20 Questions – February, 2017 - GI Bleeding

- You are called for "vomiting blood". Harold (the patient) says he just threw up some bright red blood. For surgical history, he tells you he had an aortic aneurysm repair about 15 years ago. How diaphoretic are you?
- As you transport this patient, you muse over other causes of hematemesis. Recall a few…
- How often does a GI bleed stop on its own?
- How much blood does it take to make a stool black? How about to produce that nice, tarry melena?
- What do we mean by "upper" and "lower" bleeds? Where is the dividing line?
- What's the most common cause for heavy bright red bleeding from the bottom? (No, it's not foreign bodies).
- What are some causes of true lower GI bleeds?
- Harold's daughter wonders if you can take her 2 year old son Meckel in for evaluation also, as he has been passing blood in his diaper. Aside from a dumb name, what may her son have?
- What are some other causes of pediatric GI bleeding?
- How often does cancer cause major GI bleeding?
- Enroute to the ED, your patient in question 1 throws up about 2 liters of blood (on your new brown pants) and drops his BP to the 80/P range. You open up some normal saline. What is your blood pressure target?
- Once you have cleaned your pants off and out, you are dispatched to another GI bleed. The patient has been throwing up bright red blood. You notice that he is jaundiced. He admits to having liver problems. What might be the cause of his bleeding?
- Why do patients with GI bleeds need to be on a cardiac monitor?
- What is a Mallory-Weiss tear? Can it result in large volume blood losses?
- You have been taking ibuprofen 800mg every four hours for 2 weeks due to an on the job back strain. The past few days you have had some dull abdominal pain. Tonight, you notice your stools are black. What could possibly be happening?
- When is throwing up blood not GI bleeding?
- A patient has been taking anti-acids "like crazy" before beginning to throw up blood. He insists he needs to take more to stop the acid and the ulcer. Is he right?
- You are called to the home of a gentleman who is vomiting blood and also has maroon blood in his stools. What are his chances of dying from this event?
- The same patient says that he has had the same thing happen a year ago and he "did just fine". On average, do patients with recurrent major bleeds do better or worse than those who are presenting with their first major bleed?
- What is the number one contributing cause to peptic ulcer development? (not including your partner).

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- VERY diaphoretic. This patient has a classic presentation for a "herald bleed". This happens when the graft around the aorta breaks down and erodes through into the bowel, basically creating a communication from aorta to gut. Often the initial small volume of bleeding is followed by life-threatening hemorrhage. This basically never happens with current repair techniques, in which the graft is enveloped in the old aortic wall.

- In this age group, peptic ulcer disease is #1, followed by gastritis, esophageal varicies, Mallory-Weiss tears, and inflammation of the esophagus or duodenum (often drug related).
- About 80% of the time. Unless the bleeding is life-threatening, we'll often just wait, watch, and support.
- Only about 60cc for black, about 100-200cc to get melena.
- An upper GI bleed refers to a bleeding source before the Ligament of Treitz, which is where the duodenum joins with the jejunum (about 15% of the way through). A lower GI bleed is one that occurs beyond this point.
- Trick question! The most common source for heavy lower GI bleeding is a massive UPPER GI bleed (for example, from an ulcer). If the gut transit time is less than 4 hours, the blood will still be red from an upper GI source. >4h becomes black…
- A longer list – the most common major source is diverticula (outpouchings off the colon), other possible causes are polyps, inflammatory bowel disease (like Crohn's), infectious diarrhea, hemorrhoids and anal fissures, cancer, and vascular malformations are the common adult causes.
- A Meckel's diverticulum is a little leftover outpouching in the gut where ducts once attached. For whatever reason, it contains stomach acid cells that produce…stomach acid. Not being in the stomach, this can create a problem. About 2-3% of kids have this, but only about 2% of them will have significant bleeding. It usually occurs by the age of two with painless rectal bleeding. The treatment is surgical removal of the area…
- In infants, swallowed maternal blood (eg: from a cracked mother's nipple, birth, etc.) is common. Beyond infancy, infection, milk allergy, intussusception (telescoping of the bowel), hemolytic-uremic syndrome, and volvulus are a few of the nasty possibilities.
- Only about 5% of GI cancers will have significant GI bleeding. Most of the time the blood loss is small, chronic amounts, resulting in anemia, which may result in orthostatic symptoms, which might lead to syncope, which might lead to a 911 call.
- Aim for a BP not higher than systolic 90-100mmHg systolic. Remember though that elderly patients may have higher than normal baseline blood pressures so this may be VERY hypotensive for them. Higher pressures and large volume saline resuscitation just tend to promote more bleeding. This patient needs blood, FFP, tranexamic acid, and an OR immediately.
- Esophageal varices are a potential cause. Basically, when the liver fails, it is harder for blood to flow into it. Blood coming to the liver from the gut is therefore under more pressure, which causes outpouchings in the vascular system of the gut, most prominent around the esophagus and the anus. When these rupture, there is no arterial wall to clamp down and stop them, so they tend to bleed terribly. However, even with a past history of variceal bleeding, another source is found (usually peptic) in at least 50% of patients coming in with a new, acute bleed.
- Unfortunately, GI bleeds tend to be a pretty good stress test. Not only is your body stressed about losing blood, but hemorrhage creates greater demands on the heart. At least 30% of patients over age 60 with a significant GI bleed will have some associated cardiac ischemia, and may even have obvious angina or an MI.
- A Mallory-Weiss tear occurs when tears in the distal esophagus or the proximal stomach lining are caused by increased pressure, usually as a result of vomiting, coughing, seizures, and the like. In only 50% of diagnosed cases is there a history like this, however. They are much more common in alcoholics and patients with hiatal hernias. They account for 5-9% of cases of massive GI bleeds, so they are not to be regarded as a trivial problem.

- Non-steroidal drugs like ibuprofen and Toradol are THE most common drugs contributing to GI bleeding and ulcer development. Other drugs that often contribute to GI bleeds are aspirin, alcohol (especially in combination), iron, coumadin, and steroids.
- When you're at the Ozzy Osbourne concert... Swallowed blood, especially from a nosebleed, is a common fooler. Occasionally, blood may be gagged up from the lung and swallowed, then vomited, but this is uncommon, and a VERY bad thing to have happening. There is some movement to drinking cow's blood in certain circles for nutrition, but hopefully not something that will catch on.
- Once the bleeding starts, the blood is an excellent buffer, so antiacids that neutralize (Tums, Maalox, etc) won't be helpful. Zantac and proton pump inhibitors such as omeprazole may be helpful. One thing to note is that magnesium-containing antiacids (eg: Maalox) may lead to false negatives on the test for occult stool blood…
- Hematemesis and hematochezia (red from both ends) carries a mortality of about 30%, about 3x that of a "routine" major GI bleed.
- Interestingly, recurrent bleeders tend to do better, probably because they have previously demonstrated their ability to survive a challenge.
- H.pylori is a bacteria that contributes to ulcer development in perhaps 60-80% of ulcers, and leads to ulcer recurrence if not treated. Testing is done in everyone with documented ulcers, and in many people with suspected ulcers. H. pylori treatment currently requires two to three drug therapy for at least two weeks to eradicate it, and a confirmatory test is often done to make sure that treatment was successful.

Don't forget your partner this Valentine's day!