

Rare Upper GIS Bleeding Lesion Duodenal Dieulafoy Lesion (DL): Two Case Reports Supported by Photo Image

Dilay Demirayak* and Ayşegül Özakyol

Division of Gastroenterology Osmangazi University Faculty of Medicine, Turkey

*Corresponding author: Dilay Demirayak, Division of Gastroenterology Osmangazi University Faculty of Medicine, Eskişehir, Turkey, Tel: 5055618232; E-mail: dilaydemirayak@gmail.com

Abstract

Dieulafoy lesion (DL) is a rare cause of gastrointestinal system (GIS) bleeding. DL is responsible for 0.3-6.7% of upper GIS bleeding. While the majority of DL is located nearly of the gastroesophageal junction in the stomach, it is rarely observed in other parts of the gastrointestinal system. Therapeutic endoscopy is recommended as the preferred method for initial treatment of DLs. Adrenaline injection is used alone or in combination with other endoscopic methods in treatment. It has a high mortality rate when diagnosis and treatment is delayed.

Introduction

Dieulafoy Lesion (DL) is a rare cause of Gastrointestinal System (GIS) bleeding that occurs as a result of the opening of a large pulsatile artery into the lumen from a mucosal tear surrounded by normal mucosa, which is frequently observed in the proximal part of the stomach [1,2]. It was named after the French doctor Paul Georges Dieulafoy (1839–1911). He first described this phenomenon in 1898. DL is responsible for 0.3-6.7% of upper GIS bleeding [3]. The lesion occurs predominantly in the proximal of the stomach but is also reported in the extra gastric regions. While the majority of DL is located in the stomach close to the gastro-esophageal junction, it is rarely seen in other parts of the gastrointestinal tract [4-6]. Endoscopy is effective and safe method for DL treatment in today's diagnosis and treatment. Hemoclip application, injection therapy, thermal probe application, laser therapy and endoscopic band ligation are the endoscopic techniques used in the treatment. Mechanical endoscopic hemostasis methods provide permanent hemostasis in up to 100% of cases [7-11]. It has a high mortality rate when diagnosis and treatment is delayed. In our study, we present two cases of upper GI bleeding arising from DL in the duodenum treated with APC

and Hemoclip application. In this study, the endoscopic appearance of DL, difficulties in diagnosis of the lesion and its treatment are discussed.

Case Presentation

Case Introduction 1

A 78-year-old female patient was admitted to the emergency room with lassitude and black stool for 2-3 days. She had no previous history of gastrointestinal bleeding, ulcer, alcohol abuse or NSAID use, but she was using coumadin for AF. On clinical examination, there was no significant finding except pallor. Hemoglobin was 6.78 gm / dl and hematocrit was 18%. Inr: 5.5 of the coagulation parameters. Platelet count was normal. Nasogastric aspirate was clear.

Upper GI endoscopy: No bleeding focus was found in the esophagus and stomach in the upper GI endoscopy. Since fresh blood was seen in the postbulbar duodenum, an enteroscopic examination was started. An active bleeding dialefoy lesion was detected in the second part of the duodenum, 1 cm distal to the major papilla in the patient with normal bulbus (**Figure 1**). This lesion could only be seen clearly with a duodenoscope. Argon plasma coagulation was applied to the bleeding artery. The argon gas flow rate and the electrical power were set at 2 lt/min and 20 W, respectively. After the bleeding was controlled, 2 hemoclips were placed.

