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INTUSSUSCEPTION

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The patient is a 51 years old female with multiple surgical histories including Gastric Bypass, Gastric Band, Removal of the band and multiple lysis of adhesion, who presented to the Emergency Room of our Hospital with the left upper quadrant pain associated with nausea and 10 episodes of vomiting and diarrhea. There was some tenderness to deep palpation in the periumbilical area with minimal distention of the abdomen. The patient had a white count of 14 and a CAT scan showing a Biliopancreatic Limb Obstruction at the site of previous Jejunojejunostomy with evidence of intussusception. **Fig. 1** At that point the decision was made to take the patient to the Operating Room concerning for a Bowel Ischemia secondary to a closed loop bowel obstruction. The proposed surgery was diagnostic Laparoscopy, Small Bowel Resection and possible open. Risks and benefits of the procedure was explained to the patient. The patient was taken to the Operating Room after Pre Op clearance for the procedure.

Keywords: Intussusception; Hernia; Obstruction; Open Repair

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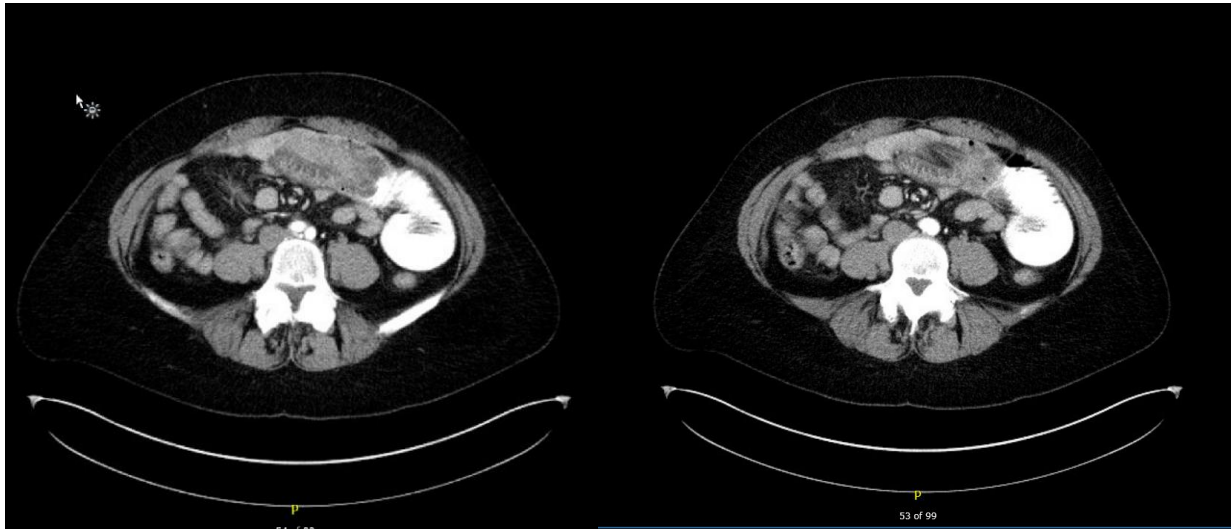
THE SURGEONS' LOUNGE CASE

Fig. 1

Fig. 2

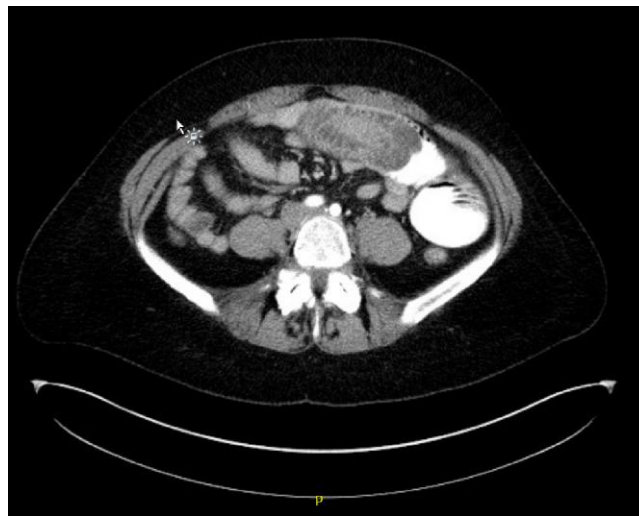


Fig. 3

Fig. 1, 2 & 3 Different levels of CT Abdomen shows intussusception of the jejunum distal to the previous jejunojejunosomy anastomosis. Small bowel loops distal to intussusception are collapsed.

