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SURGICAL STRATEGY OF PATIENTS WITH STOMACH CANCER COMPLICATED WITH ACUTE GASTRIC BLEEDING

Summary. *Objective.* Improvement of results of treatment of patients with stomach cancer complicated with acute gastric bleeding.

Materials and methods. It was shown the analysis of results of surgical treatment of 252 patients with stomach cancer complicated with acute gastric bleeding, which got the hospital treatment at GI "V. T. Zaycev Institute of General and Urgent Surgery of NAMS of Ukraine" from 2010 till 2019, aged 29 till 76. All patients randomly divided on 2 groups: the group of control — 129 patients (got the hospital treatment from 2010 till 2014), and the basic group — 123 patients (from 2015 till 2019).

Results. The common surgical tactics and operations were used at the group of control. The two-staged active-idividualized surgical tactic was used at the basic group. Radical surgery was performed in 120 (47.6%) cases; in 132 (52,4%) cases – palliative and symptomatic(the 121(48,0%) cases of it was major abdominal surgery). Postoperative complications occurred in 79 patients (31.1%) and postoperative mortality in 7.9% (20 patients) cases.

Conclusion. There is the rational of using the two-staged surgical tactic with wide using of minimally invasive procedure for the treatment of patients with stomach cancer complicated with acute gastric bleeding. Using of this tactic leads to increasing of quantity of radical operations from 38(29,2%) at the group of control till 82(72,8%) at the basic group and leads to decreasing post-operative deaths from 8,5 % till 7,2 % respectively.

Key words: *gastric cancer, gastric bleeding, surgical treatment.*

Introduction

Despite the declining trend in the incidence of gastric cancer, the problem of treatment of its complicated forms remains one of the most complex and relevant [1, 2, 3]. Up to 60-80% of patients are admitted for treatment with neglected forms of the disease in the presence of severe complications [2, 4]. The incidence of postoperative complications ranges from 16.3 to 48.0%, and mortality from 8.3 to 37.2% [2, 4, 5, 6].

The aim of the study: to improve the results of treatment of patients with complications gastric cancer.

Materials and methods

The study is based on the analysis of the results of treatment of 252 patients with gastric cancer, complicated by bleeding, who were treated at the «Institute of General and Emergency Surgery. V. T. Zaitseva National Academy of Medical Sciences of Ukraine «from 2010 to 2019. Aged from 29 to 76 years. The average age was 59.6 years. There were 147 men (58.3%) and 105 women (41.7%). All patients were randomized into two groups: comparison — 129 patients (were treated from 2010 to 2014), the main — 123 patients (treatment period from 2015 to 2019). Commonly used surgical tactics and operations were used in the comparison group. The main group used active-individualized two-stage surgical tactics and developed combined and reconstructive-restorative operations.

Lesions of the cardiac stomach were noted in 31 (12.3%) patients, gastric body — in 92 (36.5%) , initial department — in 85 (33.7%), subtotal gastric lesion — in 28 (11.1%), total — in 16 (6.3%) patients.

Mild blood loss, according to the classification O. O. Shalimov and VF Saenko (1987) [4], found in 67 (16.0%) patients; moderate — in 136 (32.5%); severe — in 49 (11.7%) patients.

To assess the state of hemostasis used the classification of bleeding activity Forrest J.A.H. in the modification of Nikishayev VI (1997) [5], according to which three groups of patients were identified: Group I — ongoing bleeding (FIA, FIB, FIX) — 78 patients (31%); Group II — stopped bleeding (FIIA, FIIB, FIIS) — 82 patients (32.5%); Group III — no signs of bleeding (FIII — defect under fibrin) — 92 patients (36.5%)

Morphologically, gastric tumors were represented by adenocarcinomas of varying degrees of differentiation: G1 (highly differentiated) — in 25 (10.0%)), G2 (moderately differentiated) — in 55 (22.0%), G3

(lowly differentiated) — in 113 (44.6%), G4 (undifferentiated cancer) — in 59 (23.4%) patients.

In the studied groups, according to CT, there was a spreading of gastric tumors in neighboring organs: the colon and its mesentery — in 100 (39.7%), the pancreas — in 61 (24.2%), liver — in 9 (3.6%), spleen — in 23 (9.0%), diaphragm — in 7 (2.7%), gallbladder and hepatoduodenal ligament — in 2 (0.7%), duodenum (duodenum) — in 5 (1.9%), and invasion of several organs — in 46 (18.2%) patients. The distribution of patients by stages of TNM is presented in Table 1.

Table 1

Distribution of patients with gastric cancer according to the TNM classification

Indicator	Comparison group (n = 129)	Main group (n = 123)
T4N0M0	16 (6,3%)	11 (4,3%)
T4N1M0	86 (34,1%)	82 (32,5%)
T4N2M0	27 (10,7%)	30 (11,9%)

Results and discussion

The clinic has been providing medical care to patients with malignant neoplasms of the stomach for many years with the development of acute complications such as bleeding, stenosis and perforation. The clinic has adopted a two-stage treatment tactic based on the widespread use of minimally invasive procedures.

