

Marginal Ulcer and Gastrogastric Fistula: A Case Report of Refractory Hemorrhage in Late Postoperative Period of Roux-En-Y Gastric Bypass

Daniel Cruz Ferreira dos Reis¹, Gustavo Santana Esperidiao² and Ana Karen Alves²

¹General and Bariatric Surgeon, Second Lieutenant of the Health Officers of the Military Police of Minas Gerais, General Surgery Department of the Minas Gerais' Military Police Hospital, Brazil

²First year's Resident of General Surgery from the Minas Gerais' Military Police Hospital, Brazil

*Corresponding author:

Daniel Cruz Ferreira dos Reis,
General and Bariatric Surgeon, Second Lieutenant
of the Health Officers of the Military Police of
Minas Gerais, General Surgery Department of the
Minas Gerais' Military Police Hospital, Brazil

Received: 20 Jan 2025

Accepted: 02 Feb 2025

Published: 06 Feb 2025

J Short Name: AJSCCR

Copyright:

©2025 Daniel Cruz Ferreira dos Reis, This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and build upon your work

Citation:

Daniel Cruz Ferreira dos Reis. Marginal Ulcer and Gastrogastric Fistula: A Case Report of Refractory Hemorrhage in Late Postoperative Period of Roux-En-Y Gastric Bypass. *Ame J Surg Clin Case Rep.* 2025; 8(4): 1-6

1. Introduction

Marginal ulcers are significant complications in patients undergoing Roux-en-Y gastric bypass (RYGB), frequently associated with gastrointestinal bleeding. The incidence ranges from 0.6% to 16%, depending on factors such as excessive acid exposure in the jejunal mucosa due to a gastrogastric fistula (GGF), the use of non-steroidal anti-inflammatory drugs (NSAIDs), *Helicobacter pylori* infection, smoking, and diabetes mellitus. The diagnosis of marginal ulcers is established by upper gastrointestinal endoscopy (EGD), and their management is largely similar to that of peptic ulcers in patients who have not undergone gastric bypass. This report describes a case of refractory hemorrhage caused by a marginal ulcer, addressing diagnostic and therapeutic challenges.

2. Case Report

2.1. Initial Patient History

A 60-year-old male patient with a history of morbid obesity treated with Roux-en-Y gastric bypass using the Fobi-Capella technique in 2007 via laparotomy. At the time of bariatric surgery, his body mass index (BMI) was 44.81 kg/m². After surgery, he achieved satisfactory weight loss and comorbidity control, reaching a BMI of 28.71 kg/m². In 2019, he presented with the first signs of hemorrhagic complications and weight regain, with a BMI of 32.21 kg/m².

2.2. First Episode of Gastrointestinal Bleeding (2019)

In 2019, the patient experienced recurrent episodes of hematemesis and melena without significant hemodynamic instability. An EGD

identified a marginal ulcer at the jejunal portion of the gastrojejunal anastomosis without active bleeding and a positive urease test. *Helicobacter pylori* eradication therapy with amoxicillin and clarithromycin for 14 days was initiated. Continuous use of esomeprazole and sucralfate was prescribed for maintenance therapy.

2.3. Recurrence and Initial Clinical Management (October 2023)

The patient presented with severe melena requiring emergency care, blood transfusion, and admission to the intensive care unit (ICU) for three days. A new EGD revealed a gastrogastric fistula and a marginal ulcer at the gastrojejunal anastomosis with a visible vessel (Forrest IIA). Endoscopic hemostasis with mechanical clipping was successfully performed.

2.4. Recurrence and Refractory Hemorrhage (April 2024)

In April 2024, the patient experienced a new episode of severe hematemesis and melena, requiring ICU admission. Laboratory tests showed critical hemoglobin levels of 7.5 g/dL, necessitating blood transfusions. An EGD revealed active dripping bleeding with a large adherent clot at the gastrojejunal anastomosis (Figures 1 and 2). The surgical team was consulted, and due to the refractory nature of the case and clinical severity, surgical intervention was indicated. After clinical stabilization with a corrected hemoglobin level of 9.5 g/dL, the patient underwent surgery. At this time, his BMI had risen to 35.05 kg/m².



