An ulcerated gastric diverticulum—a rare cause of haematemesis and melaena

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Summary

A case of recurrent intraluminal bleeding from an ulcerated gastric diverticulum is described. Difficulties in diagnosis and treatment of this rare condition are discussed. The importance of accurate preoperative diagnosis by endoscopy and barium meal is emphasized.

KEY WORDS: stomach, diverticulum, ulcer, haemorrhage.

Introduction

Gastric diverticula are relatively uncommon and usually present as an incidental finding on barium meal or gastroscopy. A proportion of cases develop vague dyspepsia which appears to respond to diverticulectomy. However, serious complications, such as intraperitoneal or intraluminal haemorrhage and perforation are rare (Palmer, 1951). Haematemesis and melaena have been attributed to gastric diverticula in a number of reports but the precise origin of the bleeding has rarely been fully substantiated (Cosman, Kollum and Kingsbury, 1957). We describe a case in which intragastric haemorrhage was shown to originate from an ulcer within a true gastric diverticulum and which illustrates some of the problems in diagnosis and management of this rare condition.

Case report

A 54-year-old housewife was admitted 2 hr after a haematemesis. There was no relevant past history. Her pulse was 58 per min and blood pressure 100/70 mmHg on admission. Clinical examination was unremarkable. Her haemoglobin was 10.4 g/dl and she was transfused four units of whole blood. Upper alimentary endoscopy was performed shortly after admission. Incomplete views of the stomach were obtained but she was noted to have a small hiatus hernia and mild oesophagitis. A clot was present in the lower oesophagus and for this reason the bleeding was attributed to her oesophagitis. She was treated by postural adjustment and an alginate-antacid prepara-

tion. Repeat gastroscopy 1 month later failed to show any abnormality other than a small hiatus hernia.

FIG. 1. Lateral view of the barium meal, showing a large narrow-necked diverticulum (arrowed) arising from the posterior aspect of the gastric fundus.

Three months later, she was readmitted with a 4-day history of melaena and fainting attacks. On admission she had a haemoglobin concentration of only 4.7 g/dl. At gastroscopy there was old clot in the oesophagus and stomach and a careful search revealed a pouch arising from the fundus of the stomach. This was interpreted as either a diverticulum or normal fundus trapped within a

FIG. 2. Photograph of the opened diverticulum showing the ulcer (arrowed).

FIG. 3. Histology of the diverticular wall showing the ulcer and the attenuated layer of smooth muscle (arrowed).

paraesophageal hernia. The mouth of the pouch could be entered with ease to reveal fresh clot lying within it, although the source of the bleeding could not be visualized. Barium meal the following day confirmed the presence of a large diverticulum arising from the gastric fundus and a small sliding hiatus hernia (Fig. 1), but no paraesophageal hernia was demonstrated.

She was transfused five units of blood and underwent laparotomy. On opening the abdomen no abnormality was initially apparent other than a small sliding hiatus hernia. A careful search, however, revealed an 8 cm diameter diverticulum arising from the posterior aspect of the greater curve 5 cm from the hiatus, concealed within the gastrosplenic omentum. The diverticulum was excised with a cuff of stomach and the gastric defect closed in two layers.

The sliding hiatus hernia was reduced and the hiatus repaired. Her postoperative recovery was unremarkable and she remains well 3 months later.

Opening the diverticulum revealed a small ulcer (Fig. 2). Histology showed that it was a true diverticulum possessing an attenuated muscle layer, and confirmed that the ulcer was benign (Fig. 3). The epithelial histology was otherwise normal.

Discussion

This case illustrates the importance of careful examination of the whole stomach, including the fundus, at gastroscopy. It also emphasizes the value of a barium meal when endoscopy has failed to show a definite cause for upper gastrointestinal haemorrhage and when endoscopic findings require further

clarification. Accurate pre-operative diagnosis was particularly important in the present case since the diverticulum was concealed within the gastrosplenic omentum and could easily have been missed at laparotomy. Moreover, treatment by a "blind" partial gastrectomy would have left the bleeding point *in situ*.

Amongst the many reports of gastrointestinal haemorrhage in the presence of gastric diverticula (Cosman *et al.*, 1957), a careful search has revealed only five published cases in which it has been shown convincingly that intraluminal haemorrhage has originated within a diverticulum. In 1925 Sutherland reported a case of intragastric bleeding in a patient with two juxtapyloric diverticula. After a partial gastrectomy both diverticula were found to be filled with clot but no mucosal lesion was described to account for this. Subsequently, there have been two reports of haemorrhage originating from benign ulcers within diverticula arising in the pyloric antrum (Love, 1942) and body of the stomach (Crismer *et al.*, 1970), respectively. In two further cases, bleeding was attributed to multiple erosions (Cosman *et al.*, 1970) and gastritis (Brown and Priestley, 1938) within diverticula arising in the subcardiac and fundic regions. All four of these patients were treated by diverticulectomy. It would seem likely that the mucosal lining of a gastric diverticulum is predisposed to ulceration and haemorrhage (Cosman *et al.*,

1970), but this would be difficult to prove. Nevertheless, it is upon this assumption that treatment by simple diverticulectomy, as opposed to partial gastrectomy or diverticulectomy, vagotomy and drainage is based. Simple diverticulectomy appears, however, to be effective since there have been no reports of recurrent ulceration following this procedure.

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