Bleeding complicates the course of gastric cancer in 2.7 — 41% of cases and takes 2-3 place among others [2, 4, 5, 6]. The method of endoscopic hemostasis included the initial assessment of the source of bleeding, endoscopic clipping of bleeding vessels, coagulation and cryopreservation, irrigation of the bleeding tumor with hemostatics. Achieving temporary endoscopic hemostasis in 36 (14.2%) patients with ongoing gastric bleeding allowed to perform the intensive preoperative care with delayed surgery for 2 to 6 days after hospitalization.

Performing X-ray at the first stage performed in 16 (6.3%) patients, of which 11 (4.3%) patients became an independent method of treatment (9 noted no recurrence of bleeding). It should be noted that this method was especially valuable for achieving hemostasis in elderly patients with severe comorbidities with a high degree of operative risk of «open» surgery. 22 (8.7%) in the comparison group to 4 (1.5%) in the main group. Deferred operations were performed in 47 (18.6%) patients, of which — in 35 (28.6%) patients of the main group.

There is currently no standard surgical method due to the variety of severity and location of the disease, so an individual approach to the choice of surgical method is used.

Our clinic has adopted tactics aimed primarily at achieving temporary hemostasis. If it is possible to perform radical surgery, we perform one-stage radical operations, with high surgical risk we use two-stage tactics (stage I — palliative resection of the stomach with tumor; stage II — radical resection of the stomach (gastrectomy) with adequate lymph dissection and resection of affected organs). The peculiarity of palliative resections is that when repeated interventions are excluded, we prefer the methods in the Billroth-II modifications. At planned repeated intervention — Billroth's methods — I. As the palliative operations allowing to stop bleeding, at tumors of a stomach which cannot be removed, applied a gastrotomy with a stitching of the bleeding vessels, a tamponade of a crater of a tumor ulcer by a stuffing box on a nutritious vascular leg. Polycarp, as well as developed in the clinic tamponade of ulcers of the tumor of the anterior wall of the stomach.

At the height of bleeding operated 26 (10.3%) patients, of whom 4 (1.6%) — patients of the main group. Radical operations were performed in 5 (1.98%) of them in 2 — combined gastrectomy.

The main radical operations are distal gastrectomy, total gastrectomy, proximal gastrectomy. Distal gastrectomy was performed in exophytic tumors of the antrum of the stomach that do not extend above the angle of the stomach. At a gastrectomy we prefer esophagojejunoanastomoses in our modification and modification of Ru (at reconstructive operations). Since 1989, the clinic, along with the well-known, used its own method of esophagojejunoanastomosis. The peculiarity of this modification is the fixation of the drive loop behind the esophagus in the posterior mediastinum, the imposition of temporary esophageal-diaphragmatic sutures on the anterior wall of the esophagus; formation of an antireflux anastomosis due to its intussusception by these sutures into the outlet loop of the small intestine. The simplicity of the proposed operation, reducing the intervention time to a minimum, allowed it to be used to perform gastrectomy at the height of bleeding with good results [6].

We share the opinion of SA Geshelina (1988) [1], who agrees with other authoritative experts that in operations at the height of bleeding, total gastrectomy, compared with proximal gastrectomy, is more justified, technically simpler, more reliable and more radical, accompanied by fewer postoperative complications and lower mortality. In cancer of the body part, a significant part of the small curvature and distal parts of the bleeding stomach, in tumors with differentiation G3 and G4, in tumors type 3 and 4 according to Bormann, performed a total gastrectomy with lymph dissection, in tumors with differentiation G1 and G2, in tumors 1 and type 2 according to Bormann performed distal gastrectomy with lymph dissection. However, in the general serious condition of the patient, a common tumor process, palliative resections, including atypical ones, can be used. At the recovery stage, we prefer modifications of resection according to Billroth-II.

A special category of patients are patients with tumors of the gastric stump, bleeding. Radicalism regarding tumor and hemostasis is achieved through the use of gastric stump extirpation with lymph dissection. We performed combined extirpations of the gastric stump in 15 patients (9 — the main group and 6 — the comparison group). In 10 patients — with resection of the colon, supplemented in 2 patients with splenectomy; in 5 — with resection of the pancreas and splenectomy. 1 patient died due to pulmonary heart failure. In case of bleeding from unresectable tumors of the stump of the stomach, the only possible measures are endoscopic and X-ray endovascular hemostatic techniques performed in 4 patients. Fatal bleeding with recurrence was noted in 2 patients.

