Retrograde Intussusception of Jejunojejunostomy 24 years after a Roux en Y Gastric Bypass

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Introduction

Intussusception in adults is more frequently caused by structural lesions such as benign polyps, Meckel's diverticulum, intraluminal lipomas, and malignant neoplasms.[2] Retrograde intussusception is a very rare but important cause of small bowel obstruction in bariatric patients. Prompt diagnosis and appropriate treatment can reduce mortality and morbidity. We present a case of a 47-year-old female with a history of Roux en Y Gastric Bypass over 20 years ago who presented to the Emergency Department with an acute onset of severe abdominal pain. Workup and CT findings were concerning for small bowel obstruction secondary to a retrograde intussusception at the Jejuno-jejunostomy. This was addressed with abdominal exploration and resection due to some evidence of necrosis intraoperatively.

Case Presentation

A 47-year-old female with a previous history of Roux en Y Gastric Bypass over 20 years presented with acute onset epigastric abdominal pain and obstipation for approximately 24 hours. This was associated with nausea and inability to pass flatus. The patient is an active smoker with concurrent heroin and cocaine use. On physical examination, blood pressure was 128/73 mm Hg, Pulse rate 98 pulse/min, and Temperature 37.1° Celsius. Her abdomen was soft and non-distended but showed localized tenderness in the epigastrium. Her laboratory studies showed a WBC of 8.28K/uL and lactic acid of 2.8 mmol/L. CT scan of the abdomen illustrated some worrisome findings including intussusception or internal hernia at the previous site of the Jejuno-jejunal anastomosis. Resuscitative efforts were initiated, and the patient proceeded to the operative suite for surgical intervention.

Treatment/Outcome

Diagnostic laparoscopy initially performed showed an intussusception of the Jejuno-jejunal anastomosis approximately 15 cm from the ligament of Treitz. An attempt at laparoscopic reduction was unsuccessful. Additionally, due to proximity to the ligament of Treitz, a formal laparotomy was performed to reduce the intussusception. Upon further evaluation, the intussuscepted segment appeared ischemic with some necrotic features. We performed a resection of the intussuscepted segment with the whole Jejuno-jejunal anastomosis and the creation of a primary two sequential side-to-side anastomosis 20 cm apart. A 75 cm small bowel was resected with pathological analysis showing ischemic bowel disease with hemorrhagic necrosis in the mid-section of the common channel that had intussuscepted. The patient had an uneventful and full recovery.

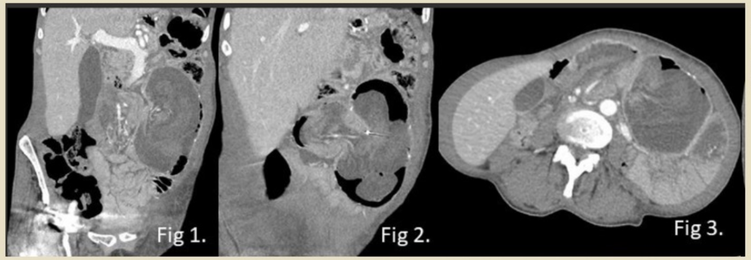


Figure 1-3. Preoperative CT imaging-
Findings are compatible with small bowel obstruction and appearance worrisome for intussusception or internal hernia

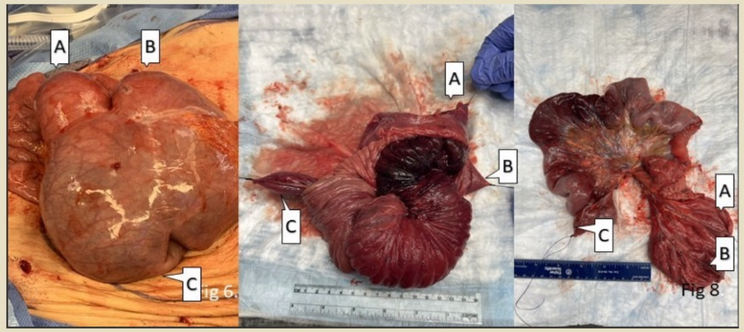


Figure 6-8. – *Intraoperative findings*
75 cm of resected ischemic small bowel including J-J anastomosis

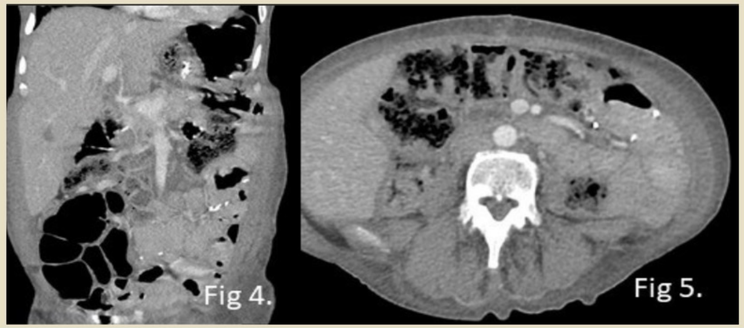


Figure 4-5. Post operative.
Diffusely dilated small bowel and colon without evidence mechanical obstruction.

Discussion

Intussusception in adults is more frequently caused by structural lesions such as benign polyps, Meckel's diverticulum, intraluminal lipomas, and malignant neoplasms.[2] Symptoms are usually nonspecific however abdominal pain is the most common complaint. Roux-en-Y gastric bypass (RnYGB) represents the second most common bariatric procedure performed in the United States.[1] With the complications associated with RnYGB, intussusception post-RYGB is very rare. The exact mechanism remains unknown; however, it is thought to be caused by peristaltic dysmotility.[2] The diagnosis of intussusception in this patient population remains a significant challenge as the symptoms are usually nonspecific. The common complaints by patients include vague abdominal symptoms, weight loss, constipation, nausea, and vomiting. The most useful diagnostic test of choice is a CT scan. Patients can present with either a partial or complete small bowel obstruction.[1] Prompt surgical exploration is warranted to establish a definitive diagnosis and to decrease the associated morbidity and mortality. Laparoscopy with simple reduction may suffice in uncomplicated and stable patients where the bowel appears to be viable.[1] Nonetheless, there should be a low threshold for open abdominal exploration if there is evidence of non-reversible ischemia or gangrene. Resection of the Jejuno-jejunostomy with re-anastomoses has demonstrated the lowest risk of recurrence.[1]

Conclusions

Retrograde intussusception is a very rare diagnosis but not an uncommon entity in the bariatric population. Clinical suspicion needs to be very high to be able to appropriately manage so that we can salvage bowel. It is an important cause of small bowel obstruction after bariatric surgery. Correct diagnosis and appropriate treatment promptly can reduce mortality and morbidity.

References

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2. Kumar A, Ogbonda S, Persaud P, Shiwalkar N. Retrograde Intussusception after Roux-en-Y Gastric Bypass. Cureus. 2020 Jun 25;12(6):e8825. doi: 10.7759/cureus.8825. PMID: 32607307; PMCID: PMC7320641.

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