ACQUAINT PUBLICATIONS ....Disseminate your Research

Journal of Medical Case Reports and Case Series ISSN: 2692-988

Case Report Volume 4 Issue 05

Case Study of a chronically Obese Smoker With S/P RYGB Complications of Intussusception, Incisional Hernia, and Marginal Ulcers.

Javairia Ayyub[1*], Sailaja Nandennagari[2], Preethi Annam[2], Vimal R. Basani[3], Raiza Singh[3], Ahmad Al shhraifeen[4], Frederick M. Tiesenga[5]

[1]Caribbean Medical University School of Medicine, Curaçao

[2]Avalon University School of Medicine, Curaçao

[3]St. George's University School of Medicine

[4]The Hashemite University School of Medicine, Jordan

[5]Community First Medical Center

[*]**Corresponding Author:** Javairia Ayyub, Caribbean Medical University School of Medicine, Curaçao.

Received date: 08 March 2023**; Accepted date:** 28 March 2023**; Published date:** 10 April 2023

Citation: Ayyub J, Nandennagari S, Annam P, Basani VR, Singh R, et al. (2023) Case Study of A Chronically Obese Smoker With S/P RYGB Complications of Intussusception, Incisional Hernia, and Marginal Ulcers. J Med Case Rep Case Series 4(05): https://doi.org/10.38207/JMCRCS/2023/APR04050431

Abstract

Objective:

This case study aimed to highlight all the complications of status post Roux-en-Y/Gastric bypass in a chronically obese smoker the following year.

Background:

Roux-en-Y gastric bypass (RYGB) is considered one of the most successful procedures with a low mortality rate for bariatric surgery in morbidly obese patients. However, it can lead to complications like marginal ulcer, volvulus, internal hernia, intussusception, cholelithiasis, and gastro-gastric fistula with varied morbidity.

Presentation:

A 62-year-old female patient with a past surgical history of Roux-en-Y gastric bypass with hiatal hernia repair presented mid-epigastric pain and dysphagia and developed several complications like intussusception and incisional ulcer, followed by gastrojejunal marginal ulcer within few months after the gastric bypass surgery. A computed tomography scan and EGD were performed to confirm the diagnosis.

Discussion:

Intussusception is a rare complication of RYGB, accounting for ≅1% of small bowel obstruction cases. Although the risk factors for the development of marginal ulcers remain multifactorial, smoking remains the primary factor causing recurrence. Computerized tomography scan and EGD represents the diagnostic test of choice. Early surgical intervention may prevent the possibility of bowel resection.

Conclusion:

This case demonstrates the presence of a triad of intussusception, incisional ulcer, and marginal ulcer in a chronic smoker, which was managed by initial reduction followed by limited surgical resection.

Keywords: Gastric bypass, intussusception, marginal ulcer, incisional ulcer, etc.

Background:

RYGB has gained popularity among bariatric and laparoscopic surgeons due to its highly successful method in weight loss in patients with morbid obesity. RYGB is a weight-reducing procedure that entails creating a small pouch from the stomach's lesser curvature and connecting it to the small intestine **[7]**. Even though this is one of the most common procedures for morbid obesity, this minimally invasive procedure poses risks **[12]**. This paper discusses complications, including intussusception, incisional hernia, and a marginal ulcer in a single patient following a Roux-en-Y gastric bypass surgery after the primary lap band failed.

Introduction

Roux-en-Y gastric bypass (RYGB) is considered one of the gold standard procedures for bariatric surgery in morbidly obese patients. However, the complications associated with this procedure are well-documented and should not be overlooked. One of the most common complications is marginal ulcers which carry the risk of severe morbidity and mortality due to the possibility of perforation and

heavy bleeding. Unfortunately, the etiology of these ulcers is still unknown; however, several risk factors have been identified, such as a history of type 2 diabetes and peptic ulcers **[6,8]**. Other well-known complications of RYGB include small bowel obstruction (SBO), which can be due to intussusception, internal hernia, and volvulus. Intussusception is the rarer cause of SBO, with the incidence of small bowel intussusception after gastric bypass surgery estimated to be between 0.1 and 1.2 % **[9,11]**. However, due to the recent surge in the popularity of bariatric surgery as a tool for weight loss management, the overall incidence of intussusception post-op has also increased.

