

ENDOSCOPIC AND X-RAY ENDOVASCULAR METHODS OF TREATING PATIENTS WITH GASTRIC CANCER

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Abstract. In Ukraine, according to the cancer registry of 2022, the incidence of stomach cancer was 25.5 per 100 thousand population, the mortality rate from this pathology is 19.77 per 100 thousand population. prevalence of the cause of death from malignant diseases, and is one of the most common types of malignant neoplasms and ranks fifth in terms of prevalence worldwide. The use of minimally invasive techniques (endoscopic, hagiographic chemoembolization and combined) within the framework of a generally recognized surgical strategy allows you to postpone surgical intervention and prepare the patient for radical surgery with a full volume of lymphatic dissection according to certain oncological standards, and due to this, improve the results of treatment of patients with stomach cancer complicated by bleeding.

Keywords. Treatment, stomach cancer, complications, malignant diseases, bleeding, endoscopic and X-ray endovascular methods, endoscopic stenting, surgical tactics.

According to the WHO, malignant neoplasms of the stomach rank fifth among all cancers in the world and second, after lung cancer, in terms of the frequency of causes of death from oncological pathology. Malignant neoplasms of the stomach are the cause of almost every sixth death in the world. The most common complications

of malignant tumors of the stomach are bleeding, stenosis and perforations (World Health Organization. Cancer, Fact Sheet 2023) [27].

The germination of all walls of the stomach by a malignant tumor leads to its necrosis and arcorrosion of the large vessel that feeds the wall, creating conditions for the development of serious complications, primarily perforation with the development of peritonitis and bleeding.

Kalisz K. et al., claim that the frequency of bleeding in malignant tumors ranges from 4.6 to 23.4% of all cases of malignant tumors, and in the structure of non-ulcerative gastric bleeding of malignant tumors is 10.0-55.0%. At the same time, bleeding occupies the 2nd-3rd position among other complications of malignant tumors of the stomach [9].

According to Schatz R.A., Rockey D.C., gastrointestinal bleeding was the initial symptom of malignancy in 55/71 (77.5%) patients; 26/71 (36.6%) of patients had advanced metastatic disease [21].

The authors Imbesi J.J., Kurtz R.C., emphasize that bleeding in malignant tumors of the stomach occurs against the background of primary tumors, metastatic spread or with a locally invasive tumor [6].

Strate L. L. and Lower G. I. in their studies claim that about 3-11.0% of acute bleeding from the lower gastrointestinal tract is associated with neoplasms of the colon [24], and vice versa, according to the results of studies by Kim Y. I., Choi I. J., which prove that 1-5.0% of bleeding in the upper gastrointestinal tract is mainly associated with malignant tumors of the stomach [12].

Scientists Fujishiro M. et al., Gralnek I. M. et al., Kim Y. I., Choi I. J., in their writings prove that complications of stomach cancer mainly develop at advanced stages and are accompanied by symptoms (anemia, dizziness, loss of consciousness, nausea, vomiting, dehydration, exhaustion), which sharply reduce the quality of life of patients. For this kind of patients with limited survival, it is important to focus on comprehensive treatment, adequate symptom relief and improvement of their quality of life. There are many treatment options for bleeding in stomach cancer, but their results cannot be called satisfactory. [3, 4, 12].

Fujishiro M. et al prove that the results of relief of acute bleeding from a gastric tumor are mainly associated with the development and improvement of endoscopic methods of hemostasis, including injection therapy (pricking with ethanol, epinephrine), mechanical therapy using an endoscopic clamp or "Hemoclip" clips (argon plasma coagulation, thermocoagulation) or a combination of these methods [3].

According to Kim Y.J. et al., Koh K.H. et al., Park H. et al., the frequency of successful endoscopic hemostasis, depending on the method used, can be achieved from 31.0% to 100% of cases, while the frequency of rebleeding reaches 41.0%, which makes 27 repeated endoscopic interventions technically difficult. The median overall survival after endoscopic hemostasis is approximately 3-6 months, and mortality at 30 days reaches up to 22.0 % of the total sample [13, 14, 18].

