

Preemptive Analgesia

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ABSTRACT

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Opinion

Preemptive analgesia is an analgesic treatment method which is applied before surgical trauma and tissue damage. It is a preoperative technique used to prevent central sensitization due to surgical and inflammatory injuries in the postoperative period [1]. The main objectives of this method are prevention of central sensitization before surgical trauma, reduction of postoperative pain and prevention of chronic pain development [2]. The concept of preemptive analgesia was first described by Woolf in 1983 as a result of his studies on post-injury pain hypersensitivity [3]. Major (orthopedic, abdominal, thoracic) surgeries are often associated with allodynia, postoperative hyperesthesia and chronic pain [4]. After the development of central sensitization due to surgical trauma, postoperative hyperesthesia develops, and recovery is delayed. In the preemptive analgesia technique central sensitization is prevented by preoperative analgesic methods, and in this way postoperative hyperesthesia development is prevented [4]. If analgesic treatments and methods are used only in the postoperative period, the development of central sensitization cannot be prevented, and postoperative hyperesthesia is temporarily blocked [2].

Postoperative pain can lead to adverse consequences such as hypertension, tachycardia, and limitation of mobilization, leading to increased morbidity and mortality [5]. As a result of postoperative pain, hospitalization time is prolonged, costs of care increase and patient satisfaction decreases [6,7]. In addition, persistent postoperative pain (PPP) is one of the most important negative outcomes of postoperative pain which is not fully and adequately treated. Studies have shown that the presence of acute postoperative

pain is a serious risk factor for the development of PPP [5]. Several drugs, techniques and combinations thereof are used in preemptive analgesia. Nonsteroidal Anti-Inflammatory Drugs (NSAIDs), opioids, ketamine, systemic antiepileptics (pregabalin, gabapentin) and local anesthetics (neuraxial administration, peripheral nerve blocks, wound infiltrations) are commonly used in preemptive analgesia [8]. There is no conclusive evidence of the superiority of one drug or technique over another. The choice of drug and technique should be determined according to the clinical characteristics of the patient, the type of operation and the experience of the physician. I frequently perform preemptive analgesia especially in orthopedics and otorhinolaryngology surgeries. However, I think that more studies on preemptive analgesia will help physicians for the selection of drugs and techniques.

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