A total of 120 (47.6%) patients underwent combined gastrectomy with lymph dissection in the amount of D2 (including 82 patients in the main group).Combined gastrectomy with resection of the transverse colon and its mesentery was performed in 40 (15.8%) patients, with liver resection — in 9 (3.6%) patients, resection of the pancreas in combination with splenectomy — in 32 (12.7%)) patients, another 28 (11.1%) patients underwent multivisceral resection. Gastroplasty with the ileocecal segment of the intestine (18 patients) was used in gastric resection in combination with resection of the transverse colon. in 132 (52.4%) — palliative and symptomatic (of which 121 (48.0%) — cavitary). Postoperative complications occurred in 79 patients (31.3%), postoperative mortality was 7.9% (20 patients).

Conclusions

1. In patients with gastric cancer complicated by bleeding, we consider it appropriate to use two-stage surgical tactics with extensive use of minimally invasive surgery.

2. The introduction of the proposed surgical tactics and new surgical interventions contributed to an increase in the number of radical operations from 38 (29.2%) — in the comparison group to 82 (72.8%) — in the main group and reduced postoperative mortality from 8.5% to 7.2 % respectively.

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ЛІКУВАННЯ ХВОРИХ НА РАК ШЛУНКУ, ЩО УСКЛАДНЕНИЙ ГОСТРОЮ ШЛУНКОВОЮ КРОВОТЕЧЕЮ

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Реферат. *Вступ*. Незважаючи на тенденцію зниження захворюваності на рак шлунку проблема лікування ускладнених форм захворювання залишається однією з найбільш складних і актуальних. Мета дослідження — покращення результатів лікування хворих на ускладнений рак шлунку.

Матеріали та методи. Дослідження засноване на аналізі результатів лікування 252 хворих на рак шлунку, що ускладнений кровотечею, які перебували на лікуванні у «ДУ Інститут загальної та невідкладної хірургії ім. В.Т. Зайцева НАМН України» з 2010 по 2019 рр. у віці від 29 до 76 років. Всі хворі поділені на дві групи: порівняння — 129 хворих (перебували на лікуванні з 2010 по 2014 рр.), основну — 123 хворих (період лікування з 2015 по 2019 рр.).

Результати та обговорення. У групі порівняння застосовувалися загальноприйняті хірургічна тактика й операції. В основній групі використовувалася активно-індивідуалізована двоетапна хірургічна тактика, що припускає досягнення гемостазу у першому етапі та комбіновані й реконструктивно-відновлювальні операції у другому. Радикальні операції виконано у 120 (47,6%) хворих; у 132 (52,4%) – паліативні та симптоматичні (з них у 121 (48,0%) – порожнинні). Післяопераційні ускладнення виникли у 79 (31,3%) хворого, післяопераційна летальність склала 7,9% (20 хворих).

Висновки. У хворих на рак шлунку, що ускладнений кровотечею, доцільним є застосування двоетапної хірургічної тактики з широким використанням малоінвазивних оперативних утручань. Впровадження запропонованої хірургічної тактики й нових оперативних утручань сприяло збільшенню числа радикальних операцій з 38 (29,2%) в групі порівняння до 82 (72,8%) в основній групі і зниженню післяопераційної летальності з 8,5 до 7,2% відповідно.

Ключові слова: *рак шлунку, гостра шлункова кровотеча, хірургічне лікування.*

ХИРУРГИЧЕСКАЯ ТАКТИКА ПРИ ОСТРОКРОВОТОЧАЩЕМ РАКЕ ЖЕЛУДКА

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Реферат. *Цель*. Улучшение результатов лечения больных раком желудка, осложненным острым желудочным кровотечением.

Материалы и методы. Приведен анализ результатов оперативного лечения 252 больных раком желудка, осложненным кровотечением, которые проходили стационарное лечение в «ГУ ИЗНХ им. В. Т. Зайцева НАМН Украины» с 2010 по 2019 год. Все больные разделены на две группы.

Результаты и обсуждение. В группе сравнения применялась общепринятая хирургическая тактика и операции. В основной группе применялась активно-индивидуализированная двухэтапная хирургическая тактика. Радикальные операции выполнены у 120 (47,6%) больных; у 132 (52,4%) – паллиативные и симптоматические (из них у 121 (48,0%) – полостные). Послеоперационные осложнения возникли у 79 больных (31,3%), послеоперационная летальность составила 7,9% (20 больных).

Выводы. У больных раком желудка, осложненным кровотечением, целесообразно применение двухэтапной хирургической тактики с широким применением малоинвазивных оперативных вмешательств. Данная тактика способствовала увеличению числа радикальных операций с 38 (29,2%) в групе сравнения до 82 (72,8%) в основной групе и снижению послеоперационной летальности с 8,5% до 7,2% соответственно.

Ключевые слова: *рак желудка, острое желудочное кровотечение, хирургическое лечение.*