Upper GI Bleeding

Resuscitation and initial management

- Transfuse massive bleeding with blood, platelets and clotting factors in line with local protocols
- Platelet transfusion- actively bleeding and plt count < 50 x 10^9/L
- FFP- Actively bleeding and PT/INR/aPTT > 1.5 normal
- Fibrinogen < 1.5 g/L despite FFP- cryoprecipitate
- PCC- patients on warfarin and actively bleeding

Timing of Endoscopy

- Unstable patients with severe acute UGI bleeding- Endoscopy immediately after resuscitation.
- All other patients- Endoscopy within 24 hours of admission.

Non-variceal bleeding

- Medical Management
  - PPI increases gastric pH and stabilize clot, use omeprazole/ pantrapazole loading dose with the infusion
  - Tranexamic acid, no proven benefit
- Endoscopic treatment
  - Mechanical method e.g. clips with or without adrenaline
  - Thermal coagulation with adrenaline
  - Fibrin or thrombin with adrenaline.
  - Endoscopic injection of N-butyl-2-cyanoacrylate to patients with upper gastrointestinal bleeding from gastric varices.
- Offer TIPS if bleeding from gastric varices is not controlled by endoscopic injection of N-butyl-2- cyanoacrylate.
- Offer a repeat endoscopy to patients who re-bleed with a view to further endoscopic treatment or emergency surgery.
- Offer interventional radiology to unstable patients who re-bleed after endoscopic treatment.
- Refer urgently for surgery if interventional radiology is not promptly available.

Variceal bleeding

- Medical Management
  - Vasopressin/ terlipressin- significant relative Risk reduction and mortality benefit
  - Stop treatment after definitive haemostasis has been achieved, or after 5 days.
  - Prophylactic antibiotic therapy at presentation, proven mortality benefit- ceftriaxone or ciprofloxacin
- Endoscopic treatment
  - Band ligation
  - Consider transjugular intrahepatic portosystemic shunts (TIPS) if bleeding not controlled by band ligation.
- Life-threatening bleeding may be controlled with a Sengstaken-Blakemore tube or a Linton-Nachlas tube until haemostasis can be achieved endoscopically, or with TIPS.

patients on NSAIDs, aspirin or clopidogrel

Control of bleeding and prevention of re-bleeding

- Continue low-dose aspirin for secondary prevention of vascular events in patients with UGI bleeding in whom haemostasis has been achieved.
- Stop other non-steroidal anti-inflammatory drugs (including cyclooxygenase-2 [COX-2] inhibitors) during the acute phase
- Discuss the risks and benefits of continuing clopidogrel (or any other thienopyridine antiplatelet agents) in patients with upper gastrointestinal bleeding with the appropriate specialist (for example, a cardiologist or a stroke specialist) and with the patient.

Variceal haemorrhage: management of acute GI bleeding

- 5-year mortality – if only VH 20%
  -- if with other complications (HE/Ascites) 80%
- Imaging studies aimed at ruling out HCC and portal vein thrombosis (PVT)
- Antibiotic prophylaxis is recommended in cirrhotic patients with acute GI bleeding because it reduces the incidence of infections and improves control of bleeding and survival.
  - Ceftriaxone (1 g/24 h) is the first choice in patients with decompensated cirrhosis, those already on quinolone prophylaxis, and in hospital settings with high prevalence of quinolone-resistant bacterial infections.
  - Oral quinolones (norfloxacin 400 mg b.i.d) should be used in the remaining patients
  - Total duration 7days
- vasoactive drug therapy should be initiated as soon as AVH is suspected.
  - Starting vasoactive drugs before endoscopy decreases the incidence of active bleeding during endoscopy and facilitates endoscopic therapy, improving the control of bleeding, and potentially survival
  - Continue for up to 5days to reduce re-bleeding
- Proton pump inhibitors (PPIs) have not shown efficacy for the management of AVH. However, a short course therapy with PPI after EBL may reduce the size of post-banding ulcers

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- Terlipressin, somatostatin or octreotide are accepted options
- Lactulose may be used to prevent encephalopathy, but further studies are needed
- Beta-blockers and vasodilators should be avoided during the acute bleeding episode
- Proton pump inhibitors (PPIs) have not shown efficacy for the management of AVH

