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Treatment of Patients with Colon Cancer Complicated by Acute Obstruction

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ABSTRACT

Background. According to several surgeons, after surgical interventions are performed after more than 24 hours, the number of postoperative complications and deaths is significantly higher. Some recommend continuing preoperative preparation for 24 hours. Others allow preoperative preparation for up to 2 days.

Material. We studied the results of decompression therapy in 462 colon cancer patients hospitalized on an emergency basis with an acute obstruction clinic in our clinic from 2000 to 20-20 years.

Conclusion. The possibilities of modern special methods used in the diagnosis of colon cancer complicated by acute obstruction have been clarified, and a rational program for their use has been developed. In patients with colon cancer complicated by an acute obstruction, the effectiveness of conservative methods of resolving obstruction has been studied, depending on the size of the cancer canal and the localization of the stricture. In patients with colon cancer complicated by an acute obstruction in a comparative aspect, an assessment of the effectiveness of using various methods of resolving obstruction using endoscopes is given. Minimally invasive methods of decompression and detoxification therapy have been improved, allowing more effective decompression and detoxification therapy. And the dynamics of the development of changes in the intestinal wall, intra-abdominal pressure, and intoxication syndrome in patients with colon cancer, complicated by an acute obstruction, depending on the method of decompression, has been developed. A rational program has been developed for the use of various methods of decompression in patients with colon cancer complicated by obstruction.

Keywords: Colon cancer, acute intestinal obstruction, diagnostics, forecasting, treatment

INTRODUCTION

One of the most difficult in the field of emergency surgery and oncology remains the treatment of colon cancer, complicated by acute obstruction. Despite the introduction into medical practice over the past 20-25 years of modern diagnostic and therapeutic technologies, the mortality rate for this pathology, according to various authors, ranges from 15 to 25% and does not tend to decrease [17, 34, 44].

In the treatment of patients with colon cancer, complicated by an obstruction, surgeons face the question not only of saving the patient's life from acute surgical pathology, but also, if possible, getting rid of his cancer, which requires radical surgical interventions and combined methods of treatment. However, in most patients whose age exceeds 60 years or more, along with the severity of the process itself, there are many concomitant diseases that can themselves complicate the intra- and postoperative period and lead to death [27, 29, 33, 37].

In this regard, the implementation of radical surgical interventions increases the risk of complications and deaths, and some surgeons prefer conservative therapy in

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most patients with colon cancer, complicated by obstruction upon admission. Justifying this by the fact that the tumor almost never causes a complete obstruction of the intestinal lumen [18, 28, 33, 39, 43].

Some authors believe that with colon cancer complicated by an obstruction, conservative treatment should not be continued for more than 2-3 hours, during this time it is necessary to decompress the upper and lower intestines, to compensate for introductory electrolyte disorders, and longer conservative treatment reduces the chances of a favorable outcome of the operation [8, 15, 25, 33, 37].

According to several surgeons, after surgical interventions are performed after more than 24 hours, the number of postoperative complications and deaths is significantly higher. Some recommend continuing preoperative preparation for 24 hours. Others allow preoperative preparation for up to 2 days [7, 14, 28, 29].

The most difficult in tactical terms remains a group of patients in whom, against the background of conservative treatment, it is temporarily possible to achieve an improvement in the general condition, partial discharge of stool and gases. This leads many surgeons to the idea of the success of decompression and infusion therapy, which they continue even with repeated attacks of obstruction. In this regard, a favorable moment for surgical intervention is missed [6, 12, 24, 44].

To improve the results of surgical treatment of this contingent of patients, many authors propose to resolve the obstruction on the first ethane by conservative or minimally invasive methods, and already at the second stage, under the most favorable conditions, perform radical surgical intervention [5, 10, 15, 20, 25, 30]. However, despite the clear task, the proposed solutions are rather contradictory. Some authors recommend first performing conservative methods of decompression, others - with the help of endoscopes to use various technologies for recanalization of the cancer canal, others - at the first stage to perform laparotomies and impose unloading proximal stomas, the fourth - at the first stage impose proximal stomas by laparoscopic access or through mini access [4, 8, 17, 34, 40].

With adequate decompression in patients with complicated colonic cancer, favorable conditions are created for complex treatment, which undoubtedly makes it possible to improve not only the near, but also the long-term results of treatment [35, 39, 43, 44].

MATERIAL AND METHODS

We studied the results of decompression therapy in 462 colon cancer patients hospitalized on an emergency basis with an acute obstruction clinic in our clinic from 2000 to 20-20 years.

Within 6 hours from the onset of the disease, only 14 (3.03%) patients were admitted, from 6 to 24 hours - 72 (15.6%), from 1 to 3 days - 223 (48.3%) and 4 or more days - 153 (33.1%). Of these, men were 269 (58.2%), and women 193 (41.8%). The average age of the patients was 65 years.

Elderly age in the studied patients also led to many concomitant diseases. In 68.3%, cardiovascular diseases were detected, including coronary heart disease, atherosclerotic and coronary cardiosclerosis, hypertension. 14.5% of diseases of the cardiovascular system were accompanied by rhythm disturbances, in 8.6% by circulatory disorders, in 11.5% by cardiovascular insufficiency.

In all 462 patients, general clinical and laboratory research methods were carried out using generally accepted methods, which made it possible to establish the state of homeostasis and the level of intoxication, as well as to monitor their dynamics.

In most patients on admission, there was an II or III degree of severity of the physical condition, 41.5% and 42.9%, respectively. Mild - detected only in 7.9% and extremely severe in 8.1%.

To objectively assess the effectiveness of decompression therapy, we assessed the severity of the physical condition and the degree of surgical risk for all patients upon admission. Subsequently, in patients with conservative and endoscopic methods of decompression after 24 hours, then after 3-5-7 and, if necessary, after 10 days.

