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Der Pharmacia Lettre, 2017, 9 [8]: 14-17
[http://scholarsresearchlibrary.com/archive.html]

Scholars Research Library
ISSN 0975-5071
USA CODEN: DPLEB4

Results of Surgical Treatment of Patients with Complications of Locally Advanced Stomach Cancer

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ABSTRACT

Abstract. The analysis of the results of surgical treatment of 418 patients with complicated locally advanced stomach cancer is given. The course of the main disease was complicated by hemorrhage in 252 (60.3%), stenosis in 89 (21.3%), perforation in 15 (3.5%), and their combination in 62 (14.8%) patients. Radical operations were performed in 168 (40.2%) patients, in 250 (59.8%) patients - palliative and symptomatic operations. Postoperative complications arose in 82 patients (19.6%), post-operative mortality was 7.2% (30 patients).

Keywords: Complicated locally advanced stomach cancer, Surgical treatment.

INTRODUCTION

Despite the tendency to reduce the incidence of stomach cancer, the problem of treating complicated forms of the disease remains one of the most complex and urgent [1,2,5]. Up to 60% to 80% of patients go to treatment with advanced forms of the disease in the presence of severe complications [2,4]. The incidence of postoperative complications varies from 16.3% to 48.0% and lethality from 83% to 37.2% [2,3,4,6]. The aim of the study was to improve the results of treatment of patients with complicated locally advanced gastric cancer.

MATERIALS and METHODS

The study is based on an analysis of the results of treatment of 418 patients with locally advanced gastric cancer who was on treatment at the GI "V.T. Zaytsev Institute of General and Emergency Surgery of NAMS of Ukraine" from 1996 to 2015; at the age of 18 – 85 years. The average age is 61.9 ± 8.9 years. The number of men was 261 (62.4%), the number of women - 157 (37.6%).

All patients were divided into two groups: control group - 212 patients (were on treatment from 2006 to 2010), the main - 206 patients (treatment period is from 2011 to 2015). A conventional surgical tactics and operations were used in the control group. The main group used an actively individualized two-stage surgical tactic and reconstructive-reductive surgical interventions.

The defeat of the cardiac part of the stomach was noted in 41 (11.4%) patients, the body of the stomach in 158 (41,1%), the output department in 112 (29.0%), the subtotal lesion of the stomach in 48 (11.2%), all symptoms - in 29 (7.3%) patients. Bleeding was detected in 252 (60.3%) patients, stenosis in 89 (21.3%), perforation in 15 (3.5%), and their combination in 62 (14.8%) patients. Low-grade adenocarcinoma was detected in 156 (37.3%) patients, with different degrees of adenocarcinoma differentiation - in 201 (48.1%) and ring-cell carcinoma - in 61 (14.6%) patients. Mild blood loss, according to the classification of Shalimov and Saenko [6], was detected in 67 (16.0%) patients, medium-heavy - in 136 (32.5%), severe in 49 (11.7%) patients. The distribution of patients by TNM stages is presented in Table 1.

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Table 1: Distribution of patients with gastric cancer by stages of TNM.

Index	Main group	Control group
T4	206 (49.3%)	212 (50.7%)
N0	15 (3.5%)	29 (6.9%)
N1	112 (26.8%)	122 (29.2%)
N2	64 (15.3%)	48 (11.5%)
N3	15 (3.5%)	13 (3.1%)
M	206 (49.3%)	212 (50.7%)
P3	-	12 (2.8%)
P4	206 (49.3%)	200 (47.8%)

RESULTS AND DISCUSSION

The treatment of patients with malignant neoplasms of the stomach with the development of acute life-threatening complications, such as bleeding, stenosis and perforation has been carried out in the clinic for many years.

Bleeding complicates the course of stomach cancer in 2.7% to 41.0% of observations and takes 2-3 places among others one [1,4,5]. A bleeding classification of Forrest J.A.H. in the modification of Nikishaev was used for evaluating the status of homeostasis [6]. Achieving of temporary endoscopic homeostasis in 49 (11.7%) patients with continued bleeding from the stomach tumor allowed using the preoperative drugs with delayed surgery for 2-6 days after admission.

At the first stage, X-ray endovascular hemostasis was performed in 31 (7.4%) patients: 13 of them (3.1%) were an independent treatment method (9 patients had no bleeding recurrence). At the first stage the use of minimally invasive homeostasis methods allowed to reduce the number of urgent operations from 46 (11.0%) in the control group to 13 (3.1%) in the main group. Surgery was delayed in 80 (19.1%) patients, 59 of them (14.1%) were in the main group. 40 (9.5%) patients of them were operated in a peak bleeding, 8 (1.9%) patients were from the main group. Radical operations were performed in 5 (12.5%) patients; combined gastrostomy was in 4 patients of them. Postoperative complications observed in 15 (37.5%), died - 5 (12.5%) patients. Palliative resections of the stomach were performed in 47 (11.2%) patients with bleeding from the tumor.

Perforation of stomach cancer occurs in 2.1% to 11.5% of patients [2,3]. Perforation of stomach cancer was noted in 19 (4,5%) patients in our study. At the first stage, the perforation was sutured. The delayed resection of the stomach was performed at the second stage. Two-stage interventions were performed in 9 patients with perforation of the stomach tumor. In 4 cases with delayed surgery, it was possible to perform a radical combined gastrectomy, in 5 patients - palliative resections of the stomach. The rest 10 patients underwent primary gastrectomy (in 4 - palliative). 2 patients died due to peritonitis. Stenosis of the stomach with its tumor lesion occurs in 7.5% to 25.4% of observations among others [1-3]. Stenosis of the stomach was noted in 89 patients in isolation (total in 104 (24.8%) patients). According to X-ray classification of Lindenbraten, compensated stenosis was detected in 42 (10.0%) patients, sub-compensated one in 46 (11.0%), and decompensated one - in 16 (3.8%). Radical operations were performed in 37 (8.8%) patients in this group. Palliative gastrectomy was performed in 16 (3.8%) patients, stomach resection - in 41 (9.8%) patients. Symptomatic operations were performed in 68 (6.2%) patients; gastro-enteroanastomosis - in 42 (9.8%) patients, the formation of gastrostomy - in 26 patients.

Combined gastrostomy with lymphodissection in the D2 volume was performed in 168 (40.2%) patients (106 patients of the main group). Combined gastrectomy with resection of the transverse colon and its mesentery was performed in 36 (8.6%) patients, with liver resection in 35 (8.3%) patients, with and without pancreatic resection in combination with splenectomy and without it - in 32 (7.6%) patients, splenectomy - in 14 (3.3%), and multivisceral resections were performed in 51 (12.2%) patients. Esophagogastroplasty ileocecal segment of the intestine (18 patients) was used for gastrostomy in combination with resection of the transverse colon. We have performed combined extirpations of the stomach stump in 15 patients (9 of the main group and 6 of the control group).

Palliative and symptomatic operations were performed in 250 (59.8%) patients. In total, postoperative complications arose in 82 (19.6%) patients. Post-operative mortality was 7.2% (30 patients).

CONCLUSION

We have proposed to use a two-stage surgical tactic with extensive using minimal invasive methods of homeostasis for patients with complicated locally advanced gastric cancer. The introduction of proposed surgical tactics and new surgical interventions have promoted to increase the number of radical operations from 62 (14.8%) in the control group to 106 (25.3%) in the main group and decrease the postoperative mortality from 8.0% to 6.3% respectively.

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