Koh K.H. et al., similar rates of deaths were found in patients on day 30, and the results of observations with repeated endoscopic hemostasis ranged from 25.8% to 34.6% ($p=0.004$) [14].

Researchers Lu Y. et al., Mirsadraee S. et al., Yap F. et al., report side effects after endoscopic hemostasis, in the form of more active bleeding (1.7%) and perforation (0.6%) even with a combination of several methods. The authors of these three retrospective studies proved that the efficacy of transcatheter arterial embolization in patients with recurrent bleeding from gastric cancer after endoscopic interventions was worse [15, 17, 28].

Meehan T. et al., Park S. et al., in their studies prove that the rate of successful hemostasis with transcatheter arterial embolization ranges from 40.0 to 100%, the rate of rebleeding — from 41.0% to 66.0%, and the survival and mortality rate at 30 days — 0.9–3.7 months and 25–60.0% [16, 20].

According to Koh K.H. et al., relative contraindications to the use of transcatheter arterial embolization are bleeding and slight curvature of the stomach, since embolization of the left gastric artery is technically problematic, and the rate of failed attempts to embolize this area is 49.0% [14].

Oncologists Tey J. et al., from the Singapore National Cancer Institute, were

the first to identify the effectiveness of palliative radiation therapy for tumor bleeding and gastric stenosis in a prospective study. They proved that palliative radiation therapy in optimal doses is well tolerated and improves the quality of life of patients with stomach cancer [25].

Chaw C.L et al, Hiramoto S. et al., Tey J. et al., prove that the rate of successful hemostasis in patients varies from 50.0% to 80.0%, 52.9% of patients with tumor obstruction have a partial response to radiation therapy in the form of improved food permeability through the area of stenosis, the median overall survival is 2.1–5.3 months. Up to 20.0% of patients after radiation therapy experience high toxicity (vomiting, acute gastritis, anorexia, neutropenia, leukocytopenia, exacerbation of obstruction) The role of radiation therapy in the treatment of such patients requires careful study, but no home study on this problem has been published. In modern literature, various aspects of stenting of the upper gastrointestinal tract with self-expanding prostheses are wide and multifaceted. [1, 5, 25].

Davids P.H. et al., Jeurnink S.M. et al., Jung G.S. et al., Park K.B. et al., Soderlund C. et al. Stenting leads to a faster onset of oral meals, shortens hospital stays. However, 30.0-50.0% of patients in the long term require repeated interventions due to the development of complications (blockage of the stent with food masses, migration, closure of the Vater's nipple followed by jaundice or cholangitis, perforation) [2, 7, 8,19, 22].

According to the research of Upchurch E. et al., the life of patients who have undergone stenting of the tumor area of the stomach does not exceed 3 months [26].

Jeurnink S.M. et al., in a randomized trial (SUSTENT, Netherlands) compared the two most common palliative treatments for malignant gastric outlet obstruction: gastroenterostomy and stenting. Placement of self-expanding 29 stents was associated with better outcomes, and anastomosis bypass surgery had more favorable outcomes in the long term. The authors recommend the use of endoscopic stenting in patients with an expected survival of less than 2 months, in other cases it is necessary to resort to surgical intervention [7].

Keränen I. et al., In their study, endoscopic stenting, gastroenterostomy, and

palliative resection were compared in patients with gastric cancer complicated by tumor stenosis of the original section. The median survival of patients undergoing palliative surgery was 241 days, the indicators for the stenting groups were 50 days and bypass surgery were 141 days. Asymptomatic survival was also higher in the palliative surgery group (223 versus 43 and 121 days) [11].

Thus, surgical treatment of patients with advanced forms of stomach cancer complicated by tumor stenosis and bleeding should be carried out only in a specialized hospital by surgeons with extensive clinical experience in abdominal surgery and oncology. The choice of treatment method should be based on a thorough assessment of the patient's clinical condition, age and concomitant diseases.

Endoscopic and X-ray endovascular treatments for gastric cancer patients are longer and more technically complex, and research results suggest that they can be used to achieve a long-term prognosis. The topic is relevant and needs further study.

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