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Case Report

A rare case of Gastric Diverticulum in a young patient

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Gastric diverticulum represents a rare disorder of the gastrointestinal system. Although most patients are asymptomatic and the finding of this condition is often incidental, a large diverticulum may be related to upper abdominal pain, dyspepsia, nausea and emesis. In more severe cases, diverticula may cause ulcerations, perforation or even hemorrhage. The diagnosis is usually difficult, the symptoms can be common to a series of other gastrointestinal disorders, turning the anamnesis and physical examination not very specific. Esophagogastroduodenoscopy is recommended for correct visualization of the location and size of the lesion. Surgical resection is considered the main treatment of this condition in symptomatic patients or patients with complications. We describe the case of a young patient with diverticulum in the gastric fundus, and a brief review of the literature.

KEYWORDS: *Gastrointestinal; Gastric diverticulum; Abdominal pain; Dysphagia; Laparoscopic*

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INTRODUCTION

Gastric diverticula were first described by Moebius in 1661 and represent the rarest form of diverticulum in the entire gastrointestinal tract, with an estimated prevalence of 0.04% in studies with diagnosis made by using contrast-enhanced radiographs and 0.02% when autopsies are performed[1,2]. Although it is proportionally similar in men and women, this pathology affects individuals over 40 years of age in approximately 82% of cases and affects young people under 20 years of age in only about 4% of cases[2,3].

CASE REPORT

A 29-years-old female patient with a previous medical history of migraine and previous surgeries for endometriosis and cesarean section, was referred to our service due to recurrent complaints of epigastric pain, nausea and vomiting, without other associated complaints such as fever, weight loss, hematemesis or melena. The patient also denied smoking, alcoholism and drug addiction. Physical and laboratory examination without abnormalities. Abdominal computed tomography (Figure 1) revealed a distended stomach by liquid and gaseous contents with the presence of a gastric diverticulum. The esophagogastroduodenoscopy (EGD) (Figure 2) showed a diverticulum in the gastric fundus with the presence of food remains.

The patient underwent a laparoscopic gastric diverticulectomy (Figure 3). The procedure was performed releasing the greater gastric curvature, the gastric fundus and dissecting the gastric diverticulum with a sealing forceps. The gastric diverticulum was resected completely and with margins, using an endoscopic linear stapler (load 60 mm).

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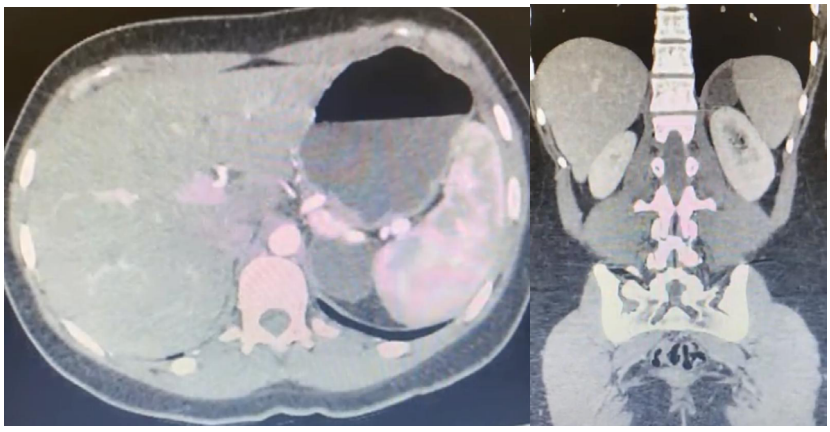

Figure 1: Abdominal computed tomography revealed a distended stomach by liquid and gaseous contents and an hypodense area corresponding to the gastric diverticulum (arrows).

