

Acute Ulcer Perforation of Gastro-Jejunal Anastomosis After Roux-En-Y Gastric Bypass Category: Case Report

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Abstract

Different bariatric surgical procedures are being performed nowadays, sleeve gastrectomy, Roux-En-Y gastric bypass (RYGB) and mini-gastric bypass are the most adopted techniques. Acute perforation of an ulcer in the gastro-jejunal anastomosis (GJA) is not common, only few cases where reported. We report a case of 51-year-old male presented with acute ulcer perforation of gastro-jejunal anastomosis 10 years after Roux-en-Y gastric bypass.

Keywords: Gastro-Jejunal Anastomosis (GJA); CT Scan

Introduction

Obesity is continuing to be a major health problem that affects people of all ages [1].

Different bariatric surgical procedures are being performed nowadays, sleeve gastrectomy, Roux-En-Y gastric bypass (RYGB) and mini-gastric bypass are the most adopted techniques [3].

Overall morbidity rate after Roux-en-Y gastric bypass (RNYGB) surgery is 4.6%. While main early complications are bleeding and leak, long term complications include nutrient deficiencies, internal hernia, postprandial dumping syndrome, chronic kidney disease and hypoglycemia [2].

Acute perforation of an ulcer in the gastro-jejunal anastomosis (GJA) is not common, only few cases where reported [4,8].

Case Presentation

A 51-year-old male presented to the emergency department (ED) with sudden onset epigastric pain radiating to the back associated with nausea and shortness of breath. He has a past medical history of RYGB done 10 years ago, diabetic and hypertension.

On examination patient blood pressure 120/70 mmhg, pulse 94 b/m, respiratory rate 22 breath per minute, dehydrated.

Abdomen examination showed generalized tenderness mainly epigastric. Laboratory investigations showed:

WBC 8.5 K/UI, HB 11.2 G/DI, Lipase 16.1 U/L and CRP 22.01 mg/L.

Urgent CT of the abdomen and pelvis with IV contrast (Figure 1) showed evidence of multiple variable sized foci of air attenuation seen underneath both diaphragmatic copula outside the bowel lumen keeping up with pneumoperitoneum.

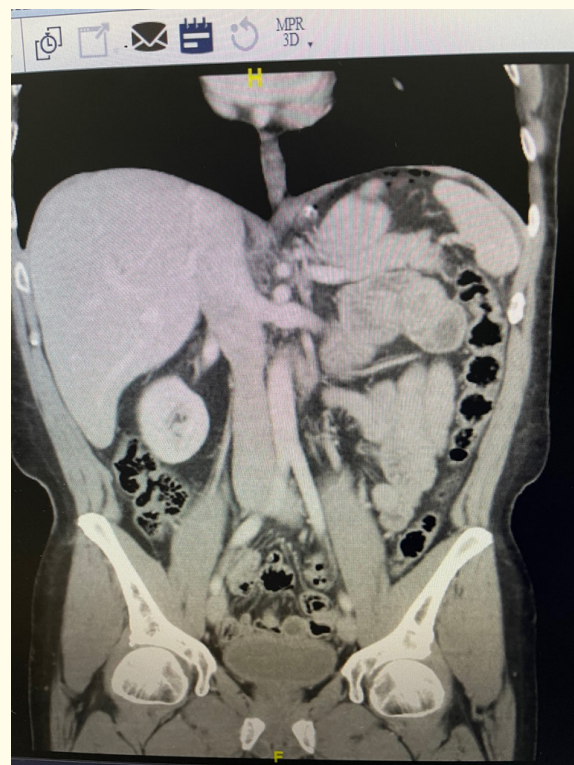


Figure 1: CT scan demonstrating foci of air under copula of diaphragm.

Patient admitted and received IV antibiotics (cephalosporin and Omeprazole and metronidazole), rehydrated and urgent diagnostic laparoscopy was performed under general anesthesia there was multiple inflammatory adhesions around the (GJA) with fibrinoid reaction, very few free fluid in the abdominal cavity and normal looking jejunum-jejunal anastomosis and normal looking liver and remaining bowel with normal duodenum and there was no internal hernia. After adhesiolysis, no perforation could be detected therefore we performed a methylene blue test injected through naso-gastric tube (NGT) which showed extravasation through a 3mm perforation at the right border of the (GJA), (Figure 2,3). It was repaired by primary suturing using absorbable vicrel3/0 suture with omental patch. Patient was extubated and transferred to regular ward in a stable condition. Oral fluid was resumed on day one post operative. He was continued on IV antibiotics, IV omeprazole, IV paracetamol and subcutaneous clexane for prophylaxis of deep venous thrombosis and clarithromycin and patient continued to improve. He was discharged home on day three post operative. Follow up one week later in outpatient department patient was doing well returned to his daily activities normally. He was referred to gastro-enterologist for upper endoscopy after three months.

