

Small Bowel Obstruction Due to Food Bolus Impaction in a Post Gastrojejunostomy Patient: A Case Report

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ABSTRACT

Small bowel obstruction (SBO) is a common surgical emergency that can result from various causes, including adhesions, hernias, tumors, and foreign bodies. SBO caused by food bolus impaction is a rare but important clinical condition, particularly in patients with a history of gastrointestinal surgery. This case report presents a 56-year-old male with a history of gastrojejunostomy and bypass surgery in 2010, performed for benign duodenal stenosis, who presented with a small bowel obstruction due to food bolus impaction. The patient complained of a two-day history of constipation, colicky abdominal pain, nausea, vomiting, and reduced urine output. Despite initial conservative management for suspected adhesive intestinal obstruction, exploratory laparotomy revealed food bolus impaction without adhesions. Bowel decompression and food bolus removal were performed, and the patient recovered uneventfully. This case report highlights the challenges in managing SBO due to food bolus impaction in a patient with prior gastrointestinal surgery and discusses the importance of long-term dietary adjustments in preventing recurrence.

KEYWORDS: Small bowel obstruction, food bolus impaction, gastrojejunostomy, bypass surgery, slow transit, dietary management.

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INTRODUCTION

Small bowel obstruction (SBO) is a frequent cause of abdominal emergencies, accounting for up to 20% of admissions for acute abdominal pain in surgical wards. SBO can arise from a variety of etiologies, including adhesions, hernias, tumors, and foreign bodies. Although adhesions are the most frequent cause of SBO, particularly in patients with a history of abdominal surgery, food bolus impaction is a relatively rare phenomenon, particularly in patients without predisposing anatomical or functional abnormalities (1). The incidence of food bolus impaction is higher in individuals with altered gastrointestinal anatomy, such as those who have undergone gastric bypass procedures (2).

Gastrointestinal surgeries, particularly bypass surgeries such as gastrojejunostomy, can significantly alter the normal anatomy and function of the digestive system, leading to complications like delayed gastric emptying, altered gastrointestinal motility, and impaired food transit time. In

patients with a history of gastric bypass procedures for benign duodenal stenosis, impaired motility and changes in the natural flow of food through the digestive system increase the risk of impaction. Slow food transit time allows larger food particles to accumulate, which can lead to obstruction (3).

In this case report, we present a 56-year-old man who developed SBO due to a food bolus impaction following a bypass surgery with gastrojejunostomy performed several years prior. The case underscores the intricate relationship between previous surgeries and subsequent gastrointestinal function, particularly concerning delayed gastric emptying and altered peristalsis. The role of the gastrojejunostomy in this patient's condition suggests that postoperative anatomical alterations can lead to slowed transit time, incomplete digestion, and increased susceptibility to obstruction. This case highlights the need for increased awareness of SBO as a potential complication in patients

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with a history of gastrointestinal surgeries, and it provides an opportunity to discuss dietary modifications that could prevent future episodes of food bolus impaction.

CASE PRESENTATION

A 56-year-old male patient was admitted to our hospital with a two-day history of constipation, colicky abdominal pain, abdominal distension, nausea, vomiting, and reduced urine output. He had a significant surgical history, including laparotomy and gastrojejunostomy performed in 2010 for benign duodenal stenosis. On admission, his vital signs were stable with a blood pressure of 120/80 mmHg, pulse rate of 82 beats per minute, respiratory rate of 18 breaths per minute, and temperature of 37°C. Physical examination revealed a distended abdomen with tenderness localized to the right iliac fossa (RIF) and umbilical region. Bowel sounds were slightly increased, but there were no signs of peritonitis, such as guarding or rigidity.

Laboratory investigations showed normal complete blood counts and electrolyte levels, with mildly elevated urea and creatinine levels indicating mild dehydration. A chest X-ray revealed a minimal left-sided pleural effusion and bilateral linear atelectasis, while a plain abdominal X-ray demonstrated multiple dilated loops of small bowel, measuring 5–6 cm in diameter, with multiple air-fluid levels, suggestive of small bowel obstruction. Abdominal ultrasonography confirmed small bowel loop distension with ineffective to-and-fro peristalsis, indicating mechanical bowel obstruction.



