Recurrence of Jejuno-jejunal Intussusception After RNYGBP Requiring Anastomotic Resection and Reconstruction

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INTRODUCTION

Obesity is highly prevalent in the US population. In a nationally representative survey of adults in the United State approximately one-third of US residents have a body mass index (BMI) exceeding 30, and 5% to 10% have BMIs of more than 40.[1] Bariatric surgery has resulted in substantial long-term weight loss for the obese patient. There are obvious benefits to bariatric surgery, but it does not come without its own complications, early and late.

As many as 25% of patients undergoing weight loss surgery require repeat surgery, either due to complications or failed weight loss.[2] These patients are particularly at high risk, as the morbidity following these re-operative procedures is often high. Early onset-complications encountered in bariatric surgery are: bleeding (2.5%), anastomotic leak (1%), bowel obstruction (1.7%). Late-onset complications are described as: dumping syndrome (up to 30%), marginal ulcer (0.5-20%), anastomotic stricture (3-12%), incisional hernia (0.5-8%), and bowel obstruction (2.5%).[4]

Our case highlights the rare, long-term complication of Roux-en-Y Gastric bypass of jejuno-jejunal intussusception. The reported incidence of intussusception following gastric bypass surgery is about 0.1–0.3%.[5] As a rare occurrence, the diagnosis of such complication needs to remain with high suspicion because this diagnosis often requires surgical correction.

CASE REPORT

A 43-year-old woman with a PSHx of antegastric antecolic roux-en-y gastric bypass 5 years ago, followed by laparoscopic reduction of an internal hernia 3 years later, and a diagnostic laparoscopy with reduction of intussusception just 3 months prior presented to our ED with an acute onset of generalized abdominal pain associated with nausea and bloody emesis. The pain started approximately 2 hours prior to presentation after drinking a cup of coffee. She denied fever or chills and had passed a bowel movement the morning of presentation. On exam, there was severe diffuse tenderness with peritoneal signs. Laboratory tests were significant for a white blood count of 11.1 mm3 , and serum lactate of 4.2 mmol/L. A chest radiograph (Figure 1) and a CT scan (Figure 2 & 3) were obtained.



Figure 1. Chest X-ray demonstrating subcutaneous emphysema with dilated bowel.



Figure 2. Coronal CT abdomen demonstrating small bowel obstruction in the region of the jejunojejunal anastomosis, with evidence of perforation and bowel ischemia.



Figure 3. Axial CT abdomen demonstrating small bowel obstruction in the region of the jejunojejunal anastomosis, with evidence of perforation and bowel ischemia.

She was taken to the operating room as a emergent case. The operation was carried out laparoscopically. Visualization of the abdomen under pneumoperitoneum revealed markedly distended bowel and free fluid. Adhesions were lysed to allow for visualization of the roux limb. In the lower abdomen an area of intussuscepted bowel into the J-J anastomosis was encountered and multiple attempts to reduce the bowel ultimately failed. The small portion of bowel that was reduced showed areas of ischemia and perforation, and the decision was made to resect the segment in question. Proximal to the J-J (roux and B-P) limbs, as well as distal to the J-J (common channel) were transected with an Endo GIA stapler. The specimen was sent to pathology. The small bowel was then reconstructed. First, the roux to distal common channel was reanastomosed approximately 50cm from the G-J, and intervening mesentery was closed. The B-P limb was then reanastomosed about 75cm from the G-J, and intervening mesentery was closed. The small bowel was then run to the terminal ileum with no other injury appreciated.

The patient had an unremarkable post-operative course and was discharged on post-operative day four.

DISCUSSION

Many surgical approaches to small bowel intussusception after RYGBP have been described ranging from simple reduction to resection and revision of the anastomosis. Additionally, pexy of the B-P limb to the common channel has been performed.[6] The optimal treatment is still undefined because recurrences and reinterventions are described after each of the proposed interventions. Simper *et al.* found 100% recurrence rate with reduction alone, 40% recurrence with plication, and 12.5% recurrence rate with resection and revision of the enteroenteric anastomosis.[5] In another study, Singala *et al.* found that sixty eight patients (96%) required surgery; 48 (70.6%) underwent revision of anastomosis, 16 (23.5%) had reduction without resection, while 4 patients (5.9%) had plication only. Post-operatively, 9 patients presented with recurrence, five of which had been treated earlier without resection, eventually required revision of the anastomosis.[2]

CONCLUSION

Small bowel intussusception after RYGBP should remain on the differential based on vague presenting symptoms. It may be prudent to perform a reduction surgery initially, but management of SBI should include a low threshold for surgical resection and reconstruction of the anastomosis because of the high risk of necrosis and perforation.

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