CLINICAL VIGNETTE

Meckel's Diverticulum as a Cause for Massive GI Bleed

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Case

A 26-year-old male with history of methamphetamine and alcohol abuse presented with two days of rectal bleeding and a syncopal episode. The patient reported two weeks prior to admission he had 3-4 episodes of black tarry stool and abdominal pain that resolved with NSAIDs. Two days prior to admission, he began having loose bright red stools up to 30x/day, remaining continuously in the bathroom. Stools turned darker red but not black over the next 24 hours. This continued until the morning of admission, when he fainted and was found in the bathroom by his father with bright red blood covering the toilet bowl and was brought to the ED. In the ED, VS included tachycardia up to 113/min and SBP 80-120. His Hgb was 7.5, decreased from 15 one year prior.

Patient was admitted to the medical ICU given tachycardia, syncope and significant anemia. EGD was promptly performed, which was entirely normal and colonoscopy planned the following day. However, overnight, patient had large volume bright red blood per rectum with hemodynamic instability and emergent CTA showed an abnormal vascular structure arising from the ileal branch, which was successfully embolized by IR.

Patient continued to have GI bleeding, and a NM Meckel's scan was obtained and reported as normal. Given a strong suspicion for Meckel's based on CTA, significant bleeding and patient's age, surgery was consulted, and performed an exploratory laparoscopy. A Meckel's diverticulum was found and subsequently resected. Patient did well post op and was discharged home.

Discussion

Meckel's diverticulum is the most common congenital anomaly of the GI tract. It results from incomplete obliteration of the vitelline duct leading to the formation of a true diverticulum of the small intestine.[1] Approximately 2 to 4 percent of patients develop a complication over the course of their lives, often before the age of two. A Meckel's diverticulum that bleeds is usually lined by two different types of mucosa: the native intestinal mucosa and a heterotopic mucosa. The most common type of heterotopic mucosa is gastric; pancreatic or colonic heterotopic mucosa have also been reported.[2]

Patients are often asymptomatic, however, when they do have symptoms, the most common symptoms are abdominal pain, intussusception, small bowel blockage and GI bleeding. Diagnosis can be made via angiography, NM Meckel's scan, capsule endoscopy, enteroscopy and laparoscopy. It is important to note each of these diagnostic modalities has limitations. In our case, NM scan has reported sensitivity of 85 to 97 percent in the pediatric patient, lower sensitivity and positive predictive value in adults of about 60 percent each.[3] The specificity of a Meckel's scan is approximately 95 percent in both pediatrics and adults, and false negative studies can occur.

Once identified, surgery is recommended for symptomatic patients. In our patient, the clinical suspicion was high enough to have patient undergo an exploratory laparoscopy, which identified the Meckel's diverticulum which was excised.

It is important to consider a Meckel's diverticulum in patients with severe GI bleeding where no source is identified endoscopically or radiographically. A high level of suspicion should prompt surgical consultation, as the definitive management in the case of symptomatic Meckel's is a surgical resection.

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