

# FEATURES OF THE POSTOPERATIVE PERIOD IN PATIENTS WITH DESTRUCTIVE FORMS OF ACUTE APPENDICITIS



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## ЎТКИР АППЕНДИЦИТНИНГ ДЕСТРУКТИВ ШАКЛИ БЎЛГАН БЕМОРЛАРДА ОПЕРАЦИЯДАН КЕЙИНГИ ДАВРНИНГ ЎЗИГА ХОС КЕЧИШИ

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## ОСОБЕННОСТИ ТЕЧЕНИЯ ПОСЛЕОПЕРАЦИОННОГО ПЕРИОДА У БОЛЬНЫХ С ДЕСТРУКТИВНЫМИ ФОРМАМИ ОСТРОГО АППЕНДИЦИТА

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**Резюме.** Тадқиқотнинг мақсади классик кесим ва лапароскопия ёрдамида операция қилинган ўткир аппендицитнинг деструктив шакллари бўлган беморларда операциядан кейинги даврнинг хусусиятларини аниқлаш эди. Ушбу мақсадга эришиш учун 2021-йилда РШТЎИМ Самарқанд филиалига ётқизилган аппендицитнинг деструктив шакллари билан оғриган 82 нафар беморда операциядан кейинги эрта даврнинг кечиши қиёсий таҳлил қилинди. Шундан 41 нафар беморга видеолапароскопик, 41 нафар беморга анъанавий очик усулда аппендэктомия ўтказилди. Ўткир аппендицит учун лапароскопик аралашув жуда самарали усул бўлиб, кам инвазив жарроҳликнинг афзалликларига эга ва операциядан кейинги даврнинг қулай кечиши билан бирга анча хавфсиздир.

**Калим сўзлар:** аппендицит, даволаш, лапароскопия, операциядан кейинги давр.

**Abstract.** The aim of the study was to identify the features of the postoperative period in patients with destructive forms of acute appendicitis, operated on using classical access and laparoscopy. To achieve this goal, a comparative analysis of the course of the early postoperative period was carried out in 82 patients with destructive forms of appendicitis admitted to the Samarkand branch of the RNCCEM in 2021. Of these, 41 patients underwent videolaparoscopic treatment and 41 patients underwent appendectomy using the traditional open method. It was found that laparoscopic intervention for acute appendicitis is a highly effective method, having the advantages of minimally invasive surgery and is quite safe, accompanied by a favorable course of the postoperative period.

**Keywords:** appendicitis, treatment, laparoscopy, postoperative period.

**Relevance.** Acute appendicitis is the most common surgical disease of the abdominal organs. Destructive forms of acute appendicitis remain a pressing problem of emergency abdominal surgery due to the rapid development of the inflammatory process in the appendix, atypical clinical manifestations and difficulty of diagnosis. The percentage of postoperative complications does not decrease, the most formidable of which are the development of sepsis and multiple organ failure. The modern stage of development of surgery is characterized by the widespread introduction of various minimally invasive endosurgical technologies into everyday practice of treating patients with emergency pathology. The use of endoscopic surgery in surgical practice is promising and appropriate, since it radically improves treatment and increases the quality of

life of patients. In the treatment of appendicitis, laparoscopy and laparotomy have their indications and contraindications. The question remains relevant: when is it necessary to switch from laparoscopy to "open" access, how justified is it and will it worsen the course of the underlying disease? Certain endosurgical techniques, primarily laparoscopic appendectomy, have become quite widespread in surgical practice, having proven their effectiveness, but not all authors laparoscopic Appendectomy is recognized as the unconditional method of choice in the treatment of patients with destructive appendicitis and appendicular peritonitis.

**Target:** To analyze the characteristics of the postoperative period in patients with destructive forms of acute

appendicitis, operated on using classical access and laparoscopy.

**Material and methods.** A comparative analysis of the course of the early postoperative period was carried out in 82 patients with destructive forms of appendicitis admitted to the Samarkand branch of the RNCM in 2021. Patients, depending on the method of surgical treatment, were divided into two equal groups. Both groups were comparable in the number of patients, age and gender, and, therefore, it was possible to compare both groups and obtain statistically reliable data. The first group consisted of 41 patients who underwent videolaparoscopic treatment, the second group also included 41 patients, appendectomy in this group was performed using the traditional open method. All patients underwent general clinical examination of blood and urine, determination of blood type and Rh factor, prothrombin index, blood clotting and bleeding duration using standardized methods. In case of atypical clinical signs of the disease, biochemical blood tests were performed.

All patients with questionable clinical signs underwent ultrasound examination of the abdominal organs, kidneys and urinary system. Ultrasound examinations were performed on an expert-class ultrasound device manufactured by Shenzhen Mindray BioMedikal (China) model DC-40 full HD release date 2019 CT7-02000031T, using a 3-10 MHz convex sensor, a 4-16 MHz linear sensor, and a 1-8 MHz volumetric sensor.

To assess the characteristics of the postoperative period in patients, the following indicators were compared: severity of pain syndrome, need and duration of use of painkillers, body temperature, time of patient activation in the early postoperative period, as well as the length of hospital stay after surgery.

Assessing the severity of pain in patients is a difficult but extremely important task, since the treatment

tactics depend on it. The severity of pain in the early postoperative period was determined using the Wong-Baker 2008 pain intensity assessment system (Fig. 1).

Wong-Baker scale (Wong - Baker face pain ratings scale) includes pictures of faces - a smiling face, which means no pain (0 points out of 5), a face distorted by a grimace and crying, which means the greatest pain intensity (5 points out of 5). The Wong-Baker scale also has a close relationship with the visual analog scale and facial pain scale. The average score was calculated.