In patients whose decompression was carried out by surgical intervention, that is, a proximal double-barreled stoma was applied through mini-access, or a laparotomy was performed with resection of the intestine site with the imposition of a stoma, the severity of the physical condition was assessed both upon admission and before surgery, then IA 1-3-5-7 and 10 days. In our observations, patients with II and III prevailed upon admission. the severity of the physical condition. Most often, obstruction complicated the course of cancer when it was localized in the distal parts of the colon

In 261 (56.5%) patients, cancer was localized in the colon, including 33 (12.6%) patients in the ascending colon, 16 (6.1%) in the transverse colon, in the descending colon - in 50 (19.1%) and the sigmoid colon in 162 (62.1%). In 201 (43.5%) patients, the tumor was localized in the rectum, including 26 (12.9%)patients up to 7 cm from the edge of the canal, 46 (22.9%) - from 7 to 12 cm, and above 12 cm in 129 (64.2%) patients.

Of 462 patients in 394 (85.2%) adenocarcinomas, 31 (6.7%) - non-differentiated cancer, in 27 (5.8%) muci-

nous adenocarcinomas, 11 (2.3%) persevering-cleft cancer.

In 205 (44.4%)patients with colon cancer complicated by an acute obstruction, there were regional or distant metastases or there was a spread of the tumour to the sedimentary organs.

Using the data from sigmoidoscopy, colonoscopy, rhinoscopy, and intraoperative and macro-morphological description of the tumour in 359 patients, the size of the tumour canal was determined.

In 103 patients, information about the size of the cancer canal was not available in the medical documentation. Including 78 patients who, for various reasons, after a short preoperative preparation, were performed by applying a proximal colostomy. Decompression therapy was performed on 384 patients. It was started immediately after performing a survey X-ray and continued for 6 hours, then performed a second review of the abdominal cavity.

The outcomes of decompression therapy were assessed by changes in laboratory data, clinical manifestations, radiological and ultrasound patterns, and dynamics of intra-abdominal hypertension.

For a refined diagnosis of colon cancer complicated by an acute obstruction, we prescribed survey radiography of the abdominal cavity immediately after the general clinical and laboratory methods of examination and only after that we used other special methods. With the help of a survey radiography of the abdominal cavity in 409 (88.5%) patients with a clinic of acute intestinal obstruction, fluid levels or pronounced pneumatosis were detected upon admission. The remaining 53 (11.5%) patients on the survey radiographs of the abdominal cavity had an accumulation of gas in the colon, which did not allow to confirm with certainty the alleged diagnosis.

RESULTS

The diagnosis of acute impairment of colon patency using survey radiography of the abdominal cavity was established in 29 (87.9%) patients with cancer of the ascending region, in 15 (93.7%) - of the transverse colon, in 43 (86%) patients with cancer of the outgoing department, in 149 (91.9%) cancer of the sigmoid colon and 186 (92.5%) of rectal cancer. 313 (67.7%) had signs of acute colon obstruction, in the remaining 149 (32.3%) - thick-small intestine.

Survey radiography of the abdominal organs made it possible to tentatively establish the level of localization of the stricture. But for an updated diagnosis in this contingent of patients, more informative methods of examination were needed.

Of the 384 patients who underwent follow-up studies after 5-6 hours, 132 (34.4%) patients on survey radiographs showed a decrease in fluid and gas levels by more than 30%. In these patients, we exhibited stage I of impaired patency of the colon, in 155 (40.1%) patients on repeated radiographs performed against the background of the recommended volume of decompression therapy, after 6 hours, a decrease in gases above fluid levels by less than 30% was revealed. In 97 (25.5%) patients on control survey radiographs performed after 6 teas, an increase in the size of the gas area above the liquid levels was noted and stage 3 intestinal obstruction was exposed.

In 138 patients out of 384 patients, to clarify the diagnosis of colon cancer complicated by an acute obstruction, recto scope was performed, in 57 (41.3%) patients this method was ineffective, tumors were not detected. Including 41 due to the localization of cancer beyond the reach of the rectoscope, the remaining 16 patients had pain during the rectoscope, and they refused to continue the study.

In 81 patients who managed to detect a tumor during rectoscope, a biopsy was taken, the size of the external hole was determined, and its visual features were studied.

With the help of a rectoscope, 37 attempted cancer canal recanalization, and 12 patients had a contrast X-ray examination.

In 58 patients, a rectal sensor was inserted into the rectum and distal third of the sigmoid colon to the level of stricture localization and an ultrasound examination of the tumour and surrounding organs and tissues was performed.

With the help of colonoscopy, it was possible to identify the cause of the development of mechanical obstruction in 158 (88.8%) patients to whom this study was performed. In the study, the tumour localization site was established, a biopsy was taken, the visual characteristics were studied, and the diameter of the external opening of the cancer canal was determined. In 20 (11.2%) patients, a colonoscopy could not be performed because of the pronounced pain syndrome during the apparatus through the intestine and the patient's refusal to further investigations.

With cancer of the ascending department, it was possible to identify a tumor only in 12 (75%) patients, with cancer of the transverse colon in 4 (57.1%) patients. With cancer of the descending section in 17 (89.5%), with sigmoid colon cancer in 81 (96.4%) and with rectal cancer in all 52 (100%) patients.

Irrigoscopy was performed in 275 patients with colon cancer complicated by an acute obstruction, in 244 (88.7%) the causes of obstruction and tumour localization were revealed. Including 67 (27.5%) patients, the diameter of the cancer canal and its length and configuration was determined, in 138 (56.%) patients the contrast filled only the distal opening and part of the cancer canal. And in 39 (15.9%) patients with irrigoscopy, it was possible to establish only the level of obstruction without a clear contrast of the lumen of the cancer canal.

