

**A COMPARATIVE EVALUATION OF BUPIVACAINE WITH
NALBUPHINE VERSUS BUPIVACAINE WITH TRAMADOL FOR POST
OPERATIVE ANALGESIA IN ELECTIVE LOWER LIMB
REVASCULARIZATION SURGERIES UNDER COMBINED SPINAL
EPIDURAL ANAESTHESIA**

ABSTRACT

Background: The challenging task of postoperative pain relief comes within the realm of the anaesthesiologist. Combined spinal epidural (CSE) anesthesia can be used as the sole technique for carrying out surgical procedures and managing postoperative pain using various drug regimes. Epidural administration of opioids in combination with local anesthetic agents in low dose offers new dimensions in the management of postoperative pain.

Aims: Comparative evaluation of bupivacaine hydrochloride with nalbuphine versus bupivacaine with tramadol for postoperative analgesia in lower limb revascularization surgeries under CSE anesthesia to know the quality of analgesia, incidence of side effects and level of patient satisfaction. The quality of analgesia as compared using visual analog scale has been found to be statistically significant ($P<0.05$) in group A and B. The significance was high in group B when compared with group A.

Methods: A prospective, randomized and double-blind study was conducted involving 80 patients of American Society of Anesthesiologists physical status I, II and III coming for elective lower limb revascularization surgeries carried under combined spinal epidural anesthesia. Anaesthesia was given with 0.5% of 2.5 ml bupivacaine intrathecally in both the groups. Epidurally 0.25% bupivacaine along with 10 mg nalbuphine (group A) or tramadol 50 mg (group B) diluted to 2 ml to make a total volume of 10 ml was administered at sensory regression to T10.

Results: The total duration of postoperative analgesia in patients in group B as prolonged as compared to group A but found to be statistically insignificant. The mean heart rate which has been found to be statistically significant in both the groups. The mean systolic blood pressures and diastolic blood pressures have been found to be statistically significant ($P<0.05$) in both the groups. The quality of analgesia as compared using visual analog scale has been found to be

statistically significant ($P < 0.05$) in group A and B. The significance was high in group B when compared with group A.

Conclusion: We conclude that both nalbuphine and tramadol were effective for postoperative analgesia when used epidurally in patients undergoing lower limb revascularization surgeries. The nalbuphine group had better quality of surgical anaesthesia and lesser incidence of complications like nausea and vomiting. Also patient satisfaction was better among the nalbuphine group.

Keywords: Epidural, opioid, pain, bupivacaine