Figure 1. Small bowel obstruction due to impaction of food bolus at ~8 inches away from ileocaecal junction.

Based on the clinical presentation and imaging findings, a diagnosis of adhesive intestinal obstruction was made. The patient was initially managed conservatively with nil by mouth (NBM), Ryle's tube insertion for decompression, intravenous fluids, and antibiotics. Despite these measures, the patient's abdominal distension worsened over the following three days, with an increase in abdominal girth

and the absence of bowel movements or flatus. Given the failure of conservative treatment, the decision was made to proceed with an exploratory laparotomy.

During surgery, the small bowel was found to be significantly dilated, with an obstruction located approximately 8 inches proximal to the ileocecal junction. The obstruction was caused by a 2-inch-long impaction of undigested food bolus (Figure 1). There were no adhesions or other pathological findings related to his previous surgery. Bowel decompression and removal of the food bolus were successfully performed (Figure 2, 3 and 4). The patient's postoperative course was uneventful, and he was gradually transitioned from a liquid to a solid diet. He was discharged on the 12th postoperative day and then reported no further issues during follow-up, with normal bowel function and the ability to tolerate a regular diet.



Figure 2. Intraoperative finding of food bolus impaction and removal of food bolus via enterotomy.

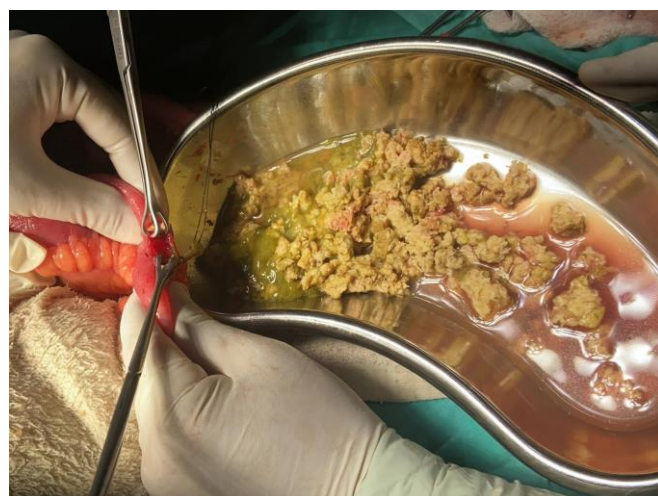


Figure 3. Intraoperative finding of food bolus impaction and removed food bolus pieces.

DISCUSSION

Food bolus impaction is an uncommon cause of SBO, particularly in patients with a history of gastrointestinal

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surgery. Gastrojejunostomy alters the normal digestive process by bypassing part of the stomach and duodenum, often leading to delayed gastric emptying and ineffective digestion. This anatomical change can impair the stomach's ability to break down large food particles adequately, predisposing to food bolus formation. In this case, the patient's previous surgery for benign duodenal stenosis likely contributed to poor digestive function, resulting in delayed transit time and inadequate digestion of solid foods, eventually leading to food bolus impaction.

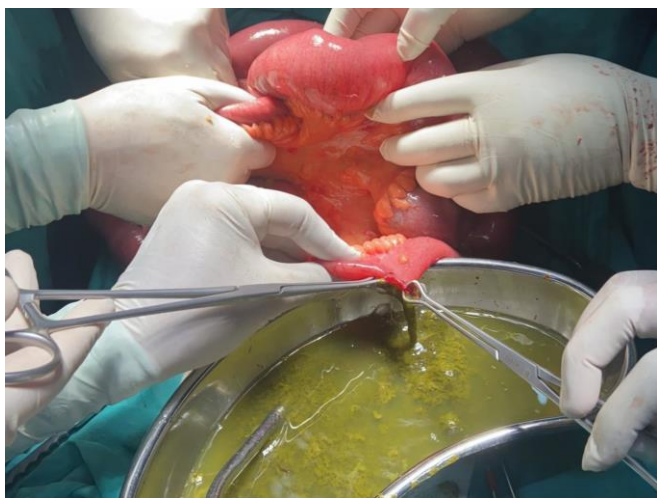


Figure 4. Intraoperative finding of small bowel obstruction and procedure of bowel decompression.

