Chapter 5

G.I. Bleed

Sharad C Shah¹, Prasanna S Shah²

¹Hon. Gastroenterologist: Jaslok Hospital, Breach Candy Hospital & Sir H.N. Hospital,
Ex-Head, Dept. of Gastroenterology, Sir J.J. Hospital & Grant Medical College,
²Consultant Gastroenterologist

What would I do in first 3 hrs of GI Bleed?

It would be essential to

1. Confirm that patients condition is due to bleed and not by any other cause.
2. Resuscitation of the patient and grade the severity of bleed.
3. Severe cases should be shifted to the hospital.
4. Collect the blood for grouping and cross-matching and for other important investigations.
5. OGDscopy.
6. Different modalities of treatment for bleed.
7. Advise of follow up and close observation.

Determine the source of the haemorrhage, stop the bleeding, and prevent recurrent bleeding.

GI bleed incidence is double in male than female.

Inspite of all the advancement in the management of G.I. bleed, mortality doesn’t seem to be coming down. Mortality is because of co-morbid factor rather than bleed itself 14% mortality.

1. Confirm the Bleed

G.I. tract Bleed can be confirmed by 5 ways

1. Haematemesis is bloody vomitus, either fresh and bright red or older are coffee ground.
2. Malena is black, tarry, foul smelling stool.
3. Haematochezia, passage of bright red or maroon blood from the rectum in the form of pure blood mixed with formed stool, blood clots, or bloody diarrhoea.
4. Occult blood
5. Symptoms of blood loss, such as lightheadedness, syncope, dyspnoea, angina or even shock.

Assessment of the Patient with G.I. Bleed

1. Whether bleeding is acute or chronic.
2. Patient haemodynamically stable or unstable.
3. G.I. Bleed is confirmed by stool or nasogastric aspirate.
4. Record vital signs, skin & mucous membrane for pallor, signs of shock.
5. Send blood for CBC (Complete blood count)
6. Send blood for typing and cross matching to blood bank
7. Arrange for blood.

Presenting Symptoms
In acute G.I. Bleed hematemesis and malena are the two most presenting symptoms.

Blood Pressure and Heart Rate
1. Postural hypotension: Drop in B.P. by 15 to 20 mm Hg after sitting.
2. Tachycardia increases with greater loss of blood. Patient may experience a vasovagal reaction with bradycardia during episodes.

D.D. for Upper G.I. & Lower G.I. Bleed
Once resuscitation has started the site of bleeding must be traced out to the upper or lower GI bleed for further management.

Hematemesis is upper GI bleed presentation, i.e. above the Treitz ligament.
Bloody aspiration from nasogastric tube confirms upper G I Bleed.
In Upper GI bleed bowels sounds are hyperactive and BUN rises.
Malena, indicates that blood has remained in G.I. Tract for more than 14 hrs and is the result of degradation of blood by colonic bacteria.
Colonic bleeding rarely produces malena and if it must be from proximal colon.
Colonic lesions presents as occult blood in stool or with hematochezia. Bleeding from small intestine presents as malena or hematochezia.

Evaluation of Patients with Upper G.I. Bleed
History & physical examination
Endoscopy: Once patient becomes hemodynamically stable Endoscopy should be performed.
Gastric lavage should be given before carrying out Endoscopy. Using Ryles tube.
Endoscopy also permits haemostatic therapy.
Sclerotherapy can be given.

Angiography: When endoscopy and surgery is contraindicated, Angiography & Angiographically delivered therapy is helpful.

Acute lower G.I. Bleed: Hemorrhoids, IBD, Cancer, Radiation and medication (NSAID’S digoxin).

Anoscopy and sigmoidoscopy helps to detect low-lying lesions such as bleeding hemorrhoids, and fissure, rectal ulcer, proctitis or rectal cancer.