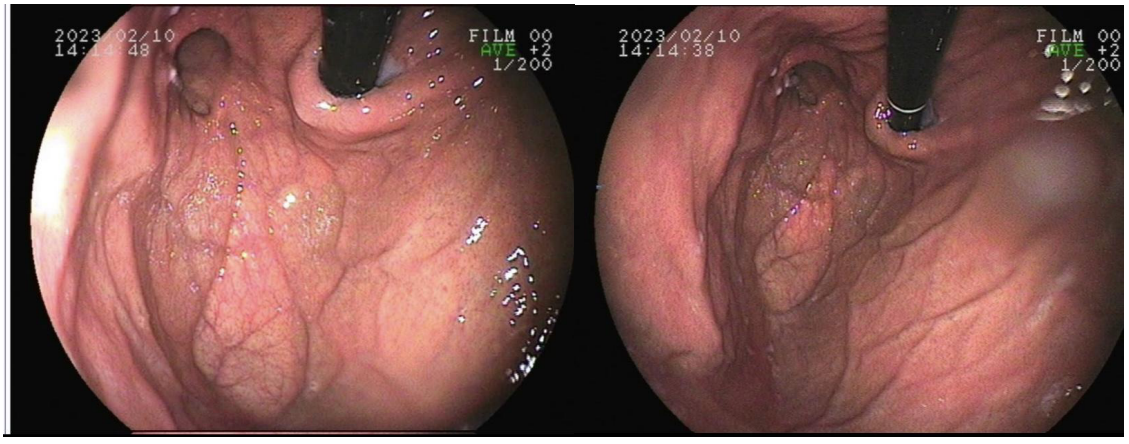

Figure 2: Endoscopic view of the diverticulum in the gastric fundus showing a diverticulum in the gastric fundus with the presence of food remains.

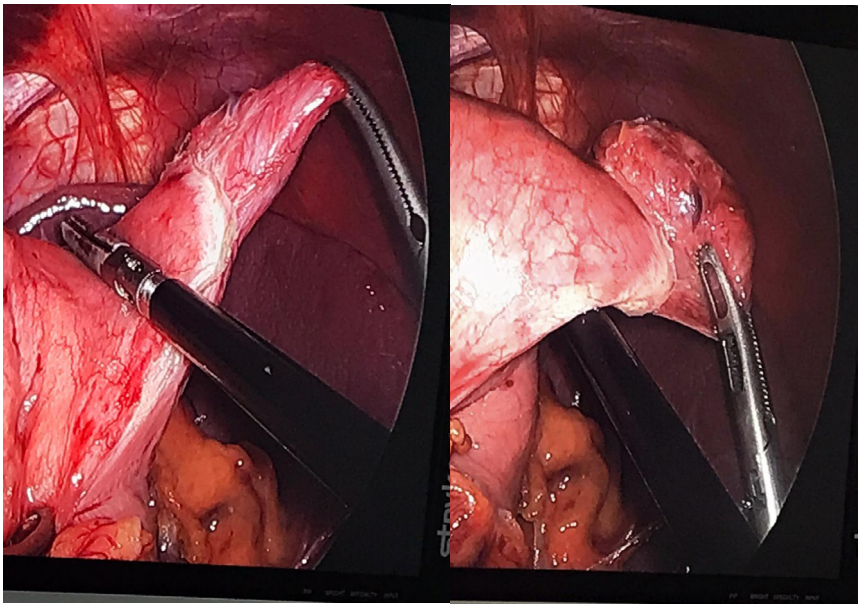

Figure 3: Laparoscopic gastric diverticulectomy.

Finally, the surgical specimen was removed (Figure 4) and sent for anatomopathological examination.

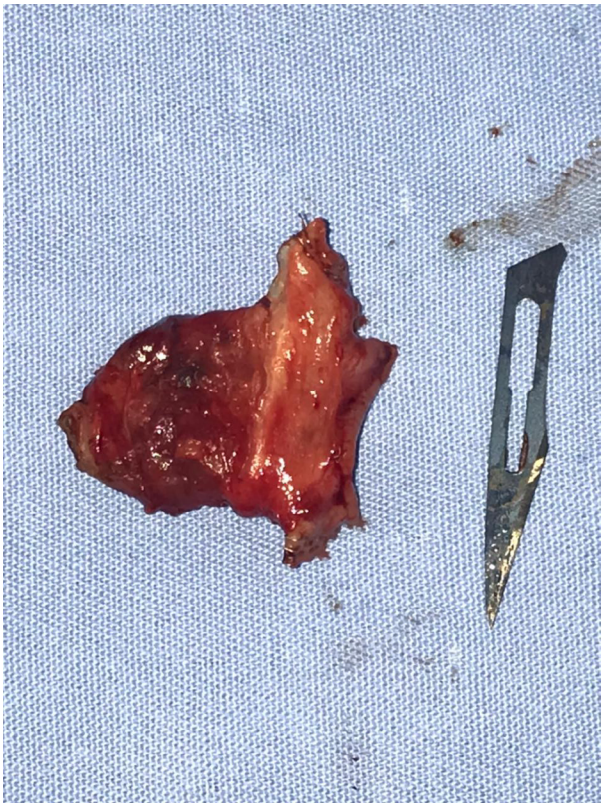

Figure 4: Gastric diverticulum surgical specimen after laparoscopic resection.

