Journal of Chitwan Medical College 2021;11(37):135-137
Available online at: www.jcmc.com.np

CASE REPORT

DIEULAFOY'S LESION OF JEJUNUM PRESENTING AS AN OBSCURE GASTROINTESTINAL BLEEDING: A CASE REPORT

Yeshika Thapa[1], Sagar Poudyal[1,*]
[1]Department of Gastro-Medicine, Chitwan Medical College and Teaching Hospital, Bharatpur, Nepal

Received: 28 Jun, 2021
Accepted: 29 Jul, 2021
Published: 30 Sep, 2021

Key words: CT Angiography; Dieulafoy's Lesion; Double-Balloon Enteroscopy; Gastrointestinal Bleeding.

***Correspondence to:** Sagar Poudyal, Department of Gastro-Medicine, Chitwan Medical College and Teaching Hospital, Bharatpur, Chitwan, Nepal.
Email: drsagarpoudyal@gmail.com

Citation

Thapa Y, Poudyal S. Dieulafoy's lesion of jejunum presenting as an obscure gastrointestinal bleeding: a case report. Journal of Chitwan Medical College.2021;11(37):135-7.

ABSTRACT

Obscure gastrointestinal bleeding has been designated as bleeding of unknown origin that persist or recurs after a negative initial or primary endoscopy (colonoscopy and upper endoscopy). We present a case of 16 years old male who was admitted at our hospital with presentation of black tarry hard foul-smelling stool associated with weakness, dizziness and loss of consciousness for 10-15 minutes. Physical examination showing pallor. Upper GI Endoscopy, colonoscopy and double balloon Enteroscopy (DBE) failed to find out the cause of bleeding whereas, CT angiography shows a prominent submucosal vessel with blush of contrast enhancement seen at mid-jejunum and suggestive of a Dieulafoy's lesion. As the lesion was not identified properly during both anterograde and retrograde Double Balloon Enteroscopy we decided to go for the conservative management and treated the patient on close monitoring.

INTRODUCTION

Obscure GI Bleeding (OGIB) is defined as recurrent or persistent gastrointestinal bleeding from a source that cannot be identified using upper or lower endoscopy, and is associated with a so-called "gastrointestinal disease of unknown cause".[1] Obscure GI bleeding can be divided into occult and overt. Occult OGIB is manifested by recurrent iron-deficiency anemia (IDA) and/or recurrent positive fecal occult blood test results. Overt OGIB presents as gross or visible recurrent bleeding with melena or hematochezia which may require the blood transfusion.[2] Their incidence varies depending on the age of the affected individual.

Dieulafoy's lesion (DL) is a rare and uncommon disease that is mainly responsible for upper gastrointestinal (UGI) bleeding which accounts about 5%.[3] Dieulafoy's lesion is an abnormally large, tortuous, submucosal vessel that is 1-3mm in size that erodes the overlying epithelium without primary ulceration and erosion. Lesser curvature of the stomach within 6cm of the gastroesophageal junction is the most common site of DL. The anatomical distribution of Dieulafoy's lesion includes Stomach (71%), duodenum (15%), esophagus (8%), rectum (2%), colon (2%) and jejunum (1%).[4] Bleeding from this lesion tend to be spontaneous and of intermittent pattern which make it very hard to diagnose. This report presents a case of obscure GI bleed which was found to have DL at mid-jejunum in a young patient.

CASE REPORT

A 16 years old male presented to the emergency department with black, tarry, foul smelling, stool at a frequency of two episodes for 1 day. He also had history of dizziness, loss of consciousness while defecating for about 10-15 minutes which was not associated with tongue bite, abnormal body movements, upward rolling of eyes and frothing. He had no history of Acid peptic disease, NSAIDs intake, chronic liver disease or antiplatelet or anticoagulant drugs. Neither he had evening rise of temperature nor did he have pain abdomen and weight loss. He had similar history of black tarry stool or melena three months back for which he underwent two unit of blood transfusion at local hospital. Physical examination reveals pallor, hypotension and tachycardia and systemic examination was unremarkable.

Investigation

Laboratory investigation showed decrease in hemoglobin (7.1g/dl), decrease in PCV (24.8%), decrease in MCV (68fl) with PBS (microcytic hypochromic) and iron profile (decrease serum iron and increase TIBC) suggesting iron deficiency anemia. Other parameters were in their normal range. The UGI endoscopy was normal but during ileo-colonoscopy finding was normal except altered blood staining mucosa (Figure 1).

