Unexpected Gastric Ectopic Pancreas During Sleeve Gastrectomy: A Case Report

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Conflict of interest: None declared

Patient: Female, 30-year-old
Final Diagnosis: Gastric ectopic pancreas
Symptoms: —
Medication: —
Clinical Procedure: Laparoscopic sleeve gastrectomy
Specialty: Surgery

Objective: Rare disease

Background: Ectopic or heterotopic pancreas is relatively rare pathology described as pancreatic tissue lacking communication with the normal pancreas. Ectopic pancreatic tissue can be found along the gastrointestinal tract, with the most common location the stomach along the greater curvature. This congenital condition could be identified incidentally, or present with symptoms that range from pain and bleeding to obstruction and malignant transformation.

Case Report: We report a case of a 30-year-old female, who underwent laparoscopic sleeve gastrectomy for morbid obesity of body mass index (BMI) of 46 kg/m², and who was found to have a 3 cm submucosal mass at the lesser curvature while dividing the stomach. The sleeved stomach tube’s intraoperative gastroscopy showed a submucosal mass at the posterior stomach wall towards the lesser curvature, increasing the suspicion of gastrointestinal stromal tumor (GIST) tumor. The choice was to continue with a secure margin and conversion to roux-en-y gastric bypass with gastric tumor resection. It turned out that the final pathology was submucosal ectopic pancreas. Despite being a rare pathology, for any submucosal gastric mass, ectopic pancreas should be on the differential diagnosis list. During the sleeve surgery, the mass was found, and the approach was changed to intraoperatively subtotal gastrectomy and roux-en-y gastric bypass.

Conclusions: Before any bariatric operation, even in asymptomatic young patients, it is worth doing routine upper endoscopy to prevent surprising intraoperative pathology.

MeSH Keywords: Bariatrics • Gastrectomy • Gastric Bypass • Pancreas

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**Background**

Obesity is a growing worldwide disease causing serious medical problems. Several treatment modalities are used, starting with conventional medical therapy, such as diet, exercise, and drugs, to more invasive methods such as surgery. The most efficient way to treat obesity is bariatric surgery [1]. There are several kinds of surgery available for this chronic disease, such as gastric banding, strap, roux-en-y gastric bypass, duodenal switch, and many more. During bariatric surgery, unexpected rare pathologies can be encountered such as exophytic gastric or small bowel lesions, as well as mural or submucosal masses. Ectopic or heterotopic pancreas is a very rare pathology with few reported case [2]. It can mimic gastrointestinal stromal tumor (GIST) tumor because of the submucosal location. Management of incidental pathologies range from simple excision to change of type of surgery like our first reported case.

We conducted subtotal gastrectomy with roux-en-y gastric bypass during the laparoscopic sleeve gastrectomy in a youthful patient, a submucosal ectopic pancreas toward lesser curvature.

**Case Report**

We report a case of a 30-year-old female, undergoing laparoscopic sleeve gastrectomy for morbid obesity of body mass index (BMI) of 46 kg/m². Pre-operative workup showed normal CBCD and Chem 9, with an upper limit thyroid stimulating hormone (TSH), but the patient was cleared for surgery by the endocrinologist consult. No preoperative abdominal ultrasound nor upper endoscopy was done, because based on hospital protocol there was no requirement for pre-operative ultrasound or upper endoscopy.

