

LAPAROSCOPY IN THE COMPLEX TREATMENT OF SEVERE ACUTE PANCREATITIS

F.Sh.Mavlyanov , M . Kh . Mukhammadiev , F.M.Shukurov, S.Zh.Kamolov
*Samarkand branch of RSCEM,
Samarkand State Medical Institute .Uzbekistan*

Abstract

To explore the possibilities of different methods of surgical treatment of severe acute pancreatitis , two groups of surgical patients were selected depending on the method of surgical treatment, which were produced by different types of " open " and laparoscopic operations. To assess the effectiveness of the applied methods of treatment, in the postoperative period, we used the following laboratory and physiological parameters: progression or regression systemic inflammatory response syndrome (SIRS), neutrophil-lymphocyte ratio (NLR), as well as integral scales for assessing severity Ranson , APACHE - II and SAPS . The results obtained demonstrate the advantages of laparoscopic surgical methods.

Key words: acute pancreatitis, laparoscopy .

Introduction

At the present time acute pancreatitis (AP) occupies third place in the list of diseases of "acute abdomen" and 12.5% across the acute surgical abdominal pathology, the second highest total number of days of hospitalization and a fifth place in the number of hospital deaths that shows the importance of accurate and current knowledge about this disease [6,8,9] . The basis AP lies primarily aseptic lesion (edema or necrosis) of pancreas with secondary inflammatory reaction, characterized by the phase current, wherein the basic clinical parameters (severity, incidence of complications, surgical activity, mortality, cost of treatment and others.) mostly determined by the prevalence of destructive process [2,4] . Despite the priority of intensive conservative therapy in the treatment of severe acute pancreatitis (SAP) , in different phases of the disease there are indications for carrying out surgical interventions that can be implemented as traditional, and also modern videolaparoscopic methods, however, indications for minimally invasive interventions is still clearly not defined . Despite the fact that surgical treatment is considered effective in the treatment of infected pancreatic necrosis , the risk of failure of the endocrine and exocrine pancreatic function in the postoperative period, remains quite high [1,3,5,7] . The problem of acute pancreatitis does not lose its relevance, despite the achievement of significant success in the diagnosis and treatment of this pathology. The timing and choice of the method of surgery is of great

importance for reducing the number and prevention of complications of acute pancreatitis.

The purpose of the study: to carry out analysis of the efficiency of application of various methods of surgeries in complex treatment of severe acute pancreatitis.

Materials and Methods: Were analyzed surgical treatment of 74 patients with severe acute pancreatitis in the period from 2015 to 2020 years, who were on the stationary treatment in the department of emergency surgery №1 and №2 of the Samarkand branch RSCEM. To explore the possibilities of the use of the laparoscopic technique and treatment of severe acute pancreatitis, depending on the method of conducting surgical intervention, two groups of surgical patients were selected: basic and control. The main group consisted of 36 patients with severe acute pancreatitis, in the course of treatment that used endovideosurgical surgery. The structure of the control group consisted of 38 patients with severe acute pancreatitis, which performs various types of "open" surgery. A diagnosis of severe acute pancreatitis was based on the study and examination of the case history, clinical symptoms, as well as laboratory data and instrumental methods of diagnosis. Laboratory methods for diagnosis of severe acute pancreatitis included: index of hemoglobin, hematocrite, number of erythrocytes, leukocytes and platelets of peripheral blood, glucose and diastasis and blood creatinine, urea and residual nitrogen of blood serum.

To compare the clinical efficacy of "open" and laparoscopic methods of surgical treatment of severe acute pancreatitis, in the study and control groups in the postoperative period, we used the following laboratory-physiological parameters: progression or regression of systemic inflammatory response syndrome (SIRS - systemic inflammatory response syndrome), neutrophil-lymphocyte ratio (NLR - neutrophil - lymphocyte ratio), as well as integral scale evaluation of the severity of the patient: Ranson, APACHE - II and SAPS. We analyzed the outcome of the disease, the length of stay in the surgical intensive care unit after surgery, the duration of treatment in the postoperative period, the nature and frequency of complications. Statistical processing of the results was carried out using traditional reliability criteria (Student's criterion, correlation coefficient and reliability criterion).

Research results and discussion. Conservative therapy of acute pancreatitis included pain relief, infusion therapy (mainly crystalloids, reference point 7-10 ml /kg/h), blockade of the secretory function of the pancreas, inhibition of biologically active substances, suppression of gastric secretion, antibiotic therapy, antispasmodics, anticoagulants, as well as the correction of metabolic disorders. Patients of the control group (n 38 -

51.4%) were made " open " surgery with laparotomy: necrosectomy, drainage packing of bag, opening and drainage of abscesses (or phlegmon) of retroperitoneal tissue, cholecystectomy with draining of choledoch or cholecysto-stomy, sanitation and draining of abdominal cavity. In 6 (8,1%) patients pancreatic necrosis was diagnosed after laparotomy, determined after widespread peritonitis.

Endovideosurgical methods of surgical intervention were performed in 36 (48.6%) of 74 patients with severe acute pancreatitis, and all operations were performed in the early stages of the disease. The indications in these cases were: an increase in free fluid in the abdominal cavity over time, preservation or progression of intoxication syndrome despite ongoing conservative therapy, acute destructive cholecystitis, diffuse enzymatic peritonitis. The main aim was sanitation and abdominal drainage and/or restriction of liquid accumulation in retroperitoneal space as a surgical method of detoxification of organism. The patients underwent such surgical interventions as laparoscopy, debridement and drainage of the omental bursa and abdominal cavity, laparoscopic cholecystectomy. In all patients of the main and control groups, operations were performed according to emergency indications, after a short-term preoperative preparation.

