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Single Case

Colonic Dieulafoy Lesion as a Rare Cause of Lower Gastrointestinal Bleeding

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Keywords
Dieulafoy lesion · Lower gastrointestinal bleeding · Endoscopic clipping · Colonoscopy

Abstract
Introduction: Dieulafoy lesion is one of the most under-recognized sources of gastrointestinal (GI) bleeding (GI), typically manifesting as acute upper gastrointestinal bleeding; endoscopy is usually the first diagnostic and therapeutic modality utilized to handle these lesions by employing a variety of procedures. ***Case Report:*** This is a case of an 81-year-old female who was being assessed after experiencing repeated bouts of melena with hemoglobin drop. The patient had multiple comorbidities but no history of gastrointestinal bleeding. Esophagogastroduodenoscopy (EGD) revealed only Erythematous duodenopathy without active bleeding; the initial colonoscopy revealed a large amount of blood without identifying the source of bleeding; a second colonoscopy revealed classic Dieulafoy lesions in the splenic flexure, which were injected and clipped, and the bleeding ceased. ***Conclusion:*** Dieulafoy lesions are most frequently found in the stomach and gastro-esophageal junction, but they have also been documented in other parts of the gastrointestinal tract. In this particular instance, the lesions were identified in the colon, which is an unusual location for them, and they were treated endoscopically by clipping and injecting. In conclusion, colonic Dieulafoy lesions, although rare, have the potential to cause life-threatening bleeding and should be included in the differential diagnosis of lower gastrointestinal bleeding.

Introduction

Dieulafoy lesion, also known as caliber persistent artery, is one of the most under-recognized causes of gastrointestinal bleeding [1]; it was named after Paul Dieulafoy after his publication in 1898 when he reported fatal gastrointestinal bleeding in 3 asymptomatic male patients [2]. They are believed to account for only 1–2% of acute GI bleeding [1]. Endoscopy is

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Table 1. Laboratory values before and after the procedure

Laboratory values	Admission date	1 day before the procedure	After colonoscopy
Hemoglobin	7.3	7.3	9.4
Hematocrit	22.7	22.4	26.9
Serum creatinine	3.5	3.1	2.6

usually the first diagnostic test, but contrast computed tomography and surgical interventions are possible consideration for complicated cases [1]. There are no standard guidelines regarding its management. The use of different endoscopic techniques (ablation, mechanical, hemostatic) is usually the primary method [3]; surgery is sometimes needed in complex cases or with rebleeding [4]. Mortality rates (approximately 5%) are similar to those of other causes of GI bleeding.

Case Report

An eighty-one-year-old female was being evaluated after having several episodes of melena, hemoglobin drop, and hypotension. She has a medical history of atrial fibrillation on apixaban, cerebrovascular accidents, hypertension, heart failure with persevered ejection fraction, permanent pacemaker, gout, breast cancer status postmastectomy, and chronic kidney disease.

The patient had no history of gastrointestinal bleeding or melena and denied NSAID use. She had a colonoscopy many years ago, but no previous EGD was done, and the patient denied any nausea, vomiting, or abdominal pain. The abdominal exam was benign, non-tender, non-distended abdomen, and rectal examination demonstrated residual melena stool. Investigations were significant for hemoglobin drop from 9 g/dL to 7.3 g/dL and an INR of 1.7. The patient was started on supportive measures, including intravenous crystalloids, intravenous proton pump inhibitors, received one unit of packed red blood cells transfusion, and apixaban was held (Table 1).

EGD showed erythematous duodenopathy without active bleeding; the patient underwent a colonoscopy. The first colonoscopy revealed a large amount of bright red blood and blood clots in the rectum, sigmoid, descending, and transverse colon; a repeat colposcopy was done. Clotted blood was found from the rectum to the splenic flexure. The area was lavaged with a large amount of water and reexamined again; a single large Dieulafoy lesion with bleeding was found at the splenic flexure with active bleeding (Fig. 1) and was clipped and injected; the bleeding stopped (Fig. 2); and there was no bleeding at the end of the procedure.