Figure 1: Dripping Bleeding.



Figure 2: Large adherent clot at the gastrojejunostomy.

2.5. Surgical Procedure

A laparoscopic gastrectomy with resection of the excluded stomach was performed as previously planned and documented with the patient's informed consent and the assistant surgeon's approval. A summary of the procedure is available in Video 01.

The procedure posed significant technical challenges due to extensive adhesions between the abdominal viscera and the abdominal wall, complicating portal placement (Figure 3).

Additional findings included adhesions between the excluded stomach and the left lobe of the liver (Figure 4), a previously

undiagnosed paraesophageal hernia (Figure 5), and severe fibrosis between the gastric pouch and the excluded stomach. Given the intense fibrosis and the technical difficulty of accurately localizing the fistula, the gastric pouch was stapled to reduce its volume, prioritizing patient safety and control of the clinical condition (Figure 6). Despite the technical difficulties, the procedure was uneventful. The patient recovered favorably in the immediate postoperative period, with discharge 48 hours after surgery, presenting stable vital signs, adequate hemoglobin levels, effective pain control, and good acceptance of an oral diet.

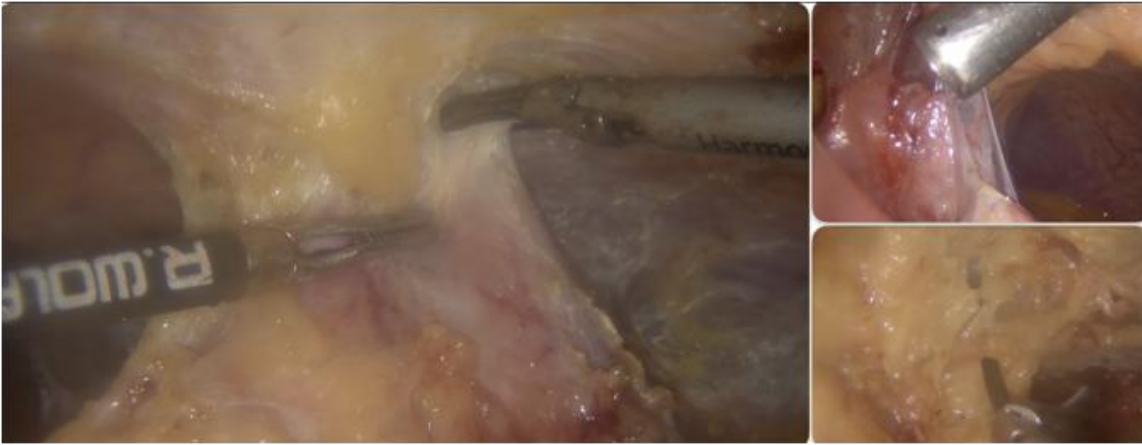


Figure 3: adhesions between the abdominal viscera and the abdominal wall.

