

Treatment of excessive weight loss after bariatric surgery – case report

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ABSTRACT

Bariatric surgeries help overcome severe obesity and its complications. Due the increase in numbers of obese patients, these procedures are gaining in popularity. In this article we report

the case of patient operated on twice for obesity, whose treatment was complicated by excessive weight loss.

Keywords: obesity; malnutrition; bariatric surgery.

INTRODUCTION

Bariatric surgeries are a most effective method of fighting severe obesity and its complications [1]. With the continuous increase in the number of obese individuals in the population [2], the procedures have been gaining in popularity [3]. However, there are a number of complications associated with bariatric surgeries [4, 5]. One such rare complication is excessive weight loss.

CASE REPORT

A 51-year-old patient, previously operated on twice for obesity, was admitted to the Department due to progressive malnutrition and an excessive weight loss of over 50% in a year. The first of the 2 surgeries, a sleeve gastrectomy, was performed in 2017, when the patient's body mass index (BMI) was 58.1 (body weight 166 kg). Sleeve gastrectomy is a surgical procedure during which the lesser sac is placed along the greater curvature of the stomach via ligation of the gastroepiploic vessels. Dissection then proceeds in the cephalad direction to the left pillar of the hiatus. A linear cutting stapler is then introduced along with a per-oral 32 to 40 French bougie. The stapler then fires along the length of the bougie, approx. 6 cm proximal to the pyloric valve, until the greater curvature of the stomach is completely transected. The stomach is transformed into a gastric pouch of approx. 20% of the original stomach volume and total capacity of 100–150 mL [6]. Following this surgery, due to an unsatisfactory weight loss (decrease to 104 kg), the patient was qualified for mini-gastric bypass revision surgery and underwent the procedure in June 2020. Mini-gastric bypass constructs a lesser curvature gastric conduit after separating the stomach with a cutting linear stapler and an anastomosis to an anti-colic loop of jejunum 150–200 cm distal to the trietz ligament (Fig. 1) [7].

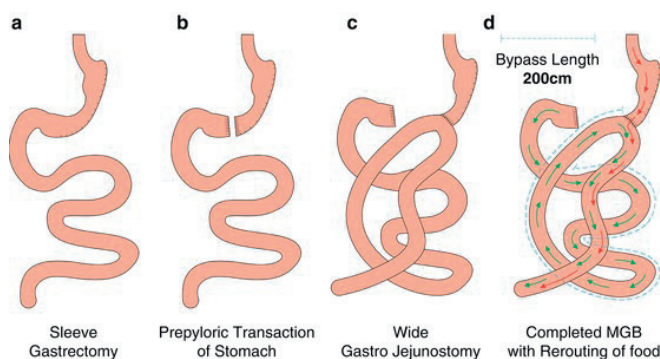


FIGURE 1. Diagram of conversion from sleeve gastrectomy to mini gastric bypass [8]

As a result of both operations, the patient's nutritional status deteriorated, and reported chronic diarrhea and weakness. Upon admission to the Department in 2021, the patient's BMI was 18.8, with a body weight of 53 kg. In laboratory tests, the total protein concentration was 4.93 g/dL (min. 6.4, max. 8.3), albumin 2.03 g/dL (min. 3.5, max. 5), total cholesterol levels 95.9 mg/dL (min. 115, max. 190). After admission, the patient was prescribed a high-protein diet. Additionally, she was given parenteral treatment and anti-diarrheal medications. The patient was discharged on the 7th day after admission, her general condition improved. She was instructed to follow a high-protein diet, take Nutramil and continue outpatient treatment in the surgical clinic. Two weeks after the patient was discharged from the Department, her general condition deteriorated, which was observed during the outpatient follow-up visit. It was decided to re-admit the patient to the Department. On admission, the patient's BMI was 19.42, with a body weight of 54.8 kg, total protein concentration 4.03 g/dL (min. 6.4, max. 8.3), albumin 1.89 g/dL (min. 3.5, max. 5), total cholesterol levels 85.4 mg/dL (min. 115, max. 190).

At the 2nd admission, the patient again reported weakness. Operative was qualified for a revision operation. However, due

to the patient's poor nutritional status, the surgery was temporarily postponed and nutritional treatment, including parenteral nutrition, was introduced. After 2 weeks of nutritional treatment, the following parameter levels were achieved: total protein 3.58 g/dL (min. 6.4, max. 8.3), albumin 1.86 g/dL (min. 3.5, max. 5), total cholesterol 113 mg/dL (min. 115, max. 190).

We performed the procedure of restoring gastrointestinal continuity: the gastrointestinal anastomosis was closed and the 2 separated parts of the stomach were re-anastomosed after the mini-gastric bypass surgery – the anatomical condition after the 3rd surgery was reconstructed similar to those after the sleeve gastrectomy. On the 2nd day after the surgery, a leak test was performed and did not reveal any anastomotic leakage. An X-ray examination revealed fluid levels, raising the suspicion of an obstruction, so we performed a colonic transit time test which excluded gastrointestinal obstruction. From the 3rd day postsurgery, the patient was given an oral diet, which she tolerated well, and the diet was gradually expanded. On the 5th day after the procedure, the results of laboratory tests improved: total protein 4.69 g/dL (min. 6.4, max. 8.3), albumin 3.08 g/dL (min. 3.5, max. 5), total cholesterol 90.7 mg/dL (min. 115, max. 190). The patient was discharged home in a good general condition on the 7th day postsurgery. The patient was instructed to attend a follow-up visit at the surgical clinic, follow a high-protein diet, and take Nutramil.

At the postsurgery follow-up visit, the patient denied further weight loss and diarrhea. One month after the operation, at the next follow-up visit, there was further improvement in the patient's nutritional status: total protein concentration 5.6 g/dL (min. 6.4, max. 8.3), albumin 3.49 g/dL (min. 3.5, max. 5), total cholesterol level 203.9 mg/dL (min. 115, max. 190). By that time, the patient's weight had increased to 66 kg (BMI = 23.38).

DISCUSSION

This case shows the importance of strict monitoring of patients following bariatric surgery. As the process of absorbing nutrients deteriorates due to the reduced surface area of the intestines involved in nutrient absorption, bariatric surgery patients should be treated as potentially malnourished, even when their BMI is correct [9, 10]. Even despite a correct qualification to surgery and a correctly performed procedure, malnutrition may appear as a complication of bariatric surgery because of variable jejunal absorption. At the same time there is no data about procedures allowing to predict malnutrition before surgery. To assess the patient's condition accurately and objectively, special attention should be paid to regular monitoring of the patient's weight correlated with the results

of laboratory test evaluating the nutritional status parameters, during long-term outpatient follow-up [11]. New scientific papers describing a revision to minigastric bypass procedures are still being published. Their content seems to confirm the validity of revisional procedures in case of malnutrition after a minigastric bypass [12]. The current lack of standardized guidelines and studies makes it difficult to adequately treat secondary malnourished patients and may pose a challenge in clinical practice. Individual manipulation of the length of the intestine which are excluded from digestion after the mini gastric bypass, may be a promising method of prevention of malnutrition in bariatric patients and also is an interesting area for future research. In order to determine the actual scale of the problem and to develop uniform standards of conduct, the issue should be researched and analyzed more extensively.

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