

Dieulafoy's Lesion, A Challenging Diagnosis And Therapeutic Approach In Upper Gastrointestinal Bleeding

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Abstract: Dieulafoy's lesion is a dilated, aberrant, submucosal artery that erodes overlying gastrointestinal mucosa in the absence of an underlying ulcer, aneurysm, or intrinsic mural abnormality. It is a relatively uncommon etiology of acute gastrointestinal bleeding and often difficult to diagnose outside the bleeding episode. The purpose of this publication is to illustrate the endoscopic diagnosis and therapeutic difficulties of Dieulafoy's lesions and to evaluate the effectiveness of the endoscopic treatment.

Keys words: Dieulafoy's lesion, upper gastrointestinal bleeding, endoscopic treatment

Date of Submission: 26-01-2019

Date of acceptance: 09-02-2019

I. Introduction

Dieulafoy's lesion is a dilated, aberrant, submucosal artery that erodes overlying gastrointestinal mucosa in the absence of an underlying ulcer, aneurysm, or intrinsic mural abnormality. It is a relatively uncommon etiology of acute gastrointestinal bleeding and often difficult to diagnose outside the bleeding episode. Endoscopy is the first diagnostic test, but has only a 70% diagnostic yield because the lesions are frequently small [1]. About 6% of the patients require three or more endoscopies to display the lesion site.

The purpose of this publication is to illustrate the endoscopic diagnosis and therapeutic difficulties of Dieulafoy's lesions and to evaluate the effectiveness of the endoscopic treatment.

II. Method

It is a retrospective series of patients admitted for gastrointestinal bleeding secondary to Dieulafoy's lesions at the gastrointestinal emergency room from January 2010 to December 2018. We reviewed clinical characteristics, risk factors, clinical presentation, endoscopic findings and outcomes

III. Results

We retrospectively reviewed medical files of twelve patients admitted for gastrointestinal bleeding secondary to Dieulafoy's lesions in the department of gastroenterology of The university Hospital Hassan II. The average age of our patients was 58.7 years (22-75 years) with a sex ratio H / F of 1, 5. 17% of our patients had cardiovascular comorbidities and were taking anticoagulant drugs during the bleeding episode, 8% was smoker and 8% were diabetic under oral antidiabetic. The majority of our patients were admitted for a massive hematemesis associated with melena (83,3%), only 8% were admitted for isolated melena and 8% for a massive hematemesis with epigastralgia. All patients developed haemodynamic instability at the time of bleeding episode requiring transfusion of multiple units of packed erythrocytes.

The most frequent localization was the stomach in 91, 6% including the great curvature of the fundus, only one duodenal location was found. The first upper endoscopy was conclusive in 50% with visualization of active bleeding (figure 1, 2). It was inconclusive in the rest: normal in 17% outside the bleeding episode and in 33% showing a fresh adherent clot hindering the exploration of a large part of the stomach from where the systematic use of a second endoscopy and a third in one patient. Computed tomography angiography showed dilated vascular arterial formation with hyper flow in 41% of cases (N: 5). Endoscopic argon plasma coagulation (APC) treatment was applied in one patient, ligation of the vessel has been used in also one patient while the others received combined endoscopic treatment (endoscopic clips with local injection of epinephrine) figure 2. Half of our patients had bleeding recurrence after endoscopic treatment: 66% (N: 4) underwent angiographic embolization with no relapse and 34% (N: 2) underwent surgical wedge resection (table 1). The mortality in our series was estimated to 16% (N: 2) after the first bleeding episode: 1 in post operative after haemostatic gastrectomy and the other due to the refractory gastro-intestinal bleeding.

IV. Discussion

The Dieulafof's lesion "DL" is a relatively rare cause of gastrointestinal bleeding that can be difficult to detect in endoscopy outside the bleeding episode. It is responsible for approximately 1.5% of acute upper gastrointestinal bleeding and 3.5% of jejunoileal gastrointestinal bleeding [1]. It can occur at any age [2], although older series have reported predominance in the sixth or seventh decade [3], in our series the average age was 58.7 years (22-75 years).