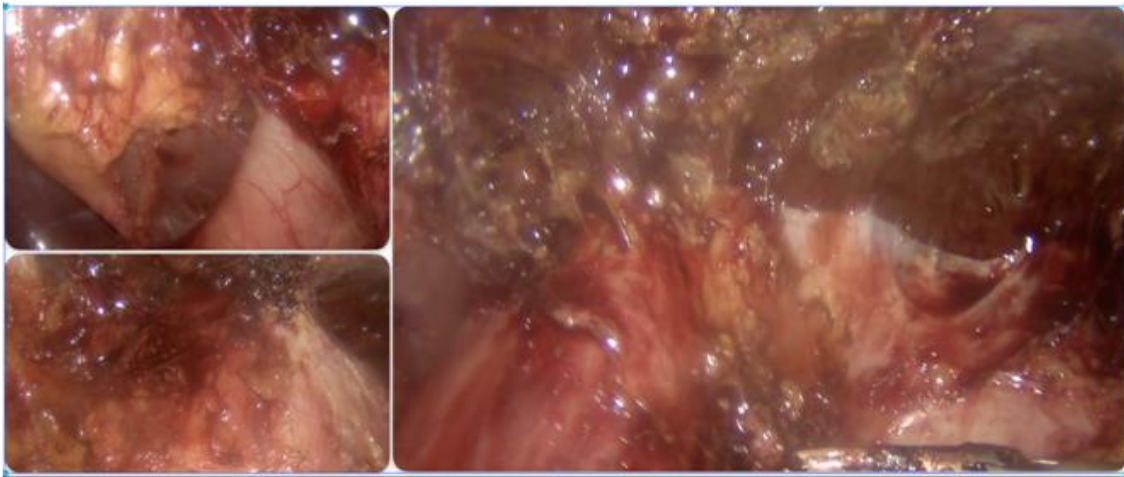


Figure 4: adhesions between the excluded stomach and the left lobe of the liver.

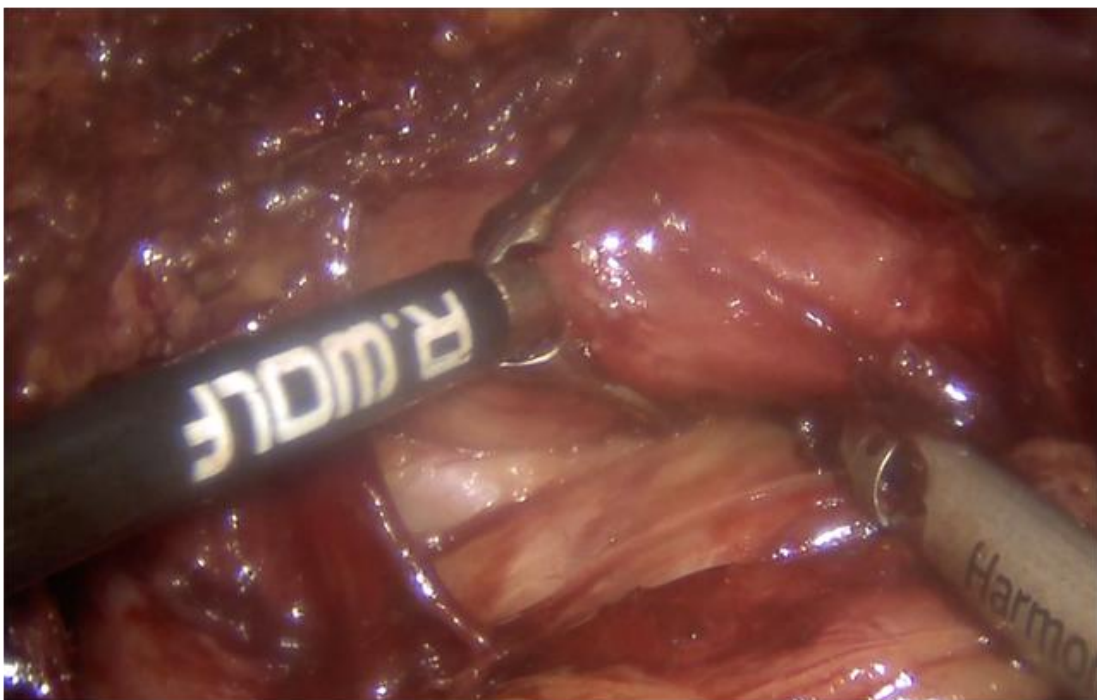


Figure 5: Paraesophageal Hernia.