DISCUSSION

Gastric diverticulum is unusual and was first described in the literature by Moebius in 1661 and later by Roax in 1774[1]. Its incidence depends on the method used for its observation, and may vary when contrast studies of the upper gastrointestinal tract are performed, with an incidence of 0.04%, and with autopsy studies, with an incidence of 0.02%[4], with only 4% of them occurring in patients younger than 20 years[2]. Even though it is rare, two studies have also shown invasion by gastric adenocarcinoma in the diverticulum[5].

Although most diverticula of the gastrointestinal tract are acquired and originate from the herniation of the mucosa and submucosa through the muscular wall (false diverticula), the gastric diverticulum is usually a true diverticulum, involving all layers of the gastric wall. The gastric diverticula are congenital in 72% of the cases, but acquired form is also possible[4,6].

In addition, gastric diverticula are typically lesions ranging from 1 to 5 cm in diameter, with location and clinical presentation that vary according to their etiology. Thus, it is known that congenital gastric diverticula are commonly found 2 or 3 cm from the gastroesophageal junction along the posterior wall of the stomach, with a symptomatology that is often associated with peptic ulcer disease, gastroesophageal reflux disease, cirrhosis, pancreatitis, hepatitis and cholecystitis[4,7]. Acquired gastric diverticula are located close to the antrum and are generally associated with peptic ulcer disease, pancreatitis, malignancy and gastric obstruction[4,8].

It is important to emphasize that most patients with gastric diverticula remain asymptomatic throughout their lives and this is mainly due to the fact that they usually are true diverticula. However, in the presence of symptoms, it is common to observe epigastric pain, emesis, weight loss, anemia or even more serious complications ranging from obstruction, gastrointestinal bleeding to perforation[2,4,9].

The diagnosis can be confirmed with contrast studies of the upper gastrointestinal tract, computed tomography and esophagogastroduodenoscopy. The vast majority of authors consider the esophagogastroduodenoscopy the gold-standard test for diagnosis, as it can easily identify the location and size of the diverticulum. In addition, the EGD allows biopsy of the lesion[10,11].

The treatment and clinical management of the patient depends on the presence and severity of the symptoms. Thus, gastric diverticula found incidentally or those asymptomatic may not need any specific treatment. Furthermore, the use of therapy with antacids such as proton pump inhibitors for a few weeks may contribute to improve the patient's symptoms[11,12]. In cases of lesions larger than 4 cm, which are most likely to cause complications such as bleeding, perforation or malignancy, the drug therapy is ineffective and surgical intervention is recommended[3,13]. Palmer demonstrated in his study that 6 out of 9 patients with symptoms caused by gastric diverticula who underwent open surgery had excellent results in terms of symptom improvement[14]. Laparoscopic resection of a gastric diverticulum was first described in 1998 by Fine[15]. Apart from that, laparoscopic gastric diverticula resection have been described by several other authors and has been increasingly used because it is considered the safest surgical technique. For this purpose, the most favorable approach and with the most successful results is simple laparoscopic resection of the diverticulum using a stapler[3].

CONCLUSION

Gastric diverticulum is an extremely rare finding among the pathologies that affect the gastrointestinal tract. We describe the case of a young patient, with symptoms of epigastric pain,

nausea, vomiting and with a suspected presence of gastric diverticulum visualized on abdominal computed tomography, which was corroborated by esophagogastroduodenoscopy. Patient underwent a laparoscopic resection of the lesion, with a good postoperative response. This diagnosis must be suspected in patients who typically present with nonspecific gastrointestinal symptoms, with a long history of drug treatments without resolution of the condition. These patients must be followed up with imaging tests, such as esophagogastroduodenoscopy, to allow the visualization of the diverticulum and study its location in order to propose the best therapeutic approach.

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