Gastric Dieulafoy lesion: a rare cause of massive haematemesis in an elderly woman

Jamie Clements,1 Barry Clements,2 Maurice Loughrey3

DESCRIPTION
A 78-year-old woman presented to her local accident and emergency department by ambulance, having collapsed following several episodes of voluminous fresh haematemesis with melaena. The patient had extensive medical comorbidities, suffering from type 2 diabetes mellitus, ischaemic heart disease, bronchiectasis and severe pulmonary hypertension. Three weeks previously she had undergone an uncomplicated total hip replacement for osteoarthritis and had been using non-steroidal anti-inflammatory drugs (NSAIDs) for analgesia. She had no history of gastroenterological disease.

The patient responded to initial resuscitative measures sufficiently to undergo oesophagogastroduodenoscopy. The gastroenterologist struggled to achieve any useful view of either stomach or duodenum due to the volume of haemorrhage, and aborted the procedure. The patient rapidly displayed signs of haemodynamic instability and deteriorated into a state of refractory hypovolaemic shock. She was intubated and ventilated.

The patient underwent laparotomy and antrotomy with duodenotomy, which showed no focal gastric or duodenal abnormality. Attempted preservation of the gastric fundus did not arrest the arterial haemorrhage and control was only achieved through total gastrectomy and oesophagojejunostomy. The gastric specimen is displayed, with bleeding source highlighted by arrow and inset (figure 1).

The list of differential diagnoses in this clinical situation is extensive (table 1). The most common cause of upper gastrointestinal bleeds (UGIBs) in this population is peptic ulceration, particularly posterior-wall duodenal ulcers, which can generate brisk haemorrhage from the gastroduodenal artery (a branch of the hepatic artery). This diagnosis may have been corroborated by the history of NSAID use; however, failure of endoscopy and angiography to identify a source of bleeding is typical of a more occult source.

The diagnosis is that of a Dieulafoy lesion or ‘persistent calibre artery’ of the stomach. A histomicrograph of the lesion is shown in figure 2, depicting classical features of normal surface gastric mucosa, aside from a haemorrhagic ulcer (arrow) penetrating a thick-walled arterial structure located within the superficial submucosa, representing the source of bleeding.

Dieulafoy lesion is a rare but well-recognised cause of UGIB. Lesions are most commonly located in the proximal stomach but have been reported throughout the gastrointestinal tract.1 Bleeding may be self-limiting and intermittent, or severe, the latter necessitating urgent intervention. Endoscopic detection is the diagnostic modality of choice, although endoscopic identification of the bleeding source may be extremely difficult, as bleeding is typically intermittent and surrounding mucosa is typically normal or demonstrates only a tiny ulcer.2

In the acute setting, profuse bleeding may obscure the endoscopic view. CT angiography may be a diagnostic strategy in the setting of acute bleeding, which may facilitate interventional radiology and arterial embolisation. Definitive
management of catastrophic bleeding may require subtotal or
total gastrectomy, and fatal cases are recognised.3

The patient recovered well in the initial postoperative period
but succumbed some months later from refractory pulmonary
hypertension.

Contributors JC: corresponding author and primary author; organised

Table 1

<table>
<thead>
<tr>
<th>Differential diagnoses of upper gastrointestinal bleeding</th>
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<tr>
<td><strong>Microscopic features</strong></td>
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<tr>
<td>Dieulafoy lesion</td>
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<tr>
<td>Duodenal ulcer</td>
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<tr>
<td>Gastric ulcer</td>
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<td>Oesophageal varices</td>
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<td>Gastritis</td>
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<td>Mallory-Weiss tear</td>
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GOJ, gastro-oesophageal junction; Hb, haemoglobin; NSAID, non-steroidal anti-inflammatory drug; UGIBs, upper gastrointestinal bleeds.

Learning points

► Dieulafoy lesions are an extremely rare but potentially fatal cause of upper and lower gastrointestinal bleeding, and should be included in the list of differential diagnoses for gastrointestinal haemorrhage.

► Diagnosis and treatment can be treacherous, given the occult and intermittent nature of the presentation of the Dieulafoy lesion.

► Management should comprise supportive measures, followed by control of bleeding by endoscopy, interventional radiology or, failing these measures, surgery.

and information from the respective consultants. ML: cosenior author; consultant pathologist; interpreted pathological specimens for submission and described a short vignette on the pathological appearances of Dieulafoy lesions for submission. BC: cosenior author; the consultant surgeon who performed the gastric resection and interpreted/prepared the surgical images for submission, in addition to supplying a short clinical vignette.

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REFERENCES