In 15 (71.4%) patients using this method of research in the right departments, the presence of an obstacle and its level were revealed. In 4 patients, its size was determined, and its patency was ascertained. In 6 patients, the contrast filled only the distal parts of the cancer canal.

In transverse colon cancer, the presence of an obstruction and its localization by irrigoscopy were determined in 8 (72.7%) patients. Including 3 patients, the stricture was traced throughout, and its patency was ascertained. In the rest of the patients, only the external opening of the cancer canal was contrasted.

With tumours of the descending department in 29 (85.3%) patients, the presence of an obstacle and the level of its localization was revealed. In 12 (35.3%) patients, the length of the cancer canal was determined, and its patency was ascertained. In the remaining 17 (50%) patients, the contrast agent filled only the distal opening of the cancer canal.

In sigmoid colon cancer, irrigoscopy was able to determine the presence of an obstruction and its location in 86 (94.5%) patients, and the size and patency of the cancer canal in 26 (28.6%) patients. In rectal cancer, 114 (96.6%) of 118 and 26 (28.6%) patients, respectively, had rectal cancer. The diameter of the external opening of the cancerous canal was determined in 65 (71.4%) patients with sigmoid colon cancer and in 81 (68.7%) with rectal cancer. Ultrasonographic examination was used in 384 patients with colon cancer, complicated by acute obstruction. With the help of ultrasound examination in 350 (91.1%) patients, the presence of obstruction was confirmed, in 224 (58.3%) a tumour was detected, in 205 (53.4%) its size, the size of the cancer canal and the thickness of the tumour walls were described. 124 (32.3%) had germination in neighboring organs or a perifocal inflammatory process. In 74 (19.2%) metastases in the liver were determined. In 286 (74.5%) patients with the help of control studies performed after 6-12-24 hours and their comparison, the dynamics of the development of acute colon obstruction against the background of decompression therapy was tracked.

The results of the study of the possibilities of special diagnostic methods in patients with colon cancer, complicated by an acute obstruction, showed that survey radiography of the abdominal cavity, ultrasound and rectoscope or colonoscopy makes it possible to diagnose acute intestinal obstruction, to conduct differential diagnosis between mechanical and dynamic obstruction, between colonic and small intestinal obstruction and to establish localization of the tumour. Determine its size, the presence of a perifocal inflammatory process and the germination of the tumor into neighbouring organs and tissues, as well as the size of the cancer canal and the thickness of the walls of the intestine and tumour. Identify the presence of distant and local metastases. It is enough to clearly assess the size of the intestine, the thickness of its walls and the severity of the peristaltic activity. Along with this, to conduct an objective dynamic control over the effectiveness of decompression therapy and predict the outcome of this therapy. And the proposed improved methods can increase the diagnostic capabilities of the methods described above. diagnosis, individually for each patient to determine the possibility of recanalization of the cancer canal and immediately after the end of the study to attempt to implement it.

To determine the effect of the size of the cancerous canal on the development of acute intestinal obstruction in 354 patients with the clinic of acute obstructive colonic obstruction, a macroscopic examination of the removed areas of the intestine with a tumor, irrigoscopy, colonoscopy and ultrasonography of the tumour and its canal was performed. In no case was complete closure of the intestinal lumen by the tumor revealed, the maximum size of the cancerous canal reached 17 mm, and the minimum was 3 mm. all patients had advanced forms of cancer (TK-T4). Complete obduracy and lumen of the intestine occurred due to the filling of the lumen of the cancerous canal with dense faeces, coarse fibre, seeds, or fruit peel with a decrease in the diameter of the cancerous canal, an increase in the number of patients with acute impairment of colon patency was also noted. So only in 8 (2.2%) patients with acute intestinal obstruction did the size of the stricture reached 16-17 mm, in all these patients the tumors were localized in the rectum.

In 86 (23.9%) patients with acute intestinal obstruction, strictures with a diameter of 11-15 mm were detected, in 114 (32.2%) patients 6-10 mm and the largest number of patients 146 (40.7%) - narrowing of the cancer canal to 5 mm.

Another trend is quite clearly noted, the more distal the tumor was located, the more often there was a devel-

opment of acute obstruction with the same or even larger diameter of the stricture.

So, in all 8 patients with the largest diameter of narrowing (up to 16-17 mm), the tumour was localized in the rectum. At the same time, only one patient with cancer in the walking parts of the colon, complicated by an acute obstruction, had a cancerous canal diameter of more than 10 mm, but it should be noted that in this patient the length of the stricture reached 120 mm. Also, only in one of the 12 patients with cancer of the operculum colon and in one of the 39 patients with cancer of the descending intestine, the diameter of the stricture exceeded 10 mm. While in cancer of the sigmoid and rectum in 42 and 37 respectively. Thus, the more distal the tumor was localized, the more often an acute violation of the patency of the colon developed.

Of the 354 patients with acute intestinal obstruction who determined the size of the cancer canal in 184 (52.6%) patients, the length of the stricture was 60-100 mm, and in 130 (36.2%) patients 100 -150 mm. And only in 40 (11.1%) patients with acute intestinal obstruction, the length of the cancer canal was less than 50 mm.

Only 36 (10.2%) patients had a narrow (<5 mm), but not an extended (up to 50 mm) cancer channel. In most patients, the size of the cancer canal was from 6 to 10 mm in diameter and a length of 60-150 mm. At the same time, the channel had a convoluted character and the longer it was, that is, the larger the size of the tumor, the more pronounced the macro-morphological signs of tumour decay were more pronounced in the central part of the canal.

With microscopic examination of tumour tissues located along the wall of the cancer canal, in almost all cases when the cancer channel was longer than 60-70 mm, there were signs of tumor disintegration, as well as more pronounced in the central parts of the cancer canal. At the same time, the thickness of the tumor wall in some places did not exceed 10-15 mm, and its integrity was easily violated.

