

## Letters to the Editor

### Upper digestive tract hemorrhage in a child with heterotopic pancreas in a gastric diverticulum

*Key words: Digestive hemorrhage. Digestive endoscopy. Heterotopic pancreas. Gastric diverticulum. Children.*

Dear Editor,

We report on the case of a 22-month-old child who was admitted to the hospital after suffering hematemesis (resembling coffee

grounds), melenas, and fever over the course of 24 hours. There was nothing of interest in the personal history, the family denied having used NSAIDs, and various second degree family members have gastroduodenal ulcers. Upon admission, the patient was in good condition, well hydrated and well perfused. Blood pressure: 88/57 mmHg. Temp: 39 °C. Cardiopulmonary auscultation was normal; the abdomen was soft and compressible, painless to the touch and without signs of visceromegaly. Upon admission, the hemogram showed leukocytosis, neutrophilia, normal hemoglobin and a hematocrit that fell 20% when tested at the 12-hour control, however both figures were within the normal range. An otorhinolaryngological examination discounted bleeding in that area. In the digestive endoscopy it was noted that the esophagus was hyperemic with some distal erosive lesions and erosions in the greater curvature of the stomach, without active bleeding. A diverticulum was found in the antrum, close to the pylorus (Fig. 1A). In the endoscopic biopsy, there were chronic inflammatory changes and fibrosis in lamina propria with focal neutrophilic activity. A barium swallow study was performed (Fig. 1B) which confirmed the presence of a 1 cm diverticulum in the medial

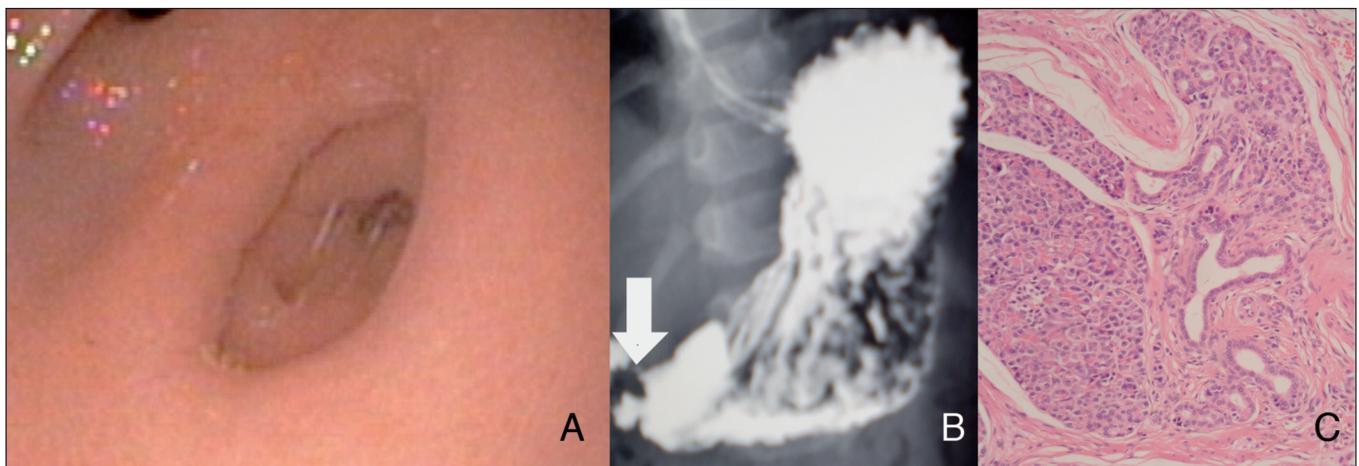


Fig. 1. A. Image of diverticulum in antrum. B. Barium esophagogastroduodenal study that shows the gastric diverticulum (arrow). C. Hematoxylin-eosin stain 20x: detail of the acini and pancreatic ducts from a lump of mature pancreatic tissue in the submucosa.

region of the antrum. Treatment followed with omeprazole and a laparoscopic resection was performed due to the localization of the lesion, the age of the child, the possible relation to the bleeding and the risk of malignization. A histopathological exam showed mature pancreatic tissue in the submucosa (Fig. 1C). The evolution was favorable and the patient was asymptomatic one year after laparoscopic resection.

## Discussion

The first description of heterotopic pancreas was reported by Jean-Schultz in 1727(1). It is an uncommon affliction and can be found in the upper gastrointestinal tract in 90% of all cases. Normally it is subepithelial and can cause pathological changes in subjacent tissues such as fatty necrosis, inflammation and diverticula. Digestive hemorrhage has also been noted, especially when heterotopic pancreas is found in the gastric region (1).

Gastric diverticula, on the other hand, can be found by endoscopy in 0.01-0.11% of cases (2). They are uncommon in children and generally asymptomatic, occasionally causing abdominalgia, obstruction, bleeding or perforation (2). More commonly they are congenital and located in the esophagogastric union. When they are acquired (pseudodiverticula) they are found in the antrum and are associated with a history of gastrointestinal disease such as peptic ulcer, cancer, pancreatitis, an obstructive condition, or gastritis, as we suspect happened with our patient (2,3). Treatment is not required for gastric diverticula unless the patient is symptomatic, they are oversized, cause complications or in order to prevent the risk of malignization (2,3). The diagnosis is confirmed by endoscopy (2), although a barium study is useful before laparoscopy, especially if the diverticula appear to be acquired. The association between heterotopic pancreas and gastric diverticula is exceptional and generally asymptomatic, even more so in children. There have only been 2 published cases that we know

of which involve pediatric patients with both malformations, but never in a patient so young (4,5). The pre-operative diagnosis of heterotopic pancreas is difficult regardless of imaging techniques or endoscopy, since biopsies are normally superficial, as in our case (1). We believe that the heterotopic pancreas could have weakened the gastric wall to form the diverticulum. In summary, our patient's digestive hemorrhage was the key symptom that led to the diagnosis and treatment of both malformations.

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