

Small Bowel Obstruction Caused by Rare Intraluminal Hematoma Secondary to Gastric Bypass: A Case Report

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Abstract

Mechanical small bowel obstruction after gastric bypass is a common complication and the most common causes of obstruction are kinking or stenosis of the entero-enterostomy, internal herniation, adhesions, external compression on the transverse mesocolon, incarceration of an abdominal wall hernia, or intussusception. One of these complications is intraluminal hematoma, which, although rare, has dangerous consequences that can even lead to mortality. Since it is a life-threatening complication, early diagnosis and emergency intervention are important. A 39-year-old female patient with a history of previous laparoscopic bariatric surgery and current BMI=39.8 was admitted due to weight regain. After the Preoperative preparation and anesthesia consultation, laparoscopic roux-NY distalization operation was performed. During the follow-up, it was observed that the patient's general condition worsened on the postoperative 12th hour. In the IV contrast-enhanced whole abdominal CT scan, spontaneous hyperdense dense content obstructing the lumen was observed, and the radiologist stated that this hyperdense content could be primarily in favor of intraluminal bleeding and hematoma. In this case report, we wanted to emphasize the early effectiveness of radiology and surgery in the diagnosis and treatment processes of a patient with intraluminal hematoma after laparoscopic roux-NY gastric bypass. The most common location of intraluminal hematoma is the jejunojejunal anastomosis area. Symptoms may occur earlier (at the 12th postoperative hour). Whole-abdominal MDCT remains the main method of diagnosing intestinal obstruction, including small bowel obstruction resulting from intraluminal hematoma.

Keywords: Complication, computed tomography, gastric bypass, intraluminal hematoma

Introduction

Obesity is an important global health problem that especially affects the Western world. At least 300,000 deaths annually in the United States are thought to be related to obesity (1). In obesity surgery, which is increasing in parallel with the increase in obesity, laparoscopic Roux-en-Y gastric bypass (LRYGB) surgery, a restrictive and malabsorptive technique, is among the Standard procedures to achieve consistent and sustainable weightloss. Small bowel obstruction (SBO) after LRYGB is a significant complication that contributes to increased morbidity and mortality, and its incidence ranges from 0.4% to 7.45% (2). While there are many reasons in the etiology of SBO, acute mechanical intestinal obstruction caused by intraluminal hematoma (IH) after LRYGB is much rarer (upto 0.71%) (3). Multidetector computed tomography (MDCT) is the primary technique in the evaluation of symptomatic patients after LRYGB, especially in terms of detecting anastomotic leaks and SBO in the early period after surgery (4,5). MDCT after oral and IV administration of contrast material is invaluable in confirming the presence,

location, and associated complications of SBO (1). In this case report, the clinical and radiological management of early SBO occurring after distalization due to weight regain after LRYGB is presented.

Case Report

A 39-year-old female patient with a history of laparoscopic bariatric surgery, the details of which she did not know, at an external center approximately 20 years ago, applies to our hospital for revision surgery. The preoperative demographic findings of the patient, who lost weight to 65 kg in the first postoperative year but gained weight again during the follow-up periods, were measured as height: 167 cm, weight: 111 kg, and BMI: 39.8.

After the Standard procedure of internal medicine department, psychologist, dietician consultations and abdominal ultrasonography, it was understood that she had Roux-NY gastric bypass during gastroscopy performed by us. Distalization was planned for the patient, who was planned for revision surgery due to weight regain.

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Received: 11.03.2024 • **Revision:** 30.09.2024 • **Accepted:** 08.11.2024

DOI: 10.33706/jemcr.1447143

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Available online at www.jemcr.com

Cite this article as: Aliyev S, Seyit H, Dolğun İ. Small Bowel Obstruction Caused by Rare Intraluminal Hematoma Secondary to Gastric Bypass: A Case Report. Journal of Emergency Medicine Case Reports. 2025;16(1): 1-3

Preoperative preparation and anesthesia consultation was performed, and then laparoscopic roux-NY distalization operation was performed. The operation was completed without any problems, the patient was woken up and sent to the ward.

In the postoperative follow-up, her vital signs were found to be stable and her drain was 50 cc serohemorrhagic. During the follow-up, it was observed that the patient's general condition worsened on the postoperative 12th hour and that she was agitated, tachypneic, normotensive and normocardic. Since distension was also detected during the abdominal examination, a complete blood count and whole abdominal CT with intravenous (IV) contrast were planned.

In the whole abdominal CT scan with IV contrast, significant dilatation was observed in the remnant stomach, duodenum and jejunal loops proximal to the jejunojejunostomy anastomosis, and it was reported that spontaneous hyperdense dense content obstructing the lumen was observed in the lumen of the jejunal loops in the left upper quadrant (Figure-1). It was stated by the radiologist that the spontaneous hyperdense content mentioned may be primarily in favor of intraluminal bleeding and hematoma, and the dilatation in the remnant stomach and duodenum may have developed secondary to the obstruction caused by the hematoma.