2. Resuscitation
1. Two large bore intravenous cannulas should be inserted to the patient.
2. NS or RL should be infused. Haemaccele can be used to improve blood pressure.
3. Measurement of CVP.
   Fluid therapy improves the circulation of remaining red blood cells quickly.
4. Oxygen by nasal cannula or facemask helps in patients of inadequate oxygenation.
5. Urine output is monitored to see for acute renal shut down.
6. Suction should be done to prevent aspiration of blood in Upper G.I. bleed.
7. If possible patient should be admitted to ICU.

Severity of bleeding can be assessed by general condition of patient, signs & symptoms, B.P. & Pulse rate and Complete Blood Count of the patient.

3. Severe Cases Should be Shifted to Hospital
Initial Management of G.I. Bleed
1. Hemodynamically unstable patients should be admitted to ICU.
2. Further management should be done on the basis of endoscopic findings.
   (Discharge criteria for patients ,60 yrs. within 24 hrs.
   If Hb.: 10 gm%, Systolic B.P.:<100 and Heart rate : <100
3. Endoscopic hemostatic therapy.
4. Doppler ultrasound probe passed through the biopsy channel of endoscope may improve prediction of rebleed.

Pharmacological Therapy
Use of vasopressin, secretin, \( H_2 \) receptor antagonist,PPIs, antifibrinolytics,prostaglandins, natural somatostatin, and somatostatin analog for stopping active ulcer bleed.
No medical therapy can be recommended for the acute treatment of ulcer.
1. PPIs 80 mg IV or \( H_2 \) receptor antagonist.
2. Tranexamic acid inhibits fibrinolysis and theoretically might prevent rebleeding.

4. Blood Transfusion
Transfusion: It is not always necessary to give blood transfusions for the patient of G.I. bleed.
Tachycardia, postural hypotension indicates low hematocrit.
Indications for transfusion:
1. Patients who has continuous bleeding despite of therapy.
2. Patients who are in shock.
3. Very low hematocrits (less than 20% 25 %).
4. Poor oxygenation symptoms (e.g. angina)
Patients response can be determined by measuring hematocrit 15 min. after transfusion.
Fresh frozen plasma (FFP) or platelets should be given to the patients who require 10 or more units of blood, who have a demonstrable deficiency of clotting factors or who have severe thrombocytopenia or platelet dysfunction.

5. Endoscopic Haemostatic Therapy
Infection Therapy
Injection of epinephrine (1:10,000) absolute ethanol,other sclerosing agents (e.g. polidocanol,sodium tetradecyl sulphate, 50% Dextrose in water [D50W], saline solution and water into the base of bleeding. It requires only an injection catheter along with endoscope.

6. Different Modalities of Treatment for Bleed
Various endoscopic thermal methods of hemostasis and injection therapy are in practice since 1980.
1. Laser: argon and neodymium,yttrium aluminium garnet (Nd:YAG<3) laser. Laser technique can not be recommended as a choice for endoscopic haemostasis because it is expensive, usually not portable and there is risk of perforation.
2. Monopolar electrocoagulation: It carries risk of significant tissue injury.
3. Bipolar or multipolar electrocoagulation
5. Other Endoscopic Hemostatic therapies
   1. Microwave coagulation
   2. Fibrin glue
   3. Hemoclip (Endoscopic application of metallic clip)

Angiographic Therapy
This technique should be reserved for the patients who has persistent severe bleeding and in whom endoscopic hemostatic therapy has failed or where endoscopic haemostatic therapy is not available and patients who carries a lot of risk in surgery. Intra-arterial infusion of vasopressin
may stop ulcer bleeding in up to 50% of cases. Use of embolic agents such as absorbable gelatin sponge (Gelfoam), tissue adhesives, autologous clot, or detachable mechanical occlusion device may control bleeding identified angiographically.

Surgical Therapy:
Patient should undergo surgery in the following conditions:
1. Endoscopy therapy fails or unavailable
2. Severe, ongoing ulcer bleeding continues.

Follow Up and Close Observation
Always there are chances of re-bleed in such patients therefore they should come for follow up and should be under close observation.

References