GI Emergencies and the “On-Call” Call

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Objectives

• Scenarios of non-emergent, but common calls

• Define the few true emergencies in GI

• How to obtain relevant clinical history for quick decision-making
QUIZ 1

Are you a “black cloud”? 

- A) Not been on call yet… yes!
- B) Was on call, best sleep ever
- C) Was on call, got some calls but didn’t have to go in… phew!
- D) Was on call, still have PTSD… my mom was right, I should have went into derm
CASE 1

• It’s your first night on-call as a first year GI fellow (black cloud)

• 5:05pm: your pager starts beeping…

• Is it a GI bleeder?

• A food impaction?
CASE 1

• Nope, it’s a patient with a prep question: “Doc, my colonoscopy is tomorrow AM and I lost my prep instructions. What do I do?”
Colonoscopy Preps

• Know which preps and dosing your home institution uses
  – **4L PEG:** Golytely, Nulytely, Trilyte
  – **2L PEG:** Halflytely, Moviprep
  – **Low volume:** Suprep, Prepopik
  – **Off label:** Miralax + Gatorade

ASGE guidelines 2015
Colonoscopy Preps

• Split prep vs. AM of dosing?
• Diet instructions?
  ◦ Clear\text\{s\}
  ◦ NPO at least 2 hours before colonoscopy
CASE 1

• “It’s me again Doc! I just puked up some of this nasty stuff!”
Patient Vomiting Prep

• Stop for 30-45 mins, then resume at slower pace
• Keep prep chilled
• Straw to bypass tongue
• Improve palatability
  – Adding flavoring (non-red Crystal Light)
  – Hard candy (sugar-free menthol candy drops)¹
• Consider antiemetic

¹Sharara et al. GIE 2013
CASE 2

• **8pm**: you get a page from the ICU resident...
“Is this the GI fellow? THANK GOD!!
I have a patient with a GI bleed and my senior
wants you to scope him NOW!!”
Emergent vs Urgent Endoscopy

• **Emergent**: “going in tonight!”
  – Scope as soon as the pt is stabilized

• **Urgent**: “see you first thing in AM”
  – Usually within 24-48 hours
  – Hemodynamically stable
QUIZ 2

Which does **not** require emergent endoscopy?

- A) 35 yo M with chest pain and spitting up saliva after eating steak
- B) 63 yo F with ascites and vomiting blood
- C) 70 yo M on Eliquis with red blood clots per rectum with stable vitals
- D) 85 yo F with abdominal distention and “coffee bean” shaped loop of colon on KUB
QUIZ 2

Which does **not** require emergent endoscopy?

- A) 35 yo M with chest pressure and spitting up saliva after eating steak
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- D) 85 yo F with distention and “coffee bean” shaped loop of colon on KUB
Indications for Emergent Scope

- Major GI bleeding
- Food impaction
- Acute colonic obstruction
- Unstable cholangitis
Initial Assessment

- Vitals
- How does the patient look?
- Age, comorbidities
- Multiorgan failure?
- Medications – anticoagulants, immunosuppressants
- Risk factors- ETOH, NSAIDs
- Do I need more diagnostic tests?
On-Call Assessment

• Give specific directions
  – What to do in what order…
  – Call me back with…
  – Call me back if…

• Assess the patient yourself!
On-Call Assessment- ABCs

• **Respiratory Status?**
  ◦ Can patient tolerate endoscopy?
  ◦ Does the patient need to be intubated?
    • Respiratory distress
    • Massive hematemesis
    • Any altered mental status

• **Cardiac Disease?**
  ◦ Troponins and EKG?

• **Massive blood transfusion protocol?**
Triage

• Where is the patient?
  ◦ Should they be in the ICU?
  ◦ Are they appropriately monitored?
  ◦ Safe for endoscopy and recovery?

• Do I need back up?
  ◦ Perforation, ischemia ➔ Surgery!
  ◦ Uncontrollable bleed ➔ IR!
CASE 2

• “This is an ETOHic patient who started vomiting red blood and is hypotensive. What should we do?”
Major GI Bleeding

- Varices
- Dieulafoy’s lesion
- Visible vessel
- Bleeding post intervention (EMR/ESD or sphincterotomy)
CASE 2

• You ask the ICU to:
  – Intubate
  – Start 2 large bore IVs
  – Transfuse blood products
  – Start IV PPI, octreotide, antibiotics
  – Follow up labs

• EGD is performed at the bedside and bleeding esophageal varices are banded (by your attending)!
Meanwhile, you receive 4 more calls. Which is an **urgent** indication for ERCP?