The study was conducted 24 hours, on the 2nd and 3rd days after the operation.

**Results and discussion.** In the first group of 41 patients, phlegmonous appendicitis was diagnosed intraoperatively in 14, gangrenous appendicitis was also diagnosed in 14, and gangrenous-perforative appendicitis was detected in 13 patients.

The age and gender composition of patients in group 1 is presented in Table 1.

In the second group, the phlegmonous form of appendicitis was found in 18 patients, gangrenous also in 12, and gangrenous-perforative form was detected in 11 patients. The age and gender composition of patients in group 2 is presented in Table 2.

The tables show that patients in both groups are comparable in terms of the frequency of various forms of acute appendicitis.

When examining the pain syndrome using the Wong-Baker scale, the average score in patients of group 1 24 hours after surgery was 4.3, on day 2 – 3.67, and on day 3 the average score was 2.67. In patients of group 2, who underwent laparoscopic treatment, the pain syndrome was the least pronounced and the average score on the scale was 2.8, 2.2, and 1.2, respectively, for the time intervals of examination in the immediate postoperative period.



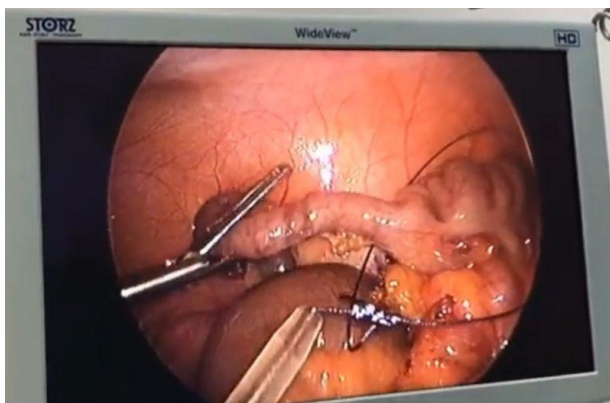
Fig. 1. Wong-Baker scale

Table 1. Clinical and statistical characteristics of patients in group 1.

	20-40 years		40-60 years		Total
	husband	wives	husband	wives	
Phlegmonous	4	3	3	4	14
Gangrenous	2	5	4	3	14
Gangrenous-perforative	3	3	5	2	13
Total	9	11	12	9	41

Table 2. Clinical and statistical characteristics of patients in group 2

	20-40 years		40-60 years		Total
	husband	wives	husband	wives	
Phlegmonous	5	4	4	5	18
Gangrenous	2	4	3	3	12
Gangrenous-perforative	3	3	3	2	11
Total	10	11	10	10	41



**Fig. 2.** View of the laparoscopic ligation technique for a acute appendicitis

Due to the presence of severe pain syndrome, patients of group 1 were given pain relief with non-narcotic analgesics 3 times a day by intramuscular or intravenous administration. Patients of group 2, since the pain syndrome was insignificant, were given pain relief 1-2 times a day. Body temperature readings in the immediate postoperative period in patients with destructive forms of appendicitis also had different values depending on the treatment method.

Thus, in patients of the 1st group, who underwent open (traditional) appendectomy methods, an increase in temperature to febrile values was noted 24 hours and on the 2nd day after the operation. Only on the 3rd day after the operation did the body temperature of the patients decrease to subfebrile values. The graph shows that in patients of group 2 who underwent laparoscopic appendectomy in the immediate postoperative period, an increase in body temperature was practically not observed.

In group 1, in order to activate patients early, bed rest was discontinued 24-48 hours after surgery, when body temperature returned to normal and pain intensity in the area of the postoperative wound decreased. The length of hospital stay, from the end of surgery to discharge, for patients in this group varied from 5 to 8 days, averaging  $6.5 \pm 0.7$  bed days.

In patients of group 2, 24 hours after the operation, it was recommended to cancel bed rest, but as a rule, patients of this category were active and got up 12-16 hours after the operation. The duration of hospital stay, from the end of the operation to discharge, of patients of this group varied from 3 to 5 days, on average  $3.6 \pm 0.6$  bed-days.

**Conclusion.** Thus, based on the advantages of endo- laparoscopic technologies in the diagnosis and treatment of major urgent diseases of the abdominal organs, in recent years 63% of the total number of emergency operations for destructive forms of appendicitis have been performed laparoscopically. Laparoscopic intervention in acute appendicitis is highly effective, having the advantages of minimally invasive surgery and is quite safe, accompanied by a favorable course of the postoperative period. Endovisual method of treating acute appendicitis based on laparoscopic appendectomy should be offered as an alternative to open surgery.

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**Резюме.** Целью исследования было выявление особенностей течения послеоперационного периода у больных с деструктивными формами острого аппендицита, оперированных с использованием классического доступа и лапароскопии. Для достижения поставленной цели был проведен сравнительный анализ течения раннего послеоперационного периода у 82 больных с деструктивными формами аппендицита, поступивших в Самаркандский филиал РНЦЭМП в 2021 году. Из них 41 пациенту было проведено видеолaparоскопическое лечение и 41 пациенту была выполнена аппендэктомия традиционным открытым способом. Установлено, что лапароскопическое вмешательство при остром аппендиците является высокоэффективным методом, обладающим преимуществами малоинвазивной хирургии и достаточно безопасным, сопровождающимся благоприятным течением послеоперационного периода.

**Ключевые слова:** аппендицит, лечение, лапароскопия, послеоперационный период.