The following three procedures were proposed 1. Diagnostic Laparoscopy 2. Extensive lysis of adhesion 3. Small Bowel resection, recreation of Roux limb and recreation of Roux-en-Y reconstruction.

We entered the abdomen at the infraumbilical site using the Hasson technique. Upon entry it was seen that Transverse Colon was adhered to the anterior abdominal wall which was carefully dissected from the peritoneum and extensive lysis of the adhesion was performed to free the Roux limb and Biliopancreatic limb to identify the all relevant structures of the previous surgery. There was no sign of bowel ischemia. After the identification of the structures there was an evidence of intussusception of the common channel telescoping into the Roux limb at the anastomotic site.

During the surgery a small foreign body that was appearing to be an old remnant of gastric band tubing was excised and sent for pathology. A decision was made to resect and re create an anastomosis. The resection and resuturing was done using stapler and vicryl sutures. We reinforced the anastomosis with 2 layer suture closure. Hemostasis and anastomosis was established. The small bowel specimen resected was sent for pathology. A 19-French Blake drain at the site of anastomosis was placed and a thorough inspection of the abdomen was done. The patient tolerated the procedure well was extubated in the operating room.

The postoperative diagnosis was intussusception of the jejunojejunostomy. The patient did not have any complication during or after the procedure.

- 1. Can you comment on this case and tell us about the management criteria.**
- 2. What are the management options? What surgical approach do you think would be the best to opt?**
- 3. What should be done to prevent recurrence, as we know plication is easy but then there is a high chance of recurrence. Also what is your comment on end to end anastomosis as a treatment option.**
- 4. What if we do not find intussusception when once we open up?**

EXPERT COMMENTARY

ADIL HALEEM KHAN-MD (GENERAL SURGEON)

Intussusception is a clinicopathologic entity that involves the invagination of a segment of the bowel into an immediately adjacent segment. This is more common in children and most commonly results from idiopathic ileocolonic intussusception. In adults, this process occurs most commonly in small bowel. As opposed to children, 90 % of these cases in adults have an identifiable cause that acts as lead point for intussusception. The lead point can be luminal, mural or extra-luminal. Neoplasms (benign and malignant) are responsible for 2/3 of the cases. [1] While uncommon, ileocolonic and colonic intussusception in adults usually results from a neoplastic process. Also, with increasing use of imaging modalities, cases of transient intussusception with no associated obstruction are being observed.

Roux-en-Y gastric bypass is one of the most common procedures being performed for patients with morbid obesity. Among the associated complications of RYGB, bowel obstruction is of particular interest as it can lead to significant morbidity and mortality if not diagnosed and managed in a timely manner. Most of these cases result from internal hernia. Additionally, patients with history of RYGB can present with Intussusception at prior jejunojejunostomy site. The case above discusses one such presentation. These cases might not have classic symptoms of palpable mass, currant jelly stools and severe abdominal pain but rather present with non-specific recurrent and intermittent abdominal pain, nausea and vomiting post RYGB. This presents a particular diagnostic dilemma.

In Patients with RYGB, Jejunojejunostomy site is most common site of intussusception. Altered Roux-limb motility rather than pathologic lead point is thought to be the cause of this problem.[2] Also, studies have shown the JJ intussusception is more common when 120 mm staple length is used compared to 60 mm staple length. [3, 4] Management options include simple reduction, plication and resection with reconstruction of the anastomosis.

Simper et al published review of 23 patients with intussusception after RYGB. Patients were treated with simple reduction, plication and resection and re-anastomosis. He reported

recurrence of 100%, 40 % and 12.5 % associated with simple reduction, plication and Resection and re-anastomosis respectively suggestion the resection and re-anastomosis might be the best option. [5] Menzo et al reported a case of jejuno-jejunal intussusception treated with plication that eventually required reconstruction of anastomosis due to persistent symptoms. [6] Polaikin et al published 10-year retrospective review of JJ intussusception after RYGB and also reported 100 % recurrence with reduction only technique. [4]

In Summary, JJ intussusception is a rare complication after RYGB. While best management option is not clear due to rare nature of the disease, Reduction only technique has highest recurrence and should not be used a primary management option. Both laparoscopic and open approach can be used depending on surgical expertise and nature of small bowel distention. In some case, intussusception might have spontaneously reduced once patient abdomen is explored. We still recommend considering plication to help decrease recurrence and symptoms.

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