Case Details

As a result of revisionary Roux-en-Y gastric bypass surgery with hiatal hernia repair, a 62-year-old Caucasian female smoker develops multiple complications months after the surgery. She is a chronic smoker who smokes ten cigarettes daily, uses medicinal marijuana, and drinks alcohol occasionally. Before her gastric bypass, she had a laparoscopic gastric band in 2021, which was later removed due to complications. After swallowing, the patient initially complained of intermittent epigastric pressure, which eventually subsided with PPIs. However, the patient continued to have intermittent epigastric and abdominal pain and acid reflux for a few months post-surgery. After eating, she complained of epigastric pain with pressure, vomiting, and acidity. The patient has a medical history of arthritis, GERD, morbid obesity, lumbar disc disorder, depressive disorder, hiatal hernia, and nephrolithiasis. Due to her continued experience of symptoms of mid-epigastric pain, lower abdominal pain, bloating and occasional vomiting after certain foods, the patient was diagnosed with a small infraumbilical ventral abdominal wall hernia, which was surgically repaired later in 2022. To summarize, she has a surgical history of left nephrectomy on 01/01/1987, and the left kidney was donated to her daughter; cholecystectomy (1990), hip/knee Surgery (2013), laparoscopic gastric band (2015), laparoscopy with adhesiolysis (09/27/2016), bladder surgery (12/28/2016 & 01/04/2017), esophagogastroduodenoscopy (10/11/2021), and lap band removal (11/11/2021).

Physical Exam on arrival:

- Abdomen: **Large Pannus**, normal bowel sounds, **slightly tender small Incisional Hernia**, no masses
- Constitutional: Ambulation with a cane.
- Head: Normocephalic and atraumatic
- Lungs: Clear to auscultation and percussion, no dyspnea, rales, wheezing
- Musculoskeletal: No cyanosis, varicosities, or lower extremity edema, **right leg with a brace**
- Neurologic: No tremor, oriented to time, place, and person
- Psychiatric: everyday mood and affect, active and alert
- Skin: No rash or jaundice, good turgor

Assessment:

Initially, a CT scan confirmed the diagnosis of JJ intussusception. Later, a CT scan was used again to confirm the diagnosis of incisional hernia. Jejuno-Jejunal (J-J) intussusception and incisional hernia were planned to be repaired, one after the other, respectively, in subsequent visits. Later, EGD was ordered to evaluate marginal ulcers as a part of the preoperative workup, and labs and vitals were monitored. Risks, benefits, and alternatives were discussed with the patient in detail, and the patient acknowledged the same.

Management:

The patient had Roux-en-Y gastric bypass with hiatal hernia repair done on 01/11/222, followed by complaints of having occasional mid-abdominal pain and bloating, which worsened over time. An abdominal CT scan revealed a minuscule infraumbilical ventral abdominal wall hernia and an enormous stool burden. On 12/11/2022, intussusception was repaired by initial reduction followed by limited surgical resection. EGD was done, revealing a gastrojejunal marginal ulcer without hemorrhage or perforation, but the surgical intervention was unnecessary. On 01/16/23, the patient had a new complaint of abdominal pain and emesis, leading to an incisional hernia diagnosis. The patient was counseled about smoking cessation as Smoking increases the risk of ulcers, hernia, and recurrence, but the patient was not receptive to this discussion. On 01/24/23, Incarcerated incisional hernia repair was done successfully. On 02/06/23, the patient complained of having epigastric pain and abdominal discomfort post incisional hernia repair on 01/24/23. The patient was feeling better but refused to stop smoking.

