AN UNUSUAL PRESENTATION OF GASTRIC DIVERTICULUM: A RARE FORM OF DIVERTICULUM OF THE GASTROINTESTINAL TRACT

Gabriela Jungblut Schuh¹, Sandra Jungblut Schuh², Ivan Morzoletto Pedrollo³, Antônio Carlos Maciel²

INTRODUCTION

We report two cases of gastric diverticulum (GD) documented by upper gastrointestinal contrast radiographic studies and computed tomography (CT). The first case is a 51-year-old woman with a typical presentation of GD occurring on the posterior wall of the fundus (Figure 1). The second case is a 72-year-old woman with sliding diaphragmatic hernia. In this patient, the gastric fundus, which also has a diverticulum, is herniated and located inside the thorax (Figure 2 and Figure 3). Both patients discovered the presence of GD incidentally during diagnostic testing for other reasons.

Clin Biomed Res. 2020;40(1):58-60

1 Faculdade de Medicina, Universidade Federal do Rio Grande do Sul (UFRGS). Porto Alegre, RS, Brasil.

2 Departamento de Radiologia e Diagnóstico de Imagem, Hospital Santa Casa de Misericórdia de Porto Alegre. Porto Alegre, RS, Brasil.

3 Departamento de Radiologia e Diagnóstico de Imagem, Hospital Moinhos de Vento. Porto Alegre, RS, Brasil.

Corresponding author:

Gabriela Jungblut Schuh
gschuh@hcpa.edu.br
Faculdade de Medicina, Universidade Federal do Rio Grande do Sul (UFRGS)
Rua Ramiro Barcelos, 2400.
90035-002, Porto Alegre, RS, Brasil.

Figure 1: Contrast radiograph of the esophagus, stomach and duodenum showing a gastric diverticulum (*white arrows*) on the posterior wall of the fundus, the most common location. *Red arrows:* diaphragm.

Figure 2: Contrast radiograph of the esophagus, stomach and duodenum showing a large hiatus hernia. The gastric fundus, which has a diverticulum (*white arrows*), is herniated and located inside the thorax. *Red arrows*: diaphragm.

Figure 3: A: CT scan with axial; B: and coronal reconstruction; C: images showing a hiatus hernia (*asterisks*) and a gastric diverticulum (*white arrow*).

DISCUSSION

A diverticulum can develop throughout the gastrointestinal tract and takes the form a pouch structure projecting outward from the canal that may contain one or more of the gastrointestinal tract layers¹. The purpose of this report is to discuss diverticular formation in the stomach, which is rare² and the least common type of gastrointestinal diverticula³. Detection rates vary with the study method, ranging from 0.02% in autopsy studies to 0.04% in upper gastrointestinal contrast radiographic studies and 0.01-0.11% in upper gastrointestinal endoscopies³. Gastric diverticulum (GD) typically presents between the fifth and seventh decades of life, with equal distribution among men and women^{3,4}. However, GD can occur at any age, with cases reported in newborns⁴.

In 75% of cases, GD occurs on the posterior wall of the fundus². Fundal diverticula often arise near the esophagogastric junction⁵. They are usually solitary and have a small orifice and short neck, although they may reach a considerable size², ranging from 2 cm to 10 cm⁵. A fundal diverticulum can be easily identified by its unique appearance, pathognomonic signs, and constant location⁵. The second most common location is the prepyloric area, with about 15% of occurrences along the greater curvature. Usually small and solitary, these diverticula may not be apparent on the serosal surface at operation and have been termed partial or intramural diverticula².

GD can be classified into two types: congenital or true diverticula, which contain all layers of the gastric wall; and acquired or false diverticula, which can be further classified as either traction or pulsion

diverticula and are composed of mucosa and submucosa. While pulsion diverticula are usually caused by increased intraluminal pressure (e.g., chronic cough), traction diverticula are derived from adjacent inflammatory processes or perigastric adhesions of coexisting lesions (e.g., peptic ulcer disease, pancreatitis, Roux-en-Y gastric bypass surgery)³. The most common type of GD, fundal diverticulum, has been traditionally considered to represent congenital diverticula⁵.

Fundal diverticula are usually asymptomatic² and discovered incidentally during routine diagnostic testing. However, they can also present with varying abdominal symptoms, including dyspepsia, vomiting and abdominal pain. Occasionally, complications such as ulceration, perforation, hemorrhage and malignancy may develop. These complications may be life-threatening and are indications for surgical management. There is no specific treatment for an asymptomatic diverticulum^{3,4}.

Conflicts of Interests

The authors declare no conflicts of interest.

REFERENCES

1. Sinclair A. Diverticular disease of the gastrointestinal tract. *Prim Care*. 2017;44(4):643-54. doi: 10.1016/j.pop.2017.07.007
2. Putman CE, Ravin CE. *Textbook of diagnostic imaging*. 2nd ed. Philadelphia: W. B. Saunders; 1994.
3. Shah J, Patel K, Sunkara T, Papafragkakis C, Shahidullah A. Gastric diverticulum: a comprehensive review. *Inflamm Intest Dis*. 2019;3(4):161-6. doi: 10.1159/000495463
4. Hajini FF, Husain M, Bhat A, Bukhari SI. Gastric diverticulum a rare endoscopic finding. *BMJ Case Rep*. 2014 Apr 1;2014. doi: 10.1136/bcr-2013-202887
5. Margulis AR, Burhenne HJ, editors. *Practical alimentary tract radiology*. St. Louis: Mosby Year Book; 1993.

Received: Jan 23, 2020

Accepted: Mar 29, 2020