Evaluation of the effectiveness of the applied methods of surgical treatment was carried out at all stages of treatment in the postoperative period. All patients on the second day after the surgery, there was an increase of neutrophil-lymphocyte th coefficient and (NLR these figures), but in the study group were slightly lower than in the control group. During the dynamic observation and evaluation of the severity of condition of patients using such integrated scales as Ranson , APACHE - II and SAPS revealed that the state of the patients who had undergone " open e " surgical intervention was regarded as a more severe than patients which operations were performed laparoskopicheski . Reduction of SIRS symptoms was observed in 72% of patients in the study group and 55% in the control group.

Comparative analysis showed that in patients who had undergone a laparoscopic techniques operative treatment duration of stay in the intensive care department of surgery was about 2 , 3 bed / day i , p rodolzhitelnost treatment was 1 8 , 5 bed / days, mortality - 13.8%, and in " open " operations - the length of stay in a surgical intensive care ward was about 3 , 8 bed / day s , n rodolzhitelnost treatment - 28.6 bed / days, and mortality - 21.5% (table №1) .

Table # 1. Comparative results of the studied parameters in patients of the main and control groups in the postoperative period.

	Main group (n 36)	Control group (n 38)
SIRS	regression	regression

	of symptoms in 26 (72.2%) patients	of symptoms in 21 (55.3%) patients
NLR (Neutrophil - Lymphocyte Ratio)	for 2- day: $2,097 \pm 0,573$	on the 2nd day: $2,391 \pm 0.449$
Ranson	after 48 hours : 4.417 ± 2.583	after 48 hours : $6,083 \pm 2.917$
APACHE - II	on the 2nd day: 8.139 ± 4.861	for 2 days: 9.639 ± 5.361
SAPS	on the 2nd day: $5,806 \pm 3.194$	on the 2nd day: 6.750 ± 3.250
the duration of stay in the OHR	2.30 ± 0.7 bed / days	3.82 ± 2.18 bed / days
duration of treatment	18.50 ± 4.5 bed / day	27.60 ± 6.4 bed / days
about complications	28,6 %	36.4 %
Death rate	13.8%	21.5%

The main criterion for evaluating the use of laparoscopic methods of operations was the immediate results of treatment: the number of complications in the postoperative period and mortality. As a result of the study valid data were obtained about the efficacy of endovideosurgical methods for the treatment of severe acute pancreatitis. The advantage of laparoscopic operations is to reduce the traumatism of carried sanitation mainly due to minimizing random access, which makes their method of choice for sanitizing operations, so this method is particularly effective in the early stages of flow (enzymatically and reactive phase) disease. Thus, our results confirm the effectiveness of modern laparoscopic methods of surgical treatment of severe acute pancreatitis, their use can reduce the rate of complications from 36,4% to 28,6% ($p < 0.05$), and reduce lethality from 21.5% to 13,8% ($p < 0.05$).

Conclusions:

1. The use of laparoscopic methods of surgical treatment in combination with intensive conservative therapy ensures early evacuation of toxic products contained in fluid accumulations, which helps to prevent multiple organ failure and leads to a reduction in treatment time, a decrease in the number of postoperative complications and mortality in patients with severe acute pancreatitis.

2. The method of choice when treating severe acute pancreatitis and in the early stages of the disease (enzymatically and reactive phase) is laparoscopic sanitation and drainage of the peritoneal cavity.

3. The introduction of laparoscopic techniques of surgical treatment allows to decrease the number of "open" operations, and significantly reduce the number of complications, mortality and length of stay of patients in the hospital.

LITERATURE

1. Avazov A.A., Mukhammadiev M.Kh., Samiev Kh.Zh., Dzhumageldiev Sh.Sh., Daminov F.A., Normamatov B.P., Khudoinazarov U.R. Severe acute pancreatitis: diagnostic and treatment options. *Problems of Biology and Medicine* 2019; 3 (111): 7-9.
2. Bagnenko S.F., Tolstoy A.D., Krasnorogov V.B., Kurygin A.A., Grinev M.V., Lapshin V.N., Goltsov V.R. Acute pancreatitis (Protocols for diagnosis and treatment). *An Nala surgery Hepatology* 2006; 1 (11): 60-66.
3. Kudelich O.A., Protasevich A.I., Kondratenko G.G. Minimally invasive surgical interventions in the treatment of patients with acute necrotizing pancreatitis. *Experimental and Clinical Gastroenterology* 2014; 5 (105): 27-32.
4. Hadzhibayev AM, Altiev BK, Rizaev KS, Baimuradov Sh.E. Determination of the severity of the course and treatment of acute pancreatitis. *Emergency surgery. XXII Congress of the Association of Hepatopancreato-Biliary Surgeons. Tashkent 2015*; 193.
5. Tskhai B.V., Toleubaev E.A., Alibekov A.E., Kalieva D.K., Balykbaeva A.M., Kusainov M.I. Comparative analysis of the effectiveness of various surgical methods for the treatment of acute pancreatitis. *Medicine and Ecology* 2018; 4 (89): 91-94.
6. A. Guerrero, de Miguel A.F., Albillos A. Acute pancreatitis. Diagnostic and therapeutic protocol. *Medicine* 2019; 12 (87): 5140-5144.
7. Karakayali F.Y. Surgical and interventional management of complications caused by acute pancreatitis. *World journal of gastroenterology* 2014; 20 (37): 13412-13423.
8. Lankisch P.G, Apte M., Banks P.A. Acute pancreatitis. *Lancet* 2015; 386 (9988): 85-96.
9. Leppäniemi A. The, Tolonen M., Tarasconi A. et al. 2019 WSES guidelines for the management of severe acute pancreatitis. *World journal of emergency surgery* 2019 ; 14 : 27