Dieulafof's lesion is more common in men [1], which joins the data of our series where the sex ratio H / F was 1, 5. Affected patients often have non-gastrointestinal comorbidities such as cardiovascular disease, hypertension, diabetes and chronic renal failure. Also, they often take non-steroidal anti-inflammatory drugs (NSAIDs) or anticoagulants most likely because these drugs promote bleeding from underlying Dieulafof's lesions. Patients are usually asymptomatic before the bleeding episode which can manifest as hematemesis, melena, or hematochezia. More than half of the patients present both hematemesis and melena [4], our data confirm that, 83,3% of our patients had both hematemesis and melena. The first upper digestive endoscopy can diagnose DL in only 70% of cases due to relatively small lesion size, intermittently active bleeding, lesion location between folds, or lesion location underneath gastric contents, an adherent blood clot, or a pool of blood from massive bleeding [5]. In our series, the first upper endoscopy was conclusive in only 50% of cases. Available data suggest that mechanical hemostasis may be more effective than other endoscopic modalities in patients with gastrointestinal bleeding from Dieulafof's lesion [6]. In our series, endoscopic argon plasma coagulation (APC) treatment was applied in one patient, ligation of the vessel has been used in also one patient while the other patients received combined endoscopic treatment (endoscopic clips with local injection of epinephrine). Recurrent bleeding after attempted endoscopic hemostasis is about 10% [7], it can be treated by repeated endoscopic hemostasis, angiographic embolization, or surgical wedge resection [7]. Mortality related to gastrointestinal bleeding from Dieulafof's lesions has significantly decreased to about 9% - 13% due to the advent of therapeutic endoscopy [8]. In our series, 50% of recurrent bleeding was noted after endoscopic treatment: 66% underwent angiographic embolization with no relapse and 34% underwent surgical wedge resection.

V. Conclusion

Dieulafof's lesion is an important cause of acute gastrointestinal bleeding causing severe, life-threatening, recurrent gastrointestinal bleeding. Bleeding recurrence was founded in 50% of cases with a high mortality around 16%. However, angiographic embolization remains a life-saving option in this case.

Conflicts of interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Table

Table 1: Characteristics of studied population

Average age	58,7 years (22-75)
sexe ratio (M/F)	1,5
Localisation	
Fundus	92% (N : 11)
duodénum	8% (N : 1)
Endoscopic treatment :	
Argon plasma coagulation (APC)	8% (N: 1)
ligation of the vessel	8% (N: 1)

Endoscopic clips + epinephrine	84% (N: 10)
Bleeding recurrence	50% (N : 6)
treatment after rebleeding :	
angiographic embolization	66% (N: 4)
surgical wedge resection	34% (N: 2)
Death	16% (N : 2)

Figures :

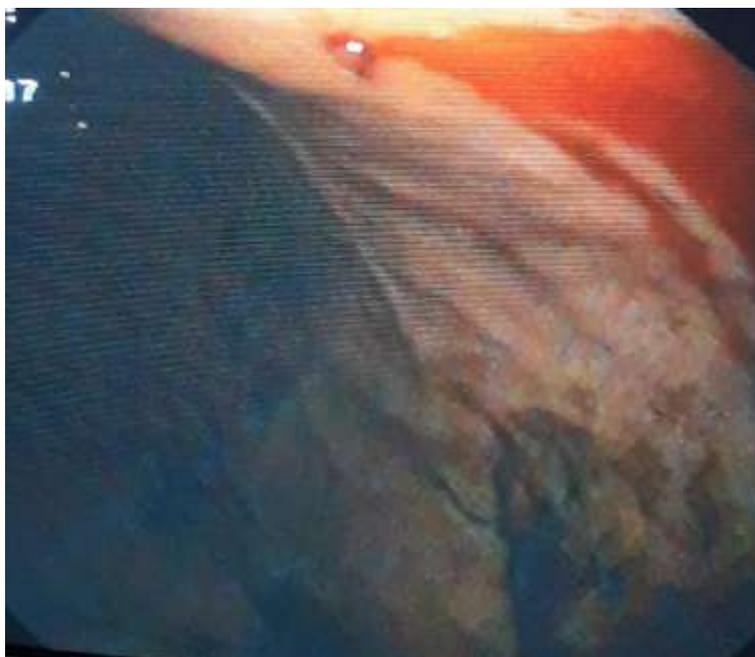


Figure 1: Dieulafoy's lésion with active bleeding



Figure 2: setting up endoscopic clips

Hamdoun FZ. " Dieulafoy's Lesion, A Challenging Diagnosis And Therapeutic Approach In Upper Gastrointestinal Bleeding." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 2, 2019, pp 87-89.