INFLUENCE OF PRE-OPERATIVE KETOPROFEN ADMINISTRATION (PREEMPTIVE ANALGESIA) ON ANALGESIC REQUIREMENT AND THE LEVEL OF PROSTAGLANDINS IN THE EARLY POSTOPERATIVE PERIOD

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The aim of this study was to examine the effect of ketoprofen used in preemptive analgesia on the intensity of pain and requirement for analgesics in the perioperative period. Sixty patients scheduled for elective lumbar disc prolapse surgery were randomly divided into two groups. In the PRE group (n = 30) ketoprofen was administered one hour before incision. In the POST group (n = 30) ketoprofen was used immediately after the surgery. The operation was performed under general anesthesia. Postoperative analgesia was realized by NCA (Nurse Controlled Analgesia) and the „required” dose of ketoprofen was 100 mg. After the operation, pain intensity was measured using visual-analog scale (VAS), ketoprofen requirements, the time to the first dose of ketoprofen, and levels of prostaglandin E₂ (PGE₂) in blood serum were compared. There were no differences between the groups in the VAS pain scores, and levels of PGE₂ in blood serum. However, in patients of PRE group who had received preemptive analgesia, a significantly lower total consumption of ketoprofen, as compared with POST group, was observed between 12th and 36th postoperative hours. It was also found that the time which elapsed between the end of the operation and the first NCA activation was significantly shorter in the PRE group, as compared with the POST group.

The results of our study confirm the possibility of modifying the nociception process in the perioperative period through preemptive analgesia by ketoprofen.

Key words: preemptive analgesia, postoperative pain, NSAIDs, ketoprofen, PGE₂

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