



The role of minimally invasive technologies in the diagnosis and treatment of patients with acute destructive pancreatitis.

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Resume. This article presents the results of surgical treatment of 367 patients with acute destructive pancreatitis, who were treated in the Department of Emergency Abdominal Surgery of the Fergana branch of the Russian National Center for Medical Rehabilitation in the period from 2016 to 2021. A differential approach to the choice of surgical interventions in severe forms of acute pancreatitis has been developed.

Keywords: acute pancreatitis, surgical treatment, differential approach.

Introduction.

The number of patients with acute pancreatitis does not tend to decrease, taking the third place in the structure of surgical diseases of the abdominal cavity. Among the total number of patients, pancreatic necrosis is about 20-35% and is accompanied by a high overall and postoperative mortality rate, reaching 15-45%. Early diagnosis and selection of optimal treatment methods in patients with pancreatic necrosis are complex and ultimately unresolved problems of surgery.

Purpose of the study.

Development of a differential approach to the choice of surgical interventions in severe forms of acute pancreatitis.

Materials and methods of research.

The paper presents the results of surgical treatment of 367 patients with severe forms of acute pancreatitis who are being treated in the Department of Emergency Abdominal Surgery of the Ferghana branch of the RSC EMP in the period from 2016 to 2021. There were 150 women (40.9%) and 217 men (59.1%). The age of the patients ranged from 28 to 64 years.

Alcohol intake was established as the main etiological factor in 198 (54%) patients, biliary factor was established in 139 (37.9%) patients, and no etiological factor was established in 30 (8.1%) patients.

Research methods they included general clinical and instrumental tests. To determine the infection and severity of pancreatic necrosis, we used the determination of C-reactive protein (CRP) in the blood. An increase in the CRP level of more than 150 mg / l indicated the development of severe pancreatic necrosis. Among the instrumental methods, ultrasound, ERCP, spiral and



magnetic resonance imaging were used. The results of computed tomography were evaluated by classification Balthazar with the index CTSI, consisting of the index of pancreatic necrosis and the index of acute inflammatory changes. Rapid diagnosis of acute pancreatitis was carried out with the determination of the indicator of the qualitative content of diastase in the urine, which is a one-step qualitative test. Due to the use of the test, a differential diagnosis of acute pancreatitis with other diseases was carried out within 5-10 minutes, which made it possible to avoid overdiagnosis of acute pancreatitis at the prehospital stage.

To determine the severity of acute pancreatitis, a classification was used that includes 4 main forms: mild, moderate, severe and extremely severe (fulminant) form. The severity of the patients' condition was determined by scales Ranson, APACHE II and Imrie-Glasgow this led to further treatment and diagnostic tactics.

Results and their discussion.

367 surgical interventions were performed in 367 patients with severe acute pancreatitis. The following complications were identified: 95 (25.9%) had acute fluid accumulations (pancreatic and parapancreatic), 23 (6.3%) had postnecrotic pseudocysts, 47 (12.8%) had pancreatic abscess, 77 (21%) had sterile pancreonecrosis, and 88 (23.4%) had advanced pancreatic necrosis. infected pancreatic necrosis. The choice of treatment tactics for patients with acute pancreatitis was based on a dynamic assessment of clinical and laboratory data and evaluation of dynamic ultrasound, MSCT, and MRI of the abdominal cavity.

Ultrasound, MSCT, and MRI were monitored to determine the dynamics of changes in the volume of fluid accumulations, the degree of pancreatic necrosis, and retroperitoneal tissue damage. Laparoscopic drainage procedures were performed in cases of fluid accumulation in the abdominal cavity with a volume of more than 500 ml, in the early enzymatic phase of acute pancreatitis, and laparoscopic cholecystostomy was performed if signs of biliary hypertension were detected. At the same time, 177 (48.2%) mini-invasive videolaparoscopic interventions were performed: rehabilitation videolaparoscopy with abdominal drainage-128 (34.9%) patients, rehabilitation video laparoscopy, contact cholecystostomy – 82(23.3%), rehabilitation and drainage of the omentum sac – 36 (10.2%), rehabilitation and drainage of the omentum sac, contact cholecystostomy – 39 (11.1%), cholecystolithotomy, LHE, rehabilitation and drainage of the omentum sac and abdominal cavity – 28 (8.0%). Under ultrasound control 36 (5,2%) patients underwent drainage of acute fluid accumulations of the abdominal cavity. Patients with severe pancreatitis who, according to clinical, laboratory and instrumental data, suspected biliary genesis of pancreatitis underwent urgent ERCP. When detecting pathology of the bile ducts and the large duodenal papilla 28 (4.0%) patients underwent transpapillary endoscopic interventions: when choledocholithiasis was detected 17 (60,7%) EPST performed, y 10 (35,7%) of which - EPST with choledocholithoextraction, with the detection of microcholedocholithiasis and biliary sludge in patients with 11 (39,3%) - endoscopic balloon dilation of the large duodenal papilla. In the phase of infectious complications, both minimally invasive and traditional surgical interventions were performed. Indications for minimally invasive interventions were: formed local fluid accumulations in the abdominal cavity, omentum sac, retroperitoneal tissue. In the infectious phase completed 142 (20,4%) minimally invasive interventions. From videolaparoscopic interventions performed: mini-invasive necrosequesrectomy with videolaparoscopic retroperitoneal access – 12



(5%), laparoscopic dissection and drainage of pancreatic cysts – 14 (9,9%) sick people. The pancreatic abscess was opened and drained under ultrasound control 21 (13,2%) to the patient, autopsy and drainage of the infected pseudocyst under ultrasound control, 18 (12,7%) - lumbotomy, in 21 (14.8%) - minilaparotomy.

After videolaparoscopic interventions at the second stage, 99 (27%) patients underwent both minimally invasive and open surgical interventions. With the development of purulent-septic complications of acute pancreatitis with the formation of large sequesters, the presence of infected pancreatic necrosis, usually exceeding 30-40% of the pancreatic volume, peritonitis 174 (31.8%) The patients underwent open surgical procedures with necrosectomy and drainage of the omentum sac. Programmed relaparotomies with additional rehabilitation of purulent foci were performed in 48 (30.2%) patients: 27 (56.3%) were performed in 2 stages, 21 (43,7%) – in three stages. After laparoscopic drainage of the omentum sac and abdominal cavity, 2-3-stage operations were performed – 30 (85%) to patients. The postoperative mortality rate was – 17.3% (95 patients). Causes of postoperative mortality: acute hemorrhagic pancreatic necrosis-21 (22.1%), acute fatty pancreatic necrosis – 26 (27.4%), acute mixed pancreatic necrosis - 17 (17.6%). Minimally invasive interventions were performed mainly in the last 3 years, while traditional operations were performed mainly from 2016 to 2018, which allowed, in comparison with the results, to reveal a decrease in the number of complications by 8.9%, a decrease in mortality by 8.2%.

Thus, the developed differential approach to the choice of surgical interventions with extensive introduction of minimally invasive technologies has improved the results of treatment of patients with severe forms of acute pancreatitis.

Conclusions.

Thus, the conducted studies indicate that in the diagnosis of severe forms of acute pancreatitis and its complications, the use of monitoring laboratory and instrumental research methods made it possible to timely determine the degree and volume of pancreatic damage and develop surgical tactics.

The proposed differential approach to the choice of surgical interventions with a broad introduction of minimally invasive techniques allowed to reduce the number of complications by 83.9%, mortality-by 8.2%.

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