Several studies have documented the association between gastrojejunostomy and impaired gastric motility, which can result in poor mixing of gastric contents, delayed emptying, and the formation of bezoars or undigested food masses. The reduced digestive efficacy in patients with such surgical histories can cause a slower transit of food through the gastrointestinal tract, increasing the risk of obstruction, particularly from large, undigested food particles, and particularly in the narrower segments of the distal small intestine. In this patient, the obstruction occurred near the ileocecal junction, a common site for impactions due to the narrowing of the bowel lumen. The absence of adhesions or other anatomical abnormalities in this patient further supports the hypothesis that the primary mechanism of obstruction was the formation of an undigested food bolus due to altered motility and digestion.

Management of SBO typically begins with conservative measures, including bowel rest, nasogastric decompression, and intravenous fluids to correct electrolyte imbalances and dehydration. In many cases, these measures are sufficient to relieve the obstruction, particularly when it is due to adhesion or partial obstruction. However, as demonstrated in this case, complete mechanical obstruction due to a food bolus often requires surgical intervention, especially when conservative treatment fails.

Postoperative care should focus not only on ensuring recovery from surgical intervention but also on long-term strategies to prevent recurrence. Dietary modifications are crucial for patients with a history of gastrointestinal surgeries to prevent the recurrence of SBO. These patients are often advised to follow a soft or liquid diet initially, gradually transitioning to solid foods as tolerated. The ingestion of small, frequent meals and thorough chewing are important strategies to aid digestion and prevent the formation of food boluses. In addition, avoiding foods that are difficult to digest, such as fibrous vegetables and large pieces of meat, can help minimize the risk of future obstruction.

This case highlights the importance of recognizing food bolus impaction as a potential cause of small bowel obstruction in patients with previous gastric surgeries. Early diagnosis and appropriate intervention, including dietary modifications, are essential to prevent complications and ensure favorable outcomes. The role of timely surgical intervention remains critical in the management of such patients when conservative measures fail. Future dietary recommendations for such patients should focus on soft, easy-to-digest foods and lifestyle adjustments to promote smoother digestion and prevent recurrence of obstruction.

CONCLUSION

This case highlights the potential for food bolus impaction to cause SBO in patients with altered gastrointestinal anatomy following surgery. Prompt recognition and appropriate management are essential to prevent complications such as bowel ischemia and perforation. For patients with a history of bypass surgery or other gastrointestinal procedures, long-term dietary adjustments are important to maintain proper digestive function and avoid recurrent obstructions. This report adds to the growing body of evidence that emphasizes the importance of individualized dietary management in the postoperative care of patients who have undergone gastrointestinal surgeries.

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

REFERENCES

- I. Albostani, A., Kfelati, F., Alsaadi, W., Faraman, R.A. and Farman, A. 2021. Small bowel obstruction due to a meat bolus bezoar: the second case report in literature. *Annals of Medicine & Surgery*, 2024, 86: 1139-1143.

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- II. Porter, D.J., Cosgrove, C. and Middleton, E. 2015. An Unusual Case of Small Bowel Obstruction. *J Med Cases*. 2015, 6(11): 517-519.
- III. Ullah, S.M.J. and Kawsar, K.A. 2009. Small Bowel Phytobezoar Obstruction in a Post Gastrojejunostomy Patient - A Case Report. *JBCPS*, 2009, 27(2): 99-102.
- IV. Naqvi, R.H., Gupta, A., Khokher, B., Dhar, S. and Gupta, S. 2022. Prospect of food bolus obstruction in a tertiary care hospital. *Int Surg J*. 2022, 9(9): 1572-1576.
- V. Kang, J.K. and Sun, Z. 2023. Food Bolus Ileus as a Cause of High-Grade Bowel Obstruction: A Case Report. *J Surg Res*, 2023, 6(1): 137-139.
- VI. Wang, S., Yang, X. and Zheng, Y. 2021. Clinical characteristics and indications for surgery for bezoar-induced small bowel obstruction. *J Int Med Res*, 2021, 49. doi:10.1177/0300060520979377
- VII. Malhotra, S. 2023. An unusual case of meat bolus impaction in an adult. *Int J Otorhinolaryngol Head Neck Surg*, 2023, 9: 235–236.