Thus, acute obstruction in patients with colon cancer can develop already with a narrowing of the intestine to 17 mm, at the same time, complete obturation of the tumour of the intestinal lumen does not occur due to the disintegration of the tumor along the course of the cancer canal. The cause of the development of acute violation of the patency of the colon in stenosing cancer is the blockage of its lumen with dense faeces, coarse fiber, peel from fruits and other inclusions of faeces. At the same time, the narrower and longer the cancer canal and the more distal the tumor is located, the greater the likelihood of developing an acute violation of the patency of the colon.

Based on the foregoing, in patients with colon cancer complicated by an acute obstruction, the possibility of resolving obstruction by conservative or minimally invasive methods remains.

The dynamics of the development of obstruction against the background of decompression therapy, depending on the size of the cancer canal, we studied in 354 patients.

We began to carry out complex decompression and corrective therapy immediately after the diagnosis was established. It included gastric drainage and administration through a nasogastric probe of petroleum jelly oil in an initial dose of 50-60 ml and subsequently in a dose of 30 ml every 2 hours, prolonged epidural blockade, stimulation of intestinal motility (crucial 2 ml (20 mg) iv/ m, Proserpine 0.05% - 2 ml intramuscular, hypertonic solution of sodium chloride 10% - 20 ml iv) siphon and hypertonic enemas. Along with this, in parallel, correction of water-electrolyte balance was carried out, along acid-base state, microcirculation, administration of antispasmodics, non-narcotic analgesics, and infusion-detoxification therapy.

Temporarily, but completely (stage 1 acute intestinal obstruction), it was possible to resolve the obstruction in 124 (35.02%) patients. Including 88 (93.6%) patients with a cancer canal diameter of more than 10 mm and any length, all 4 patients with a stricture diameter of 5-10 mm and a length of up to 50 mm, in 20 (55.5%) patients with a diameter of less than 5 mm, and a length of not more than 50 mm.

With a stricture of 6-10 mm and a length of 50-100 mm, obstruction was resolved in 10 (14.5%) patients, and only in 2 (3.2%) cases with a stricture diameter of 5 mm and a length of 6-100 mm. In other patients, the obstruction took on a persistent or increasing character.

In patients with stage, I acute intestinal obstruction, the above therapy continued in full condition until the obstruction was completely resolved. Then, against the background of correction of metabolic and cardiovascular disorders, treatment of concomitant diseases, detoxification and, if necessary, anti-inflammatory therapy, without a slag diet and natural diet. They continued to prescribe petroleum jelly oil 30 ml 5-6 times a day, up to surgery, which was usually performed for 7-10 days. On the eve of surgery, cleansing enemas were again prescribed (2 in the evening and 2-3 in the morning). The therapy was effective in all patients in this group.

If, upon admission, the pain syndrome was detected in 83% of patients, then after 6 hours only in 51.7%, af-

ter 12 hours in 20.1% and after 24 hours it was not detected in any. Nausea, vomiting, and dry mouth were present at admission in 65%, 49.2% and 45.2% of patients by 12 o'clock notin any of them. Bloating by 24 hours was noted only in 4% of 90.3% of patients admitted with this symptom. From the first hours of the beginning of decompression therapy, almost all patients noted the discharge of stool and gas, increased peristaltic activity, normalization of the pulse. That is, there was a clear clinical picture of the resolution of obstruction.

Of the 124 patients with stage, I acute intestinal obstruction upon admission, 105 (84.7%) had fluid and gas levels on radiographs. Including 41 small-colonic and 63 colonic levels. The remaining 19 (15.3%) have pneumatosis of the colon. The size of the area above the levels of fluid is different, from 5-10 to 300-500 square centimetres.

After a control X-ray examination performed after 5-6 hours, in 43 (34.7%) patients, radiographic signs completely disappeared, in the rest they resolved within 6-48 hoursagainst the background of continuation in full coverage of the therapy.

A similar dynamic was noted during ultrasound examination. Of the 82 patients, 29 (35.4%) during the control ultrasound examination after 5-6 hours in the lumen of the colon did not have sequestered fluid. The size of the intestine and the thickness of its walls also decreased, on average the diameter from 7.43±0.32 cm, to 4.64±0.25 cm ($p<0.01$), the thickness of the intestinal wall from 5.24±0.22 mm to 3.1±0.18 mm ($r<0.02$). In all 4 patients with paresis peristaltic waves began to be determined.

In the remaining 53 (64.6%) patients with stage I acute intestinal obstruction with a control ultrasound examination performed after 6 hours, a decrease in the volume of fluid in the lumen of the intestine was also detected, in 38 patients it was from 30 to 50%, in the rest 50% or more. There was also a decrease in the diameter of the intestine from 8.3±0.45 cm to 5.7±0.35 cm ($p<0.16$) and thickness from 5.1±0.27 mm to 3.6±0.16 mm ($r<0.02$). In 5 patients, with a dilated wall, an increase in wall thickness from 2.1±0.17 mm to 3.4±0.23 mm ($p<0.02$), a decrease in its size from 9.7±0.34 mm to 4.8±0.45 mm ($p<0.5$), the appearance of peristaltic waves was revealed.

In 138 patients with stage II acute intestinal obstruction after diagnosis, either an attempt was made to recanalize the cancer canal by endoscopic methods or preoperative preparation was performed from 6-7 to 24 hours.

Against the background of decompression therapy and correction of water-electrolyte and cardiovascular disorders, almost all patients noted the discharge of gases and intestinal contents, increased peristaltic activity. Of the 128 (92.7%) patients - 39 patients did not complain of bloating, the rest noted their decrease. Pain syndrome, nausea and vomiting after 12 hours occurred respectively in 44.9% of 86.2%, 26.8% of 69.6%, and 12.3% of 51.4%.