- A) cholangitis without sepsis
- B) bile leak after liver transplant
- C) malignant biliary obstruction
- D) gallstone pancreatitis with normalizing LFTs
QUIZ 3

Meanwhile, you receive 4 more calls. Which is an urgent indication for ERCP?

- A) cholangitis without sepsis
- B) bile leak after liver transplant  ✔
- C) malignant biliary obstruction
- D) gallstone pancreatitis with normalizing LFTs
Emergent ERCP

• When do I contact the ERCP team?
  – Unstable ascending cholangitis
    • Charcot’s triad = RUQ pain, fever, jaundice
    • Reynold’s Pentad
      – Hemodynamically unstable
      – Mental status changes
Urgent ERCP (within 48hrs)

- Bile leak post surgery (without a drain)
  - Incidence: 2-25% of liver transplant
  - Risk factor for developing biliary stricture

- Gallstone pancreatitis + Cholangitis
  - Reduces mortality [RR 0.2 (95% CI 0.06-0.68), I²=0], systemic [RR 0.37 (95% CI 0.18-0.78), I²=0], and local complications [RR 0.45 (95% CI 0.20-0.99)]

- Gallstone pancreatitis + CBD stone

Maheshwari et al 2007, Tse et al 2012, ASGE guideline 2018
Biliary Emergency

- Pneumobilia = Air in the biliary tree
  - Intact GB?
  - Prior ERCP/PTC/surgery?
  - Spontaneous biliary-enteric fistula?

Emphysematous cholecystitis/cholangitis!
Emphysematous Cholecystitis

- Gas forming organism
- Elderly diabetic
- Heralds development of gangrene and perforation
- Mortality up to 25%
- Under-diagnosed
- Differential ddx
  - Portal venous gas = necrotic bowel
  - Air more peripheral in liver
- Call surgery!

Lorenz et al 1990
CASE 3

- **11:15pm**: you’re about to head home but you get another page
- “I have a patient here in the ER who has a giant belly and has not passed stool or flatus in a week! What should I do?”
Acute Colonic Obstruction

- Peritoneal signs or symptoms?
  - Fever, rigors
  - Elevated WBC
  - Acute abdomen

- When was the last time stool and/or gas passed? > 6 days?

- What is the diameter of the cecum? > 10cm

- Surrounding colonic wall edema or abscess? Call surgery!

Low threshold for antibiotics!
Causes of Acute Colonic Obstruction

• **Volvulus** = “kidney bean sign”

• **Torsion** → obstruction → ischemia
  – Sigmoid colon → You!
  – Cecum → IR/surgery: cecostomy

• Elderly, institutionalized
Pseudo-obstruction, Ogilvie Syndrome

- Absence of a mechanical obstruction
- Spontaneous perforation 3-15%
- Conservative management for first 24hrs
  - Meds, electrolytes (K, Ca, Mg), mobilization, rectal tube
- Neostigmine (anticholinesterase)
  - Bradycardia, asystole, hypotension
- Endoscopic decompression
- Followed by daily PEG
  - Decreases relapse (0% vs. 33%, p= 0.04)\(^1\)

Loftus et al 2002\(^1\)
Malignant Colonic Obstruction

• **Primary colon cancer**
  – Bridge to surgery
    • Allows pre-op complete colon evaluation
    • Allows time for appropriate staging
    • Allows for 1-stage operation
  – Palliation

• **Secondary from metastases**
  – Palliation

• **Surgery:** >10% mortality and >40% morbidity

ASGE guideline 2018
Colon Stents

- Self-expanding metal stent (SEMS)
- Uncovered
- Fluoroscopy
- Enemas!

- >90% clinical success

Watt et al 2007
QUIZ 4

In which colonic obstruction scenario would you **NOT** stent?

- A) Metastatic descending colon cancer
- B) “Apple-core” sigmoid lesion on CT
- C) Metastatic ovarian to the sigmoid
- D) Palpable rectal mass on DRE
QUIZ 4

In which colonic obstruction scenario would you **NOT** stent?

- A) Metastatic descending colon cancer
- B) “Apple-core” sigmoid lesion on CT
- C) Metastatic ovarian to the sigmoid
- D) Palpable rectal mass on DRE ✅
Malignant Colonic Obstruction
CASE 3

• You call in your GI team and successfully place a colonic stent.

• There is immediate gas and stool expulsion through the stent... you've never seen a more beautiful thing!
Take-Home Points

• Only few true emergencies in GI
• Best evaluation is done by YOU!
• Who, what, when, where
• Communication is key
3am: zzz....

Questions?