

Case Report

Intussusception of the jejunio-jejunal anastomosis in a patient with Roux-en-Y gastric bypass

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ABSTRACT

Intussusception is a rare complication in postoperative patients undergoing Roux-en-Y gastric bypass (RYGB), with an incidence of 0.64%. The clinical presentation usually involves severe abdominal pain, accompanied by nausea and vomiting. The diagnostic approach using imaging studies involves computed tomography, revealing the radiological "target" sign. The treatment is surgical, with the lowest recurrence rate (12.5%) observed in the resection and anastomosis of the intussuscepted segment. The objective is to present the case of intussusception at the jejunio-jejunal anastomosis in a postoperative RYGB patient, along with its therapeutic approach, in a hospital in northern Mexico.

Keywords: Intussusception jejunio-jejunal anastomosis, Bariatric complications, Bariatric surgery, Acute abdominal pain

INTRODUCTION

Intussusception is a rare complication in postoperative RYGB patients, with an incidence of 0.64%.¹ It involves the jejunio-jejunal anastomosis, typically in a retrograde arrangement due to modifications in intestinal peristalsis. The clinical presentation usually consists of sudden-onset severe abdominal pain, accompanied by nausea and vomiting. The diagnostic approach using imaging studies involves computed tomography, revealing the radiological "target" sign.² The treatment is surgical, and the lowest recurrence rate (12.5%) has been observed in the resection and anastomosis of invaginated segment.^{1,2}

CASE REPORT

A 62-year-old male with a surgical history of gastric bypass in 1990. He began his current condition 8 hours

before experiencing sudden-onset severe colicky abdominal pain, located in the mesogastrium, accompanied by nausea and vomiting on multiple occasions, without exacerbating or alleviating factors. The pain increased in intensity and he developed oral intolerance, leading him to seek assessment and management.

On physical examination, he presented a distended abdomen, increased peristalsis, tenderness on palpation in the epigastrium and left hypochondrium, and a positive rebound sign.

Laboratory tests were requested, showing leukocytosis with a left shift. Computed tomography (CT) identified jejunio-jejunal intussusception (Figure 1), with a 10 cm dilated jejunum and air-fluid levels arranged in the left hypochondrium.

Given the described findings, a diagnostic laparoscopy was performed, locating the site of intestinal intussusception at the jejuno-jejunal anastomosis (Figure 2). An attempt at non-invasive reduction was made, but since it was unsuccessful, a conversion to conventional surgical approach was decided. Through an exploratory laparotomy, the intussuscepted segment was manually reduced (Figure 3), resected, and anastomosed, with a closed drainage placed at the surgical site. The patient had a satisfactory clinical course during hospitalization and was discharged due to improvement. Follow-up in outpatient consultations proceeded without complications, and the drainage was successfully removed.

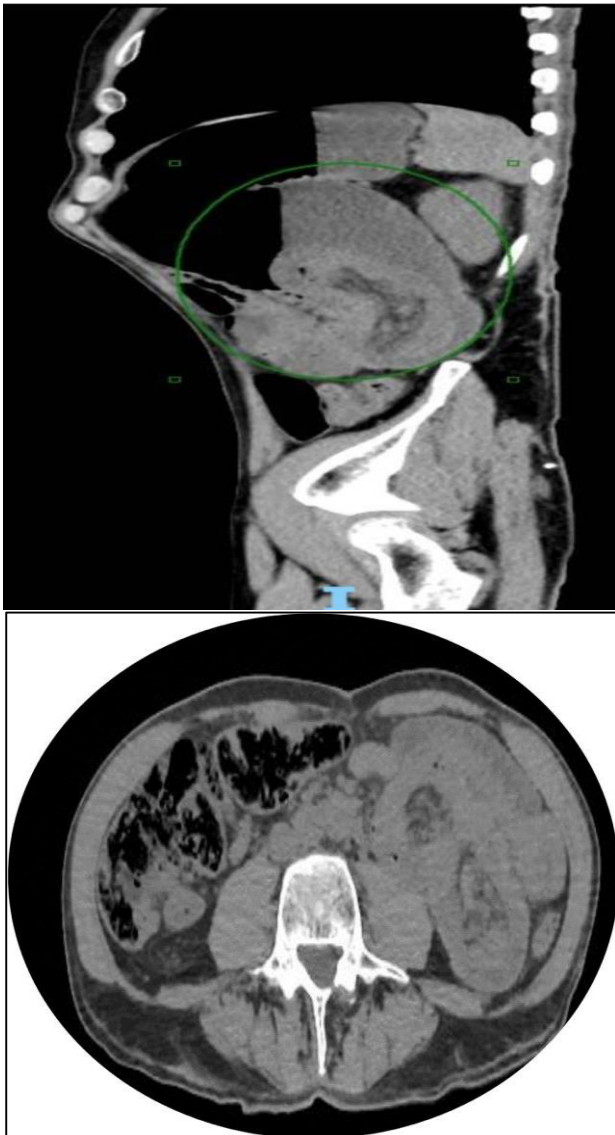


Figure 1: Multi slice CT scan, observing in both sagittal (left) and axial (right) reconstruction an image suggestive of jejuno-jejunal intussusception which shows increased wall thickness and loss of its anatomical relationship with a 10 cm dilated jejunum and air-fluid levels arranged in the left hypochondrium (Green Circle).

