

DUODENAL DIVERTICULUM CO-EXISTING WITH A BLEEDING DUODENAL ULCER: A CASE REPORT

A. B. Olokoba, O. A. Obateru and M. Yusuf

Gastroenterology Unit, Department of Medicine, University of Ilorin Teaching Hospital, Ilorin, Nigeria

Correspondence Address: DR A. B Olokoba, Department of Medicine, University of Ilorin Teaching Hospital Ilorin, Ilorin, Kwara State. *E-mail:* drabolokoba@yahoo.com *Tel:* 08038050480, 08053357173

ABSTRACT

Background: Duodenal diverticula are characterized by the presence of sac-like mucosal herniations through weak points in the duodenal wall. Duodenal diverticula co-existing with a bleeding duodenal ulcer is rare.

Objective: The objective of this case report is to illustrate an uncommon case of two duodenal diverticula coexisting with duodenal ulcer.

Case report: A 40 year old Banker, who was previously well until about 10 days prior to presentation, when he developed epigastric pain and abdominal fullness. Five days later, he started passing melena stools. He had no vomiting, haematemesis or haematochezia. He had a history of consumption of caffeinated drinks and use of Nonsteroidal anti-inflammatory drugs (NSAIDS). He had upper gastrointestinal endoscopy, which revealed two duodenal diverticula and a duodenal ulcer measuring about 1cm by 1cm, with evidence of active bleeding located separately in the first part of the duodenum. He was managed with triple regimen of proton pump inhibitor for four weeks and two antibiotics for one week, following which his symptoms improved and no more passage of melena stools. A repeat endoscopy four weeks later showed the ulcer had healed.

Conclusion: This reported case of duodenal diverticula co-existing with a bleeding duodenal ulcer is the first from Ilorin.

Keywords: Duodenal Diverticula, Bleeding, Duodenal Ulcer, Co-Existing

INTRODUCTION

Duodenal diverticula (DD) are characterized by the presence of sac-like mucosal herniations through weak points in the duodenal wall. After the colon, the duodenum is the most common site of diverticula in the gastrointestinal (GI) tract.¹ It is believed to develop as a result of abnormalities in peristalsis, intestinal dyskinesia, and high segmental intra-luminal pressures.² Chromel in 1710, in the United States (US), described the first case of DD. In the early 1950s, Case demonstrated DD radiologically and since then, more and more attention has been paid to these lesions.³

The actual incidence of DD is not known because these lesions are usually asymptomatic. However the incidence at autopsy in the US is 6-22%.² DD become symptomatic in about 5% of patients, owing to acute inflammation, perforation, haemorrhage, or obstruction.^{4,5} 75% of DD occur within 2cm of the ampulla of Vater (juxtapapillary). This anatomical location is associated with increased incidence of biliary stones, pancreatitis, biliary and pancreatic anomalies. DD may be multiple, and vary from few millimetres to several centimetres.⁶

Duodenal diverticulum with bleeding duodenal ulcer

No racial or sex predilection exists. Most DD are observed in patients older than 50 years. The most common symptom is non-specific epigastric pain or bloating. Complication rates as high as 10-12% for DD has been documented. Major complications include diverticulitis, GI haemorrhage, intestinal obstruction, acute perforation and pancreatic/biliary disease especially when it is located within the 3rd and 4th part of the duodenum.¹

Duodenal ulcers (DU) are characterized by the presence of a well-demarcated break in the mucosa that may extend into the muscularis propria of the duodenum. Over 95% of DUs are found in the first part of the duodenum, most are less than 1 cm in diameter, and are usually acquired.⁷ DUs are more common in males, could be multiple, and also occur at the site of DD. Complications include haemorrhage, perforation, peritonitis and diverticula formation.

CASE REPORT

A 40 year old male Banker, who was previously well until about 10 days prior to presentation, when he developed epigastric pain and abdominal fullness. Five days later, he started passing melena stools. He had no vomiting, haematemesis or haematochezia. He had a history of consumption of caffeinated drinks and use of NSAIDS for body aches. He had upper GI endoscopy, which revealed two DD which were inflamed (Fig 1) and a bleeding DU (Fig 2), located separately in the first part of the duodenum. The DU

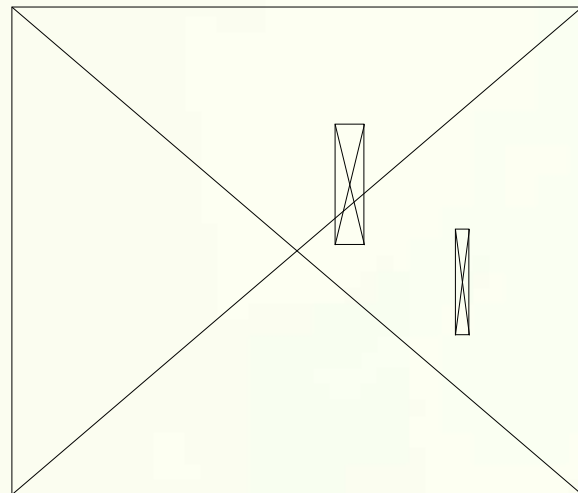


Fig 2. Duodenal ulcer (Thin arrow) in relation to the duodenal lumen (Thick arrow)

was located on opposite side of the DD, measured about 1cm by 1cm, with evidence of active bleeding (bright red blood seen). Histology of the gastric antral biopsy specimen revealed the presence of *Helicobacter* like organisms. He was managed on triple regimen of proton pump inhibitor (Rabeprazole) for four weeks and two antibiotics (Amoxicillin and Clarithromycin) for one week. A repeat endoscopy four weeks later, showed that the inflammation in the DD had resolved, and the ulcer had healed (Fig 3) and symptoms had greatly improved. There was no more passage of melena stools.

