

New method of the treatment of overweight and obese patients

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Abstract

The Clinic of the Bashkir State Medical University presents data collected based on 134 different bariatric surgical procedures in patients suffering from obesity. An original technique of laparoscopic gastroplication is described, which makes it possible to reduce the risks of developing postoperative complications. It is simple, low risk and economically efficient. The method was clinically tested and applied in 14 patients with morbid obesity. The majority of patients (83.3%) achieved a persistent decrease in body weight. Prospects for the development of the method are seen in the specification of indications and the selection of patients for surgery. Further study of the results of the use of laparoscopic gastroplication will determine its place among restrictive methods for weight loss.

Key words: *morbid obesity, bariatric surgery, gastroplication*

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According to published data, WHO experts pay serious attention to obesity as a non-infectious epidemic of the 21st century. The rapid increase in the number of obese patients explains the need to use a powerful resource of surgical methods to correct pathological changes associated with obesity. Bariatric surgery is currently the most effective way in the fight against obesity, significantly reducing both the incidence of diseases associated with obesity and the mortality of patients. In addition, it can significantly reduce financial costs for the treatment of diseases associated with obesity [1,2,4]. More than 300 thousand bariatric surgeries are performed in the world annually, but the assessment of their effectiveness is very controversial. After some complex techniques, lifelong medical supervision and lifelong intake of vitamins, iron, calcium, etc. are required to prevent the consequences of deficiency of the corresponding micronutrients (anemia, osteoporosis, etc.) and control the corresponding biochemical, instrumental and clinical parameters. In case of insufficient final result or late complications, repeated operations are possible [3,6].

Restrictive surgeries are not associated with the risks of late complications of the malabsorption method associated with vitamin deficiency and anemia and are characterized by higher rates of postoperative quality of life. [1,3]. At the same time, analyzing the postoperative results and assessing the average value of overweight loss, many authors note that the effectiveness of surgery is mainly not related to the type of technique. While adequate weight loss always occurs, patient cooperation is key to its effectiveness. Long-term results have shown that weight recovery only occurs in a few cases, due to the temporary effect of restrictive methods and discontinuation of diet and exercise. Patients need a potential weight loss trigger, like bariatric surgeries, which are effective in maintaining their diet for 4 years [2,4,5]. The essence of the technique is to reduce the volume of the stomach due to intussusception of part of the gastric wall into its lumen (creating a fold due to corrugated serous-muscular sutures) along the entire stomach [6]. At the same time, the volume of the stomach is significantly reduced, and the patient begins to experience a feeling of satiety when eating much faster. Based on own experience, the author concludes that laparoscopic gastric plication is as effective as other restrictive weight loss methods. Its advantages: much cheaper, fewer complications (0.6%), only 31% of cases with re-gain in the last 12 years, simple recovery plan. If necessary, the method is reversible and also does not exclude the use of additional methods of malabsorption (two-stage surgery) in case of insufficient weight loss [1].

We have been treating patients with morbid obesity in the clinic of surgical diseases and new technologies of the Bashkir State Medical University since 2004, during this time a variety of invasive bariatric procedures were performed in 134 patients whose BMI exceeded 35 kg / m². We have long-term observations of the results of vertical gastroplasty (21), laparoscopic gastric banding (10), gastric bypass surgery by the Fobi type (23), and various reconstructive interventions (11). At the same time, an intragastric balloon was installed in 28 patients; in 19 cases it was the primary stage before one of the surgical interventions. The remaining 9 patients achieved a satisfactory weight and were able to develop a "eating behavior" that allowed them to

stabilize their body weight. In recent years, preference has been given to the "sleeve" resection of the stomach, which is performed mainly in the laparoscopic version (57). Unfortunately, despite the preventive measures taken, we had 2 cases of death (1.5%) from acute myocardial infarction in the early postoperative period. Laparoscopic gastric plication is an alternative to gastric sleeve and is aimed at reducing the volume of the stomach without changing the path of food passage through the gastrointestinal tract. We have proposed a new method of laparoscopic gastroplication in the surgical treatment of patients with morbid obesity. The technical result is achieved by the fact that the stomach, after mobilizing it along the greater curvature using a special instrument - an intestinal clamp, is rolled up into a tube in the form of a "roll" on a calibrated gastric probe to a volume of 50 ml and fixed with non-absorbable suture.

The method is carried out as follows. The patient undergoes laparoscopy. For access to the abdominal cavity, 5 ports were used, through which trocars (3-10 mm, and 2 with a diameter of 5 mm) were inserted. A gastric tube with a diameter of 12 mm is inserted into the stomach. Mobilization of the stomach along the greater curvature to the region of the gastroesophageal junction was carried out using a LigaSure apparatus or a Harmonic ultrasonic scalpel. With the help of special laparoscopic instruments, the surgeon grasps the greater curvature with a clamp, and rolls the stomach wall into a tube in the form of a "roll". After that, the formed gastric tube is fixed with a continuous suture on the calibration gastric probe, while the volume of the lumen of the formed stomach is 50 ml. After the imposition of serous-muscular sutures on the stomach with non-absorbable suture material, the probe is removed and a control endoscopic examination is performed. Instruments are removed, laparoscopic wounds are sutured.

The method was applied in clinical practice in 14 patients with morbid obesity. In the considered group, there were 5 men and 9 women. The main indication for surgery was BMI > 35 kg/m². We consider the selection of patients for this procedure very important - patients should be with pronounced motivation, ready for continuous adherence to the diet and physical activity during the observation period after the operation. Of these, 5 patients underwent combined interventions (4-hernia repair with lipodermectomy, 1-cholecystectomy). In all cases, no intraoperative complications were noted. The postoperative course is smooth. The duration of the operation is about 60-80 minutes. In most cases -12 (83.3%), sustained weight loss was achieved. It should be noted that 2 (16.7%) patients failed to achieve a stable result. After a decrease in body weight for 3 months, negative dynamics was noted, the patients began to gain weight again.

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