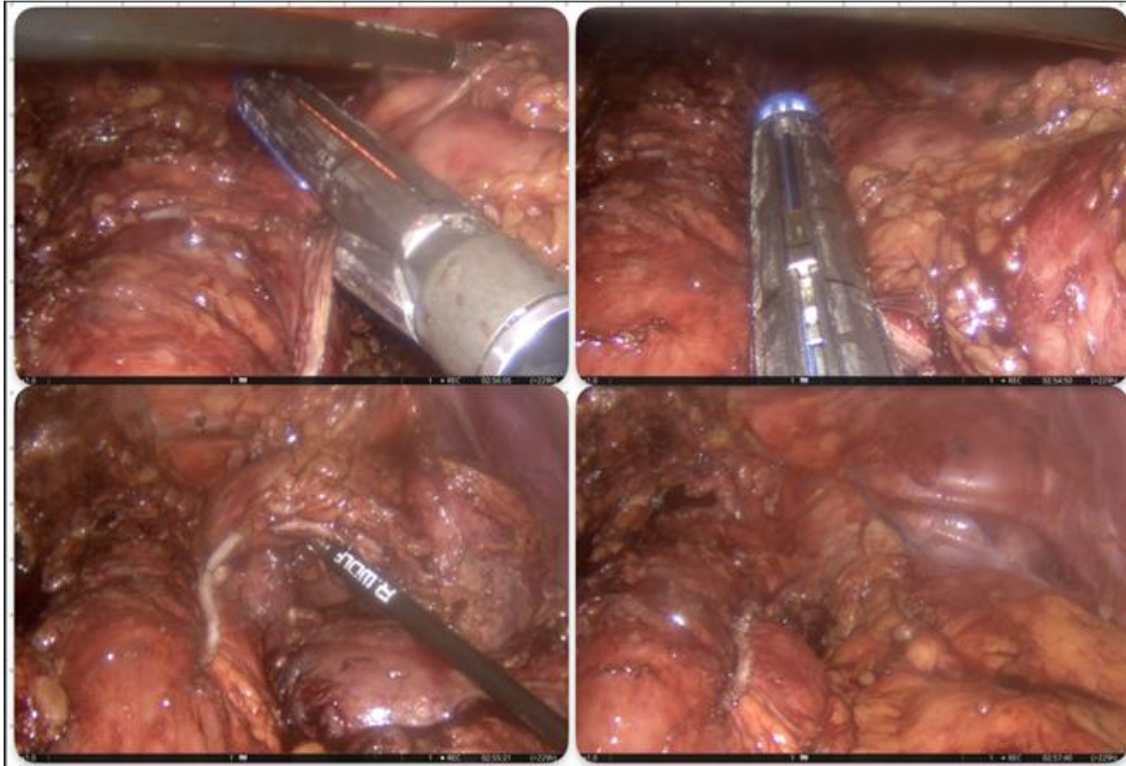


Figure 6: Stapling Process and Final Appearance of the Gastric Pouch.

2.6. Postoperative Evolution

During periodic outpatient follow-ups, the patient demonstrated satisfactory clinical evolution with no recurrence of hemorrhagic

episodes. Six months post-surgery, the patient showed a weight loss of 13 kg, achieving a BMI of 30.46 kg/m². Hemoglobin levels stabilized at 15.3 g/dL, and follow-up EGD confirmed complete healing of the marginal ulcer (Figures 7 and 8).

