**Gastro-intestinal Bleed**

1. ***In a patient with blood in the stools who is hemodynamically stable, use history to differentiate upper vs. lower GI bleed as the investigation differs***
2. ***In a patient with suspected blood in the stool, explore other possible causes (e.g., beet ingestion, iron, Pepto-Bismol) before doing extensive investigation***
3. ***Look for patients at higher risk for GI bleed (e.g. previous bleed, ICU admission, NSAIDs, alcohol) so as to modify treatment to reduce risk of GI bleed (e.g. cytoprotection)***
4. ***In a patient with obvious GI bleeding, identify patients who may require timely treatment even though they are not yet in shock***
5. ***In a stable patient with lower GI bleeding, look for serious cause (e.g., malignancy, inflammatory bowel disease, ulcer, varices) even when there is an apparent obvious cause for the bleeding (e.g., do not attribute a rectal bleed to hemorrhoids or to oral anticoagulation).***
6. ***In a patient with an upper GI bleed;***
	1. ***Include variceal bleeding in your differential,***
	2. ***Use the history and physical exam to assess the likelihood of a variceal bleed as its management differs.***

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|  | **Lower GI Bleed** | **Upper GI bleed** |
| **Anatomy** | Distal to ligament of treitz | Proximal to ligament of treitz (75% of GI bleeds) |
| **Etiology & History/Clinical presentation** | * *Diverticular disease*
	+ Usually painless but may c/o of cramping as bleeding causes irritation and the bowel to spasm
	+ Presentation varies depending on amount of volume loss, but often bleeding is brisk
	+ If bleeding is brisk pt may be hemodynamically unstable
	+ Self-limited in 70-80%
* *Angiodysplasia (arteriovenous malformations)*
	+ Usually painless and self-limited hematochezia or melena
	+ Tends to cause slow and repeated bleeds so may present with + FOBT, iron-deficiency anemia and syncope/pre-syncope
* *Colitis*
	+ Ischemic
		- Can be insidious, presenting with pain and rectal bleeding over several weeks
		- May also be fulminant with acute abdo pain, rectal bleeding and hypotension
		- Tends to affect older with cardiovascular co-morbidities
	+ Inflammatory
		- UC>CD
		- Depends on severity
		- Can present as severe bloody diarrhea +/-pus or have minimal symptoms
		- Fever, abdo pain, extra-intestinal findings
	+ Infectious
		- Hx of exposure, abdo pain, fever, diarrhea (may be watery +/- bloody depending on organism), dehydration
		- patients may be quite ill, however blood loss is usually mild
	+ radiation induced colitis
* *Neoplasm*
	+ Right-sided: melena or maroon colored stools, iron-deficiency anemia
	+ Left-sided: bright red blood per rectum.
		- Note that cecal bleeding can also present as melena
	+ Recall some colon cancers may not bleed at all
* *Anorectal disease*
	+ History of hemorrhoids, blood on toilet paper. Usually painless bleeding on history unless strangulated. Purititis also common
	+ Anal fissures – pain with passing stool, blood on toilet paper
* Need to rule out upper GI source and dietary causes of red stool such as beets
 | * *Above GE junction*
	+ Epistaxis
	+ Esophageal varices (10-30%)
		- hx of liver disease/portal hypertension (ask about EtOH, IV drug use, etc)
		- Often presents as major bleed with shock but may also present with coffee ground emesis
	+ Esophagitis
		- Hx of GERD, dysphagia, odynophagia
		- May also result from infectious causes: Candida most common organism followed by Herpes and CMV
	+ Esophageal cancer – constitutional symptoms,, progressive dysphagia
	+ Mallory Weiss tear (10%) – Hx of retching resulting in hematemesis +/- melena
* *Stomach*
	+ Gastric ulcer -20%
	+ Gastritis (e.g. H. pylori, NSAID, EtOH, post surgery, infectious, systemic) -20%
	+ Gastric cancer – early satiety, weight loss, abdo pain
* *Duodenum*
	+ Ulcer in bulb (25%)
	+ Aortoenteric fistula (usually only if previous aortic graft)
* *Coagulopathy*
	+ Drugs, renal disease, liver disease)
* *Vascular malformation*
* Also, r/o dietary causes of black stool such as iron supplementation, Pepto-Bismol
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| **Management/****Approach** | * History as above to determine if upper or lower
* Initial management
	+ stabilize patient (ABC’s, 2 large bore IVs and IV fluids, Monitors, Cross, Type and screen)
	+ placing a NG tube to help localize bleed
	+ endoscopy to r/o UGIB
	+ colonoscopy to determine site of bleed, etiology and potentially treat (e.g. coagulation)
	+ May need to transfuse if hemodynamically unstable
	+ may require surgical intervention depending on etiology
* Bedside tests
	+ DRE
* Massive GI bleed
	+ Systolic BP <90 mmHg
	+ Hb <60
	+ Risk Factors
		- >65 years
		- multiple medical co-morbidities
 | * 80% of upper GI bleeds stop spontaneously or only need supportive therapy
* Risk factors for mortality: co-existent illness, hemodynamically unstable, age >60, anti-coagulation
* Initial management
	+ stabilize patient (ABC’s, 2 large bore IVs and IV fluids, Monitors, Cross, Type and screen)
	+ NG tube to help differentiate between UGIB and LGIB (except in variceal bleeds)
* Endoscopy to visualize and potentially treat
* PPI (IV omeprazole) for non-variceal bleeds
* For variceal bleeds, octreotide
* Ensure all potential causative agents are stopped (e.g. NSAIDs, EtOH)
* May need to transfuse if hemodynamically unstable
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***References:***

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