

## EFFICIENCY OF DIAGNOSTIC LAPAROSCOPY IN EMERGENCY ABDOMINAL SURGERY

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**Relevance.** In order to improve the diagnostic tactics of acute surgical pathology of the abdominal cavity with the help of laparoscopy, 60 medical histories of patients with abdominal pathology who were admitted in an emergency order were analyzed. Laparoscopic analysis showed a high resolution of 93.1-96.8%, depending on the nature of the disease. Clinical experience shows that among the surgical patients admitted to the hospital, 25% are patients with acute surgical diseases of the abdominal cavity. This group of diseases includes mainly six nosological units: acute appendicitis, acute pancreatitis, perforated gastroduodenal ulcer, acute intestinal obstruction, pinched hernias and abdominal injuries. It is in these types of acute surgical pathology that the proportion of diagnostic errors is high not only at the pre-hospital stage, but also in hospitals, which leads to delayed interventions, severe complications and mortality. Therefore, the development of new and improvement of existing diagnostic methods is an urgent problem of modern surgery.

**Purpose of the study:** Improving the results of surgical treatment of patients with acute surgical diseases of the abdominal cavity, by improving diagnostic and therapeutic laparoscopy.

**Objectives of the study:** To study the informative value and diagnostic significance of laparoscopy in emergency abdominal surgery. To determine the possibilities of modern laparoscopic technologies in improving the quality of diagnosis and treatment of patients with acute surgical diseases of the abdominal cavity compared to open methods.

**Materials and methods.** We analyzed 60 medical records of patients who were hospitalized in an emergency in our clinic from 2018 to 2020, who underwent diagnostic laparoscopy in order to clarify the diagnosis. The patients were divided into 4 groups.

**Results and discussion.** Group 1 included 36 (60%) patients who could not be excluded from the diagnosis of acute appendicitis. Group 2 consisted of 12 (20 %) people with symptoms of peritonitis of unclear etiology (suspected perforation of the hollow organ, mesenteric thrombosis, acute intestinal obstruction). Group 3 was represented by 7 (11.6%) persons with abdominal injuries, who did not exclude damage to internal organs. Group 4 consisted of 5 (8.3%) patients with pathology of the hepatobiliary zone (acute pancreatitis, acute cholecystitis, acute hepatitis). 20 (55.5%) patients of the 1st group were admitted to the hospital on the first day after the onset of the disease, the remaining 16 (44.4%) due to the atypical manifestation of the disease - at a later date.

Although acute appendicitis is the most common acute surgical disease of the abdominal cavity, a significant number of diagnostic errors (from 20 to 40%) at all stages of medical care is allowed for this pathology. Active surgical tactics in acute appendicitis, with the exception of appendicular infiltrate, regardless of the time elapsed since the disease, determines the use of the optimal diagnostic program. As our observations have shown, clinical and laboratory methods of examination conducted in 36 patients of group 1, in 69% of cases, were uninformative, which indicates the need for more objective methods of diagnosing this pathology. Laparoscopy is such a method that allows you to verify the diagnosis. In our clinic, laparoscopic examination in 14 (38.8%) patients of group 1 was performed in the first hours from the moment of admission to the hospital, in 22 (61.1%) - after 2 hours of dynamic observation. We were able to verify the diagnosis laparoscopically in 33 (91.6%) patients.

However, acute inflammatory changes in the appendix were detected only in 9 (25%) patients, in 25 (69.4%) - gynecological pathology was diagnosed, in 2 (1.2%) - other diseases. Thus, the use of laparoscopy in the majority of patients of the 1st group allowed to establish the diagnosis and determine the treatment tactics.

In the 2nd group of 12 patients who underwent emergency laparoscopy due to the presence of symptoms of peritonitis of unclear etiology, 7 (58.3%) people were admitted to the hospital within the first day from the onset of the disease. Diagnostic difficulties were also observed in 5 (41.7%) patients hospitalized at a later stage of the development of the pathological process. Clinical-laboratory and special methods of research conducted in the hospital, in 39% of cases, were uninformative. Diagnosis in such complex cases should be based on the use of instrumental or hardware methods of research, among which laparoscopy belongs to the leading place. However, it is necessary to order the sequence of their application, depending on the complexity of solving the set diagnostic tasks. Thus, after carrying out all the necessary diagnostic measures in this group in the first 2 hours from the moment of admission to the hospital, indications for diagnostic laparoscopy were determined in 7 (58.3%) patients. In 5 (43.7%) patients, laparoscopic examination was performed after 2 hours of dynamic observation due to diagnostic difficulties. At the same time, the diagnosis was verified by laparoscopy in 11 (91.6%) patients.

In the 3rd group of 7 patients with suspected internal organ damage due to abdominal trauma, 5 (71.4%) people were admitted to the hospital on the first day after the onset of the disease: 3(28.5%) - with multiple and combined pathology. In this pathology, the number of diagnostic errors reaches 30%. In this group of patients, clinical-laboratory and additional methods of investigation (ultrasound, radiography) were informative only in 44.5% of cases.

Difficulties in establishing a diagnosis in patients of this category and the low information content of additional research methods were associated with the peculiarity of the pathological process occurring against the background of acute blood loss, shock, and alcohol intoxication. Therefore, in 5(71.4%) patients, laparoscopy was performed in the first 2 hours from the moment of admission to the hospital. The diagnosis was verified laparoscopically in 6 (85.7%) patients. Damage to internal organs was detected in 47% of patients mainly on the basis of the presence of indirect signs (blood, intestinal contents, bile). Continuing intra-abdominal bleeding was an indication for urgent laparotomy. Thus, 53% of patients managed to avoid diagnostic laparotomies, which could lead to deterioration of their condition.

In the 4th group of 5 patients with pathology of the hepatobiliary zone, 2 (40%) people were hospitalized on the first day after the onset of the disease. At the same time, 49.6% of patients were elderly and senile. It was in this group of patients that they had to face the greatest diagnostic difficulties. Currently, in emergency surgery, there are no clinical and laboratory tests that allow differentiating acute pathology of the hepatobiliary zone. So, in 50% of cases, these research methods were uninformative. In the absence of indications for emergency surgery, various tactical solutions are currently being offered. The optimal timing of conservative therapy is also not definitively established. Late and excessively early diagnostic laparotomy is fraught with dangerous consequences, especially in the elderly and senile. Some authors consider conservative treatment only as a therapy that corrects functional and metabolic disorders, and as a stage of preoperative preparation, others-as an attempt at all costs to resolve an acute attack of the disease. In this group, only 13% of patients had laparoscopy performed in the first 2 hours from the moment of admission to the hospital, in 87% of cases-at a later time. At the same time, 96% of patients were able to verify the diagnosis, but the pathology of the hepatobiliary zone was diagnosed only in 60% of patients.

**Conclusions.** Based on the analysis of the effectiveness of the laparoscopic method of investigation, we revealed its high resolution, which, depending on the nature of the pathological process, varies from 93.1 to 96.8%. The difficulties that arise during laparoscopy can be caused by both objective and subjective factors. Objective factors include the adhesive process in the abdominal cavity, intestinal paresis, obesity of the 2nd-3rd degree, large and giant postoperative ventral hernias. A subjective factor can be considered the lack of experience of the surgeon performing laparoscopic examination. Currently, due to the use of video laparoscopy, there is an increase in the frequency of diagnosis verification to 98%. Nevertheless, the laparoscopic method, due to its invasiveness, should be used at the final stages of diagnosis and be strictly justified.

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