

Incidental Finding of a Rareprepyloric Diverticulum in a Young Nigerian with Upper Gastrointestinal Bleeding

Abdulumuni.Yakubu¹, AbubakarSadiqMaiyaki¹, Yusuf. Musa², NasiruAltineDankiri¹

¹Department of Internal Medicine, Usmanu Danfodiyo University Teaching Hospital, Sokoto, ² Department of Medicine, Federal Medical Centre, Katsina.

Abstract:-

Background: Gastric diverticula are outpunching of the stomach walls that typically form in the fundus. They are uncommon gastrointestinal diverticula and are very rare anatomic abnormalities. This case report was based on an incidental endoscopic finding of a pre-pyloric diverticulum in a 25-year old man who presented with Non-steroidal Anti-inflammatory Drug-induced (NSAID-induced) upper gastrointestinal bleeding. He was medically managed and has been followed up for over 18 months.

Keywords:- Prepyloric Diverticulum, Gastrointestinal Bleeding, Endoscopy.

I. INTRODUCTION:

Gastric diverticula are dilations that protrude from the gastric wall [1]. They are the least common diverticula of the gastrointestinal tract and their observed prevalence ranges from 0.03–0.1% of upper gastrointestinal contrast studies, 0.03–0.3% of autopsies, and 0.01–0.11% of oesophagogastroduodenal endoscopies[2]. The condition is equally presented within both sexes and commonly occurs in fifth and sixth decades of life[3], although they have been reported in patients as young as 20 years and even in children[4]. Gastric diverticula are often single and may vary in shape and size as they can be as large as half of the stomach, although most are 1–6 cm in size. However, multiple and larger diverticula have also been noted[2, 5]. Predisposing factors include areas of weakness caused by splitting of the longitudinal muscle fibres, an absence of peritoneal membrane and perforating arterioles[6]. Patients are mostly asymptomatic but may present with mild gastric symptoms. They may be congenital or acquired[7-9]. The congenital forms are most commonly subcardial/ fundal (close to the esophago-gastric junction on the posterior wall of the lesser curvature), have the full complement of the layers of the stomach and mostly asymptomatic; while the acquired ones are also termed as “pseudo diverticula” because they lack the full complement of all the layers of the stomach wall[10]. Acquired diverticula are associated with peptic ulcer disease, pancreatitis, gastric malignancy or adhesions due to previous surgery[11]. Pre-pyloric diverticula are even rarer than subcardial diverticula[10]. The most common symptoms that

patients seek treatment for are upper abdominal pain, nausea, weight loss and emesis. Occasionally, the presentation of a gastric diverticulum can be dramatic related to massive haemorrhage or perforation requiring immediate surgical treatment [2, 12-14].

This case report presents the interesting case of a 25-year old male patient who presented with NSAID-induced upper gastrointestinal bleeding who was incidentally found to have a preexisting 1 cm-wide pre-pyloric diverticulum.

II. CASE REPORT

A 25-year old non-smoking male was referred for upper gastrointestinal endoscopy at the Usmanu Danfodiyo University Teaching Hospital, Sokoto Nigeria. His symptoms were epigastric pain, nausea and three episodes of vomiting blood-stained (coffee ground) recently ingested meals associated with blood clots for a couple of hours before presentation. Estimated blood loss was 250 mls. There was a history of ingestion of Non-steroidal anti-inflammatory drugs about 48 hrs before the onset of symptoms and patient used to take such drugs once in a while over the past 4 years because of some pain unrelated to the current presentation. He was not known to have peptic ulcer disease, no history of jaundice or bleeding diathesis and was not on anti-coagulant medication. There was neither history of use of alcoholic beverages nor the history of swimming in ponds. He was acutely ill-looking, not pale, anicteric with no peripheral stigmata of chronic liver disease. He had tachycardia with a BP of 120/72 mmHg in the supine position. Packed cell volume was 35%, Platelet count $278 \times 10^9/L$, INR = 1.1, HBsAg - Non-reactive as well as Anti-HCV. Liver scan, liver function, and renal function tests were all normal. At endoscopy there were erosions at the pyloric antrum, no ulcers or bleeding vessels. Additionally there was a 0.9 - 1cm-wide pre pyloric diverticulum with inflamed edges. It was about 3cm from the pyloric opening on the posterior wall of the stomach [Figure 1]. Esophagus, Fundus and duodenum were normal. Histology of biopsy specimens revealed Erosive Gastritis with concomitant H Pylori associated chronic gastritis and moderate metaplasia. He was placed on triple therapy, Antacids as well as oral misoprostol. He was counselled against further use of NSAIDs.

The patient improved remarkably and has been on follow up because of the metaplasia. The patient has remained stable.



Figure 1: Note the pre-pyloric diverticulum lower right corner, inflammation and erosion in the background and the pyloric opening top left corner.

III. DISCUSSION

Our patient's age was at the lower end of the ladder in terms of the age range of occurrence of this rare condition[4] and was largely asymptomatic except for the NSAID-induced erosive gastritis. This was at variance with the usual symptom-prone acquired prepyloric diverticular disease (as opposed to the relatively more common fundal type)[10]. Gastric diverticular disease as a whole is the least common diverticular disease of the gastrointestinal tract[2]. Our patient had no endoscopic evidence of peptic ulceration, gastric malignancy, gastric-outlet obstruction and no history of abdominal surgery or history suggestive of chronic Pancreatitis as would normally be true for acquired prepyloric diverticula[11]. The patient's diagnosis was made promptly at endoscopy as this procedure has become the best diagnostic tool for the diagnosis of diverticular disease. Congenital or true diverticula comprise 70-75% and are composed of all the layers of the stomach[15]. They are classically located on the posterior part of the cardia and are due to a weakness in the gastric wall. On the opposite, acquired or false diverticula, are

much less common and consist in herniation of mucosal and submucosal layers into the muscularis. They are entirely contained within the gastric wall and usually located in the greater curvature of the antrum[10]. Our patient's lesion was prepyloric in the posterior wall and consistent with the usual finding. The 1cm size fell within the lower limit of most reports[2, 5]. The presence of metaplasia in our patient further suggests the acquired nature of the diverticulum; probably H Pylori associated gastritis. In terms of a possible association of gastric diverticulum with malignancy, only 4 cases in English literature were reported hitherto[16-19].

We screened our patient for HBsAg and anti HCV because of the endemic nature and relevance of those infections to upper gastrointestinal bleeding in our environment[20, 21].

Our patient responded well to triple therapy, antacids and prostaglandin analogue based on our assessment of his presentation and the aetiopathogenesis thereof. Appropriate management of diverticula of the stomach depends on size,

location, symptoms and complications resulting from. Large-sized, distal and complicated diverticula should be surgically removed either by laparotomy or laparoscopic approach[10]. There is currently no consensus treatment for asymptomatic diverticula incidentally discovered which usually don't require any treatment. Symptomatic patients may be treated with H₂-receptor blockers or proton-pump inhibitors[22].

IV. CONCLUSION

A rare form of a rare disease (Gastric/Prepyloric diverticulum) was incidentally found at an uncommon age in a Nigerian following upper gastrointestinal endoscopy for NSAID-induced upper gastrointestinal bleeding. Concomitant metaplasia was found which has necessitated prolonged follow-up. He was managed conservatively with a good outcome. This procedure is invaluable in the diagnosis and management of the condition.

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