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## EXCESS BODY WEIGHT AS A FACTOR IN THE DEVELOPMENT OF GASTROESOPHAGEAL REFLUX DISEASE

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**Summary.** Certainly, when choosing a surgical intervention, a comprehensive assessment of the patient is necessary, taking into account all the indications and contraindications for PRZh and GSH, especially such as diabetes, smoking, pregnancy planning, etc. Also, the patient's wishes and the economic component should be taken into account in a complex.

**Key words:** bariatric surgery, gastroesophageal reflux disease, choice of surgery.

**Relevance.** Currently, gastroesophageal reflux disease (GERD) is one of the most common diseases in gastroenterology. The reasons for the increase in prevalence are considered to be changes in the diet of the population, which, together with the increasing prevalence of obesity, leads to an increase in morbidity [1,3,4,20,21,22]. The complexity of the problem of treating gastroesophageal reflux disease is not so much in stopping the existing inflammatory changes in the esophageal mucosa, but in eliminating the underlying disease that caused the development of these changes. And if we take into account that conservative therapy, even with the use of modern drugs, according to most authors, gives only a temporary effect, it becomes obvious that the main treatment is surgical. General etiological factors and pathogenetic mechanisms of gastroesophageal reflux disease and obesity contribute to an increase in the incidence of excess body weight in patients with GERD, more than the average in the population [17,19,27,28]. Every second patient with excess weight or obesity has signs of gastroesophageal reflux disease [12,14,16,18,29]. The leading place in its pathogenesis is occupied by a violation of the antireflux barrier function, which can occur due to a primary decrease in the tone of the lower esophageal sphincter (LES), its structural changes (for example, with concomitant hernia of the esophageal opening of the diaphragm, excess body weight) an increase in the number of spontaneous relaxations. As a result of excess body weight, the frequency of GERD symptoms increases and the risk of gallstone disease and other forms of

gastrointestinal pathology associated with metabolic syndrome increases [23,24,25,26].

Patients with an increased body mass index and complaints of heartburn and belching constitute a risk group for the development of GERD [1,2,6,8,10]. The selection of patients with excess body weight and obesity is due to the fact that, firstly, their excess weight is in itself a predisposing factor to the development of GERD. Secondly, the course of the disease in such patients is usually more severe, which leads to insufficient prediction of relapses of the disease and treatment of complicated gastroesophageal reflux disease, and the currently used methods of surgical treatment of GERD do not always lead to the cure of patients with this pathology, which makes the problem of surgical treatment very urgent. Therefore, any attempt to develop new methods of treatment and prevention of this severe pathology seems to be very relevant. Despite the advantages of laparoscopic surgery for gastroesophageal reflux disease, some issues remain unresolved: assessment of surgical trauma, cost-effectiveness of the operation, feasibility of choosing a method of surgical treatment in patients with excess body weight and selection of patients. In light of recent implementations, these tasks are particularly relevant. However, attempts to solve this complex problem by using any modified interventions do not always give the desired result and therefore are not widely used. Thus, at present, issues of laparoscopic surgery for gastroesophageal reflux disease in patients with excess body weight require further development, both in tactical and technical aspects, in order to improve the results of surgical treatment. This work is a continuation of research in this direction.

**Purpose of the study.** Development of surgical treatment methods for overweight patients with gastroesophageal reflux disease that have high clinical efficacy and the lowest incidence of complications and relapses.

**Materials and methods.** The present study was based on observations of 123 patients who underwent surgery for gastroesophageal reflux disease in the Clinic of Surgical Diseases and New Technologies based at TMA and BukhMI No. 21 from 2019 to 2022. All patients were divided into two groups. The main group consisted of 78 (65.0%) patients with gastroesophageal reflux disease accompanied by overweight or obesity. Of these, 40 (51.3%) patients underwent laparoscopic surgery using the proposed method, and 38 (48.7%) patients underwent Nissen fundoplication. The control group included 42 (35.0%) patients with normal body weight, who also underwent planned surgical treatment of GERD. Of these, 23 (54.8%) patients underwent surgery using the proposed method, and 19 (45.2%) patients underwent