Conclusion

Dieulafoy lesions are commonly encountered in the stomach and gastroesophageal junction [3, 5], but it has also been reported throughout the gastrointestinal tract [6]; however, it was rarely encountered in the colon (less than 2% of the cases) or as a cause of lower gastrointestinal bleeding [7]. Initially, it was mainly detected in the right colon, but later, it was found in other locations [8].

The initial diagnostic modality, as with other causes of gastrointestinal bleeding, is usually GI endoscopic methods [9]; sometimes, more than one endoscopy is required to detect the lesions [10], as described in our case here. Also, occasionally endoscopic ultrasound is needed to help with the diagnosis [11]; sometimes, it may simulate other vascular anomalies such as arteriovenous malformation or vascular aneurysms [7, 12], and lesions are usually visualized only during active bleeding [13] as illustrated in Figure 1. Also, as mentioned here in our case,

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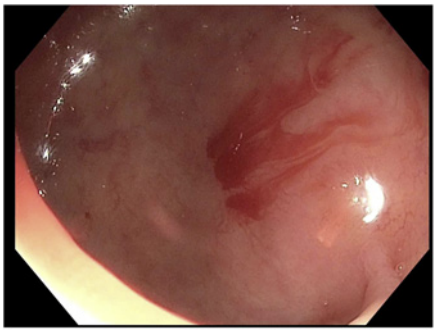

Fig. 1. Splenic flexure Dieulafoy lesion with active bleeding.

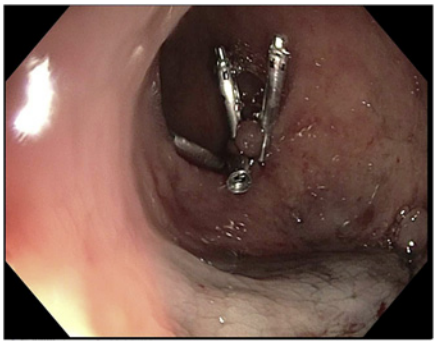

Fig. 2. Lesion clipped, injected bleeding stopped.

it is advised to do irrigation as sometimes clots will form and may conceal the bleeding site [14]. Other diagnostic modalities, such as computed tomography angiography and contrast-enhanced magnetic resonance imaging, are not commonly used for diagnosis [15] as endoscopy remains the modality of choice.

Previously, surgery was the mainstay of treatment for Dieulafoy lesions, and it was associated with a very high mortality rate. In 1990, endoscopic therapy was used to achieve hemostasis for those lesions [16], mortality dramatically decreased afterward, and now, different interventions are available for the acute management of Dieulafoy lesions. Inayat et al. [17] reviewed different surgical and nonsurgical approaches for the management of rectal Dieulafoy lesions, including (electrocoagulation, heater probe, gauze tamponade, sclerotherapy, band ligation, combination of endoscopic therapy, embolization, and direct surgical ligation) and based on their analysis, endoscopic mechanical therapy (such as the one used here in our case) showed a better therapeutic outcome [17].

In conclusion, although rare, colonic Dieulafoy lesions can cause life-threatening bleeding and should be considered in the differential diagnosis of lower gastrointestinal bleeding. It can be missed in the initial endoscopy, and a repeat endoscopy may be needed; the proceduralist should have a high suspicion of those lesions to avoid missing them. The CARE Checklist has been completed by the authors for this case report and is attached as online supplementary material (for all online suppl. material, see https://doi.org/10.1159/000542790).

Statement of Ethics

Written informed consent was obtained from the patient to publish the details of their medical care and any accompanying images. Ethical approval is not required for this study in accordance with local or national guidelines.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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Author Contributions

Mohamed Farag drafted the case report, collected references, and conducted the literature review. Yordanka Diaz helped in drafting the case and writing the discussion part. Harish Patel provided final approval of the version to be published and provided the endoscopic images.

Data Availability Statement

All data generated or analyzed during this study are included in this article and its online supplementary material files. Further inquiries can be directed to the corresponding author.

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