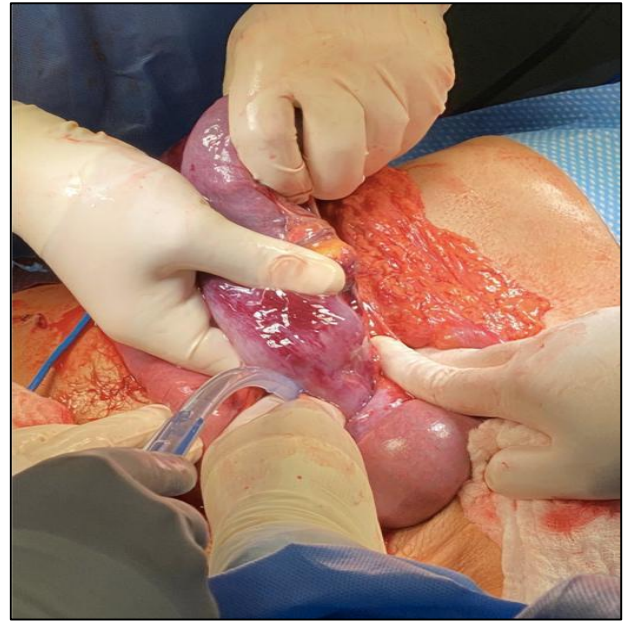


Figure 2: Intussusception of jejuno-jejunal anastomosis.

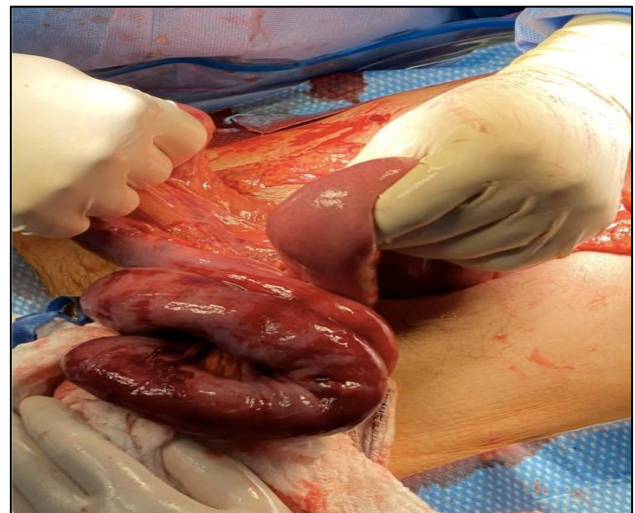


Figure 3: Re-ducted jejuno-jejunal anastomosis with ischemic small bowel segment.

DISCUSSION

To understand the complications associated with bariatric surgery, in this case RYGB, it's important to have a clear comprehension of the anatomical rearrangements involved. The RYGB procedure is both a restrictive and malabsorptive procedure, functioning by restricting stomach volume and redirecting the path of ingested food, bypassing a significant portion of the stomach and proximal intestine.^{3,4}

The RYGB surgery involves dividing the stomach into a small gastric pouch and a larger remaining stomach. The small intestine is then divided at the level of the jejunum (50 to 120 cm distal to the ligament of Treitz), and its

proximal end is anastomosed to the distal limb of the intestine (75 to 150 cm beyond the stapled end), creating the jejuno-jejunal anastomosis. The stapled end of the distal intestine is brought up to the upper part of the abdomen and anastomosed with the gastric pouch, creating the gastro-jejunojejunostomy anastomosis.^{3,5,6}

In this arrangement, ingested food enters the gastric pouch and travels down alimentary limb of the intestine. In the jejuno-jejunal anastomosis, food mixes with bile and pancreatic enzymes from the biliopancreatic limb, originating from remaining stomach and duodenum.^{3,6}

Intussusception is one of the several issues that can occur, especially at the site of the jejuno-jejunal anastomosis. It is a rare problem, occurring in about 0.4-4.7% of cases.^{7,8,11,15} Clinically, it presents with abdominal pain, nausea, and vomiting. This involves the retrograde displacement of the common channel limb into the jejuno-jejunal anastomosis, leading to obstruction of the Roux and/or biliopancreatic limbs.^{9,11,12} Mucosal hypertrophy and hyperplasia can be the starting point for intussusception.⁹⁻¹¹ This complication tends to be delayed, occurring up to 2 years after RYGB surgery.¹⁻¹⁴ Diagnosis is typically made through computed tomography (CT), sometimes revealing the "Target" sign, attributed to intestinal thickening and associated mesenteric edema.^{2,11} Surgical treatment involves exploration and locating the intussusception area, performing reduction and enteropexy or revising the jejuno-jejunal anastomosis, depending on its viability.¹³⁻¹⁵

CONCLUSION

In postoperative RYGB patients, intussusception is a rare complication. Diagnostic suspicion in cases of acute abdominal pain and oral intolerance is complemented by imaging studies. According to current literature, the recommended treatment is resection and anastomosis of the invaginated segment, showing lower recurrence rates compared to enteropexy and reduction.

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