2016 Management Algorithm for Upper and Lower GI Bleeding

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## GI Bleeding

### Upper GI Bleeding
- Bleeding source proximal to the Ligament of Trietz
- Hematemesis
- coffee ground emesis
- melena
- bright red blood per rectum
- > 300,000 hospitalizations in the US annually
- 3.5-10% mortality

### Lower GI Bleeding
- source distal to ileocecal valve
- Hematochezia
- melena
- 20% of all cases of GI bleeding
- Most cases stop spontaneously
- 2-4% mortality
Outline

• Acute Upper GI Bleeding
  non-variceal
  variceal
• Acute Lower GI Bleeding

Guidelines:
American Society of Gastrointestinal Endoscopy
American College of Gastroenterology
American Association for the Study of Liver Diseases
Baveno Consensus Guidelines
Initial clinical approach to non-variceal Upper GI Bleeding

- Resuscitation
- NG tube
- IV PPI therapy
  - reduces rates of high risk stigmata on endoscopy
  - reduces need for endoscopic therapy
- Prokinetic agents (IV Erythromycin or metoclopramide)
  - decreases need for repeat endoscopy due to obscured views

ASGE Guidelines 2012
Timing of endoscopy

- Urgent endoscopy (within 24 hrs) indicated for the following:

  - History of malignancy or cirrhosis
  - Hematemesis on presentation
  - Hypovolemia (hypotension, tachycardia)
  - Hemoglobin < 8
Causes of Upper GI Bleeding

1. Peptic ulcer disease (20-50%)
2. Gastroduodenal erosion (8-15%)
3. Esophagitis (5-15%)
4. Varices (5-20%)
5. Mallory-Weiss tear (8-15%)
6. Vascular malformation (5%)
Endoscopic treatment

• Injection
tamponade: saline vs epinephrine
sclerosants: ethanolamine
sealants: thrombin, fibrin, cyanoacrylate

• Cautery
electrocautery
argon plasma coagulation

• Mechanical
hemoclip
bANDING
Indications for endoscopic treatment of ulcers

<table>
<thead>
<tr>
<th>Stigmata</th>
<th>Risk for recurrent bleeding in the absence of endoscopic therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active arterial bleeding (spurting)</td>
<td>100%</td>
</tr>
<tr>
<td>Non-bleeding visible vessel</td>
<td>50%</td>
</tr>
<tr>
<td>Non-bleeding adherent clot</td>
<td>8-35%</td>
</tr>
<tr>
<td>Flat/pigmented spot</td>
<td>&lt; 8%</td>
</tr>
<tr>
<td>Clean-based ulcer</td>
<td>&lt; 3%</td>
</tr>
</tbody>
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Variceal bleeding

- Management is similar to non-variceal upper GI bleeding with the following exceptions:
  - IV octreotide and antibiotics prior to endoscopy
  - Avoid over resuscitation with blood products
  - Correction of INR and platelets usually not necessary

- Endoscopic therapy:
  - Band ligation
  - Ethanolamine injection
  - Cyanoacrylate injection
Salvage therapy

• Endoscopic treatment failure: 10-15%

• Defined as:
  - failure to control acute variceal bleeding within 24 hours
  - failure to prevent clinically significant rebleeding
  - death within 5 days after treatment initiation

• Risk factors for treatment failure:
  - HVPG > 20mmHg
  - active bleeding at the time of endoscopy
  - shock at admission
  - severity of liver disease
Early use of TIPS in Patients with Cirrhosis and Variceal Bleeding

Garcia Pagan, NEJM 2010
Lower GI Bleeding
Causes of lower GI bleeding

1. Diverticulosis (20-65%)
2. Angioectasia (40-50%)
3. Ischemic colitis
4. Hemorrhoids (2-5%)
5. Colorectal neoplasia
6. Postpolypectomy bleeding (2-8%)
7. Solitary rectal ulcer
8. Radiation proctopathy
ASGE Guidelines: lower GI bleeding

Lower GI Bleed

Occult Bleed
- Colonoscopy
  - Negative colonoscopy
    - UGI symptoms
  - EGD
Melena
- EGD
  - Negative EGD
Scant intermittent Hematochezia
- Flexible Sigmoidoscopy
  - Negative
  - Colonoscopy
Severe Hematochezia (see algorithm 2)
- Age < 40 years; No alarm symptoms/risk factors
- Age > 50 years; Alarm symptoms/risk factors
  - Colonoscopy
ASGE Guidelines: severe hematochezia

Severe Hematochezia
- Resuscitation & Evaluation
- Physical Exam/Orthostatics
- CBC/Coags/Type & Crossmatch
- Consider NGT lavage

Consider nasogastric tube
- Positive aspirate or risk factors for UGI lesion
- Negative or nondiagnostic aspirate

EGD
- Positive
- UGI Algorithm

Colonoscopy
- Negative
- Purge prep

Massive Bleeding
- Surgical consult
- Angiography (RBC scan)
- Refractory bleeding
- Successful embolization
- Surgery
- Observe

ASGE Guidelines, GI Endoscopy 2014
Lower GI bleeding: risk factors for poor outcome

- Hemodynamic instability on presentation (tachycardia, hypotension, syncope)
- Ongoing bleeding
- Comorbid illnesses
- Age > 60
- Initial hct < 35%
- Elevated creatinine
- History of diverticulosis or angioectasia
When to go straight to angiography

ACG Guidelines:

“Radiographic interventions should be considered in patients with high-risk clinical features and ongoing bleeding who have a negative upper endoscopy and do not respond adequately to hemodynamic resuscitation efforts and are therefore unlikely to tolerate bowel preparation and urgent colonoscopy (strong recommendation, very low quality evidence)”