Oh Boy! Why Is He Bleeding?

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Intro:

Hematemesis and melena in a pediatric patient indicates an upper gastrointestinal bleed proximal to the ligament of Treitz at the duodenojejunal junction. Hematemesis is the most common symptom at presentation at 73%, while melena is present at 21% and coffee ground emesis at 6% [1]. Incidence of UGIB in the pediatric population is 6.4%, three times more likely than lower GI bleeding, commonly characterized by bright rectal bleeding [2]. Although UGIB can resolve spontaneously, mortality rates due to UGIB have been measured between 5% - 21% and therefore require immediate intervention [3].

Case:

A previously healthy, breastfed 5 month old male initially presented to the ER with 1 episode of hematemesis. On admission, the patient was well appearing and complete blood count was negative for anemia. After administration of intravenous protonix and no further episodes overnight, he was discharged in stable condition with a proton-pump inhibitor prescription for one month. Three days later, the patient was brought back to the ER with a 3 day history of tarry, black stools. Parents reported 9-10 episodes of bright red hematemesis two days prior. His mother mentioned her nipples had been cracked and bloody, so she transitioned to expressed breastmilk that was not pink or red in appearance. Tarry stools persisted after admission. Both EGD and CTA were unable to identify a source of bleeding. His hemoglobin and vitals remained stable. Stool studies were positive for occult blood and EPEC, which does not commonly present with bloody stools. After three days of hospital stay, he received with a tagged red blood cell nuclear medicine study unremarkable results. His parents reported that the melena resolved around this time as well. Workup was unable to ever identify an active source of gastrointestinal bleed.

Discussion:

UGIBs in the pediatric population are diverse and require different pathways of management and investigation. In infants, etiologies include cow’s milk protein allergy, esophagitis, gastritis, vascular malformations, foreign body ingestion, esophageal varices, and ulcers [1, 3]. Non-GI sources of bleeding, such as maternal blood or nasopharyngeal blood, can mimic UGIB [3]. Severe bleeding can lead to hypovolemic shock requiring aggressive fluid management, anemia requiring transfusion, and airway instability requiring intubation. In stable patients, acid suppression using PPIs is indicated even before a bleeding source is identified [4, 5]. Endoscopy is often able to identify the source of bleeding, however, in cases where endoscopy fails, tagged red blood cell nuclear medicine and CT-angiography studies can assist [4]. While a source of bleeding was not able to be found on workup, the patient has close follow-up with outpatient GI clinic and provided return precautions if episodes recur.

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4. Polat, E., et al., *Pediatric upper gastrointestinal bleeding in children: etiology and treatment approaches.* Journal of Emergency Practice and Trauma, 2020. **6**(2): p. 59-62.

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