In all 138 patients with stage II acute intestinal obstruction on a control X-ray examination performed after 5-6 hours, regardless of the degree of intestinal pneumotization, there was a decrease in the gas area above the fluid levels by less than 30% of the original.

In 92patients with stage 3 acute intestinal obstruction after diagnosis, preoperative preparation was performed for 12 hours. In all 92 patients with stage III acute intestinal obstruction on survey radiographs made after 5-6 hours, regardless of the initial level of pneumotization, stabilization or increase in the gas area above fluid levels was noted.

At the same time, patients noted a significant improvement in well-being. On clinical examination, bloating decreased slightly, as well as pain withindrom. A decrease in the pulse rate was noted in almost all patients. The discharge of stool and gas was noted only in 16.3% of patients. Increased peristaltic noises occurred in 92.4%, in 4% there was a decrease in them. Also, in all patients, a decrease in pain, nausea and vomiting was noted.

We tried to recanalize the cancer canal in patients with stage II and III acute intestinal obstruction due topreoperative preparation. With the help of a rectoscope and a special device developed by us, acute phenomena of impaired colon patency were resolved in 16 (43.2%) patients, including almost all patients with a cancer channel up to 5 mm in diameter and a length of 25 to 50 mm. With a cancerous canal with a length of 50-100 mm and a diameter of up to 5 mm was able to hold a stand in 2 out of 7 patients, in these 2 patients the length of the canal did not exceed 60-70 mm. With a length of more than 100 mm and a similar diameter in none of the 9. An attempt to conduct a silicone stent in patients with a cancer canal dimeter of 6-10 mm and its length of 60-100 mm bla successful in 8. With a stricture diameter of 6-10 mm and a cancerous length A 100-150 mm canal was removedfromthe ability to resolve obstruction in 2 out of 6 patients.

It should be noted that in patients with extended cancer channels, that is, large tumors prone to disintegration,

we stopped conducting the probe at the slightest resistance.

None of the 37 patients that we attempted to recanalize the cancer canal with a rectoscope and the proposed methods, complications and lethal outcomes would havebeen affected.

Colonoscopy using the technology developed by us to resolve obstruction was successful in 11 (32.2%) patients. In all cases, the "ballooning" probe, and along it the silicone wall, were carried out in the overlying departments. It was possible to temporarily resolve acute obstruction in 4 patients out of 5 with a cancer diameter of less than 5 mm and its length of 25-50 mm, also in 1 out of 5 patients with a cancer canal diameter of less than 5 mm and a length of 60-100 mm. But in no case of 8 with the same diameter, but a length of more than 100 mm. More successful was the ability to resolve obstruction in patients with a stricture diameter of 5-10 mm. With its length up to 50 mm, it was successful in all 4 patients. , with a length of 50-100 mm in 5 out of 8, and with a length of more than 100 mm in 1 out of 2 patients. There were no deaths and complications when trying to stent the cancer canal. It should be noted that we refused to try to conduct a probe above the tumor, if in the process of its implementation there was a noticeable resistance.

In all 27 patients who underwent cancer canal recanalization using endoscopic methods that we had improved; the clinical manifestations of acute obstruction began to resolve immediately during recanalization. Pain syndrome, nausea vomiting, dry mouth and eliminated in all patients within 6-12 hours, bloating within 24 hours. All patients also noted the discharge of feces and gases, registration of intestinal noises during the first hours from the beginning of recanalization, normalization of the pulse by 12-24 hours was noted in almost all patients.

On survey radiographs produced after 6 hours, there was a clear tendency to resolve obstruction. By 24 hours, radiographic signs of obstruction were completely resolved in 21 patients, in the rest within 24-48 hours.

An attempt to install self-expandingstentswas made in 11 patients. It was successful in all 3 patients with a cancer canal diameter of less than 5 mm and a length of 25-50 mm. In 1 patient with a cancer canal up to 5 mm in diameter and up to 60-100 mm in length, an attempt to conduct a self-expanding stent through the cancer canal failed. In patients with a stricture diameter of 5-10 mm and a length of 60-100 mm, it was possible to recanalize the cancer canal using a self-expanding stent. In patients with a stricture diameter of 5-10 mm and its length, it was possible to recanalize the cancer canal using a self-expanding stent. In patients with a stricture diameter of 5-10 mm and its length, it was possible to recanalize the cancer canal using a self-expanding stent. in 3 out of 4 patients. It was possible to install a self-expanding stent in 3 patients with a cancer canal diameter of more than 10 mm.

Given the high cost of self-expanding stents and previous experience in recanalizing the cancer canal with semi-rigid metal probes and silicone stents, we did not try to use metal self-expanding stents in patients with a long cancerous canal and a narrow lumen. The above factor was also the reason for installing self-expanding stents, as a rule, only for permanent decompression in patients. with inoperable forms of colon cancer.

All 9patients immediately after the establishment of the stent noted the discharge of gases and liquid intestinal contents, increased peristaltic activity, the disappearance of nausea, vomiting and dry mouth. The tendency to normalize pulse indicators. On control radiographs produced after 6 hours, a clear positive trend was noted, and by 24 hours the elimination of radiographic signs is notthe same.

