EVALUATION OF THE EFFECT OF ADDITION OF CLONIDINE TO 0.5% ROPIVACAINE IN SUPRACLAVICULAR BRACHIAL PLEXUS BLOCK

ABSTRACT:

AIMS & OBJECTIVES: To evaluate the effect of addition of clonidine to 0.5% Ropivacaine in supraclavicular brachial plexus block for patients undergoing orthopedic and other upper limb surgeries. To observe the time of onset of sensory and motor blockade, duration of sensory and motor blockade, duration of postoperative analgesia, intraoperative sedation score, hemodynamic variables such as HR, SBP, DBP & Spo₂ in both the groups.

METHODS:

In a randomized, double blind placebo controlled study, supraclavicular brachial plexus block was performed in 60 patients. They were divided into two groups, each comprising 30 patients.

1. RC Group: Patient receiving 1 ml of Clonidine (150 µgm)+35 ml of 0.5% Ropivacaine(175 mg).

2. R Group: Patient receiving 1 ml of Normal saline +35 ml of 0.5% Ropivacaine (175 mg).

Supraclavicular brachial plexus block was performed under ultrasound guidance. Sensory block onset was tested by using 23 G needle every 3 min until the feeling of dull sensation to pinprick. Complete sensory block known as Total loss of sensation to pinprick. Motor blockade was assessed every 3 min by “3 point modified bromage scale” for upper limb. Postoperative analgesia was
standardized and time of onset of sensory and motor blockade, duration of sensory and motor block, duration of postoperative analgesia and postoperative pain score were compared.

RESULTS:

The mean time of onset of sensory block in group RC was 5.8 ± 2.72 min and in group R was 7.7±2.53 min which was statistically significant (P value 0.007). The mean time of onset of motor block in group RC was 9.3 ± 2.72 min and in group R was 10.63 ±2.785 min, which was statistically significant (P value <0.05). The mean duration of sensory block in group RC was 534.67 ± 62.449 min and in group R was 44.50 ± 1.004 min, which was statistically significant (P value <0.001). The mean duration of motor block in group RC was 498.00 ± 53.233 min and in group R was 400.67 ± 38.200 min, which was statistically significant (P value <0.001).

Duration of post operative analgesia was significantly prolonged in RC group 656.7±86.256 min than control R group 502± 53.169 min, which was statistically highly significant (P< 0.001).
CONCLUSION:

The addition of clonidine (150µgm) to 0.5% Ropivacaine (175 mg) in supraclavicular brachial plexus block for patients undergoing upper limb surgeries provided, rapid onset of sensory and motor blockade and also extends the duration of sensory and blockade. It extends duration of postoperative analgesia with good hemodynamic stability with optimum sedation.

KEY WORDS: Supraclavicular brachial plexus block, Clonidine, Ropivacaine