



# Multimodalna analgezija kao prevencija ranog postoperativnog bola

## Multimodal analgesia as a prevention of early postoperative pain

Nebojša Stevanović

Klinički centar Kragujevac

Clinical Center Kragujevac

### Apstrakt

Akutni postoperativni bol se javlja kod svih pacijenata neposredno posle hirurške intervencije. Svaki peti pacijent nakon velikih hirurških intervencija oseća neki intenzitet bola od jakog do neizdrživog ili nedovoljno olakšanje nakon primenjene analgetske terapije. Sa fiziološke strane, bol je normalan biološki odgovor i predstavlja znak da je anatomski, telesni i funkcionalni integritet narušen. Analgezija predstavlja postizanje neosetljivosti na bol. Veština lečenja bola podrazumeva izbor jednog ili više lekova ili nefarmakoloških sredstava koja će obezbediti maksimalnu efikasnost uz minimalne neželjene efekte za svakog pacijenta posebno. Među pacijentima postoji razlika u percepciji bola, kao i u odgovoru na terapiju. Pri izboru analgetika potrebno je dati najbezbedniji efikasan lek u najmanjoj dozi koja će dati zadovoljavajući efekat i pritom izbegavati klinički značajne interakcije sa drugim lekovima.

Multimodalna analgezija deluje na sve aspekte bolne osovine, uključujući stimulaciju, modulaciju, inflamaciju i psihološku komponentu i ima za cilj (kombinacije lekova i terapijskih postupaka) da stvori režim sinergističke kontrole bola, što kao krajnji cilj ima za efekat brži i bezbedniji oporavak pacijenata i uspeh u ishodu lečenja.

Dobra procena bola omogućava adekvatan izbor analgetske metode, kao i procenu njene uspešnosti. Za procenu bola uglavnom se koriste: vizuelno analogna skala (VAS), govorna skala, numerička skala, skala za procenu bola sa licima. Terapijski cilj na VAS je od 0 do 4.

Lečenje postoperativnog bola započinje još prilikom anesteziološkog pregleda i psihološke pripreme pacijenta, kako od strane lekara i medicinskog osoblja, tako i od porodice. Preemptivna analgezija trebalo bi da smanji bolni odgovor pacijentu nakon hirurške intervencije. Najčešće se koriste: anksiolitici, opiodi, antagonisti NMDA, NSAID, antiepileptici. Nakon operativnog zahvata najčešće je u upotrebi kombinacija opioda i NSAID, kao i razne druge tehnike (epiduralna analgezija, kontinuirani blokovi, PCA).

Neadekvatna postoperativna analgezija uzrokuje usporen oporavak pacijenta, promenjen imunološki odgovor, pojavu vegetativnih simptoma, promenu u perifernom i centralnom nervnom sistemu, sa prelaskom akutnog u hroničan postoperativni bol.

### Abstract

Acute postoperative pain occurs in all patients immediately after surgery. Every fifth patient, after major surgical interventions, feels strong or even unbearable pain, as well as insufficient relief after the application of analgesic therapy. From a physiological point of view, pain is a normal biological response and is a sign that anatomical, bodily and functional integrity has been compromised. Analgesia is the achievement of insensitivity to pain. The skill of treating pain implies the choice of one or more drugs or non-pharmacological agents that will provide maximum efficiency with minimal side effects for each patient separately. There is a difference between patients in the perception of pain as well as in the response to therapy. When choosing analgesics, it is necessary to give the safest effective drug in the lowest dose that will give a satisfactory effect, while avoiding clinically significant interactions with other drugs.

Multimodal analgesia acts on all aspects of the pain axis, including stimulation, modulation, inflammation, and psychological component and aims (combination of drugs and therapeutic procedures) to create a synergistic pain control regime, which ultimately has the effect of faster and safer patient recovery and success as a result of treatment.

A good assessment of pain enables an adequate choice of analgesic method as well as an assessment of their success. For pain, assessments are mainly used: visual analog scale (VAS), speech scale, numerical scale, the scale for pain assessment with faces. The therapeutic goal on VAS is from 0 to 4.

Treatment of postoperative pain will begin during the anesthetic examination and psychological preparation of the patient by the doctor and medical staff, as well as by the family. Preemptive analgesia should reduce the patient's painful response after surgery. The most commonly used are anxiolytics, opiods, NMDA antagonists, NSAIDs, antiepileptics. After surgery, a combination of opiods and NSAIDs is most often used, as well as various other techniques (epidural analgesia, continuous blocks, PCA).

Inadequate postoperative analgesia causes slow recovery of the patient, altered immune response, the appearance of vegetative symptoms, changes in the peripheral and central nervous system with the transition from acute to chronic postoperative pain.