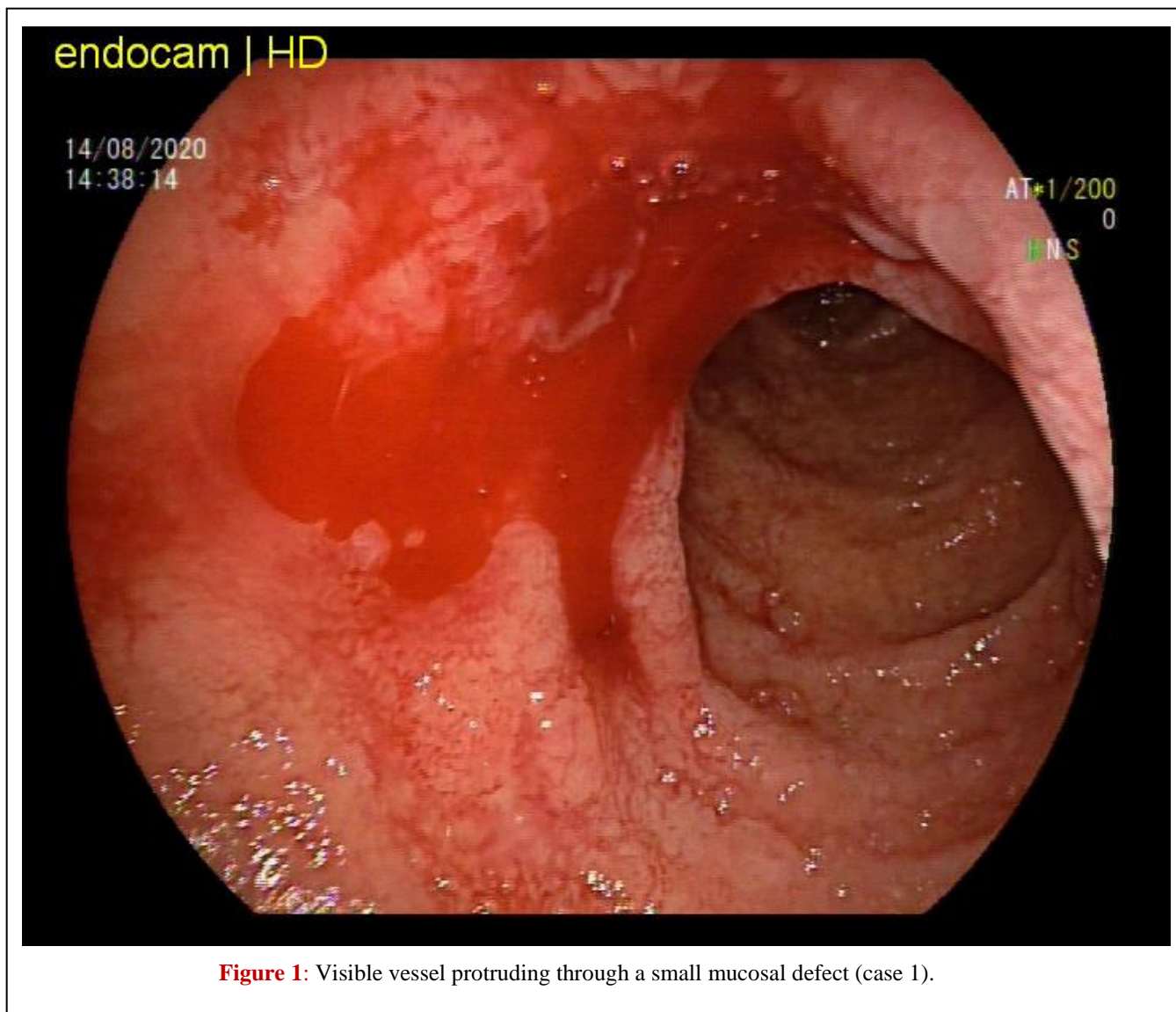


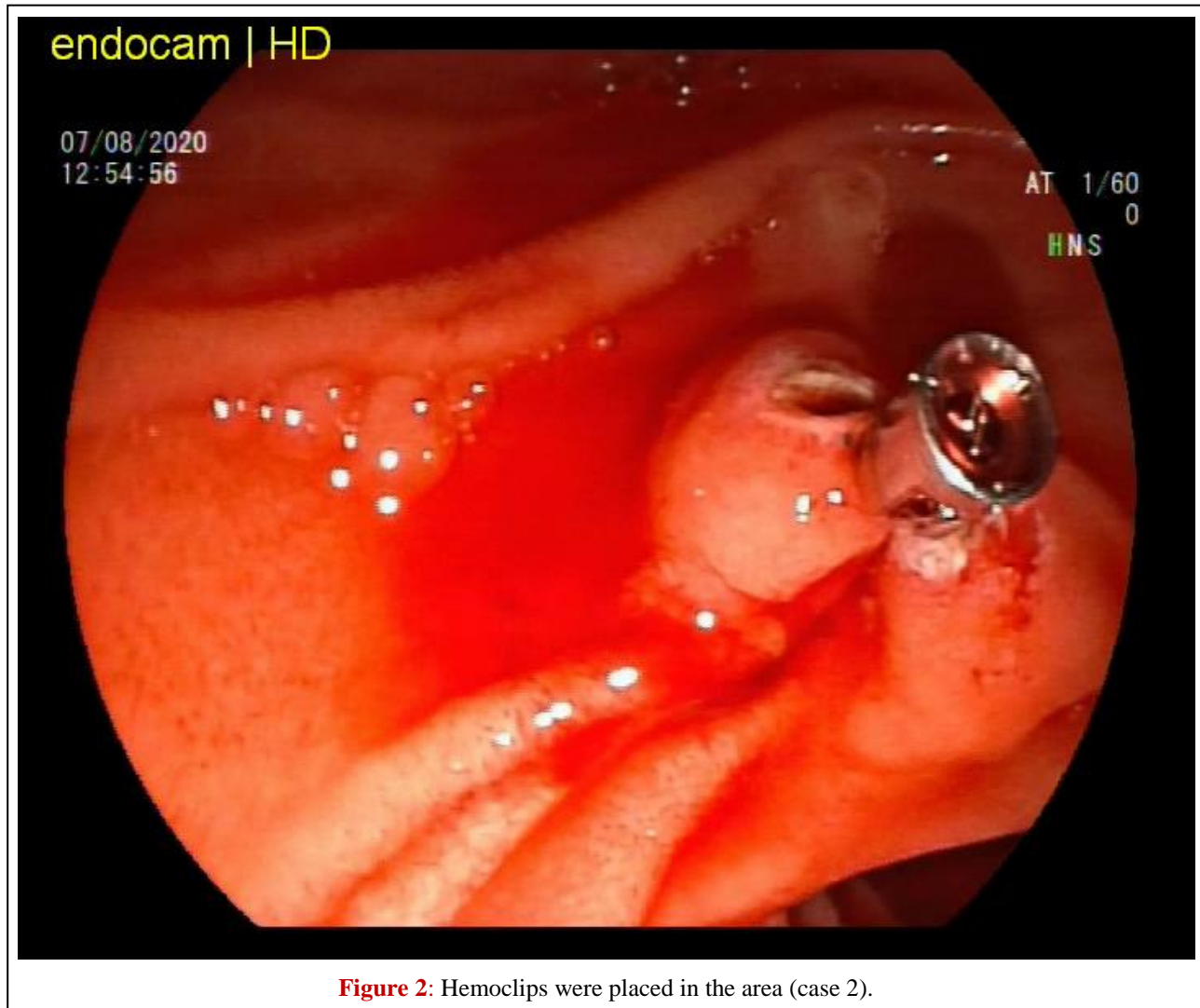
Figure 1: Visible vessel protruding through a small mucosal defect (case 1).

It was learned that the patient did not have any complaints suggesting bleeding in the polyc controls after being discharged.

Case Introduction 2

A 90-year-old male patient was admitted to the emergency department with a black stool for 1 day. It was learned that he had a history of hospitalization due to endoscopy and GIS bleeding recently. Hemoglobin was 4.8 gm / dl and hematocrit was 15%. There was a history of intermittent NSAID intake, and coagulation parameters were normal. On clinical examination, there were no significant findings except tachycardia (Heart rate - 105 / minute). No bleeding focus was found in the esophagus and stomach in the upper GI endoscopy. No active ulcer was seen in the duodenum. When fresh blood was seen in the lumen distal to the second continent of the duodenum, it was started to be examined by enteroscopy.