During all fourteen follow-up visits she had till today, we can observe weight loss of 66 lbs. and BMI reduced from 33.8 to 21.1 kg/sq meter. Following is the list of medications the patient used for her past medical problems and current medical conditions, and she claims she adheres to the medications as per the prescription and was allergic to Lyrica.

Aleve, Amitriptyline, Aripiprazole, Bevespi Aerosphere inhaler, Celebrex, Chantix, Diclofenac, Esomeprazole, Furosemide, Incruse Ellipta, Meloxicam, Morphine, Oxybutynin, Oxycodone, Pantoprazole, Tylenol-Codeine, Duloxetine, Propranolol, Trintellix, and Famotidine.

Discussion

There are several bariatric surgeries, from less invasive to more invasive such as laparoscopic gastric band, gastric sleeve, and gastric bypass. Whether the procedure is invasive or non-invasive, it has become a prominent method to treat morbid obesity lately. However, many factors limit patients from having bariatric procedures or causing complications. Although these complications could occur in

patients after Roux-en-Y gastric bypass (RYGB), it is rare to have multiple complications seen in the same patient. In our case, the patient presented with intussusception, incisional hernia, and marginal ulcer within one year after revisional Roux-en-Y gastric bypass (RYGB). Prior to the procedure, the patient had a removal of the laparoscopic gastric band, which was her first bariatric surgery. Contributing factors that could cause multiple complications in our patient is chronic smoking and failed lap gastric band prior to Roux-en-Y gastric bypass (RYGB). Study shows that patients who underwent revisional Roux-en-Y gastric bypass (RYGB) after lap gastric band removal instead of a primary procedure tend to have a higher risk of complications **[2]**. It is well-documented that gastric bypass surgeries have approximately 0.1-0.3 % chance of a Jejuno-Jejunal (JJ) intussusception complication, as seen in our patient who suffered from intermittent abdominal pain post-procedure for months without relief despite taking medicine **[4]**. Incisional hernia is another complication observed in our patient, which was later repaired. It is characterized by a protrusion of the abdominal wall caused by the prolapse of intracavitary structures, such as a segment of the small intestine, through the trocar orifice. Typically, ultrasonography and physical examination are preferred methods to diagnose incisional hernia. A CT scan confirmed the patient's incisional hernia and intermittent symptoms of lower abdominal pain with protrusion of the hernia **[1]**. A marginal ulcer is one of the most common complications that could occur after Roux-en-Y gastric bypass (RYGB), especially in patients who smoke. Studies show that after analyzing different causes of the ulcer, tobacco use was the solitary significant risk factor for recurrence ($p = 0.01$) **[10]**. Despite being aware of marginal ulcers due to smoking, our patient smoked ten cigarettes/per day throughout her procedures. EGD was performed to confirm the diagnosis. The patient presents epigastric pain, pressure, and dysphagia throughout the 2022 post-gastric bypass. Although intake of NSAIDS, alcohol, and smoking are all risk factors for causing marginal ulcers, tobacco remains the most crucial risk factor that causes marginal ulcers, delays their healing, and causes recurrence.

Conclusion

Our patient's case report illustrates multiple rare complications of RYGB, like intussusception, marginal ulcer, and incisional ulcer, all in a single patient presenting with symptoms of constant epigastric abdominal pain. Although alcohol, NSAIDs, and failure of previous lab bands contribute to the risk of developing complications, smoking at any magnitude is associated with a very high risk of developing marginal ulcers after RYGB, and therefore smoking cessation before and after bariatric surgery is highly recommended.

Authors Contributions:

All the authors in this paper contributed as per our discussion as follows, JA and SN together contributed case details and discussion, Vimal to Introduction, Raiza to Background, and Ahmad helped in discussion. AP contributed to abstracting and concluding along with active participation in acquiring any case details. Thank you to Dr. Frederick M. Tisienga for helping us in this paper. Without his guidance and support, this would not have been possible.

