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**XV**

**INTERNATIONAL SCIENTIFIC  
AND PRACTICAL CONFERENCE**

**"THE MAIN DIRECTIONS OF THE DEVELOPMENT OF  
SCIENTIFIC RESEARCH"**

**Helsinki, Finland  
April 18 - 21, 2023**

**ISBN 979-8-88955-326-7**

**DOI 10.46299/ISG.2023.1.15**

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Proceedings of the XV International Scientific and Practical Conference

Helsinki, Finland  
April 18 – 21, 2023

**UDC 01.1**

The 15th International scientific and practical conference “The main directions of the development of scientific research” (April 18 – 21, 2023) Helsinki, Finland. International Science Group. 2023. 405 p.

**ISBN – 979-8-88955-326-7**

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## COMPARISON OF PERIDURAL ANALGESIA METHODS DURING OPERATIONS IN ABDOMINAL SURGERY

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**Introduction.** Optimal analgesia is an important aspect of adequate recovery after major abdominal surgery, as it makes possible to avoid negative consequences that significantly delay postoperative recovery and prolong the rehabilitation period [1, 2].

In nowadays, there are many methods of analgesia, which include combinations of drugs, their dosage and method of administration [3]. One of the methods that is very often used in surgical practice is epidural analgesia. Its advantages are faster rehabilitation after surgical interventions; contraindications for carrying out other methods of analgesia; absence of unwanted side effects; high efficiency of analgesia, etc. [2, 3, 4].

**The purpose of the study:** to determine the priority areas of application of epidural anesthesia techniques during surgical interventions in abdominal surgery.

**Materials and methods:** modern literary sources of domestic and foreign scientific literature were analyzed using the PubMed database by key words: "epidural anesthesia", "abdominal surgery", "adequate methods of analgesia".

**Research results and their discussion.** The concept of the work includes the study of analgesia during surgical intervention for pathologies of the abdominal cavity. Depending on the severity and type of the disease, operations such as: resection of the stomach, intestines, gastro-entero-, entero-entero-, choledocho-duodenoanastomosis, resection of ulcers, giant ventral hernias can be performed. At the same time, the subsequent period of recovery and rehabilitation is of great importance, which depends not only on the surgical intervention, the presence or absence of pathological complications in the preoperative period and directly during the operation itself, but also on the correct administration of analgesia. Thus, in the study of Homon M.L. [4], the author analyzed two groups of patients with different methods of anesthesia: the 1st group, in which a combination of general anesthesia with endotracheal artificial lung ventilation (e/t mechanical ventilation) and epidural analgesia with a 0.25% bupivacaine solution was used; and 2-a – in which a combination of general anesthesia with e/t mechanical ventilation and epidural analgesia with 0.25% standard longocaine

solution was used. In order to identify the effectiveness, it is necessary to highlight the main criteria: hemodynamic indicators (the main one is the dynamics of mean arterial pressure (ABP)) during surgery and in the postoperative period, as well as the use of sympathomimetic support drugs, infusion and symptomatic therapy. It was found that patients in the second group (combination of general anesthesia with e/t mechanical ventilation and epidural analgesia with 0.25% standard longocaine solution) had a smoother course of hemodynamic parameters. The reason is, that in the first group of patients (combination of general anesthesia with endotracheal artificial lung ventilation (e/t mechanical ventilation) and epidural analgesia with 0.25% bupivacaine solution), probable fluctuations of SBP between the minimum and maximum values during anesthesia were established, which was not observed in the second group. During the studying of hemodynamic indicators in the first day of the postoperative period, a probable difference in the increase of the maximum SBP in the 1st group of patients to  $101.7 \pm 2.5$  mm Hg was established, compared to the maximum SBP in the 2nd group —  $94.3 \pm 2.4$  mm Hg. Fluctuations between maximum and minimum SBP were also noted when using bolus administration of bupivacaine and were in the first group: max. SBP —  $101.7 \pm 2.5$  mm Hg; min. SBP —  $89.1 \pm 1.9$  mm Hg. Therefore, according to the investigated hemodynamic parameters, the postoperative period also showed a better period in the patients of the second group, which may indicate a more favorable course of recovery and further recovery.

Important role is also attached to the postoperative period, where sympathomimetic support drugs, infusion and symptomatic therapy are used. As a result of the research conducted by the author [4]. the number of used non-steroidal anti-inflammatory drugs (NSAIDs) as background analgesics is probably less in patients of the second group ( $1.0 \pm 0.1$  mg/kg/day), the dose of longocaine used was probably lower compared to bupivacaine, the frequency of use of infusions in the first group was 8% higher compared to the first group, which makes it possible to determine the second method, which is easier in terms of the course and number of tools used. This criterion confirms the fact that, based on the studied hemodynamic indicators, the need to use infusion therapy and NSAIDs is significantly less in patients of group 2 - in which a combination of general anesthesia with e/t mechanical ventilation and epidural analgesia with a 0.25% standard solution of longocaine was used.

**Conclusions.** Operative interventions for pathologies of the abdominal cavity have become important and widespread today. Choosing not only competent tactics for conducting the operation itself, but also a high-quality method of pain relief can be a guarantee of quick recovery and reduction of the patient's rehabilitation period. As a result of the analysis of literary sources, it was proved the high efficiency of using this method of analgesia, as well as the most rational way of taking it, which makes it possible to avoid unwanted side effects and ease the patient's further condition in the postoperative period.

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