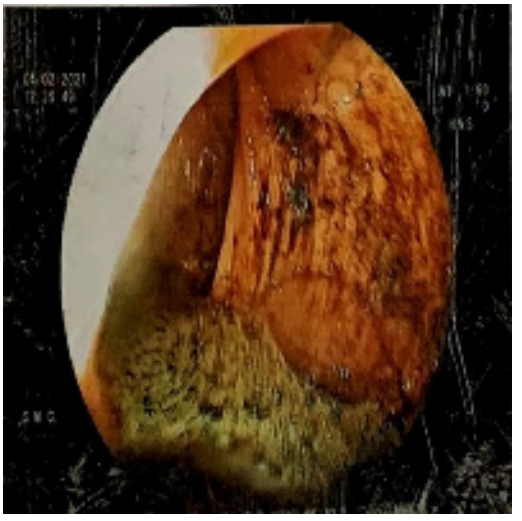

Figure 1: Colonoscopy showing altered blood clots with normal mucosa and vascularity

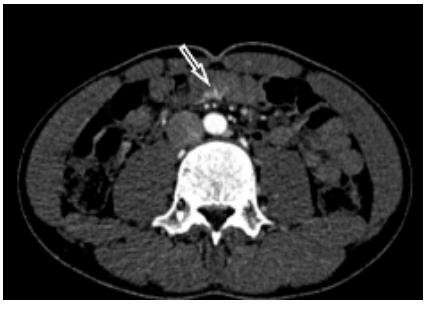

Figure 2: CT abdominal angiogram transverse section demonstrates Dieulafoy's lesion at mid-jejunum

Figure 3: CT abdominal angiogram saggital section demonstrates Dieulafoy's lesion

Subsequently, on next day Double Balloon Enteroscopy (DBE) was done but the lesion was not identified during both anterograde and retrograde study. In CT abdominal Angiography; a prominent submucosal vessel with blush of contrast enhancement is seen at mid-jejunum located just anterior to aorta for segment of 2.5 × 0.9cm (Figure 2 and 3).

Treatment

According to the CT angiography, he was suspected to have a vascular lesion most likely Dieulafoy's lesion. Patient was then managed conservatively with antibiotics, proton pump inhibitors, stool softener, tranexamic acid for ongoing intermittent bleeding, and two unit of Packed Red Blood Cell (PRBC) was transfused to correct the anemia when his hemoglobin was 7.1. Patient bleed was subsided next day and his stool color also changed back to normal yellow color in 3 days and finally he was discharged after 7 days of treatment.

DISCUSSION

Gastrointestinal bleeding is an emergency condition in adult. Nearly 80% of this bleeding in adults originates proximal to the ligament of Treitz. Small bowel lesions account for the majority of the etiologies of OGIB (~75%) and predominantly include vascular lesion and ulceration (~45%) in Asian population.[5-7] Dieulafoy's lesion is a rare clinicopathological condition but it is one of the differential diagnosis for OGIB. Histologically, DL consists of an abnormal, submucosal "caliber-persistent artery" that typically protrudes through a minute 2 mm to 5 mm mucosal defect[4]. This lesion is most commonly seen at proximal stomach but in our case, it is at mid-jejunum which was a rare presentation. Dieulafoy's lesion is characterized by a bleeding or clot-bearing artery protruding into the GI lumen without surrounding ulceration.[8] DL is more prevalent in male than in female, mean age is over 50 but in our case, patient is of young age which is unusual. Usually, DL present along with multiple comorbidities who are treated with NSAIDs: Aspirin/ Warfarin. The pathogenesis of Dieulafoy's lesion is still poorly understood.

The available endoscopic investigations that will help for diagnosis of OGIB are video capsule endoscopy, single and double balloon-assisted Enteroscopy, spiral Enteroscopy. When endoscopic investigation failed to diagnose then radiological investigation is the choice which contains Computed Tomography Angiography (CTA), CT Enterography (CTE), technetium 99m-labeled red blood cell nuclear scan and Meckel scan. Among these, CTA is preferred for diagnosis of OGIB.Technetium-99m labelled red blood cell scans have also been used to identify the location of bleeding Dieulafoy's lesion when endoscopy had failed.[9] The small size lesion and extensive blood and clots in lumen makes the diagnosis challenging. The diagnosis is even more complex as bleeding stops as in our case.