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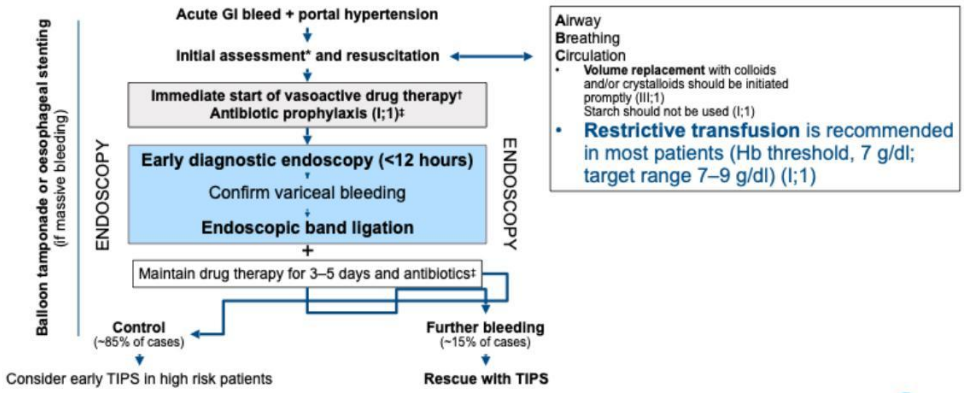
- **Medical emergency**: high rate of complications and mortality in DC
  - Requires immediate treatment and close monitoring



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*History, physical and blood exam, cultures; †Somatostatin/terlipressin; ‡Ceftriaxone (1 g/24 hours) is the first choice in patients with DC, those already on quinolone prophylaxis, and in hospital settings with high prevalence of quinolone-resistant bacterial infections. Oral quinolones (norfloxacin 400 mg BID) should be used in the remaining patients (I;1)
Figure adapted from de Franchis R, et al. J Hepatol 2015;63:743–52;
EASL CPG decompensated cirrhosis. J Hepatol 2018;doi: 10.1016/j.jhep.2018.03.024

Treatment	Dose	Duration
Antibiotics		
Ceftriaxone	1 g IV daily	5–7 days
Ciprofloxacin	400 mg IV or 500 mg oral twice daily	5–7 days
Norfloxacin	400 mg oral twice daily	5–7days
Vasoconstrictors		
Octreotide	50 μg IV bolus, then infusion at 50 μg/hr	2–5 days
Terlipressin	2 mg IV every 4 hr × 48 hr, then 1 mg IV every 4 hr	2–5 days
Somatostatin	250 μg IV bolus, then 250–500 μg/hr	2–5 days

Acute variceal haemorrhage: treatment

- Vasoactive drugs and ligation are the primary options for acute VH
  - There may be a role for TIPS in selected high-risk patients

Recommendation	Grade of evidence	Grade of recommendation
The combination of **vasoactive drugs and ligation is recommended as the first therapeutic option** in acute variceal bleeding	I	1
Early pre-emptive covered TIPS (placed within 24–72 hours) can be suggested in **selected high-risk patients**, such as those with Child–Pugh class C with score <14 • However, the **criteria** for **high-risk** patients, particularly Child–Pugh B with active bleeding, **remains debatable** and needs further study	I	2
Rescue TIPS is indicated in these patients if hemorrhage cannot be controlled or if bleeding recurs despite vasoactive drugs and EVL.		

EASL CPG decompensated cirrhosis. J Hepatol 2018;doi: 10.1016/j.jhep.2018.03.024

Management of persistent bleeding

- Up to 10–15% of patients have persistent bleeding or early re-bleeding
  - Despite treatment with vasoactive drugs and EBL, and prophylactic antibiotics

Recommendation	Grade of evidence	Grade of recommendation
TIPS should be used as the **rescue therapy** of choice in cases of persistent bleeding or early re-bleeding	I	1
With the pre-requisite of expertise, **balloon tamponade** should be used in case of **uncontrolled bleeding** as a temporary "bridge" (max 24 hours) until definitive treatment can be instituted • Removable, covered and self-expanding oesophageal stents can be used as an alternative to balloon tamponade	III I	1 2
In the context of bleeding, where encephalopathy is commonly encountered, prophylactic lactulose may be used to prevent encephalopathy, but further studies are needed	I	2
β-blockers and **vasodilators** should be **avoided** during the acute bleeding episode	III	1

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Variceal haemorrhage: prevention of variceal rebleeding

3.Secondary Prevention

NSBBs and EBL in combination reduces the risk of re-bleeding compared with monotherapy

Recommendation		
Combination therapy of NSBBs + EBL is recommended	I	1
Serial EBL is recom: → 2-4 weekly until eradication , then 3months and 6months		
Covered TIPS placement is recommended in patients who continue to be **intolerant to NSBBs***	III	1

*Provided that there are no absolute contraindications
EASL CPG decompensated cirrhosis. J Hepatol 2018;doi: 10.1016/j.jhep.2018.03.024