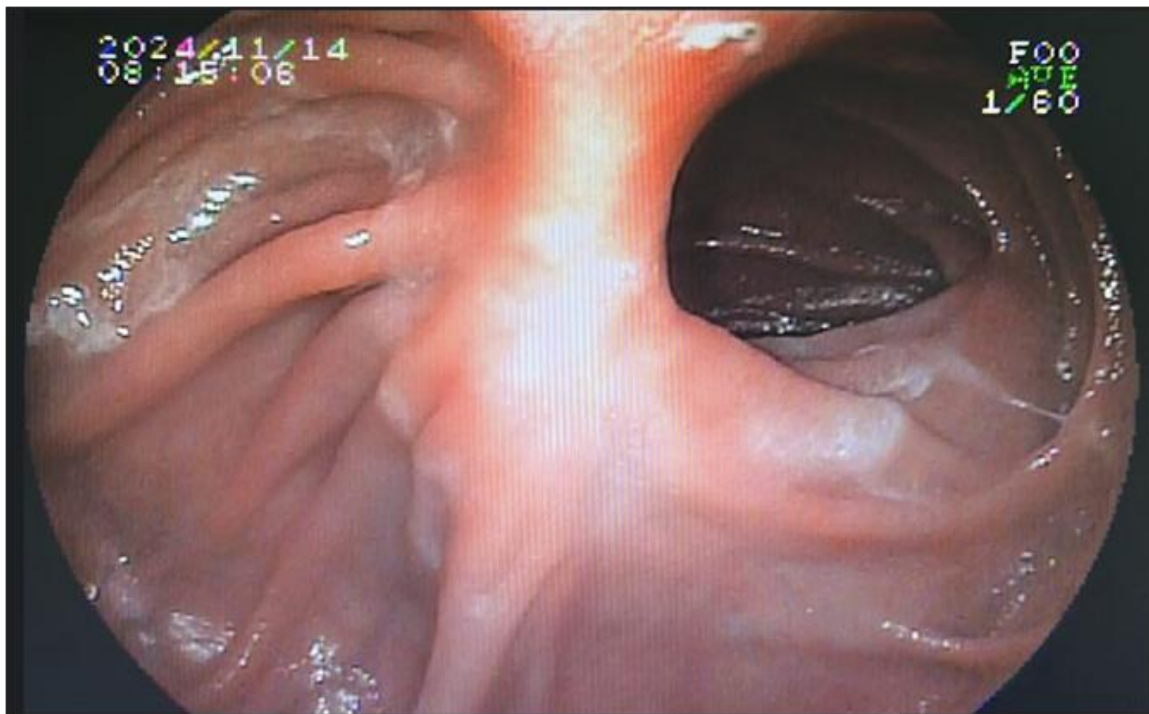


Figure 7: Healthy Gastrojejun Anastomosis.



Figure 8: Healthy Alimentary Loop.

3. Discussion

Marginal ulcers are a common late complication in patients undergoing RYGB, with an incidence of 0.6% to 16% [1,2]. Predisposing factors include excessive gastric acid exposure to the jejunal mucosa, ischemia at the anastomotic site, *Helicobacter pylori* infection, smoking, and NSAID use [1,3,4]. In this case, the presence of a gastrogastric fistula contributed to increased acid exposure, exacerbating the clinical picture. Gastrogastric fistulas are also known to cause weight regain [5], as seen in this patient, whose BMI increased from 28.71 kg/m² to 35.05 kg/m². This occurs due to direct food passage into the excluded stomach, compromising the restrictive and malabsorptive effects of RYGB. This weight regain was a critical factor in the decision for surgical intervention, as it signaled metabolic control failure. The diagnosis of gastrogastric fistulas and marginal ulcers relies on complementary exams such as EGD and, in some cases, computed tomography [9,4]. EGD not only confirms the presence of ulcers and fistulas but also aids in grading their severity and guiding therapeutic strategies [2].

Initial management of marginal ulcers involves proton pump inhibitors (PPIs) at full doses, sucralfate, and eradication of *Helicobacter pylori* when present [3]. However, in refractory cases associated with gastrogastric fistulas, surgical treatment becomes necessary. Options include revision of the gastrojejunal anastomosis, resection of the excluded stomach, closure of the fistula, or reversal to the original anatomy [5-11].

4. Conclusion

This case highlights the complexity of managing late complications of RYGB, such as marginal ulcers and gastrogastric fistulas (GGF). The patient's weight regain was consistent with the presence of a GGF, which impaired the restrictive and malabsorptive effects of bariatric surgery. This factor significantly influenced the decision for surgical intervention, not only for refractory hemorrhage but also for the failure of metabolic control.

