Approach to GI Bleeding

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‘Hemorrhage is the most pressing of all surgical emergencies.’

Percy Sargent, 1907

‘The only hemorrhage you need fear is when you can hear it or If it’s your own blood.’

Richard Sim, 2003
Gastrointestinal Bleeding

• Upper GI bleeding
• Lower GI bleeding
• GI bleeding of Obscure Origin
Objectives

• Recognise GI bleed
• Risk stratification
• Resuscitation
• Specific disease entities
Approach

• Acute vs Chronic
• Upper vs Lower GI
• Anatomy vs Pathology
• Diagnostic vs Therapeutic
• General vs Specific
Acute vs Chronic

- Rate of bleeding
- Intestinal transit
- Pathology
- Urgency of management
Upper vs Lower GI

- Symptoms and signs
- Anatomy
- Endoscopy
- History, Physical exam
Anatomy

• Oronasal
• Esophagus
• Stomach
• Duodenum
• Small bowel
• Large bowel
• Anorectal
Pathology

- Congenital vs Acquired
- Infection vs Inflammation/Immunological
- Benign vs Malignant neoplasm
- Trauma vs Iatrogenic
- Endocrine vs Metabolic
- Vascular vs Degenerative
- Drugs vs Psychogenic
Pathology

• Vascular
• Inflammatory/infectious
• Neoplastic
• Degenerative/deficiency states
• Intoxication
• Congenital
• Autoimmune/allergic
• Trauma
• Endocrine including metabolic
Investigations

• Hematological
• Biochemistry
• Radiological
• Endoscopy
• Others
Management

- NBM, N/G tube lavage
- I/V fluids, blood and blood products
- I/V omeprazole, Vit K, somatostatin
- Hourly parameters, urine output, I/O chart
- FBC, U/E, LFT, PT/PTT, Ca/PO4, ABG
- Oxygen, CXR, ECG
- Other adjuncts - CVP, angiogram
- Consent for Endoscopy KIV laparotomy
COMBINED MANAGEMENT FOR ACUTE ULCER BLEEDING

- Clinical assessment of risk factors
  - High risk
    - Admit to intensive care unit
  - Low risk
    - Admit to general ward

- Endoscopy
  - Active bleeding
  - Protruberant vessel
  - Adherent clot
  - Pigmented spot or clean base

- Injection therapy ± coaptive coagulation
  - Failure of hemostasis
  - Successful hemostasis
    - Recurrent bleeding
    - No recurrent bleeding
    - Surgery
COMBINED MANAGEMENT OF ACUTE VARICEAL BLEEDING

Upper gastrointestinal bleeding

Esophageal variceal bleeding confirmed by endoscopy

Vasoactive agents as an adjuvant or when emergency endoscopy is not available

Endoscopic injection or variceal ligation

Bleeding stopped

Weekly endoscopic treatment until varices obliterated

Rebleeding

Fail to stop bleeding

Repeat endoscopic treatment

Rebleeding

Fail to stop bleeding

Surgery or TIPSS
MANAGEMENT OF GI BLEEDING OF OBSCURE ORIGIN

GI bleeding: unknown source

Upper endoscopy and colonoscopy

Rapid bleeding (>0.5ml/min)

Positive
Angiography

Massive bleeding
Laparotomy and intraoperative endoscopy
Treat accordingly

Negative
Mild bleeding
Technetium-99m red blood cell scan

Small bowel enema
Technetium-99m red blood cell scan
Angiography

Positive
Treat accordingly

Negative
Positive
Treat accordingly

Negative
Observe and arrange angiography if rebleed

Slow bleeding (<0.5ml/min)

Positive
Technetium-99m red blood cell scan
Treat accordingly

Negative
Small-bowel enema Meckel's scan
Conclusion

• Assess severity
• Resuscitate
• Correct coagulopathy
• Diagnose site of bleeding
• Stop bleeding
Conclusion - Further Reading

• Peptic ulcer disease
• Esophageal varices
• Gastric carcinoma
• GERD
• Diverticular disease
• Angiodysplasia
• Colonic neoplasm