Challenges In The Management of Postoperative Pain

Jamshed Akhtar [1*]

Control of pain as a result of surgical intervention is a challenging condition. Pain is reported as most annoying symptom that has a significant bearing on the outcome of the surgical procedure. The postoperative pain is different from the one that is associated with many chronic conditions like those related to musculoskeletal system. There is still an ongoing effort to understand this pattern of acute pain however, the experimental models to work on, are still under research. Another challenge is, how to translate these experimental findings into the clinical practices.[1]

The postoperative pain, according to the literature, is not the result of an inflammatory process alone. It is also not the outcome of isolated nerve injuries, though this may contribute to the mechanism of pain. In rodent models, after surgical incision, activation and sensitization of peripheral nociceptors and spinal dorsal horn neurons are reported. Specific mechanisms leading to this are under investigation. The treatment of pain is thus debatable as exact mechanism of this phenomenon is still not known.[2] There are number of pharmacological as well as non-pharmacological protocols suggested to address the postoperative pain.

In clinical practices different protocols recommended to treat postoperative pain include preemptive analgesia, intraoperative and postoperative use of narcotic and nonnarcotic drugs, either in combination or alone, through different routes like, local infiltration into the surgical site, parenteral injection through intravenous approach, and neuraxial path during surgery, and then switching to oral route at discharge from the hospital.[3] This multimodal approach is considered to be most suitable however, the pain control in patients undergoing day-care surgery is reported as imperfectly addressed. Pain management in pediatric age group is another challenge as non-verbal child is unable to express and crying may be perceived as being an outcome of fear or separation from the parents.

The use of narcotic drugs like opioids, for analgesia is another ongoing challenge. The irrational prescription and use of opioids has resulted in drug dependence and abuse with its consequences.[4] Morbidity and mortality are also reported. A red flag is raised against such an approach.[5] Nonnarcotic analgesia is recommended to avoid these issues. In randomized controlled trials and systematic reviews this group of drugs is found as effective as opioids.[6] The nonnarcotic drugs have various mechanisms of action and commonly used pharmacological agents include both selective and non-selective cyclooxygenase (COX) inhibitors and acetaminophen.[7] In addition, amide group of anesthetic drugs like bupivacaine and lignocaine are also commonly used in surgical practices for various indications and are reported to be effective as anesthetic with prolonged effect.[8]

In this issue two studies are published where pain related to different surgical procedures is addressed. In one study intraoperative infiltration of combination of bupivacaine and ketamine in comparison with bupivacaine alone was found more effective in postoperative pain relief with statistical significance. In another study two approaches were adopted where bupivacaine and lignocaine were infiltrated before making an incision in one group and after in other group at the end of surgery. Pain was assessed on visual analogue scale. The results were significant in terms of effective pain control when drugs were used before making an incision. However, the limitation of both the studies include no mention about the need of rescue analgesia and how patients were treated after 24-hours of surgery. This is important part of comprehensive management of postoperative pain control which is often not addressed. Clinicians are therefore advised to also consider pain relief after discharge from hospital, till normal physical activities are resumed.

[1] Department of Paediatric Surgery, National Institute of Child Health Karachi

Correspondence:
Dr. Jamshed Akhtar [1*]
Paediatric Surgeon
Karachi
E mail; jamjim88@yahoo.com

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