Surgery was chosen and during the laparoscopic sleeve gastrectomy, the submucosal mass was discovered to be 3 cm at the lower curvature while the stomach was divided after the second EndoGIA stapler fire (Figures 1, 2). Intraoperative gastroscopy (Figure 3) of the sleeved stomach tube showed a submucosal mass at the posterior gastric wall toward lesser curvature raising the suspicion for GIST tumor. No frozen section was taken because there was no suspicion of malignancy and based on the exophytic submucosal invagination of the mass, the main differential was a GIST tumor. Thus, resection...
Ectopic or heterotopic pancreas is a rare pathology first described in 1727 [7]. It was described as pancreatic tissue found in the location with no continuity or communicating with the anatomic pancreas [8]. The incidence range is reported to be between 0.5% and 13.7% of autopsies [2]. The most common location along the gastrointestinal tract (GIT) is the stomach (38%) and the small bowel [9]. If symptomatic, patients present with pancreatitis, pain, bleeding, obstruction, or malignancy. Ectopic pancreas tissues in the stomach are usually in the antrum toward greater curvature [9] as submucosal lesion mimicking GIST tumor [10].

Ectopic pancreas found incidentally during bariatric surgery has been reported as jejunal tumor during laparoscopic gastric bypass [11]. To our knowledge, our case study is the first report case of gastric ectopic pancreas during bariatric surgery. The location of the mass in this case that was toward the lesser curvature is also of interest, because the location dictated a change in our operative strategy from sleeve gastrectomy to subtotal gastrectomy and roux-en-y gastric bypass.

**Conclusions**

Bariatric surgery is being performed more and more, as the incidence of obesity disease is growing worldwide. More pathologies are being discovered incidentally, as more operations occur. One of these rare pathologies is the ectopic pancreas that mandate surgical resection once discovered intraoperatively. To limit unexpected pathologies during surgery it is worth asking for routine upper endoscopy even in asymptomatic and young patients.

**Conflict of interests**

None.

**References:**

1. Elfving G, Hästbacka J: Pancreatic heterotopia and its clinical importance. Acta Chir, 1965; 130(6): 593–602
2. Seneviratne SA, Ramanayaka IT, Samarasekera DN: Heterotopic pancreas in the body of the stomach. Ceylon Med J, 2009; 54(2): 57–58
3. Rivera JÁ, Cossio TGD, Pedraza LS et al: Childhood and adolescent overweight and obesity in Latin America: A systematic review. Lancet Diabetes Endocrinol, 2014; 2(4): 321–32
4. Abarca-Gómez L, Abdeen ZA, Hamid ZA et al: Worldwide trends in body mass index, overweight, and obesity from 1975 to 2016: A pooled analysis of 2416 population-based measurement studies in 1289 million children, adolescents, and adults. Lancet, 2017; 390(10113): 2627–42
5. Nudel I, Sanchez VM: Surgical management of obesity. Metabolism, 2018; 92: 206–16
6. Mechanick JI, Kushner RF, Sugerman HI et a.; American Association of Clinical Endocrinologists, The Obesity Society, and American Society for Metabolic & Bariatric Surgery Medical guidelines for clinical practice for the perioperative nutritional, metabolic, and nonsurgical support of the bariatric surgery patient. Obesity, 2009; 17(S1): S3–72
7. Misheva B, Hajjar R, Chapdelaine H et al: Ectopic jejunal pancreas with pancreatitis mistaken for a post-transplant lymphoproliferative disease in an immunosuppressed kidney transplant patient. J Surg Case Rep, 2018; 2018(10): ryx259
8. Mulholland KC, Wallace WD, Epanomeritakis E, Hall SR: Pseudocyst formation in gastric ectopic pancreas. JOP, 2004; 5(6): 498–501
9. Subasinghe D, Sivaganesh S, Perera N, Samarasekera DN: Gastric fundal heterotopic pancreas mimicking a gastrointestinal stromal tumour (GIST): A case report and a brief review. BMC Res Notes, 2016;9(1): 185
10. Montalvo D, Hernandez P, Lanzabalza A: Unexpected ectopic pancreatic tissue during laparoscopic bariatric surgery. Case report and literature review. Surg Obes Relat Dis, 2016; 12(10): e87–88
11. Finnell CW, Madan AK, Ternovits CA et al: Unexpected pathology during laparoscopic bariatric surgery. Surg Endosc, 2007; 21(6): 867–69