



Upper Gastrointestinal Obstruction Caused by Gastrolithiasis After Laparoscopic Roux-en-Y Gastric Bypass: a Case Report

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Background

Laparoscopic Roux-en-Y gastric bypass (LRYGB) is one of the most common bariatric surgeries performed worldwide [1]. When a patient who has undergone this procedure develops symptoms of upper gastrointestinal obstruction, a stricture of the gastrojejunostomy site is considered first. We here present a rare case of symptoms of upper gastrointestinal obstruction due to gastrolithiasis after LRYGB.

Case Report

A 46-year-old man with a body mass index of 36.5 kg/m² had severe diabetes and underwent LRYGB at our hospital. The LRYGB procedure and postoperative recovery were smooth, and the patient was discharged on postoperative day 4. He was a heavy smoker, but he quit smoking after the surgery. After 1 week of continuously drinking alcohol, he began to complain of vomiting. He was only able to drink small amounts of water slowly and could not eat anything at approximately 3 months postoperatively.

An upper gastrointestinal series using meglumine diatrizoate was performed to obtain a diagnosis. The contrast medium could

not pass through the anastomosis (Fig. 1a). The patient was diagnosed with anastomotic stenosis and prepared for endoscopic balloon dilatation. However, a gastrolith blocking the gastrointestinal anastomosis was found in the stomach during the gastroscopic examination (Fig. 1b); marginal ulcers and anastomotic edema were also found (Fig. 1c). After detailed questioning, the patient reported that he had eaten many haws before he developed the symptoms of upper gastrointestinal obstruction. Soda water was used to relieve the symptoms of the gastrolith, which was then excreted with feces after drinking about 2000 ml of soda water.

Discussion

The mixture of haws with gastric acid can induce gastrolith formation. The amount of gastric acid from the gastric pouch is significantly reduced after RYGB [2]. In the present case, the patient ate many haws within a short time, and the small gastric pouch did not have enough time to empty. Moreover, alcohol stimulated the secretion of gastric acid. These factors led to the gastrolith formation in this patient. Alcohol also led to the marginal ulcer and anastomotic edema, and these factors made it

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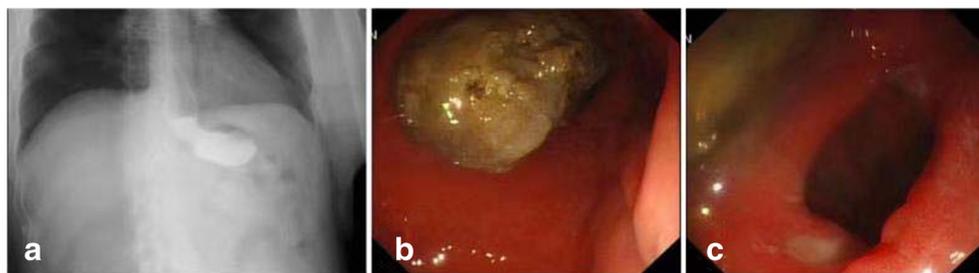
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Fig. 1 **a** Upper gastrointestinal series with meglumine diatrizoate. **b** The gastrolith blocked the gastrointestinal anastomosis. **c** Marginal ulcers and anastomotic edema were observed



difficult for the gastrolith to be excreted from the gastric pouch. The treatment of gastroliths includes medication (sodium bicarbonate, chymotrypsin, and others), endoscopy, and surgery. This patient's gastrolith was successfully excreted after treatment with soda water. However, the risk associated with this treatment is the development of an intestinal obstruction after the gastrolith enters the small intestine.

Conclusion

Gastroscopy is the gold standard technique for diagnosing gastrointestinal anastomosis strictures. Maintenance of healthy dietary and lifestyle behaviors is very important to avoid certain complications after bariatric surgery.

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Compliance with Ethical Standards

Conflicts of Interest The authors declare that they have no conflict of interest.

Statement of Human and Animal Rights This study was performed in accordance with the principles of the Declaration of Helsinki and was approved by the Ethics Committees of Beijing Friendship Hospital, Capital Medical University.

Informed Consent Informed consent was obtained from the patient described in this report.

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