A dangerous gastric bleeding cause: Dieulafoy's lesion

B Ekçi, Ö Gökçe, I Ekici, Ü Akyüz

Bleeding is a complication of gastrointestinal vascular malformation and may be an emergency. Dieulafoy’s lesion is rare but the aberrant submucosal artery may cause gastrointestinal bleeding. It is most commonly located in the proximal part of the stomach. Endoscopy is used for diagnosis and treatment. Mass lesions, diffuse lesions and severe bleeding may require surgery. Wedge resection or lesion suturing may be selected for gastrointestinal haemorrhage. (Hong Kong j.emerg.med. 2010;17:177-179)

出血是腸胃畸形血管的併發症，可以是急症。迪厄拉富瓦氏病變是罕見的，但其畸變的黏膜下動脈可引致腸胃出血。它最常見的位置是在胃的近端部份。內窺鏡是用於診斷及治療。瘧塊病變、擴散型病變及嚴重出血，可能需要動手術。腸胃出血，可以選擇楔形切除術或縫合病變。

Keywords: Dieulafoy’s lesion, endoscopic hemostasis, gastrointestinal hemorrhage, surgery

關鍵詞：迪厄拉富瓦氏病變、內窺鏡止血、腸胃出血、外科手術

Introduction

Gastrointestinal vascular malformations may present with bleeding, anaemia, or if they form a mass lesion, with intussusceptions. Dieulafoy’s lesion is a rare condition. Gallard in 1884 described this lesion but it was named after a French surgeon Paul Georges Dieulafoy in the literature. Dieulafoy’s lesion typically occurs within 6 to 10 cm of the oesophago-gastric junction, generally along the lesser curvature of the stomach. Endoscopy is used for diagnosis. Successful haemostasis has been reported with many different endoscopic techniques.

This case report describes the clinical presentation and management of a patient with acute gastrointestinal bleeding due to a Dieulafoy’s lesion.

Case report

A 60-year-old woman presented with repeated vomiting of fresh blood to our emergency department in August 2009. She had chronic obstructive pulmonary disease and osteoporosis. Emergency upper gastrointestinal endoscopy detected Dieulafoy’s lesion along the greater curvature of the fundus of her stomach which was defined as arterial-type bleeding with no evidence of mucosal ulceration or erosion. Clipping was performed but not effective. Endoscopic injection therapy with epinephrine and heater probe
application were performed and the bleeding was controlled (Figure 1). It rebled after two days. She underwent a repeat endoscopy, and the bleeding lesion was controlled with heater probe and argon laser. However, the patient had a third episode of haematemesis on the same day and 5 units of blood were transfused. She underwent emergency surgery. The stomach was exposed and the lesion was clearly demonstrated at the fundus of the stomach. Gastric wedge resection was performed. The patient was discharged uneventfully on postoperative day 5. The final pathology confirmed Dieulafoy’s lesion. The histopathology showed large tortuous malformed vessels and no amyloid deposit (Figures 2 and 3). The patient was well at the 5-month follow-up.

**Discussion**

Acute upper gastrointestinal bleeding remains an important emergency situation. Some estimates suggest symptomatic vascular anomalies may be present in approximately 1 in 10,000 individuals.³ Dieulafoy’s lesion is a rare condition in this group of diseases. It commonly locates in the proximal aspect of the stomach and accounts for 1% to 5.8% of nonvariceal bleeding and is more common in men than in women (2:1).⁴ The pathogenesis is unknown, but it is considered to be a congenital lesion.⁵ The typical lesion consists of a small submucosal artery that protrudes through a tiny mucosal defect. It is generally located in the submucosa and characterised by a large tortuous

![Figure 1](image1.png)

**Figure 1.** (a) Dieulafoy’s lesion, (b) after heater probe application.

![Figure 2](image2.png)

**Figure 2.** Large tortuous malformed vessels in the gastric submucosa (reticulin stain x 100).

![Figure 3](image3.png)

**Figure 3.** Large tortuous vessels in the gastric submucosa and overlying eroded, necrotic mucosal surface (haematoxylin and eosin stain x 100).
vessel and a small defect in the overlying mucosal surface. Occasionally, amyloid deposition may be found on the vessel wall. The most common location of the lesion is the body of the stomach, followed by the cardia and the esophagus, but it has also been reported in the small and large bowels. Presenting symptoms include haematemesis, melaena, haematochezia, hypotension and tachycardia and there were haematemesis, melaena, hypotension and tachycardia in our patient.

Endoscopic methods should be the first choice in treating bleeding Dieulafoy’s lesions. Endoscopic haemoclips application, endoscopic band ligation, heater probe application, and Nd:YAG laser therapy, with or without injection therapy, have all been shown to be effective in various studies. If endoscopic therapy fails, angiography with embolization or surgery is indicated. Wedge resection is the surgical procedure of choice. In this patient, injection therapy with epinephrine alone was not successful. Heater probe and argon laser were applied following the epinephrine injection but bleeding could not be stopped. Therefore, surgical management was decided and wedge resection of the lesion was performed.

In conclusion, for patients with Dieulafoy’s disease, early diagnosis through emergency endoscopy and endoscopic therapy can be effective and life-saving. However if endoscopic therapy is not successful, surgical management should be employed.

References

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