In the exploration after laparotomy performed under emergency conditions with these preliminary diagnoses; The

jejunojejunostomy anastomosis was intact, the alimentary leg and common channel jejunum loops were normal, but intraluminal hematoma and dilatation were observed in the biliary leg. The stum padjacent to the anastomosis was opened and intraluminal hematoma drainage was performed using the milking method from this area (Figure-2) and the anastomosis line was checked. The hemorrhagic area on the anastomosis line was primarily sutured. The patient's perioperative general condition improved and the operation was completed with no additional pathology detected.

The patient was followed up as extubated in the postoperative intensive care unit, and two erythrocyte replacements were performed during this two-day hospitalization. The patient's general condition improved and she was discharged on the 7th day after the follow-up and treatment was completed.

Discussion

Mechanical small bowel obstruction after LRYGB is a common complication occurring in 0.4% to 7.45%, and the most common causes of obstruction are kinking or stenosis of the entero-enterostomy, internal herniation, adhesions, external compression on the transverse mesocolon, incarceration of an abdominal wall hernia, or intussusception (6). Intraluminal hematoma causing proximal small bowel obstruction at the anastomotic site after LRYGB remains an unusual event.

In our literature review, it was stated that this rare complication occurs with in the second to fifth day following the gastric bypass procedure (6,7). However, in our patient, it was noticed in the first 12 hours and treated quickly. With this case report, we would like to emphasize once again that close follow-up of patients in the early postoperative period is important in such surgeries.

Although close follow-up is performed, the symptoms of these patients may not present as classic small bowel obstruction symptoms. There may be findings that may suggest obstruction, such as nausea, vomiting, tachycardia, and abdominal pain, or there may be no specific symptoms (6). However, it has been mentioned in the literature that Tachycardia and the feeling of "dooms day is approaching" are among the common symptoms of intraluminal hematoma causing obstruction in the jejunojejunostomy area (8). Although our patient's findings were not specific, the presence of agitation was an indication that something was wrong. An attempt was made to make a diagnosis by performing a CT scan with IV contrast under emergency conditions.

It has been stated in the literature that upper gastrointestinal examination is very valuable in the evaluation of symptomatic patients after Roux-en-Y gastric bypass, especially in terms of detecting anastomotic leaks and SBO within 4 months after surgery (1). MDCT after oral

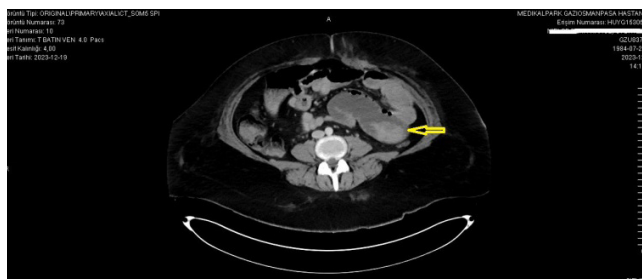


Figure 1. Itraluminal hematoma and proximal dilatation



Figure 2. Evacuation of intraluminal hematoma by milking method

and IV administration of contrast material allows optimal evaluation of postoperative anatomy and complications, including SBO. In our patient, CT was very useful in making the diagnosis, as the clinical symptoms did not lead to a specific diagnosis. The reason why oral contrast was not given to our patient was purely to save time.

After laparotomy, a hemorrhagic area in the jejunojejunostomy anastomosis line and an intraluminal hematoma in the biliary leg were detected in the patient's CT scan, as mentioned. When we look at the literature, it is stated that intraluminal hematoma can most commonly occur in or near the anastomosis area, as in our patient (3,6,7,9).

Obstructions caused by intraluminal hematoma can lead to serious consequences. It must be intervened urgently as it may cause not only intestinal perforation and peritonitis, but also mortality. There are treatment recommendations for both laparoscopic and laparotomy in the literature (3,7,10). However, if clinical suspicion is high, the idea that exploration should be continued to prevent subsequent perforation and peritonitis prevails, even if imaging findings are suspicious (8-11). In parallel with the literature, we performed a laparotomy in our patient, opened the stump adjacent to the anastomosis, and performed intraluminal hematoma drainage from this area using the milking method.

Conclusion

In conclusion, although acute mechanical intestinal obstruction (SBO) caused by intraluminal hematoma after LRYGB is rare, it should be treated immediately due to its life-threatening character. The most common location of IH is the jejunojejunal anastomosis area. Symptoms may occur earlier. Whole-abdominal MDCT remains the main method of diagnosing intestinal obstruction, including SBO resulting from intraluminal hematoma.

Conflict of Interest

No conflicts of interest between the authors and/or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Informed consent was obtained from the patient for this case report.

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