Diagnostic Dilemma: A Case of Obscure Gastrointestinal Bleeding

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Obscure gastrointestinal bleeding represents one of the most challenging disorders due to negative initial evaluations. A high index of suspicion is required as otherwise it can lead to significant delay in diagnosis. We present a case of a 37-year-old male, who had been admitted yearly for the past 4 years for the treatment of iron deficiency anemia, with esophago-gastro duodenoscopy, colonoscopy, fecal occult blood, bone marrow biopsy, and contrast-enhanced computed tomography scan being inconclusive, for which he received oral iron and later iron supplementation. Despite repeated evaluation and supplementation, he would present with severe iron deficiency anemia in failure. A technitium-99m-labeled red blood cell scan showed slow, active, intermittent bleeding from the cecum and ascending colon. He underwent a laparoscopic right hemicolectomy. The patients’ hemoglobin remained stable at 12.9 g/dl, with no further drop on follow-up.

Keywords: Iron deficiency anemia, Obscure gastrointestinal bleeding, Technitium-99m-labeled red blood cell scan

INTRODUCTION

Obscure gastrointestinal bleeding (OGIB) is defined as bleeding from the gastrointestinal tract that persists or recurs after a negative initial evaluation using bidirectional endoscopy and radiologic imaging. Clinically, OGIB can be further subdivided into overt, where the patient presents with hematemesis, melena or hematochezia or occult, where the patient presents with iron deficiency anemia or positive fecal occult blood. In most cases of occult bleeding, the site of bleeding is identified by the esophago-gastro duodenoscopy (OGD) or colonoscopy.

CASE REPORT

A 37-year-old male presented to the outpatient department, with fatigue and palpitations for 10 days. On examination, his blood pressure was 90/80 mmHg. He had severe pallor and bilateral pitting pedal edema. There was no history of melena or hematochezia. Past history revealed that he had been repeatedly admitted over the past 3 years for iron deficiency anemia-induced congestive cardiac failure. At each time of admission, his hemoglobin (Hb) would range from 1.6 to 3.5 g/dl, peripheral blood smear showed microcytic hypochromic blood picture, fecal occult blood was negative, and OGD and colonoscopy were inconclusive. Bone marrow biopsy showed cellular marrow with depleted iron store. Hence, for further evaluation, a contrast-enhanced computed tomography scan of the abdomen was done, which was again inconclusive. He was given a total of 12 blood transfusions over the past 3 years and was stabilized. He was initially given oral iron supplements. However, due to lack of compliance and no improvement in the clinical condition, no other investigations were done and he was given intravenous iron (Figure 1). Despite repeated evaluations and supplementations, he presented again with severe iron deficiency anemia in failure this year. At the present admission, fecal occult blood test turned out to be positive. To ascertain the site of bleed, a Tc-99m-labeled red blood cell (RBC) scan was done, which showed slow, active, intermittent bleeding from the cecum and ascending colon (Figure 2). The patient was then taken for laparoscopic right hemicolectomy with ileo-colic anastomosis under general anesthesia. Intraoperative findings were normal (Figure 3). Histopathology revealed areas of hemorrhage. There were no post-operative complications. Following the surgery, the patient’s Hb steadily increased and stabilized at 12.9 g/dl. Subsequent follow-up showed no further drop.
of blood or poor colon preparation, and delay in performing an endoscopic evaluation for more than 48 h after bleed. Among Asians, 75% of OGIB is from the small bowel and 45% of these are due to ulceration. Studies have shown a high yield of second-look endoscopies to detect the site of lesion - 35-75% in OGD and 6% in colonoscopy. However, in our patient, due to intermittent bleeding, the diagnosis was unrevealing, even with multiple endoscopies. Etiology may be elusive in 10-20% of the cases, as in our patient. Technitium-99m-labeled RBC scan can detect intermittent bleeding at the rate as low as 0.05-0.1 ml/min. It has a sensitivity of 97% and a specificity of 85%. As the test is non-invasive and requires no special preparation of patient, it is preferred over angiography. Even though angiography has a dual value of being both diagnostic and therapeutic, it requires a rate of bleeding at a rate of at least 0.5 ml/h, making it less sensitive. Recurrent bleeding can occur in 5% of the patients, and follow-up of these patients is important.

CONCLUSION

OGIB represents one of the most challenging disorders due to negative initial evaluations. A high index of suspicion is required to prevent delay in diagnosis, recurrent hospitalizations, and multiple transfusions. As there is also a high miss rate for lesions on initial evaluation, the patient must be evaluated as close to the bleeding as possible. Since emergency surgeries have high morbidity and mortality rates, accurate localization of the lesion is desirable. Using multimodality diagnostic approach, it may be necessary to clinch diagnosis.

REFERENCES


DISCUSSION

OGIB could be due to vascular, inflammatory, neoplastic, or extra-luminal causes such as aortoenteric fistula, hemosuccus pancreaticus, and hemobilia. The main reasons for negative evaluation could be due to slow or intermittent bleeding, failure to detect vascular lesions due to anemia, dehydration or sedatives, compromised visualization due to the presence of blood or poor colon preparation, and delay in performing an endoscopic evaluation for more than 48 h after bleed. Among Asians, 75% of OGIB is from the small bowel and 45% of these are due to ulceration. Studies have shown a high yield of second-look endoscopies to detect the site of lesion - 35-75% in OGD and 6% in colonoscopy. However, in our patient, due to intermittent bleeding, the diagnosis was unrevealing, even with multiple endoscopies. Etiology may be elusive in 10-20% of the cases, as in our patient. Technitium-99m-labeled RBC scan can detect intermittent bleeding at the rate as low as 0.05-0.1 ml/min. It has a sensitivity of 97% and a specificity of 85%. As the test is non-invasive and requires no special preparation of patient, it is preferred over angiography. Even though angiography has a dual value of being both diagnostic and therapeutic, it requires a rate of bleeding at a rate of at least 0.5 ml/h, making it less sensitive. Recurrent bleeding can occur in 5% of the patients, and follow-up of these patients is important.

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