

## Modern Aspects of Clinical Effectiveness of Endovideosurgical Treatment of Hiatal Hernia

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**Abstract:** Modern requirements for performing antireflux interventions are based on careful mobilization of the area of the cardioesophageal junction, which is very difficult when performing video endoscopic access and leads to the refusal of surgical intervention in a number of cases, and the long-term results of laparoscopic correction of the hiatal hernia have not been sufficiently studied. This review is devoted to modern aspects of the clinical effectiveness of endovideosurgical treatment of hiatal hernia.

**Key words:** endovideosurgical treatment, hiatal hernia, treatment, reflux esophagitis.

Considering the fact that hiatal hernia is a disease of the older age group, and the disease itself is acquired in nature and occurs most often in the fifth decade of life [19], an unresolved issue is the determination of indications for elderly patients and the possibility of their treatment laparoscopically. The specificity of antireflux correction in senile and elderly people is the fact that intracorporeal sutures are applied to degenerative-dystrophic tissues, and this, in turn, creates the preconditions for the development of relapse or the formation of paraesophageal hiatal hernia [9, 13]. Today, more and more experts agree that, due to low morbidity, laparoscopic antireflux surgeries can be performed at almost any age [7, 9, 13]. Many authors recognize that laparoscopic antireflux interventions in patients with short esophagus are feasible. But if in case of shortening of the 1st degree they can be called the operation of choice, then the greatest difficulties are caused by endovideosurgical treatment of the hiatal hernia in case of shortening of the esophagus of the 2nd degree. They are associated with a high risk of complications and require the surgeon to understand the anatomy and have a high level of practical skills in performing surgery on the cardioesophageal junction for a large hiatal hernia. This type of treatment should only be performed by highly specialized hospitals with experience in hundreds of successfully performed surgical interventions of this type [8]. A recent study showed that the risk of recurrence or complications after laparoscopic treatment is associated only with the experience of the operating surgeon. Neither the type of surgical intervention, nor the sequence of stages, nor the choice of antireflux cuff had an impact on the development of complications or relapse after surgery. Sufficient experience for a surgeon is 10 antireflux operations per year [12]. Once this operational activity is achieved, we can confidently talk about a successful postoperative period.

Laparoscopic antireflux surgical interventions can have intraoperative complications in an average of 4–7.5% of cases [7, 8]. The most common complications of these operations include perforation of the esophagus and stomach [11]. The following may also occur: bleeding from the operation area, disruption of the integrity of the stomach, esophagus, trauma and rupture of the pleura, pneumothorax. The development of these complications often leads to

access conversion [6, 7]. With the introduction of laparoscopic access, the structure and type of intraoperative and postoperative complications after antireflux surgical interventions have changed. This approach is characterized by a reduction in the incidence of postoperative hernias and intraoperative damage to the spleen, while increasing the incidence of intra-abdominal bleeding (usually from the trocar hole), perforation of the esophagus or stomach, pneumothorax and pneumomediastinum. This is largely due to the experience of the operating surgeon [10].

Postoperative complications Dysphagia. Impaired passage of contents through the esophagus of varying severity occurs in 3.2–40% of patients. Most often, it is transient in nature and resolves on its own within 2–4 weeks, on average within 5–8 days. The phenomena of persistent dysphagia, which require repeated surgical intervention, occur in 2–3% of cases [6, 11]. There is evidence from randomized controlled trials that show that dysphagia occurs more often after laparoscopic fundoplications compared to open ones, especially when using a Nissen cuff [12]. “Gas-bloat” syndrome or swelling syndrome occurs in 7.9 - 22.6% of patients in the postoperative period. It usually does not require repeated surgical intervention and resolves on its own [16]. Bleeding. The frequency of this complication, according to some authors, is 2.5 – 7% [8, 11]. The source of bleeding is: trocar punctures (66%), short gastric vessels (34%) [15]. One of the rarely mentioned complications in the postoperative period is the development of subcutaneous emphysema. This condition, according to O.S. Vasnev, can occur in 4 out of 5 patients who are diagnosed with a large hiatal hernia. The cause of emphysema may be a high dissection of the esophagus against the background of membranes destroyed during the gradual enlargement of the hernia, which limit the mediastinum from the abdominal cavity [8]. According to some authors, the main indication for repeated reconstructive surgery is the development of the “telescope” symptom [5, 8].

Chernousov A.F. et al. (2011) showed experience with repeated antireflux surgeries. In their opinion, the main reason for repeated surgical treatment was also the “telescope” phenomenon against the background of an incorrectly formed cuff. To prevent these complications, it is necessary to form a full, symmetrical cuff without fixing it to the crura of the diaphragm, and to prevent its slippage, apply serous-serous sutures between the upper third of the cuff and the esophagus [10].

Modern requirements for performing antireflux interventions are based on careful mobilization of the area of the cardioesophageal junction, which is very difficult when performing video endoscopic access and leads to the refusal of surgical intervention in a number of cases, and the long-term results of laparoscopic correction of the hiatal hernia have not been sufficiently studied.

To date, a unified approach to the treatment of hiatal hernias has not been defined, and indications and contraindications for their surgical treatment have not been fully formulated. There are unsatisfactory results of surgical treatment of hiatal hernias; the optimal method of their surgical treatment has not been determined.

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