The long-term management of OGIB, definitive treatment with endoscopic interventions, angiographic embolization, or surgical resection. The treatment of choice for Dieulafoy's lesion is considered to be endoscopy and thermal coagulation is considered the standard first-line intervention. Recent studies

have suggested the use of endoclips or epinephrine injection therapy rather than thermal coagulation as it may have equal efficacy and decreased recurrence.[8] Endoscopic treatment methods are used for easily accessible lesions. As the success rate of this method is high, it is widely preferred. There are several endoscopic treatment methods such as injection, electrocoagulation, thermal probe and laser endoscopic methods and mechanical hemostasis methods. Mechanical Hemostasis methods uses the mechanical devices like hemoclips in case of soft surrounding tissue, whereas rubber band ligation is preferred in difficult location like in duodenum. Mechanical hemostasis methods are more effective and successful in achieving hemostasis as compared to injection or thermal treatment methods.[10] Another better approach in patients with active bleeding who are not receptive to endoscopic therapy and surgery is Angiographic embolization. Surgical Resection of lesion site is only preferred to those cases which do not respond to endoscopic or angiographic embolization method. In our case, we managed the patient

CONCLUSION

OGIB is challenging both diagnostically and therapeutically. Dieulafoy's lesion bleeding is typically recurrent and self-limiting as seen in our patient. Most common site of this lesion is proximal stomach but, in our case, it is seen in mid-jejunum area which is very uncommon in presentation. UGI endoscopy has been shown to be a highly successful diagnostic and therapeutic tool, and it is the treatment of choice for the lesion. The second option for treatment that is now widely accepted is the angiographic embolization. Emergency Surgery i.e. resection and anastomosis is the only choice to solve the bleeding after the failure of endoscopic intervention, angiographic intervention with hemodynamic instability status.[3] However, in our case endoscopy, colonoscopy and double balloon Enteroscopy suggested no lesion, so no any endoscopic treatment was done. On the basis of CT angiography report, we treated the patient with conservative medications (tranexamic acid) on close monitoring as the bleeding subsided spontaneously.

REFERENCES:

1. Zuckerman GR, Prakash C, Askin MP, Lewis BS. AGA technical review on the evaluation and management of occult and obscure gastrointestinal bleeding. Gastroenterology. 2000;118(1):201-21.[DOI]
2. Concha R, Amaro R, Barkin JS. Obscure gastrointestinal bleeding: diagnostic and therapeutic approach. Journal of clinical gastroenterology. 2007;41(3):242-51. [DOI]
3. Beatrice P, Lucia R, Antonio G, Domenico G, Mario S, Francesco C, et al. Rare case of upper gastrointestinal bleeding: Dieulafoy's lesion of duodenum. A case report. Annals of Medicine and Surgery. 2019;45:19-21. [DOI]
4. Lee YT, Walmsley RS, Leong RW, Sung JJ. Dieulafoy's lesion. Gastrointestinal endoscopy. 2003;58(2):236-43.[DOI]
5. Yamamoto H, Sekine Y, Sato Y, Higashizawa T, Miyata T, Iino S, et al. Total enteroscopy with a nonsurgical steerable double-balloon method. Gastrointestinal endoscopy. 2001;53(2):216-20.[DOI]
6. May A, Färber M, Aschmoneit I, Pohl J, Manner H, Lotterer E, et al. Prospective multicenter trial comparing push-and-pull enteroscopy with the single-and double-balloon techniques in patients with small-bowel disorders. American Journal of Gastroenterology. 2010;105(3):575-81.[DOI]
7. Matsumura T, Arai M, Saito K, Okimoto K, Saito M, Minemura S, et al. Predictive factor of re-bleeding after negative capsule endoscopy for obscure gastrointestinal bleeding: O ver 1-year follow-up study. Digestive Endoscopy. 2014;26(5):650-8. [DOI]
8. Chung I-K, Kim E-J, Lee M-S, Kim H-S, Park S-H, Lee M-H, et al. Bleeding Dieulafoy's lesions and the choice of endoscopic method: comparing the hemostatic efficacy of mechanical and injection methods. Gastrointestinal endoscopy. 2000;52(6):721-4.[DOI]
9. Lee KS, Moon YJ, Lee SI, Park IS, Sohn SK, Yu JS, et al. A case of bleeding from the Dieulafoy lesion of the jejunum. Yonsei Med J. 1997;38(4):240-4. [DOI]
10. Baxter M, Aly E. Dieulafoy's lesion: current trends in diagnosis and management. The Annals of The Royal College of Surgeons of England. 2010;92(7):548-54.[DOI]