



## Incidentally Detected Gastric Foregut Duplication Cyst: A Case Report

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CASE REPORT

ABSTRACT

Gastric foregut duplication cyst is a rare congenital disease. It is usually revealed with imaging study during the diagnosis of nonspecific symptoms, such as abdominal pain, nausea, and vomiting. Here we report the case of a male patient who underwent imaging study for the examination of a benign prostatic hyperplasia. A 3-cm mass containing cystic areas behind the gastric fundus was revealed on abdominal computed tomography. Laparoscopic gastric wedge resection was performed and the histopathological work-up of the specimen was reported as a foregut duplication cyst.

**Keywords:** Duplication cyst, laparoscopic surgery, stomach

### INTRODUCTION

Gastric foregut duplication cyst is a rare disease of the upper gastrointestinal system tract and constitutes 2%-4% of the gastrointestinal system duplications (1). It causes stomachache, vomiting, and weight loss, and it is mostly diagnosed in the first decade of life while examining other nonspecific symptoms (2). Surgical resection is the current treatment of this mass of embryological origin (3).

In this study, we reported a 70-year-old male patient who underwent surgery because of the tumor behind the gastric fundus that was found coincidentally and reported as a foregut cyst.

### CASE REPORT

Our patient is a 70-year-old male. During examination for benign prostatic hyperplasia, he underwent abdominal computed tomography (CT) due to suspicion of nephrolithiasis. We detected a cystic mass of approximately 3 cm diameter and growing outside of the gastric fundus wall, which was explored on abdominal CT while he was examined for benign prostatic hyperplasia (Figure 1). He had no symptoms. Gastroscopy findings were normal.

Our initial diagnosis was gastrointestinal stromal tumor; thus, we considered performing laparoscopic gastric wedge resection. While performing laparoscopic exploration, gastrocolic ligament was released and a 3-cm-diameter mass was seen behind gastric fundus wall. Laparoscopic gastric wedge resection was performed using a 60-mm endo-stapler as the location of the tumor allowed for removal with a negative margin without causing gastric outlet obstruction. The patient was discharged on postoperative day 8 without any complications. Histopathological examination of the tumor confirmed a foregut cyst (Figure 2). Written informed consent was obtained from the patient.

### DISCUSSION

Gastric foregut duplication cyst is a rare condition of the upper gastrointestinal tract and occurs during embryologic development. It consists of 2%-4% of the gastrointestinal system duplication lesions (1). The ileum is the most common location for this pathology, followed by the esophagus, jejunum, colon, stomach, and appendix. Duplication cysts may or may not be associated with the gastrointestinal tract. Gastric foregut duplication cyst is generally detected coincidentally because they cause nonspecific, but persistent, symptoms, including abdominal pain, stomach ache, nausea, vomiting, and weight loss. Therefore, it is generally diagnosed in early ages. With unremarkable symptoms, diagnosis may not be done or may be deferred (2, 3). Endoscopic ultrasonography and magnetic resonance imaging give more details because of the cystic character of this mass than abdomen ultrasonography and CT (4, 5). Despite being a congenital disease, our patient had lived asymptomatic until age 70 and had no complaint because of the tumor's tendency to grow outward of the stomach. Abdominal CT revealed a 3-cm mass

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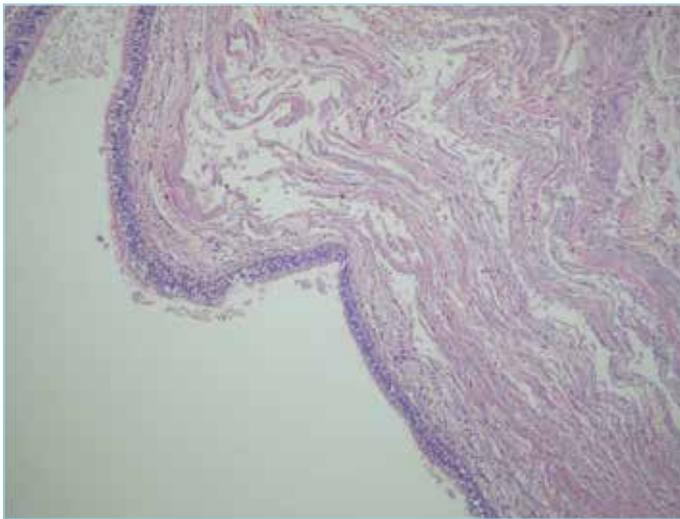
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**Figure 1.** Cystic component containing a 3-cm mass at the posterior part of the gastric fundus



**Figure 2.** Gastric mucosa containing cystic lesion covered with ciliary epithelium (10X, H&E)

in the posterior of the stomach. Gastroscopy was performed to rule out other benign and malignant mass lesions of the stomach, and no mucosal lesion was seen.

Duplication cysts have potential malignant transformation, and some cases in the literature reported adenocarcinoma development from the gastric duplication cyst; therefore, recommended treatment is total excision of the cyst (6). Excision can be performed with laparotomy or laparoscopy. We performed laparoscopic gastric wedge resection. Histological examination of the tumor revealed a cystic lesion covered by histioid and spilled epithelial cells

(Figure 2). No malignant feature was observed, and the pathologist confirmed foregut duplication cyst. Duplication cysts of the gastrointestinal tract have potential malignant transformation. In the literature, some cases reported that adenocarcinoma developed from gastric duplication cyst. Therefore, total excision of the cyst is recommended as its treatment (6). It can be performed through open or laparoscopic surgery. We performed laparoscopic gastric wedge resection. The patient was discharged without any complications after surgery. Histopathological assessment was concluded as foregut cyst and no evidence of malignancy was seen.

## CONCLUSION

Gastric foregut duplication cyst is a rare congenital disease. In elderly patients, it is generally detected coincidentally. Because of the potential transformation to malignancy, it must be completely removed.

**Informed Consent:** Written informed consent was obtained from patient who participated in this study.

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