Of the 29 patients with ileostomies in 22 patients, they were applied in the right iliac region by performing mini access with a pararectal incision. Surgical interventions in 15 patients were performed under general anesthesia, in 9 under epidural anesthesia, in 5 under local anesthesia. Of the 29 patients in 21 patients, after the removal of the small intestine loop, the contents of the large intestine were forcibly removed and its lumen was sanitized, in 8 patients this procedure was not performed. After the imposition of a double-barreled loop ileostomy, there were no deaths, inflammatory complications were identified in 4 (13.8%) patients. The ileostomy began to function within 9 hours in all patients. Around the same time, intestinal noises began to be heard. Within 6-12 hours, pain, nausea, vomiting, and dry mouth were eliminated. There is a clear tendency to normalize the pulse. It should be noted that the tendency to subside the clinical manifestations of acute obstruction occurred in patients with forced emptying of intestinal contents. After 12 hours, we performed a follow-up X-ray examination in 3 patients after forced removal of intestinal contents and in 4 patients without it. Only in 2 patients to whom we did not evacuate the contents of the intestine, single levels of fluid and gas were preserved in the lumen, but much smaller. Ultrasound examination 12 hours after the application of the ileostomy was performed in 17 patients, including 13 patients with forced evacuation of intestinal contents and 4 without it. With ultrasound examination , intestinal peristalsis was registered in all 17

patients. The size of the intestine decreased to normal in 9 patients with forced evacuation and in 2 without it. In 4 patients after forced removal of intestinal contents and in 2 patients without removal, the size of the intestine remained enlarged, the walls are edematous, up to 3-4 mm thick. Subsequently, after 24 hours, in these patients, with a control ultrasound examination, the phenomena of intestinal obstruction were not detected.

To decompression, unloading colostomies were applied in 142 patients with colon cancer complicated by acute intestinal obstruction through a mini access. Including 105 patients with double-barreled loop transverzostomies, 31 patients had double-barreled loop colostomies directly above the tumor. And in 6 patients with lower ampullary rectal cancer, single barrel candgmostomes according to the method developed in the clinic.

Of the 142 patients, 64 (45.1%) patients underwent forced removal of the contents of the colonand sanitation of its lumen. After applying the colowiththat through the mini access had 4 (2.8%) patients, inflammatory complications were detected in 26 (18.3%) patients. Only in 2 patients out of 6 with forced and in 4 out of 11 seconds independent emptying, on radiographs made after 24 hours, single small levels of fluid and gas above them were revealed, in the rest the radiographic signs of obstruction were completely resolved.

DISCUSSION

After the imposition of double-barreledcolossus, all patients have a decrease in intacusfrom the iccation withthe indrome, both in terms of clinical manifestations and laboratory data [39,41,42,44]. In almost all patients, after the imposition of proximal double-barreled colostomy, a double-barreled colostomyis noted discharge of intestinal contents and gases, relief for 6-12 hours of pain, nausea, vomiting, dry mouth, and bloating, increased peristaltic activity, a tendency to normalize the pulse [3,6,9,12,24,27,45].

In our studies, in 78 patients with colon cancer complicated by acute intestinal obstruction, surgical interventions were completed by laparotomy with the imposition of double-barreled loop stomas over the tumor. Including 73 patients were given double-barreled loop colostomies and 5 patients with double-barreled loop ileostomies.

In the postoperative period, 12 (22.2%) patients died, 29 (37.2%) developed inflammatory complications. During the first day of positive clinical symptoms, according to various clinics, practically no patient is noted [2,4,8,16,32]. Although in almost all patients immediatelyafterthe imposition of laparotomycewithcolostomy is noted. discharge of intestinal contents and gases, subsequently increased peristaltic activity was recorded only on 3-4 days [1,7,14,21].

In our studies ofreview radiography of the abdominal cavity in all 22 patients who underwent a follow-up study after 48 hours, signs of intestinal paresis of varying severity were determined on radiographs. In a follow-up study after 72 hours, 17 of them showed positive dynamics on radiographs, in 5 patients there was an increase in signs of intestinal paresis.

The study made it possible to assess the effectiveness and feasibility of using conservative, endoscopic and minimally invasive surgical interventions for the purpose of decompression in patients with colon cancer complicated by acute obstruction.

CONCLUSION

The use of a survey radiography of the abdominal cavity, ultrasound, colonoscopy or irrigoscopy allows a patientwith colon cancer complicated by acute obstruction to establish the presence of obstruction, the dynamics of its development against the background of decompression therapy, the level of obstruction, the size of the tumor and its channel, the presence of local spread or erifocalinflammatory process, regional and distant metastases. At the same time, colonic obstruction develops already with a narrowing of the cancerous canal to 17 mm, but there is never a complete obturation of the intestinal lumen. Most often, acute obstruction of the colon develops with a narrowing of the cancer canal from 10 to 5 mm or less and its length from 50 to 100 mm. In all patients with cancer strictures longer than 50 mm in the central part of the cancer canal, the development of necrotic changes and tumor disintegration is noted.

Against the background of decompression and corrective therapy, 34.4% of patients have a temporary, but complete resolution of obstruction, 40.3% have a persistent course and 25.5% have stabil obstruction is withdrawn or increases. At the same time, both with complete and persistent andland increasing variant, during the recommended preoperative period, all patients have an improvement in well-being, clinical indicators, and cardiac indicators -vascular activity, a decrease in intra-abdominal pressure and intoxication syndrome. In patients with stage II and III stages of acute obstructive obstruction of colon patency and a cancer canal less than 50 mm long and of any diameter, endoscopic methods of recanalization are shown. Endoscopic methods of decompression are quite effective in patients with a cancerous canal di-

ameter of 5-10 mm and a length of up to 100 mm, to produce recanalization is possible in 39.7% of patients. The expediency of their use in patients with a diameter of 5 mm and a length of up to 100 mm decreases, since success can be achieved only in 21.4%, while the likelihood of perforation of the cancer canal wall increases. Given the high cost and equal effectiveness of self-expanding stents and the above-described endoscopic methods of decompression, self-expandingandesya stents are advisable to use in patients who needlong-term decompression with inoperable forms of colon cancer complicated by acute obstruction.

With the ineffectiveness of conservative and endoscopic methods of decompression in patients with colon cancer located above 6-7 cm from the canal, complicated by acute obstruction, overlays of ileo- or transverzostomy are indicated, respectively, in the right iliac region or in the right hypochondrium. For tumors located below 7 cm of single barrel sigmostoma in the modification of the clinic using intraoperative methods of removing the contents of the intestine.

