International Surgery Journal
Horesh N *et al. Int Surg J. 2016 May;3(2):1002-1004*
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20161188

Case Report

Intestinal intussusception after Roux-En-Y gastric bypass: case report and review of literature

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Received: 17 February 2016
Accepted: 31 March 2016

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ABSTRACT

Bariatric surgery has evolved significantly in recent years. A variety of surgical procedures can be offered to obese patients in order to achieve weight lost. Laparoscopic gastric bypass with a Roux en Y anastomosis is one of the most common bariatric procedures performed in recent years. There is a variety of surgical complications related to laparoscopic gastric bypass. One of the rarest complications is intestinal intussusception of the entero-enteric anastomosis, which requires immediate surgical intervention. We describe a case of a 46 year-old female who presented with acute intussusception of the enteric anastomosis that required emergent surgical decompression. In this report we discuss this rare complication and the therapeutic options.

Keywords: Surgical emergency, Bariatric surgery, Acute surgical care

INTRODUCTION

Obesity is an epidemic in the western world. Prevalence is increasing worldwide both in the adult and the adolescent population.[1] As a result, health issues directly linked with obesity like diabetes, heart disease, stroke and many other illnesses are on the rise. Bariatric surgery has reduced morbidity and mortality from these disease and others.[2] causing a high rise in the amount of these surgical procedures performed annually. Of the possible bariatric procedures available, Roux en Y gastric bypass (RYGB) is still the most common surgical procedure.[3] Though surgical complications can be seen in up to 40% of patients; surgical outcome has improved significantly in recent years.[4] The high volume of these surgical procedures performed worldwide, led to a variety of known post-operative complications. One of the rarest complications following this surgical procedure is an intestinal entero-enteric anastomosis intussusception described only in a handful of patients. The latter requires early recognition of the diagnosis and prompt emergency surgical treatment. In this review we present a case of intestinal intussusception in along with a review of literature on the subject.

CASE REPORT

We present the case of a 46 year old woman who underwent laparoscopic RYGB 6 years prior to her presentation to the ER. During that period she lost 60 kg following surgery. She presented with severe abdominal pain and cramping, vomiting and nausea. Abdominal examination demonstrated a bloated abdomen with a left upper quadrant palpable mass and regional peritonitis. A plain abdominal radiography demonstrated a distended small bowel loop and a computerized tomographic scan raised the possibility of intestinal intussusception near the entero-enteric anastomosis (Figures 1-2). Initial fluid resuscitation and a nasogastric tube were placed and the patient was taken emergently to the operating room. After initial assessment that demonstrated a severe blockage in the entero-enteric anastomosis and gentile adhesiolysis,

no necrotizing bowel loops were recognized. The trapped small bowel loop with its mesentery root was successfully released, but the high pressure of the release created a 4 cm rupture several cm proximally to the blocked point, that was around 20 cm proximally to the entero-enteric anastomosis. The damaged small bowel loop was removed and a primary anastomosis was preformed, conserving the original RYGB entero-enteric anastomosis. The trapped small bowel segment recovered rapidly and no need for an additional resection was needed. Operating time was 74 minutes, and the patient recovered uneventfully, initiating oral intake at POD3, with discharge at POD5.

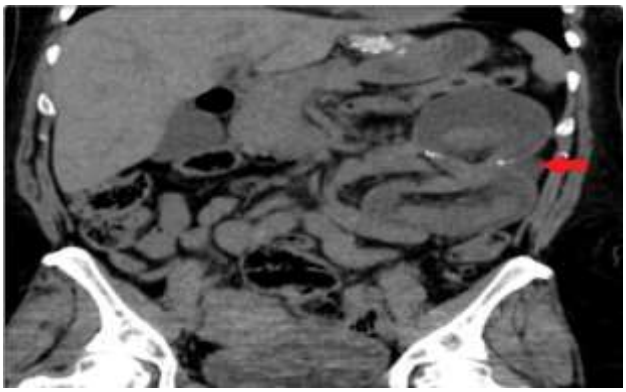

Figure 1: Coronal view of intestinal intussusception close to the anastomosis (arrow) as seen on CT scan.

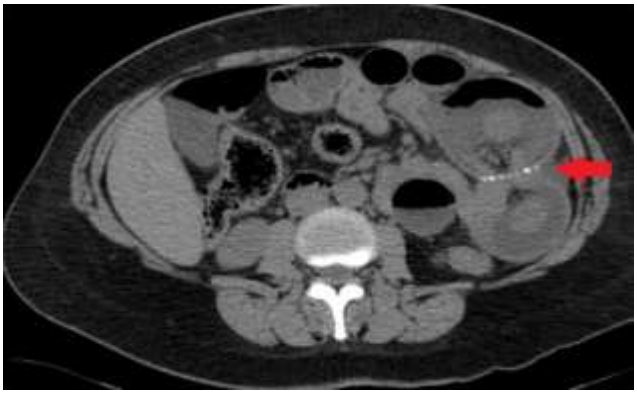

Figure 2: Roux en Y entero-enteric staple line (Arrow) and intestinal intussusception within it as seen on CT scan.

DISCUSSION

Of the bariatric surgical procedures available, Roux en Y Gastric bypass is the most common.[5] Surgical complications of this specific procedure can be divided to early (up to one month from the surgical intervention) and late complications. The latter include cholelithiasis, short bowel syndrome, dumping syndrome, bowel habits changes, post-operative ventral hernias and ulcers. Bowel obstruction is a relativly common surgical complication, as seen fron a recent study that demonstrated that close to 4% of patients suffer from Small bowel obstruction following RYGB, mostly from adhesions and internal herniation through the Peterson's or mesenteric defect.[6]

Intestinal intussusception following RYGB is a rare complication, described only in a handful of cases so far. The first description by Hocking et al [7] was published in 1991, when a patient undergoing an open RYGB for morbid obesity developed years later an ant peristaltic intestinal intussusception. Several investigators hypothesized that the cause for this rare complication is related to an altered motility of the small bowel related to the Roux en Y anastomosis (8, 9). Only two series with over 20 patients exist in the literature today. The first large series of intestinal intussusception following RYGB was published by Simper et al [10], reviewing over 15,000 RYGB patient charts with 23 patients suffering from post-operative intussceseption, of which 22 had entero-enteric intussusception. They describe 13 patients that needed emergency surgery. Though the majority of patients were originally operated in an open approach, it seems that there is no difference in recurrence rate between an open approach RYGB and a laparoscopic approach. Verban et al[11]published the largest series of patients suffering from post RYGB intestinal intussusception including 28 patients, but unlike previous reports, they distinguish between patients presenting with acute signs of small bowel obstruction and chronically obstructed patients. Daellenbach et al[12] reviewed the subject, emphasizing the need for an early recognition of this surgical complication in order to avoid bowel ischemia. Stephenson et al[13] suggested considering to resect the intrapped bowel segment in order to reduce recurrence rates but no good clinical evidence exists to supports this recommendation.

CONCLUSION

Laparoscopic RYGB for morbid obesity is a common surgical procedure. Intestinal intussusception following this surgical procedure is rare late complications that can appear acutely years after the original surgery. High clinical suspicion and a computerized tomography are needed for the diagnosis and an emergent surgical intervention, with or without bowel resection is key to avoid fatal outcomes of this rare entity.

Funding: None
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Horesh N, Forshmit E, Duhano O, Yoffe B. Intestinal intussusception after Roux-En-Y gastric bypass: case report and review of literature. Int Surg J 2016;3:1002-4.