Dieulafoy's lesion: an unexpected and rare cause of upper gastrointestinal bleeding

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DESCRIPTION

A 51-year-old man with multiple comorbidities of hypertension, chronic kidney disease, dyslipidaemia and a history of stroke was presented to the emergency department with a 1 day epigastric pain. He was subsequently diagnosed with hypertensive emergency and inferior myocardial infarction. Despite being administered an intravenous infusion of glyceryl trinitrate (GTN), his condition deteriorated and he developed cardiac arrest with ventricular fibrillation, which required cardiopulmonary resuscitation and defibrillation. The patient had stormy recoveries with multiple episodes of hospital-acquired pneumonia and prolonged intubation due to failed extubation. He was put on double antiplatelet medication and subcutaneous low-molecular weight heparins injection.

After 35 days in the coronary care unit (CCU), a coffee-ground fluid in the nasogastric tube was observed in the patient who also experienced several episodes of maelenic stools. Although his haemodynamic status was stable, his haemoglobin (Hb) level however had dropped by 2 g/dL. This necessitated urgent bedside oesophagogastroduodenoscopy, which subsequently revealed a bleeding Dieulafoy's lesion (figure 1) at the lesser curvature of the stomach, about 5 cm from the cardio-oesophageal junction. Two endoscopic haemoclips were fixed at the base of the Dieulafoy's lesion (figure 2) and epinephrine injection was then administered. The commencement of these dual therapies consequently halted the bleeding. The endoscopy was completed up to the second part of the duodenum with no other abnormality found. Following a transfusion of two pints of packed cells, the patient's Hb level increased and remained static with no further evidence of recurrent bleeding. Two days later, he was started on nasogastric tube feeding. As for his

Figure 2 Two haemoclips were applied at the base of the Dieulafoy's lesion.

myocardial infarction, cardiology team decided not to put him on anticoagulant and double antiplatelet in view of the bleeding episode previously, a single antiplatelet was restarted back instead. He improved markedly and extubated, subsequently was warded for another 20 days and discharged well after being in CCU for a total of 55 days. Throughout the remaining days of his stay, there was no more gastrointestinal bleeding episode. On a follow-up visit in surgical clinic 1 month later, he is well, with no signs of gastrointestinal bleed.

Dieulafoy's lesion accounts for fewer than 2% of all gastrointestinal bleeding cases making it one of the most under-recognised conditions.¹ The pathophysiology is undetermined although it is hypothetically postulated to be due to bleeding after erosion of the abnormally protruded dilated vessel, measuring up to 1–3 mm in diameter, which runs under the mucosa of the gastrointestinal tract.² Pre-endoscopic therapy for bleeding Dieulafoy's lesion is identical to other management for gastrointestinal bleeding focusing on volume resuscitation, intragastric acid control and avoidance of consequent end-organ failure. Volume resuscitation via large-bore branula is initially performed with crystalline solution; this is, however, later substituted with transfusion of packed cells in any evidence of anaemia. Endoscopy remains the first diagnostic test and also functions as a therapeutic measure. Certain diagnostic criteria may be employed to establish Dieulafoy's lesion: (1) active arterial spurting or micropulsatile bleeding from small (<3 mm) mucosal defects surrounded by normal mucosa, (2) the presence of protruding vessels and (3) fresh adherent clots with a small point of attachment to the mucosal defect or normal mucosa.³ Angiography may be used to embolise obscure bleeding including Dieulafoy's lesions. When

Figure 1 An endoscopy at retroflexed view showing a bleeding Dieulafoy's lesion.

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Images in...

control efforts fail, surgery is warranted, as in about 3%–16% of cases comprising mostly patients with rebleeding after endoscopic therapies.⁴ Surgical interventions that could be employed include under-running of the lesion or wedge resection of the affected section of the gut.^{4,5} Advances in endoscopic techniques have however improved the detection rate of Dieulafoy's lesions, hence significantly decreasing its mortality incidences.⁴

Patient's perspective

I thank the managing doctors who had helped me to stop bleeding inside my stomach.

Learning points

- ▶ Acute upper gastrointestinal bleeding is a life-threatening condition, which impairs haemodynamic stability and warrants urgent life-saving endoscopic therapy.
- ▶ Dieulafoy's lesion must be considered in any case of obscure upper gastrointestinal bleeding.
- ▶ The pre-endoscopic approach is similar to other treatment for upper gastrointestinal bleeding, which focuses on volume resuscitation, intragastric acid control and avoidance of end-organ damage.

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