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## The Effectiveness of Transhiatal Esophagoectomy

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### Abstract

#### Background:

Today the number of patients with cancer continues to increase. Esophageal cancer one of the most difficult disease in terms of diagnosis and treatment, in which surgical treatment remains the fundamental therapy. There are many methods, which divided into 2 large categories: transthoracic and transhiatal. Discussions about effectiveness of the techniques are going on. It should be noted that transhiatal access reduces mortality from the effects of thoracotomy.

Among oncological diseases, cancer of the esophagus takes 8th place. It is important to note the high mortality rate from cancer of the esophagus – 350000 patients every year. The priority in modern surgery for patients with esophageal cancer with functional disorders of the cardiovascular and respiratory systems is the use of transhiatal access. Extensive meta-analytical studies have been carried out in 1996 Ringani et al. and in 2002 Hulscher et al.

#### Methods:

For the period 2015-2018 at “V. T. Zaitsev institute of general emergency surgery” 24 patients with adenocarcinoma (75.0%) and squamous cell carcinoma (25.0%) underwent resection of the esophagus with simultaneous plastic surgery of the stomach stem. A set of examinations was carried out: endoscopic and radiological examinations, clinical analysis of blood and urine, a coagulogram, a biochemical blood test, a preoperative examination of therapist and anesthesiologist was carried out, and the patient's preoperative status was determined according to the ASA scale. The gender ratio is 15 men and 9 women. The average age is  $36 \pm 5$  years. The average body mass index is 20.3. Among patients there were no people with bad habits. All patients were divided into 2 main groups according to the method of surgical intervention: group I – transhiatal (50.0%); II – transthoracic (50.0%).

#### Results:

The advantages of transhiatal access are the absence of thoracotomy, which reduces the duration of postoperative pain and postoperative complications. The duration of the surgical intervention was: with transhiatic access (I) an average of  $180 \pm 30.0$  minutes; group II -  $360 \pm 25.0$  minutes. Intraoperative blood loss was in the I group -  $1000 \pm 25.0$  ml, II -  $2000 \pm 44.1$  ml.

All patients of group I switched to independent breathing and disconnected from the mechanical ventilation on the 1st day after surgery. Among patients

in the control group, this indicator in 35.0% of patients increased to 2 days. It is important to note that in patients of group II, hemodynamic instability was noted - an increase in blood pressure with poorly amenable to correction. In group I, according to the indicators of daily ECG monitoring, there is a lesser degree of ischemic changes in the myocardium: an increase in the control group by 35.3% of episodes of ST segment depression, and the degree of ST depression by 16.7%. In the early postoperative period, mortality in the main group was 2 patients (the cause of death was acute respiratory and heart failure), in the control group – 4 (1 patient had interstitial pulmonary edema, 2 – acute heart failure, 1 – acute respiratory failure). The confidence is  $p < 0.05$ .

The main cause of death in the early postoperative period among patients with esophageal cancer was a sharp disadaptation of the cardiovascular and respiratory systems.

#### Conclusions:

The use of transhiatric access reduces the length of stay of patients in intensive care. It allows you to expand the indications in patients with functional disorders of the cardiovascular and respiratory systems, significantly reduce the number of deaths in the postoperative period by 8.3% compared with the control group.

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