Patient Consent To Publish: Patient's written consent was obtained.

Conflict of Interest To Publish: Authors declare no conflict of interest to this work.

Peer Review: External peer review done.

Funding: No funding received.

Abbreviations:

ED: Emergency Department

EGD: Esophagogastroduodenoscopy

GERD: Gastroesophageal Reflux Disease

JJ Anastomosis: Jejuno-Jejunal Anastomosis

NSAIDS: Non-Steroidal Anti-Inflammatory Drugs

PPI: Proton Pump Inhibitors

RYGB: Roux-en-Y Gastric Bypass

SBO: Small Bowel Obstruction

SpO_2: Oxygen Saturation

References

1. Rossi FMB, Moreno R, Druziani AL, Perez MM, Possari E, et al. (2022) INCISIONAL HERNIA AFTER BARIATRIC SURGERY: ONLY THE PHYSICAL EXAMINATION IS ENOUGH? Arquivos Brasileiros de Cirurgia Digestiva: ABCD = Brazilian Archives of Digestive Surgery. 35: e1673.
2. Gonzalez-Urquijo M, Hinojosa-Gonzalez DE, Gidi AGA, Hurtado Arellano S, Flores-Villalba E, et al. (2021) Revisional Roux-en-Y gastric bypass after failed gastric banding: a case-matched study. Surgical Endoscopy. 36(7): 4815-4820.
3. Marcoe JP, Chau WY (2021) Intussusception after open Roux-en-Y gastric bypass managed with laparoscopic reduction. J Surg Case Rep. 2021(8): rjab339.
4. Al Sulaiti MA, Darwish A, Al Khalifa K (2019) Intussusception after laparoscopic one anastomosis gastric bypass: A rare complication. International Journal of Surgery Case Reports. 60: 270–272.
5. Wang E, Blackham R, Tan J, Hamdorf J (2017) Giant perforated marginal ulcer after laparoscopic Roux-en-Y gastric bypass. BMJ Case Reports. 2017: bcr2016218829.

6. Sverdén E, Mattsson F, Sondén A, Leinsköld T, Tao W, et al. (2016) Risk Factors for Marginal Ulcer After Gastric Bypass Surgery for Obesity. Annals of Surgery. 263(4): 733–737.
7. Abdeen G, le Roux C (2015) Mechanism Underlying the Weight Loss and Complications of Roux-en-Y Gastric Bypass. Review. Obesity Surgery. 26(2): 410–421.
8. Coblijn UK, Goucham AB, Lagarde SM, Kuiken SD, van Wagensveld BA (2014) Development of Ulcer Disease After Roux-en-Y Gastric Bypass, Incidence, Risk Factors, and Patient Presentation: A Systematic Review. Obesity Surgery. 24(2): 299–309.
9. Varban O, Ardestani A, Azagury D, Lautz DB, Vernon AH, et al. (2013) Resection or reduction? The dilemma of managing retrograde intussusception after Roux-en-Y gastric bypass. Surgery for Obesity and Related Diseases: Official Journal of the American Society for Bariatric Surgery. 9(5): 725–730.
10. El-Hayek K, Timratana P, Shimizu H, Chand B (2012) Marginal ulcer after Roux-en-Y gastric bypass: what have we really learned? Surgical Endoscopy. 26(10): 2789–2796.
11. Simper SC, Erzinger JM, McKinlay RD, Smith SC (2008) Retrograde (reverse) jejunal intussusception might not be such a rare problem: a single group's experience of 23 cases. Surgery for Obesity and Related Diseases: Official Journal of the American Society for Bariatric Surgery. 4(2): 77–83.
12. Higa KD, Boone KB, Ho T (2000) Complications of the Laparoscopic Roux-en-Y Gastric Bypass: 1,040 Patients - What Have We Learned? Obesity Surgery. 10(6): 509–513.