

Ectopic pancreas in the remnant of a gastric bypass

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Abstract

The incidence of gastric tumors in obese patients who require bariatric surgery is very low, the presence of ectopic pancreas in the gastric remnant after gastric bypass being exceptional. The most common location of the ectopic pancreas is the stomach. They usually run asymptotically. Diagnosis is usually incidental due to the absence of symptoms and difficult detection through protocolized preoperative tests, as they are generally submucosal lesions. Preoperative diagnosis of gastric remnant lesions is more infrequent due to the impossibility of endoscopic access, so they are usually intraoperative or histological findings in the exceptional cases that are not identified during surgery

and require removal of the remnant. The treatment of choice for ectopic pancreas is local excision. We present the causal finding of a gastric remnant lesion in a patient with a history of gastric bypass, which was not seen in the tests prior to gastric bypass or before a reoperation to perform a feeding gastrostomy. The anatomopathological study of the local resection piece confirmed the diagnosis of ectopic pancreas.

Keywords:

- Obesity
- Bariatric surgery
- Gastric remnant
- Ectopic pancreas

Introduction

The presence of gastric tumors in obese patients undergoing bariatric surgery is very infrequent, being exceptional the diagnosis of an ectopic pancreas being exceptional. This is defined as the presence of pancreatic tissue outside its usual location, without an anatomical or vascular relationship of continuity with the normal pancreas ⁽¹⁾. Heterotopic pancreas is a rare congenital entity with an incidence of 0.5-15% in the general population, it is observed in 0.9% of gastrectomies and in 0.5% of bariatric interventions ⁽²⁾. Most are submucosal lesions and the most frequent location is the stomach (antrum and prepyloric region) (28%), duodenum (28%) and the proximal portion of the jejunum (16%). The average size is 1.5 cm, being more common in men between 50 and 60 years old.

Preoperative diagnosis before bariatric surgery is complicated because patients are usually asymptomatic and detection of submucosal lesions on gastroscopy is difficult. More complex is the diagnosis of these lesions in the remnant after gastric bypass due to the impossibility of endoscopic access. Due to this, the ectopic pancreas is

usually diagnosed incidentally as: intraoperative findings; in the anatomopathological analysis of the surgical piece in a sleeve gastrectomy or, in those exceptional causes that, for some reason, require the removal of the gastric remnant ⁽³⁾.

Material and methods

Here we present the case of a patient with a previous Roux-en-Y Gastric Bypass (RYGB). During a feeding gastrostomy a gastric remnant lesion was identified and resected. Afterwards, the histological study confirmed the diagnosis of ectopic pancreas.

Clinical case

A 32-year-old woman operated in another centre for grade II obesity, undergoing a RYGB. In the preoperative bariatric study, a gastroscopy was performed, revealing a hiatal hernia, chronic erosive gastritis, and a diverticulum in the gastric antrum. Subsequently, she presents an adequate weight loss. Twelve years later, she suffered a subarachnoid haemorrhage

due to an aneurysm of the anterior communicating artery, requiring enteral nutrition due to serious residual neurological deterioration. Due to this, a feeding gastrostomy was indicated in the gastric remnant. A supraumbilical median laparotomy was performed and during the dissection of the gastric remnant, a hard, well-defined, whitish-yellow mass of approximately 2 cm was identified at the level of the anterior face of the greater curvature of the body-antrum. Local excision of the lesion with free margins is performed with an endostapler. The surgery is completed with a feeding gastrostomy. In the pathological analysis of the resected piece, a 1.7 x 1 centimetre tumor is described, compatible with type I ectopic pancreas on gastric tissue (figures 1 and 2).

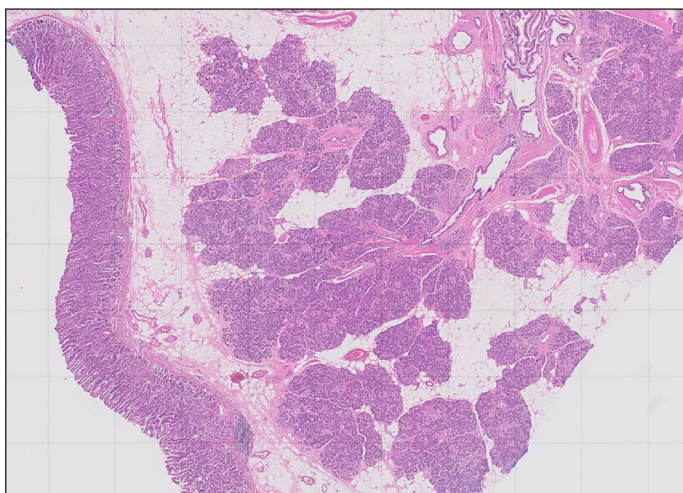


FIGURE 1. Histological view of a gastrointestinal stromal tumor in the gastric fundus diagnosed intraoperatively during a gastric bypass. CD117 specific stain.