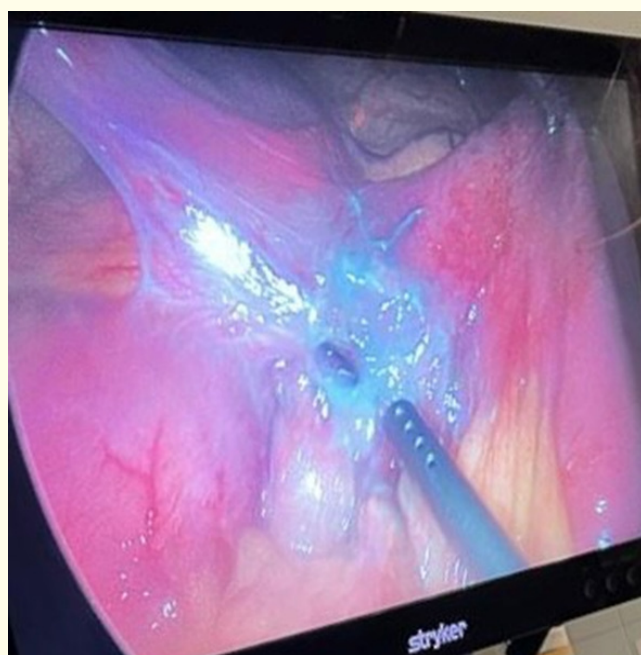


Figure 3: Intraoperative via laparoscopy showing methylene blue extravasation through the perforation.

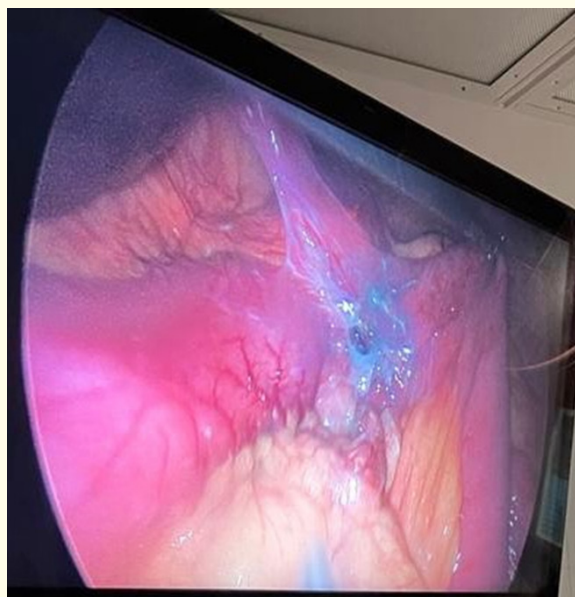


Figure 2: Intra operative via laparoscopy showing the gastro-jejunal anastomosis with the perforation.

Discussion

Our case had acute perforation of the GJA after RYGB which is not common. He did RYGB 10 years ago using a linear stapler and did not report any epigastric pain foretell a marginal ulcer.

In a reported case by Kadri Exhevit., *et al.* the patient was only 3 years post RYGB and was diagnosed via endoscopy of having a marginal ulcer only 3 months prior to perforation [11].

The reported incidence of marginal ulceration of GJA after gastric bypass varies widely, ranging from 0 to 16% [4-7]. The risk factors for ulceration are smoking, use of nonsteroidal anti-inflammatory drugs (NSAIDs) and steroids, stress, recent surgery, and the presence of gastrogastic fistulas. Higher incidence has been reported in patients who underwent gastric bypass using circular staplers for the construction of the GJA as opposed to a linear stapler [4-7].

Clinically the symptoms suggestive of marginal ulceration include, but are not limited to, upper abdominal pain or progressive upper abdominal discomfort and intolerance of food and upper gastrointestinal bleed. Intractability is generally defined as persistence of symptoms after 3 months of medical treatment. Patel, *et al.* [9] reported 39 patients with intractable marginal ulcers whose primary signs and symptoms included chronic abdominal pain (66.6%), GI bleeding (20.5%), stomal obstruction (10.2%), and perforation (2.5%). A minority of these patients will present with an acute abdomen like the patient we presented, and free perforation of the ulcer must be ruled out.

In our case abdominal examination showed generalized tenderness mainly epigastric with no signs of shock or sepsis, there was no gross peritonitis on exploring the abdomen, few free fluid in the abdominal cavity.

Ulcer perforation presents with sudden onset of abdominal pain, accompanied by signs of localized or diffused peritoneal irritation and abdominal rigidity, with a high risk of fast lethal progression due the development of sepsis [12].

We chose to use laparoscopic approach as it leads to less morbidity, less post operative pain, short hospital stay and early return to normal activity [9,10]. The definitive approach can be performed via open surgery or laparoscopy and consists of primary repair of the ulcer and omental patch along with a thorough washout of the abdominal cavity [9,10].

Conclusion

Acute ulcer perforation of the GJA after Roux-en-Y gastric bypass is an unusual complication which can occur many years after the procedure even in the asymptomatic patient.

Therefore, when dealing with acute abdomen post RYGB surgery we must have a high index of suspicion of perforation.

The use of the CT scan with IV and oral contrast can help to define the diagnosis of the condition.

The laparoscopic approach by an experienced surgeon may afford the patient the advantages of minimally invasive surgery.

Finally, we suggest periodic endoscopic screening for post RYGB surgery patient to identify and treat any ulcer early and prevent perforation.

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