This report underscores the importance of a multidisciplinary diagnostic and therapeutic approach with individualized strategies tailored to each patient's clinical condition and history. The use of laparoscopic techniques for resecting the excluded stomach, safely, even in technically challenging scenarios, demonstrates the advancements in minimally invasive surgery and its applicability in complex cases. Managing complications like GGF requires early detection, surgical expertise, and standardized techniques to minimize morbidity and improve outcomes. This case illustrates how timely, personalized intervention, combined with advanced resources, can effectively resolve severe conditions, positively impacting the metabolic control and quality of life of bariatric patients.

References

1. Palermo M, Acquafresca PA, Rogula T, Duza GE, Serra E. Late surgical complications after gastric by-pass: a literature review. *Arq Bras Cir Dig.* 2015;28(2):139-43.
2. Czczeko LE, Cruz MA, Klostermann FC, Czczeko NG, Nassif PA, Czczeko AE. Correlation Between Pre and Postoperative Upper Digestive Endoscopy In Patients Who Underwent Roux-En-Y Gastrojejunal Bypass. *Arq Bras Cir Dig.* 2016;29(1):33-7.
3. Raspante LBP, Barquette ADC, Motta EGPC, Ribeiro MA, Ramos LFM, Moreira W. Review and pictorial essay on complications of bariatric surgery. *Rev Assoc Med Bras.* 1992; 2020: 1289-1295.
4. Campos J, Neto M, Martins J, Gordejuela A, Alhinho H, Pachu E, Ferraz A. Endoscopic, conservative, and surgical treatment of the gastrogastic fistula: the efficacy of a stepwise approach and its long-term results. *BariatrSurgPract Patient Care.* 2015;10(2):62-67.
5. Capella JF, Capella RF. Gastro-gastric fistulas and marginal ulcers in gastric bypass procedures for weight reduction. *Obes Surg.* 1999;9(1):22-7.
6. Chahine E, Kassir R, Dirani M, Joumaa S, Debs T, Chouillard E. Surgical Management of Gastrogastic Fistula After Roux-en-Y Gastric Bypass: 10-Year Experience. *Obes Surg.* 2018;28(4):939-944.
7. Chau E, Youn H, Ren-fielding CJ, Fielding GA, Schwack BF, Kuri-an MS. Surgical management and outcomes of patients with marginal ulcer after Roux-en-Y gastric bypass. *SurgObesRelat Dis.* 2015;11(5):1071-5.
8. Corcelles R, Jamal MH, Daigle CR, Rogula T, Brethauer SA, Schauer PR. Surgical management of gastrogastic fistula. *SurgObesRelat Dis.* 2015;11(6):1227-32.
9. Pauli EM, Beshir H, Mathew A. Gastrogastic fistulae following gastric bypass surgery-clinical recognition and treatment. *Curr Gastroenterol Rep.* 2014;16(9):405.
10. Gao G, Nezami N, Mathur M, Balcacer P, Israel G, Spektor M. Diagnosis of gastrogastic fistula on computed tomography: A quantitative approach. *AbdomRadiol.* 2017;43(6):1329-1333.
11. Ribeiro-parenti L, De courville G, Daikha A, Arapis K, Chosidow D, Marmuse JP. Classification, surgical management and outcomes of patients with gastrogastic fistula after Roux-En-Y gastric bypass. *SurgObesRelat Dis.* 2017;13(2):243-248.
12. Yao DC, Stellato TA, Schuster MM, Graf KN, Hallowell PT. Gastrogastic fistula following Roux-en-Y bypass is attributed to both surgical technique and experience. *Am J Surg.* 2010;199 (3):382-5.
13. Alyaqout K, Almazeedi S, Alhaddad M, Efthimiou E, Loureiro MP. Fístula gastrogástricaapós bypass gástricoem Y-de-Roux: relato de caso e revisão da literatura. *ABCD Arq Bras Cir Dig.* 2020;33(2):e1509.