EVALUATION OF DEXAMETHASONE VERSUS CLONIDINE AS ADJUVANTS TO 1.5% LIGNOCAINE WITH ADRENALINE IN INFRACLAVICULAR BRACHIAL PLEXUS BLOCK FOR UPPER LIMB SURGERIES. (A PROSPECTIVE, RANDOMIZED, PLACEBO CONTROLLED TRIAL)

Dipal M. Shah¹, Mahesh K. Arora¹, Anjan Trikha¹, Ganga Prasad¹, Rani Sunder¹, P. Kotwal²

1. Anesthesiology, All India Institute of Medical Sciences, New Delhi, New Delhi, India
2. Othopedics, All India Institute of Medical Sciences, New Delhi, New Delhi, India

Introduction: Adjuvants are added to regional blocks to hasten the onset of the local anesthetics or prolong their duration of action. The role of clonidine as adjuvant is well established. We aimed to compare the efficacy of clonidine and dexamethasone as adjuvants to 1.5% lignocaine with adrenaline in infraclavicular brachial plexus block.

Methods: 53 ASA-I and II patients aged 18 to 60 years scheduled for upper limb surgery were randomized to 3 groups to receive 1.5% lignocaine with 1:200,000 adrenaline and the study drugs. Group S (n=13) received normal saline, group D (n=20) received dexamethasone and group C (n=20) received clonidine. The time to onset and peak effect, duration of the block (sensory and motor) and postoperative analgesia requirement were recorded.

Results: The 3 groups were comparable in terms of time to onset and peak action of motor and sensory block, post operative analgesic requirements and pain scores. 90% of the blocks were successful in group C compared to only 60% in group D (p=0.028). The duration of sensory and motor block in group S, D and C were 217.73±61.41min, 335.83±97.18min and 304.72±139.79min and 205.91±70.1 min, 289.58±78.37 min and 232.5±74.2 min respectively. There was significant prolongation of sensory and motor block in group D as compared to group S (p<0.5). Time to first analgesic requirement was significantly more in groups C and D as compared with group S (p<0.5). Clinically significant complications were absent.

Discussion: Clonidine had significantly higher success rate as compared with dexamethasone. The addition of clonidine resulted in prolonged sensory blockade as compared with motor blockade.

Clinical application is in outpatient setting where patients can leave the hospital while being pain free and with complete recovery of motor function, earlier assessment of nerve injuries by the surgeons, facilitation of pain free physiotherapy.

Dexamethasone and clonidine provided equivalent increase in duration of analgesia and anaesthesia which was significantly more as compared with lidocaine.

We conclude that clonidine is more efficacious than dexamethasone as an adjuvant to 1.5% lignocaine in brachial plexus blocks.