American Journal of Case Reports

e-ISSN 1941-5923
© Am J Case Rep, 2019; 20: 1966-1968
DOI: 10.12659/AJCR.916366

Received: 2019.03.20
Accepted: 2019.09.10
Published: 2019.12.30

Unexpected Gastric Ectopic Pancreas During Sleeve Gastrectomy: A Case Report

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Statistical Analysis C
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Conflict of interest: None declared

Patient: Female, 30-year-old
Final Diagnosis: Gastric ectopic pancreas
Symptoms: —
Medication: —
Clinical Procedure: Laparscopic 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/m^2, 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

Full-text PDF: https://www.amjcaserep.com/abstract/index/idArt/916366

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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/m^2. 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

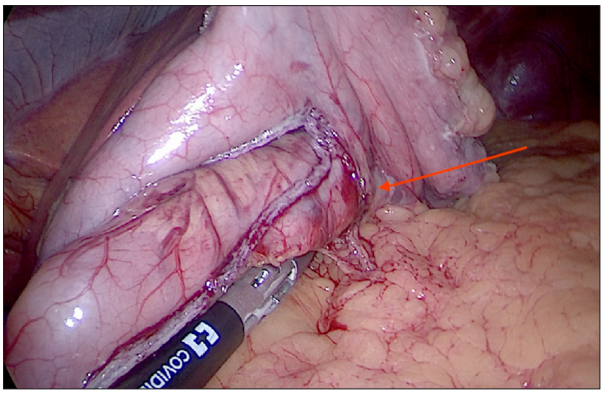

Figure 1. Gastric mass located towards the lesser curvature; photo taken after the second fire of EndoGIA during sleeve gastrectomy.

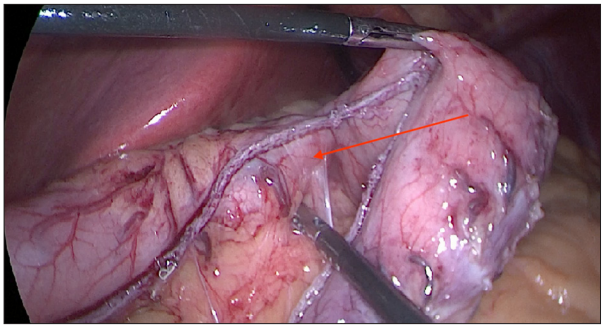

Figure 2. Arrow pointing towards the ectopic pancreatic mass of the gastric sleeve tube.

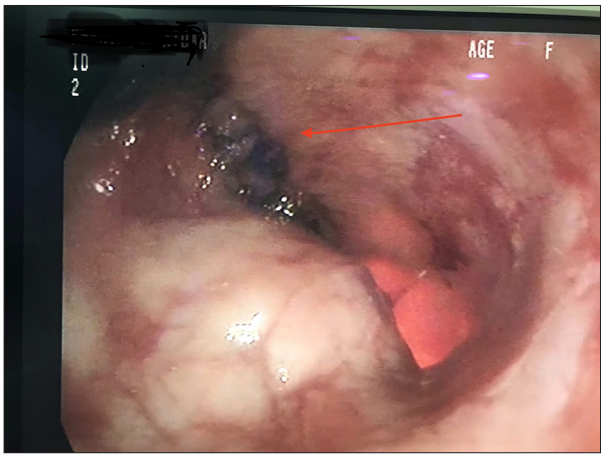

Figure 3. intra-operative gastroscopy of the sleeved stomach showing submucosal bulging mass.

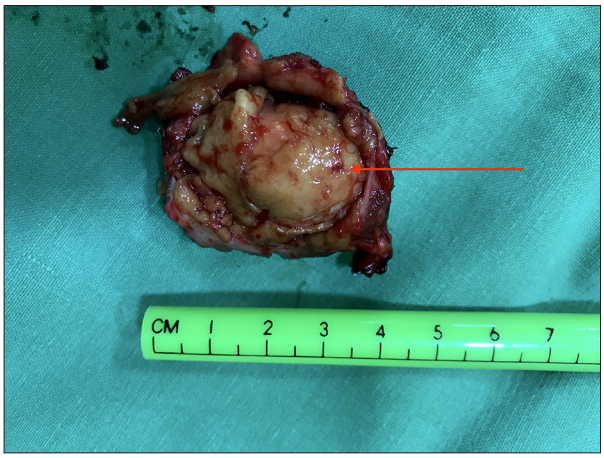

Figure 4. Surgical specimen of the ectopic gastric pancreas.

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was the main treatment course, and frozen section evaluation wouldn't have provided any added value. The decision was to proceed with gastric tumor resection with safe margin (Figure 4) and conversion to roux-en-y gastric bypass. One drain was placed in the subdiaphragmatic region, then removed 2 days post-operative.

During the recommended follow-up of 1 week and 6 months post-operatively, the patient had no complications. Final pathology was submucosal ectopic pancreas.

Discussion

Obesity incidence is increasing worldwide [3,4]. Since 2013, the American Medical Association (AMA) has acknowledged obesity as a chronic disease requiring lifelong therapy [5]. It is very difficult to manage obesity. Bariatric surgery is the most efficient method of treating obesity [3]. Several processes can be provided depending on metabolic profile and comorbidities of the morbidly obese patient. Pre-operative imaging for elective bariatric surgery is still a grade D criterion, if the patient has upper gastrointestinal (UGI) symptoms [6]. Our patient had no UGI symptoms, thus pre-operative endoscopy or abdominal ultrasound weren't done.

During surgery, unexpected pathologies like a mass, cyst, or diverticulum might be encountered. The management should be individualized case by case. Unexpected findings have been reported during bariatric surgery, as these procedures are becoming more popular [6]

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.

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