Nissen fundoplication. A specially developed observation chart was used for an in-depth study of the anamnesis and features of clinical symptoms. A study of the body mass index was also conducted to establish the degree of excess body weight and diagnose obesity. Excess weight was determined by the body mass index (BMI) proposed by WHO.  $BMI (kg / m^2) = Body\ weight (kg) / Height\ m^2$ . We considered excess weight to be the weight that exceeded the normal weight according to the tables and body mass indices by more than 10%. Of the 78 people in the main group, 44 (56.4%) were overweight (exceeding normal values by 10 to 29%) and 34 had obesity of varying degrees (exceeding normal values by more than 29%), with 25 (32.0%) patients having grade 2 obesity (exceeding normal weight by 30 to 49%) and 9 (11.6%) having grade 1 obesity (exceeding normal weight by 50 to 99%). There were 73 women (60.8%) and 47 men (39.2%). A history of 5 years or more was observed in 40 (33.4%) patients; a history of 3-4 years - in 48 (40.0%); from 2 to 3 years - in 22 (18.3%) and from 1 to 2 years - in 10 (8.3%) patients. The majority of patients in both groups were women: In the main group, there were 60 women (77.0%) and 18 men (23.0%). In the control group, there were 13 women (31.0%) and 29 men (69.0%). Most women were overweight and had multiple pregnancies in the past. The overweight men examined had a profession associated with constant physical activity. As our studies have shown, patients with gastroesophageal reflux disease often have overweight or obesity, while its clinical picture is characterized by its uniqueness and frequent complications. The indications for surgery in all patients were as follows: GERD complications 16.7%, concomitant pathology 28.3%, ineffectiveness of conservative therapy 55.0%. In the main and control groups, the combination of gastroesophageal reflux disease with SPYUD was detected in 100 (83.3%) patients; with cholelithiasis in 43 (35.8%) patients; with gastric ulcer and duodenal ulcer in 21 (17.5%) patients; with abdominal wall hernias in 9 (7.5%) patients; chronic nonspecific lung diseases were observed in 18 patients (15.0%). The excess of these total numbers of subjects is explained by the frequent combination of several diseases in the same patient. Isolated GERD was rare and was detected only in 30 (25%) overweight patients. The cause of the disease, as a rule, was the "primary" insufficiency of the lower esophageal sphincter, since no signs of anatomical changes in the area of the esophageal opening of the diaphragm were revealed during instrumental examination. Of the total number of the above-mentioned patients with excess body weight, only (35.0%) sought treatment at the clinic with a diagnosis of GERD. The referrals of the remaining patients included various diseases for which they had been unsuccessfully treated for a long time by doctors of various specialties.

Patients with excess body weight and obesity constitute a special contingent of patients, since the polymorphism of the clinic and the course of GERD in them under the guise of and in combination with other concomitant diseases cause certain difficulties in correct and timely diagnosis. In this regard, all patients underwent a comprehensive examination, including clinical, instrumental and laboratory research methods. General clinical examination was carried out using traditional methods and included a study of complaints, anamnesis, general and local status.

Thus, the implementation of the proposed method has significantly expanded the possibilities of gastroesophageal junction surgery, which has led to a more gentle technique for performing operations and has significantly reduced complications associated with injury and fraying of the diaphragm crura during their suturing, slippage and failure of the fundoplication cuff, pathological narrowing of the esophageal opening, and deterioration of the antireflux properties of the cardia. This made it possible to consider the proposed method as the operation of choice in the treatment of gastroesophageal reflux disease in patients with excess body weight. The favorable course of the postoperative period in all operated patients with excess body weight is associated with its short duration and low trauma of the intervention.

**Conclusions:** The proposed treatment method is the method of choice when performing operations on patients with concomitant excess body weight, contributing to the improvement of treatment results in patients with GERD, a decrease in the risk of intra- and postoperative complications and relapses.

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