



▼ POST GRADUATES ABSTRACTS

PG - 58 : PERINEURAL DEXAMETHASONE VERSUS INTRAVENOUS DEXAMETHASONE AS AN ADJUVANT TO LOCAL ANAESTHETIC MIXTURE IN SUPRACLAVICULAR BRACHIAL PLEXUS BLOCK: A PROSPECTIVE RANDOMIZED DOUBLE-BLIND STUDY

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Introduction: Supraclavicular block being the most preferred route, due to the greatest likelihood of conduction blockade at the level of the trunks of brachial plexus has the highest success rates for analgesia in upper limb surgeries. Many additives

are used with the local anaesthetics during the supraclavicular block to enhance the effect of analgesia in the patients. A drug which can be used to obtain a rapid onset and prolonged duration of the effect of local anaesthetic used for the block providing hemodynamic

stability with no complications is yet to be described. Therefore, this study is aimed at comparing the efficacy of dexamethasone; onset and duration of the block, intraoperative hemodynamics and postoperative complications, if any, when used as an adjuvant in supraclavicular block perineurally and intravenously.

Materials and methods: Study population: Patients admitted to PIMS for elective upper limb surgeries (forearm and hand). Type of study: Randomized control double blind study. Number of groups: 3 Sample size: 90 (30 in each group)

Results: Onset of sensory and motor blockade (8.00 ± 3.107 min) and (10.50 ± 3.309 min) was statistically significantly faster after taking the perineural dexamethasone compared to the intravenous dexamethasone (11.83 ± 5.167 min, $p = 0.003$) and (14.83 ± 4.997 min, $p = 0.001$) respectively. The duration of sensory and motor blockade was statistically significantly longer after taking perineural dexamethasone (14.37 ± 1.974 hours) and (12.92 ± 1.89 hours) compared to the intravenous dexamethasone (11.60 ± 1.694 hours, $p < 0.001$ and (10.30 ± 1.622 hours, $p < 0.001$) respectively. There were no statistically significant hemodynamic changes in both the groups

intraoperatively and no complications were noted in both the groups postoperatively.

Discussion: Anaesthesia to the restricted portions of the body, preserving consciousness in the patients and avoidance of interfering with the vital centers of the body marked the beginning of brachial plexus block in clinical anaesthesiology. Addition of various adjuvants in the local anaesthetic mixture, to reduce the volume of local anaesthetic, fasten the onset and prolong the duration has made its use almost inevitable in most peripheral nerve blocks. The mechanism and site of action for dexamethasone is not well understood. It is being used both peripherally and centrally for management of chronic pain. In this study, the efficacy of dexamethasone was studied when given through two different routes.

Conclusion: Dexamethasone as an adjuvant to local anaesthetic mixture in supraclavicular block speeds the onset and prolongs the duration of the sensory and motor blockade when given perineurally when compared to the intravenous route.

Keywords: dexamethasone, adjuvant, supraclavicular block, perineural