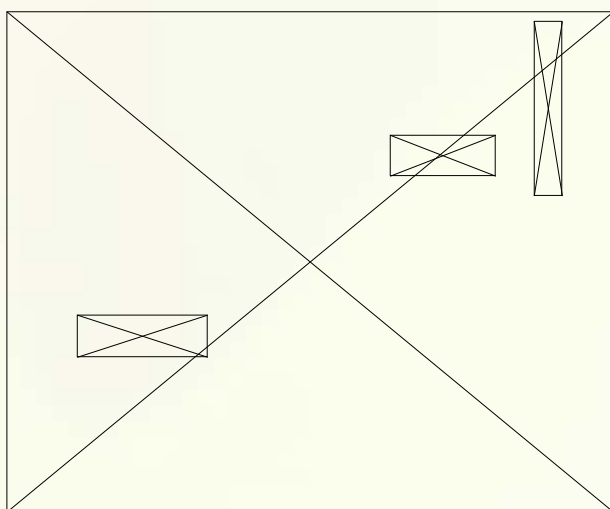


Fig 1. Two duodenal diverticula (Thin Arrows) in relation to the duodenal lumen (Thick arrow).

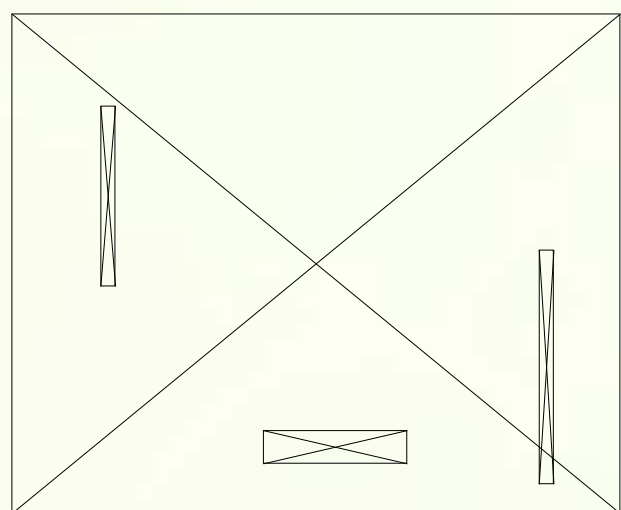


Fig 3. One of the duodenal diverticulum (Thin arrow) with site of healed duodenal ulcer (Thin long arrow) in relation to the duodenal lumen (Thick arrow).



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DISCUSSION

While 75% of DD occur within 2cm of the ampulla of Vater (juxta-papillary) and may vary from few millimetres to several centimetres and may be multiple, most DD reported are in individuals more than 50 years. Our patient was aged 40 years. The diverticula noted above were located in the first part of the duodenum, were two in number and inflamed. There was no evidence of bleeding or perforation from the diverticula. The patient could also bleed from the site of any of the two diverticula as reported from previous literature.^{8,9}

Duodenal ulcers are characterized by the presence of a well-demarcated break in the mucosa that may extend into the muscularis propria of the duodenum. Over 95% of DUs are found in the first part of the duodenum; most are less than 1 cm in diameter, while others may be as large as 4cm. The DU seen in our patient was located in the first part of the duodenum measuring about 1cm by 1cm and opposite the site of the two diverticula, with evidence of active bleeding. Our patient had a previous history of use of NSAIDs and evidence of *Helicobacter pylori* infection. It is likely that the use of NSAIDs by our patient predisposed him to a DU which bled. The presence of *Helicobacter pylori* could also have predisposed our patient to DU.

Duodenal diverticula co-existing separately with DU, may be life threatening. Both conditions could be treated conservatively but surgery may be indicated if life threatening complications arise. Our patient was managed conservatively. He subsequently did well although may require surgical intervention later, especially for the diverticula.

A review of the literature revealed that only a case of a 32-year old Nigerian woman in Lagos with pyoderma gangrenosum and a duodenal ulcer co-existing with a duodenal diverticulum demonstrated by contrast studies has been previously documented,¹⁰ suggesting that the co-existence of duodenal diverticula and a bleeding duodenal ulcer is rare in Nigeria.

CONCLUSION

This reported case of duodenal diverticula co-existing with a bleeding duodenal ulcer is uncommon, and is the first from Ilorin.

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