Ethics approval and consent to participate - All patients gave written informed consent to participate in the study.

Consent for publication - The study is valid, and recognition by the organization is not required. The author agrees to open the publication

Availability of data and material - Available Competing interests - No

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REFERENCES

1.A combination of diabetes mellitus and acute purulent-destructive lung diseases solving the problems of diagnosis and treatment / A.O. Okhunov, Sh.A. Khamdamov // Journal World Bulletin of Public Health (WBPH)-2023 - Volume 19, P. 127-135.

2.Angenete E., Asplund D., Bergstrom M., Park P.O. Stenting for colorectal cancer obstruction compared to surgery--a study of consecutive patients in a single institution. - Int J Colorectal Dis. - 2012. - May;27(5). -P.665-670.

3.Baron T.H. Colonic stenting: a palliative measure only or a bridge to surgery? - Endoscopy. - 2010. - Feb;42(2). P.163-168.

4.Blake P., Delicata R., Cross N., Sturgeon G., Hargest R. Large bowel obstruction due to colorectal carcinoma can be safely treated by colonic stent insertion--case series from a UK district general hospital. - Colorectal Dis. -2012. -Dec;14(12). - 1489-1492.

5.Bregel A.I., Hantakov A.M. Colonoscopy at acute colon diseases. . -Proktologia. - №1. -2008. - Vol.9. - P. 43.

6.Brudvik A., Rancinger P., Sundhagen J.O., Hauge T. Endoscopic stenting of malignant colorectal strictures. - Tidsskr Nor. Laegeforen. - 2005. - Aug 11;125(15). P. 2011-2013.

7.Ceriati F., Tebala G.D., Ceriati E., Coco C., Tebala D., Verbo A., D'Andrilli A., Picciocchi A. Surgical treatment of the left colon malignant emergencies. A new tool for operative risk evaluation. - Hepatogastroenterology. - 2002. - Vol. 49.- P. 961-966.

8.Chen H.S., Sheen-Chen S.M. Obstruction and perforation in colorectal adenocarcinoma: an analysis of prognosis and current trends. - Surgery. - 2000. -Vol. 127. - P. 370-376.

9.Chiapa A., Zbar A., Biella F., Staudacher C. One-stage resection and primary anastomosis following acute obstruction of the left colon cancer. - An. Surg. -2000. - vol. 66. - P. 619-622.

10.Choo I.W., Do Y.S., Suh S.W. et al. Malignant colorectal obstruction: treatment with a flexible covered stent. - Radiology. - 1998. - Feb; 206(2). - P. 415-421.

11.Corsale I., Foglia E., Mandato M., Rigutini M. Intestinal occlusion caused by malignant neoplasia of the colon: surgical strategy. - G Chir. - 2003 - Vol.24(3)-P.86-91.

12.Denis B., Ollier J.C. Management of bowel obstruction in adwanced abdominal or pelvic cancer. - Gastroenterol. Clin. Biol. - 2002. - Vol. 26. - P. 372385.

13.Differential diagnosis of necrotizing fasciitis / A.O. Okhunov, D.N. Korikhonov // British Medical Journal-2023-Volume 3-Issue 1-Pages 67-74.

14.Differentiated approaches to the diagnosis and treatment of acute lung abscesses in patients who have had COVID-19 / A.O. Okhunov, Sh.A. Bobokulova // British Medical Journal – 2023 - Volume 3, Issue 1, Pages 134-143.

15.Esparrach G.F. The role of stents in obstructive colorectal cancer.-Gastroenterol Hepatol (N Y). -2010. - Jun;6(6). P.359-61.

16.Etiological factors leading to purulent mediastinitis / A.O. Okhunov, K. Kh Boboev // World Bulletin of Public Health-2023-Volume 18-Pages 118-125.

17.Etiology and pathogenesis of primary purulent mediastinitis / A.O. Okhunov, K.Kh. Boboev // British Medical Journal – 2023 - Volume 3 – Issue 1 – Pages 144-154.

18.Foo C.C., Poon J.T., Law W.L. Self-expanding metallic stents for acute left-sided large-bowel obstruction: a

