



**MODERN VIEW OF THE CHOICE OF ABDOMINOPLASTY FOR VENTRAL HERNIAS
WITH PTOSIS OF THE ANTERIOR ABDOMINAL WALL**

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Abstract:

The literature analysis of abdominoplasty is presented: the proposed numerous modifications of abdominoplasty can be summarized in the main types of surgical interventions: classical, vertical, combined and mini-abdominoplasty.

It is also necessary to resolve the issue of choosing a surgical intervention, taking into account not only the size and location of the hernial defect, but also the volume of the removed fatty apron and the aesthetic aspects of these operations.

Keywords: abdominoplasty, ventral hernia, ptosis of the anterior abdominal wall, intraperitoneal pressure.

Despite the century-old history, abdominoplasty remains one of the most widespread surgical interventions in plastic surgery, which is associated with increased requirements for quality of life, increased desire to be not only healthy, but also beautiful [16; 25; 33;]. Abdominoplasty not only relieves people of insecurity and complexes that get the opportunity to dress without worrying about the need to mask a bulging or drooping abdomen, but also relieves of a number of concomitant functional disorders [5; 9; 41]. Abdominoplasty in aesthetic surgery has become a widespread type of surgical intervention. However, at present, many questions remain insufficiently developed [4; 42].

H. Kelly in 1899 first proposed the term "abdominal lipectomy" and removed the adipose tissue of the anterior abdominal wall in a patient operated on for gynecological diseases [8]. Historically, surgeons measured the quantity of life rather than its quality, and the effectiveness of surgical methods was determined by mortality rates, the presence of postoperative complications, the main attention was focused on improving the surgical technique, which was undoubtedly important [26]. The number and quality of simultaneous operations and abdominoplasty for ventral hernias directly depend on the level of professional training of the surgeon [10; 15; 22; 32]. According to Abalmasov K.G. et al. (2006) for the prevention of prolonged lymphorrhea followed by the formation of seromas suggested leaving 0.6-0.8 cm of adipose tissue on the aponeurosis of the muscles of the anterior abdominal wall during the removal of the skin and fatty apron [1].



The proposed numerous modifications of abdominoplasty can be summarized in the main types of surgical interventions: classical, vertical, combined and mini-abdominoplasty [29; 33; 34]. Among all aesthetic operations, abdominoplasty is traditionally considered the most risky in terms of the formation of postoperative deep vein thrombi and the development of pulmonary embolism (PE) [2; 27; 31].

A. Matarasso (1995) identifies four degrees of ptosis of the sagging skin and fat folds of the anterior abdominal wall [35;].

To this predispose concomitant diseases that are abundant in this category of patients, among which obesity, hypertension, diabetes mellitus prevail [9; 14; 26; thirty; 38].

**Classification of the degrees of ptosis of the anterior abdominal wall
(by A. Matarasso, 1995)**

Ptosis degree	Skin condition	Musculo-fascial system condition
I	Minimal ptosis	Minimal relaxation
II	Moderate ptosis	Moderate relaxation in the lower abdomen
III	Moderate ptosis	Moderate relaxation in the lower and / or upper abdomen
IV	Severe (severe) ptosis	Significant relaxation in the lower and / or upper abdomen

It was found that abdominoplasty, complementary to hernia repair, leads to a significant decrease in the dynamic tearing load on the suture line with an area of hernial defects from 32 to 150 cm² and a thickness of subcutaneous tissue over 3 cm, and there is a direct correlation between the severity of this effect and the size of the fat layer [1; nineteen]. Surgical correction of a saggy abdomen is also accompanied by an improvement in the lipid profile: a decrease in the concentration of triglycerides, low-density lipoproteins, total serum cholesterol; promotes successful compensation of carbohydrate metabolism by reducing insulin resistance and hyperinsulinemia [12; 35]. In addition, lipectomy of the anterior abdominal wall, in contrast to the conservative treatment of obesity, is accompanied by a more favorable course of hypertension and ischemic heart disease. Abdominoplasty, performed according to indications and complementing hernia repair for ventral hernia of the anterior abdominal wall, significantly reduces the degree of IAP increase that occurs during the closure of the hernial orifice, and as a consequence, it is a method of preventing recurrence [17; twenty; 21].