Double Balloon Enteroscopy Report: High flow rate, thought to be arterial bleeding was observed in the distal of the 3rd continent of the duodenum, at the beginning of the 4th continent. The bleeding point could not be seen clearly from the contraction. Dilute adrenaline injection was applied around the bleeding area and argon plasma coagulation was applied and bleeding control was achieved. Afterwards, 3 hemoclips were placed in the area where APC was applied (Figure 2).



The patient was followed up. In the endoscopy performed after being discharged, normal mucosa was observed in the affected area. No active bleeding focus was found.

Discussion

DL is a rare cause of upper gastrointestinal bleeding. It is responsible for 0.3-6.7% of all upper GIS bleeding [6]. In a large case series of 900 cases from India, DL was observed in only six (0.67%) cases of upper GIS bleeding [4]. Duodenal DL is rare [12]. Similar lesions have been described in the esophagus [2,14], jejunum and colon [2,15,16].

In previous studies, the success of diagnosing in the first endoscopy was achieved in only half of the cases. However, with the increasing awareness of pathology among physicians over time, it is seen that the success of defining the lesion in the first endoscopic examination reached 90% of the cases [3]. In the second patient, the lesion was initially overlooked on the first endoscopies. The correct diagnosis could only be reached in the endoscopy performed by us, with active bleeding. We assume that if the patient had not actively bleeding during the procedure, the diagnosis of the lesion would be difficult.

Therapeutic endoscopy is recommended as the preferred method for initial treatment of DLs [2,3,17,18]. Adrenaline injection is used alone or in combination with other endoscopic methods in treatment as bipolar and monopolar electrocoagulation, heater probe, laser photocoagulation, hemoclip and Endoscopic Band Ligation (EBL) [2,3,17]. Some Japanese groups have suggested using vascular clips on DLs as an effective and safe method of hemostasis in thin-walled organs such as the duodenum [14,18]. Nikolaidis et al. Reported that bleeding was successfully controlled in 96% (n = 22/23) of patients with Dieulafoy-like lesions treated with EBL [9]. In their study on the effectiveness of hemostatic methods used in the treatment of DL patients, Chung et al. [8] showed that mechanical hemostasis methods such as EBL and hemoclipping are superior to injection methods in controlling bleeding and preventing recurrent bleeding. Surgical ligation is only required in less than 5% of cases when endoscopic treatments fail in today's conditions [3,9,12]. Angiography and embolization are other alternative methods. It is another treatment option used in patients who have failed endoscopic treatment and are not suitable for surgical treatment [19].

Result

In conclusion, duodenal DL is a rare but important cause of recurrent and prominent upper GI bleeding.

Early awareness and endoscopy during the bleeding period are essential for correct diagnosis. Endoscopic adrenaline injection and mechanical methods are very successful in controlling bleeding.

References

1. [Mcgrath K, Mergener K, Branch S. Endoscopic band ligation of dieulafoys lesion: Report of two cases and review of the literature. Am J Gastroenterol. 1999;94:1087-90.](#)
2. [Norton ID, Peterson BT, Sorbi D, et al. Management and long term prognosis of dieulafoy lesion. Gastrointest Endosc. 1999;50:762.](#)
3. [Al-Mishlab T, Amin AM, Ellul JM. Dieulafoy's lesion: an obscure cause of GI bleeding. J R Coll Surg Edinb. 1999;44:222-5.](#)
4. [Arora A, Mehrotra R, Patnaik PK, Pande G, Ahlawat S, Bhargava DK. Dieulafoy's lesion: a rare cause of massive upper gastrointestinal haemorrhage. Trop Gastroenterol. 199;12:25-30.](#)
5. [Veldhuyzen van Zanten SJ, Bartelsman JF, Schipper ME, Tytgat GN. Recurrent massive hematemesis from Dieulafoy vascular malformation – a review of 101 cases. Gut. 1986;27:213-22.](#)
6. [Baettig B, Haeckl W, Lammer F, et al. Dieulafoy's disease: Endoscopic treatment and follow up. Gut. 1993;34:1418-21.](#)