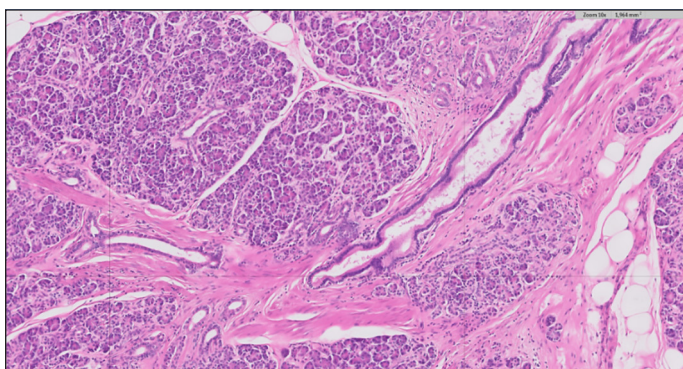


FIGURE 2. Histological view of an ectopic pancreatic tumor in gastric tissue after resection of the remnant of a gastric bypass. Hematoxylin-eosin staining.

Discussion

Diagnosis of gastric tumors in bariatric patients is very rare (<1%). Most cases are gastrointestinal stromal tumors (GIST) and the finding of an ectopic pancreas is very rare.

Histologically, three types are differentiated according to Heinrich's classification: type I (most frequent) in which ducts, acini and islets of Langerhans are observed; type II composed of ducts and type III with acinis only.

They are generally submucosal localized lesions (4) which are presented asymptotically and at any age, being more frequent in men between the fifth and sixth decade of life (5). Depending on the location and size, they can give symptoms such as epigastric pain, dyspepsia and nausea. Complications such as bleeding, pyloric stenosis and, exceptionally, risk of malignant transformation (adenocarcinoma) have been described. In addition, if they have functioning acini and blockages of the ducts, they can develop cysts, release of proteolytic enzymes and inflammation, developing ectopic pancreatitis (6).

The definitive diagnosis is always histological in the anatomopathological study of a resected lesion or in the surgical piece of a sleeve gastrectomy or gastric remnant. Preoperative diagnosis using the usual tests of bariatric protocols is uncommon. In the barium gastroduodenal study, a round filling defect can be seen. Contrast-enhanced computed tomography (CT) can show an exophytic lesion or gastric wall thickening, although it is a diagnostic technique that is not routinely performed in bariatric patient protocols. Gastroscopy is not always diagnostic in the case of deep lesions, since they are covered with normal mucosa, which makes identification and biopsy difficult (7). In contrast, endoscopy (EUS) is useful for localization, however, it is not a routinely performed technique in candidates for primary or revisional bariatric surgery (8).

In the case of abdominal reintervention, the preoperative diagnosis of gastric remnant lesions is more complicated because they are usually asymptomatic, there is no possibility of endoscopic access, and a preoperative abdominal CT is not always performed, which would be of diagnostic help. For all these reasons, it is usually an incidental intraoperative finding that is difficult to differentiate from a GIST or gastric leiomyoma. More exceptional is the histological diagnosis of the surgical specimen in those cases that are not identified during surgery and require removal of the gastric remnant (9).

The treatment of choice for these lesions is local excision. Exceptionally, they can be resected endoscopically (small and superficial tumors diagnosed preoperatively). Surgical resection is usually performed if preoperative endoscopic resection is not possible or if incidentally diagnosed intraoperatively for histological confirmation and to avoid possible symptoms or complications (1,10).

Conclusion

Heterotopic pancreas is a rare entity, found incidentally in most cases. Diagnosis in bariatric patients is exceptional, being usually found by intraoperative or in the histological study of the surgical piece of a sleeve gastrectomy or a gastric remnant. Treatment is local excision by endoscopy or surgery.

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