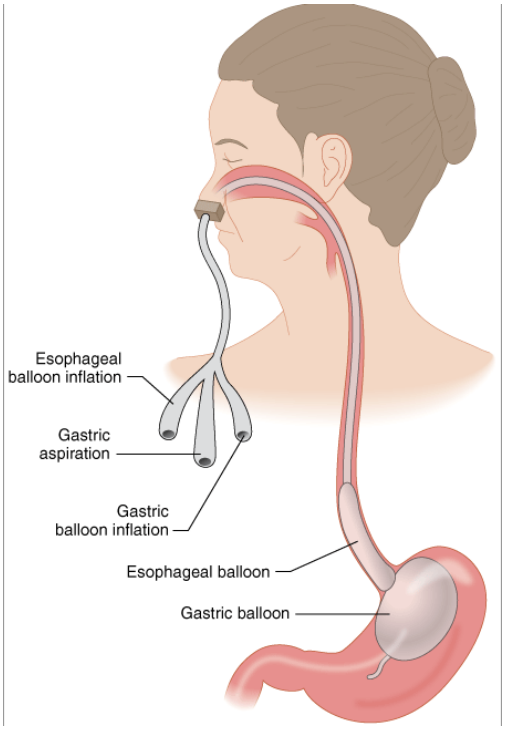
Terlipressin can also be used to treat variceal bleeding. Like octreotide, it reduces splanchnic blood flow and portal pressure. If available, use:

terlipressin 2 mg IV, 6-hourly for 2 to 5 days [Note 1].

- Note that octreotide helps control initial bleeding with NO MORTALITY BENEFIT BEING DEMONSTRATED
- Idea behind both octreotide and terlipressin is reduction of splanchnic blood flow and thus portal pressure
- Adverse reactions to terlipressin are common → HT, dysrhythmia, myocardial or splanchnic ischaemia
- BETA-BLOCKER USE (PROPRANOLOL) HELPFUL IN PREVENTING INITIAL VARICEAL BLEEDS AN DREBLEEDING

BALLOON TAMPONADE:

- Now rarely used → SENGSTAKEN-BLAKEMORE TUBE
- High incidence of adverse reactions → mucosal ulceration, oesophageal or gastric rupture, asphyxiation from dislodge ballons or tracheal compression due to balloon inflation



SURGERY → in those who do not respond to medical and endoscopic treatment

DISPOSITION AND FOLLOW UP:

- Clinical features predicting adverse outcomes → initial haematocrit of <30%, initial SBP <100mmHg, red blood in NG lavage, history of cirrhosis or ascites on exam, history of vomiting red blood
- THE GLASGOW-BLATCHFORD BLEEDING SCORE IS BASED ON CLINICAL CRITERIA AND ALLOWS RISK STRATIFICATION IN UGI BLEEDING. A SCORE OF ZERO ARE AT VERY LOW RISK FOR ADVERSE OUTCOMES OR VERY LOW BENEFIT FROM ENDOSCOPY → DISCHARGE IS POSSIBLE

Table 78-1 Glasgow-Blatchford Bleeding Score

	Score Value
Blood urea (milligrams/dL)	
<18	0
18–22	2
23–27	3
28–70	4
>70	6
Hemoglobin (men, grams/dL)	
≥13.0	0
12.0–12.9	1
10.0–11.9	3
<10	6
Hemoglobin (women, grams/dL)	
≥12.0	0
10.0–11.9	1
<10.0	6
Systolic blood pressure (mm Hg)	
≥110	0
110–109	1
90–99	2
<90	3
Other markers	
Pulse ≥100 beats/min	1
Presentation with melena	1
Presentation with syncope	2
Hepatic disease*	2
Cardiac failure†	2