Treatment of GV in patients with a saggy abdomen affects not only surgical, but also a number of social problems. The quality of life of patients in the long term after the elimination of the ventral and incisional hernia does not differ from the average population indicators and does not depend on the chosen method of repair [3; 4; eleven]. The use of a mesh explant has no advantages over other plastic methods from the point of view of rhenium quality of life [7; thirteen; 39]. Based on this, we consider the quality of life of operated patients after various methods of hernioabdominoplasty to be unsatisfactory. Quality of life of patients "SF-36 Health Status Survey. SF-36 refers to non-specific



questionnaires for assessing the quality of life, it is widely used in the United States and European countries, when conducting research on quality of life (QOL) [43]. The SF-36 questionnaire was standardized for the general population of the USA and representative samples in Australia, France, Italy. In the USA and European countries, studies of individual populations were carried out and results were obtained according to the norms for a healthy population and for groups of patients with various chronic diseases. 36 items of the questionnaire are grouped into eight scales: physical functioning, role-playing, bodily pain, general health, vitality, social functioning, emotional state and mental health. Scores on each scale range between 0 and 100, with 100 representing overall health, all scales form two indicators: mental and physical well-being. Results are presented in the form of assessments in points on scales compiled in such a way, that a higher score indicates a higher level of QoL. The following indicators are quantified:

1. Physical Functioning (PF), which reflects the degree to which physical condition limits exercise performance. Low indicators on this scale indicate that the patient's physical activity is significantly limited by the state of his health.
2. Role-Physical Function (RP) - the influence of physical condition on daily role-playing activity. Low scores on this scale indicate that daily activities are significantly limited by the patient's physical condition.
3. The intensity of pain (Bodily pain - BP) and its effect on the ability to carry out daily activities, including work around the house and outside the home. Low scores on this scale indicate that pain significantly limits the patient's activity.
4. General health (GH) - assessment of patients' state of health at the moment and the prospects for treatment. The lower the scores on this scale, the lower the health score.
5. Vitality (VT) means feeling full of strength and energy, or, on the contrary, exhausted. Low scores indicate patient fatigue, decreased vitality.
6. Social Functioning (SF) is defined by the degree to which a physical or emotional state limits social activity. Low scores indicate a significant limitation of social contacts, a decrease in the level of communication due to a deterioration in the physical and emotional state.
7. Role-Emotional (RE) functioning involves assessing the extent to which the emotional state interferes with the performance of work or other daily activities. Low scores on this scale are interpreted as a limitation in performing daily work due to a deterioration in the emotional state.
8. Mental health (MH), characterizes the mood, the presence of depression, anxiety, a general indicator of positive emotions. Low rates indicate the presence of depressive, anxious experiences, mental distress.

At the same time, there is little information in the literature on the use of various types of abdominoplasty in combination with a hernia, as well as specific measures for preoperative preparation and prevention of complications [18; 23; 24; 37; 38]. There is no consensus and little data on changes in intra-abdominal pressure depending on the type of hernioabdominoplasty. In our opinion, an individual approach to prosthetic repair of the anterior abdominal wall in patients with a saggy abdomen with different localizations of hernias can significantly improve the results of treatment.



The analysis of the literature indicates a high incidence of GV. Despite the sufficient knowledge of the etiopathogenetic mechanisms of the development of GV, the low quality of life, the frequency of complications and relapses remain high. This is largely due to the progressive increase in patients with abdominoptosis [28; 36; 40; 44]. The presence of a skin and fat "apron" significantly impairs microcirculation, trophism of nearby tissues and leads to weakness of the aponeuroses due to high static pressure. A significant increase in IAP in patients with GV against the background of overweight aggravates the existing pathologies of the cardiovascular and respiratory systems. This dictates the need to monitor IAP, the state of the respiratory and cardiovascular systems, and develop therapeutic measures to prevent their complications. Meanwhile, prosthetic plastic does not solve all the problems of treating hernia. Any synthetic material is foreign to the body and initiates an asept in the tissues surrounding the prosthesis a physical inflammatory response. The result of this reaction is a high incidence of complications in the healing of postoperative wounds, which, according to the literature, ranges from 10-30%. And there are also reports of the possibility of adhesions formation, intestinal fistulas, penetration of the implant into the intestinal lumen, arrosion of blood vessels - wound complications associated with the use of mesh prostheses.

It is also necessary to resolve the issue of choosing a surgical intervention, taking into account not only the size and location of the hernial defect, but also the volume of the removed fatty apron and the aesthetic aspects of these operations. It should also be noted that the number of people with an unfavorable baseline background due to disorders of fat metabolism is quite high, which emphasizes the need for a differentiated approach to the choice of surgical technique and prevention of complications.

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