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# **SCIENCE AND TECHNOLOGY: CHALLENGES, PROSPECTS AND INNOVATIONS**



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# MEDICAL SCIENCES

## MODIFICATION OF PREOPERATIVE PREPARATION OF ELDERLY AND ELDERLY PATIENTS IN EMERGENCY ABDOMINAL SURGERY IN PATIENTS WITH ACUTE CHOLECYSTITIS

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**Annotation.** Today, the treatment of gallstone disease by laparoscopic cholecystectomy is the “gold standard” and has been pathogenetically characterized by a large number of authors [1, 2, 3]. Although the technique has been developed and is widely used today, there are clinical situations, especially in emergency surgery, when it is impossible to use this technique and laparotomy is necessary [4, 5, 6]. At the same time, there are no clear criteria for what and when to use it, especially in elderly and senile patients, patients of this category are a special group and require an individual approach to obtain better results in perioperative treatment.

**The aim** of this study is to evaluate the effectiveness of changes in preoperative preparation in elderly and senile patients as a stage of improving treatment in the perioperative period.

**Materials and methods:** included 153 patients with acute cholecystitis on the background of gallstone disease. The comparison group included 89 (58,2 %) patients treated according to the standards and clinical protocols of the hospital. The main group included 64 (41,8 %) patients with modified preoperative preparation according to the algorithm.

**Results.** Analyzing the results of the obtained data using the P-POSSUM scale, patients in both groups were hospitalized in an equivalent severity of condition,

30,8 ± 5,2 points in the comparison group and 31,6 ± 5,7 in the main group, U = 2684,0, p = 0,5437. All patients during hospitalization were examined using ultrasound with an assessment of the inflammatory process of the gallbladder on the background of housing and communal services, during which no significant difference was found between the groups, in the comparison group acute cholecystitis without destruction was detected in 73 (82,0 %) patients, in the main group in 49 (76,6 %) patients, signs of destruction of the gallbladder wall were detected in 16 (18,0 %) patients, in the main group in 15 (23,4 %), U = 2748,0, p = 0,5664.

With the help of preoperative preparation using the modified algorithm, we managed to significantly improve the condition of patients in the early postoperative period (in the main group 28,2 ± 4,6 and 31,1 ± 7,8 points in the comparison group, U = 2219,0, p = 0,0201). Which reliably confirms the effectiveness of using this algorithm.

The use of the algorithm, and therefore, in turn, the stabilization of the patient's condition, assessment and compensation of concomitant pathology, allowed to reduce the duration of mechanical ventilation: in the comparison group, the average duration was 80,00 (70,00; 120,00) min, while in the main group 63,00 (52,50; 75,00) min, U = 1316,0, p < 0,0001, and the frequency of the need for prolonged mechanical ventilation and the stay of patients in intensive care decreased: in the comparison group 15 (16,9 %) cases, and in the main group 2 (3,1 %), U = 2457,0, p = 0,008.

At the same time, the use of the algorithm did not affect the duration of preoperative preparation: in the comparison group 26,00 (7,00; 27,00) hours. In the main group 24,00 (21,00; 37,00) hours, U = 2305,50, p = 0,0570.

**Conclusions:** the reliability of the effectiveness of the preoperative preparation algorithm for elderly and senile patients was confirmed by the improvement of the general condition of patients in the early postoperative period, assessed using the P-POSSUM scale, in the main group 28,2 ± 4,6 and 31,1 ± 7,8 points in comparison group, U = 2219,00, p = 0,0201. Also, provided a reduction in the duration of artificial lung ventilation: in the comparison group 80.00 (70.00; 120.00) min, in the main group 63,00 (52,50; 75,00) min, U = 1316, p < 0,0001. Preoperative

preparation, increasing the frequency of minimally invasive surgery and early activation of patients, reduced the length of hospital stay:  $10,9 \pm 2,5$  days in the comparison group and  $8,3 \pm 2,3$  days in the main,  $U = 1745,50$ ,  $p < 0,0001$ .

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