26224 - EPIDURAL CLONIDINE FOR TKA POSTOPERATIVE ANALGESIA - A DOSE FINDING STUDY

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Introduction: The aim of this double-blind randomized study was to evaluate the optimal epidural dose of clonidine administrated after total knee arthroplasty (TKA).1 The optimal epidural dose was defined as that providing minimal analgesic request, stable hemodynamic profile, and a minimal side effect during 72 h after surgery.
Methods: This double-blind study was approved by our Institutional Review Board. Written informed consent was obtained from all patients in the study. Eighty adult patients, ASA physical status I-III, undergoing TKA were included in the study. All the patients were randomly assigned to one of four study groups (C0, C1, C2, C4), 20 patients each. After surgery, group C1, C2 and C4 patients received patient-controlled epidural analgesia (PCEA) with morphine (0.1 mg/mL) and clonidine (1, 2, 4 μg/mL, respectively) in 0.2% ropivacaine 100 mL, while group C0 patients received only PCEA morphine (0.1 mg/mL) and 0.2% ropivacaine for postoperative control. Pain relief was evaluated by the total PCEA consumption and visual analog scale. Systolic blood pressure (SBP), heart rate (HR), sedation, and sensory and motor blockade were also recorded during the 72 h postoperatively. The degree of knee flexion also record daily until discharge.
Results: Group C0,C1, C2 and C4 patients requested 71.8±19.5, 49.6±12.3, 48.1±9.3 and 39.4±9.0 mL respectively. Patients in the clonidine groups experienced less postoperative pain during the 72 hours after surgery. There was no significant different among groups in SBP, HR, and degree of knee flexion. In C4 group, there were four patients had prolonged sensory blockade and one patient had both severe sedation and prolonged sensory motor blockade.
Discussion: The concentration of clonidine 1 μg/mL mixture with morphine and ropivacaine has to be considered the optimal epidural dose. The higher dose of epidural clonidine (4 μg/mL) produced the best analgesia but the degree of sedation and sensory blockade were more severe and longer lasting; it required careful monitoring of the patient.

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