7. [Parra-Blanco A, Takahashi H, Jerez PVM, et al. Endoscopic Management of Dieulafoy Lesions of the Stomach: A Case Study of 26 Patients. Endoscopy. 1997;29:834-9.](#)
8. [Chung IK, Kim EJ, Lee MS, et al. Bleeding Dieulafoy's Lesions and the Choice of Endoscopic Method: Comparing the Hemostatic Efficacy of Mechanical and Injection Methods. Gastrointest Endosc. 2000;52:721-4.](#)
9. [Nikolaidis N, Zazos P, Giouleme O, et al. Endoscopic Band Ligation of Dieulafoy-like Lesions in the Upper Gastrointestinal Tract. Endoscopy. 2001;33:754-60.](#)
10. [Park CH, Sohn YH, Lee WS, et al. The Usefulness of Endoscopic Hemoclippping for Bleeding Dieulafoy Lesions. Endoscopy. 2003;35:388-92.](#)
11. [Yamaguchi Y, Yamato T, Katsumi N, et al. Short-Term and Long-Term Benefits of Endoscopic Hemoclip Application for Dieulafoy's Lesion in the Upper GI Tract. Gastrointest Endosc. 2003;57:653-6.](#)
12. [McClave SA, Goldschmid S, Cunningham JT, Boyd WP Jr. Dieulafoy's cirroid aneurysm of the duodenum. Dig Dis Sci. 1988;33:801-5.](#)
13. [Ertekin C, Barbaros U, Taviloglu K, Guloglu R, Kasoglu A. Dieulafoy's lesion of esophagus. Surg Endosc. 2002;16:219.](#)
14. [Hokama A, Ikema R, Hanashiro K, Kinjo F, Saito A. Endoscopic hemoclippping for duodenal Dieulafoy's lesion. Am J Gastroenterol. 1996;91:2450.](#)
15. [Gadenstatter M, Wetscher G, Crookes PF, Mason RJ, Schwab G, Pointner R. Dieulafoy's disease of the large and small bowel. J Clin Gastroenterol. 1998;27:169-72.](#)
16. [Dy NM, Gostout CJ, Balm RK. Bleeding from the endoscopically-identified Dieulafoy lesion of the proximal small intestine and colon. Am J Gastroenterol. 1995;90:108-11.](#)
17. [Goldenberg SP, DeLuca VA Jr, Marignani P. Endoscopic treatment of Dieulafoy. Am J Gastroenterol. 1990;85\(4\):452-4.](#)
18. [Sueoka N, Koizumi N, Inokuchi K, Wakabayashi I. Combined endoscopic clipping and ethanol injection for treatment of Dieulafoy's lesions in the duodenum. Gastrointest Endosc. 1997;46:574-5.](#)
19. [Katz PO, Salas L. Less frequent causes of upper gastrointestinal bleeding. Gastroenterol Clin North Am. 1993;22:875-89.](#)

Citation of this Article

Demirayak D and Özakıyol A. Rare Upper GIS Bleeding Lesion Duodenal Dieulafoy Lesion (DL): Two Case Reports Supported by Photo Image. Mega J Case Rep. 2023; 6: 2001-2006.

Copyright

© 2023 Demirayak D. This is an open-access article distributed under the terms of the [Creative Commons Attribution License \(CC BY\)](#). The use, distribution or reproduction in other forums is permitted, provided the original author(s) or licensor are credited and that the original publication in this journal is cited, in accordance with

accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.