review of 130 patients. - Colorectal Dis. -2011. -May;13(5). -P.549-54.
19.Gatsoulis N., Roukonakis N., Kafetzis I., Mavrakis G. Surgical management of bowel obstruction due to colonic cancer. - Tech. Coloproctol. - 2004. - Vol. 8. -P. 82-84.
20.Grundmann R.T. Primary colon resection or Hartmann's procedure in malignant left-sided large bowel obstruction? The use of stents as a bridge to surgery. - World J Gastrointest Surg. - 2013. - Jan 27;5(1). -P. 1-4.
21.How to treat acute purulent-destructive lung diseases if they are sequels to Covid-19? Problems and ways to solve them / Sh. A. Bobokulova, Sh. A. Khamdamov, D. N. Korikhonov, et all. // Journal of Education & Scientific Medicine- 2023 - 1(1)-P.47-55.
22.Hsu T.C. One-stage resection and anastomosis for acute obstruction of the left colon. - Dis. Colon Rectum. - 1998. - Vol. 41. - P. 28-32.
23.Jakobs R, Miola J, Eickhoff A, Adamek H.E., Riemann J.F. Endoscopic laser palliation for rectal cancer--therapeutic outcome and complications in eighty-three consecutive patients. - Z. Gastroenterol. - 2002 - Aug;40(8). - P.551-556.
24.Khan M.I., Claydon A. Colonic self-expanding metal stents (SEMS) in acute large bowel obstruction. - N.Z. Med J. - 2011 - Nov 4;124(1345). P57-63.
25.Lim J.F., C-L. Tang., Seow-Choen F., Heah S.M. Prospective, randomized trial comparing intraoperative colonic irrigation with manual decompression only for obstructed left-sided colorectal cancer. - Dis. Colon Rectum. - 2005. - Vol. 48, N 2. - P.205-209.
26.Manes G., de Bellis M., Fuccio L., Repici A., Masci E., Ardizzone S., Mangiavillano B., Carlino A., Rossi G.B., Occhipinti P., Cennamo V. Endoscopic palliation in patients with incurable malignant colorectal obstruction by means of self-expanding metal stent: analysis of results and predictors of outcomes in a large multicenter series. - Arch Surg. - 2011 -Oct;146 (10). - P.1157-1162.
27.Nagula S., Ishill N., Nash C., Markowitz A.J., Schattner M.A., Temple L., Weiser M.R., Thaler H.T., Zauber A., Gerdes H. Quality of life and symptom control after stent placement or surgical palliation of malignant colorectal obstruction.- J Am Coll Surg. - 2010. - Jan;210(1). -P.45-53.
28.New approaches to improve autodermaplasty results / F.M. Abdurakhmanov, Sh.A. Khamdamov, D.A. Korikhonov, A.O. Okhunov // Journal of Education & Scientific Medicine-2023-Volume 2-Issue 1-Pages 22-27.
29.New approaches to treating lung abscesses as COVID-19 sequels / A.O. Okhunov, Sh.A. Bobokulova - Journal World Bulletin of Public Health – 2023 - Volume 19, P.101-107.
30.Ohman V. Prognosis in patients with obstructing colorectal carcinoma. -Am.J.Surg. - 1982. - Vol.143. - №6. - P.742-747.
31.Perrier G., Peillon C., Liberge N. Cecostomy is useful surgical procedure: stady of 113 colonic obstructions caused by cancer. - Dis.Colon.Rectum. - 2000. -Jan; 43(1). - P. 50-54.
32.Possibilities of modern physical methods of antisepsis in the treatment of acute lung abscesses in patients with diabetes mellitus / Sh.A. Khamdamov, F.M. Abdurakhmanov, Sh.A. Bobokulova, et all. // Journal of Education & Scientific Medicine – 2023 - Volume 1 – Issue 1 – Pages 37-46.
33.Purulent-destructive lung diseases, pathogenesis and modern principles and treatment / Sh. A. Khamdamov, Sh. A. Bobokulova, D.N. Korikhonov, K. Kh. Boboev, A.O. Okhunov, F.M. Abdurakhmanov // Journal of Education and Scientific Medicine- 2023-Volume 2-Issue 1-Pages 57-66.
34.Roncoroni L., Violz V., Sgolbe G., Montanari M., Pellegrini M., Peracchia A. Occlusione da carcinoma colo-rectale (Esperienza personale). - Acta Chir. Italica. - Vol. 43. - 1987.
35.Some ways to optimize diagnostic methods of necrotizing soft tissue diseases / A.O. Okhunov, D.N. Korikhonov // World Bulletin of Public Health (WBPH) – 2023 - Volume 19 – Pages 230-235.
36.Suzuki N., Saunders B.P.,Thomas-Gibson et al. Colorectal stenting for malignant and benign disease: outcomes on colorectal stenting. - Dis. Colon Rectum. - 2004. - Vol.47. - P.1201-1207.
37.Tan C.J, Dasari B.V., Gardiner K. Systematic review and meta-analysis of randomized clinical trials of self-expanding metallic stents as a bridge to surgery versus emergency surgery for malignant left-sided large bowel obstruction. - Br J Surg. - 2012. - Apr;99(4). P. 469-476.
38.Tanaka A., Sadahiro S., Yasuda M., Shimizu S., Maeda Y., Suzuki T., Tokunaga N., Ogoshi K. Endoscopic balloon dilation for obstructive colorectal cancer: a basic study on morphologic and pathologic features associated with perforation. - Gastrointest Endosc. - 2010. - Apr;71(4). - P.799-805.
39.Tuca A., Guell E., Martinez-Losada E., Codorniu N. Malignant bowel obstruction in advanced cancer patients: epidemiology, management, and factors influencing spontaneous resolution. - Cancer Manag Res. -2012. Vol.4. - P.159-69.
40.Uccheddu A., Cois A., Cagetti M. La chirurgia della complicanza occlusive nel carcinoma del colon sinistro.

Problematiche cliniche ed esperienza personale su 56 casi operati. - G.Chir. - 1994. - Oct; 15(10). - P.443-449.
41.Van Hooft J.E., Bemelman W.A., Oldenburg B., Marinelli A.W., Holzik M.F., Grubben M.J., Sprangers M.A., Dijkgraaf M.G., Fockens P. Colonic stenting versus emergency surgery for acute left-sided malignant colonic obstruction: a multicentre randomised trial. - Lancet Oncol. - 2011. - Apr; 12(4).- P. 344-352.
42.Walz M.U., Eigler F.W. and Kropft D. Combined surgical and operations for locally advanced colorectal carcinoma. - Acta.Chir.Augtr. - 1991. - Vol.23. - №1.
43.Ways to achieve positive results of dermaplasty in patients with diabetic foot syndrome / A.O. Okhunov, F.M. Abdurakhmanov // British Medical Journal – 2023 - Volume 3 – Issue 1 – Pages 92-98.
44.What do you need to know about the origin of purulent mediastinitis? / K.Kh.Boboev, D.N. Korikhonov, A.O. Okhunov // Journal of Education & Scientific Medicine -2023- Volume 2 – Issue 1 – Pages 15-21.
45.Zhong Y.S., Yao L.Q., Xu J.M., Xu M.D., Zhou P.H., Chen W.F., Qin X.Y. Emergency colonoscopy in diagnosing and treating acute colorectal obstruction. - Zhonghua Yi Xue Za Zhi. - 2011. - Mar 1; 91(8). -P. 524-527.