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Comparing the efficacy of USG guided supraclavicular brachial plexus block with or without intercostobrachial nerve block for forearm surgeries – an observational study

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TITLE PAGE

1) **Title:** Comparing the efficacy of USG guided supraclavicular brachial plexus block with or without intercostobrachial nerve block for forearm surgeries – an observational study

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Running title: Efficacy of USG guided supraclavicular brachial plexus block with or without intercostobrachial nerve block for forearm surgeries.

Abstract

Background: Supraclavicular block is commonly used for regional anaesthesia in forearm surgeries and is combined with an intercostobrachial to decrease the occurrence of tourniquet pain. The rationale behind this study is to prove that USG

guided supraclavicular block is sufficient to provide adequate analgesia and eliminates the need for an intercostobrachial block for forearm surgeries. **Method:** It is an observational study with 110 participants undergoing elective surgery. The patients were assigned into 2 groups by convenience non probability sampling. The patients were first given a USG guided supraclavicular block. A block solution of 30ml was made with 20ml given as supraclavicular block and then divided into two groups 1. Group that received an additional 10ml intercostobrachial nerve block 2. Group that did not receive an additional block. The primary outcomes assessed were intraoperative and postoperative tourniquet pain scores. The secondary outcomes assessed were onset of sensory and motor block, sensory and motor scoring, postoperative rescue analgesia time and patient satisfaction. Data was analysed using Median and interquartile range for all parameters and Mann Whitney test for VAS score comparing the two blockades. $P < 0.05$ was considered significant. **Results:** The mean intra operative tourniquet VAS score in the group that received the intercostobrachial block (Group ICB) is 0.76 ± 1.677 and in the group that received saline infiltration (Group Non ICB) is 0.69 ± 1.439 with a p value of 1.00 and was nil significant. The mean immediate post operative VAS score in the group that received the intercostobrachial block (Group ICB) is 0.93 ± 1.773 and in the group that received saline infiltration (Group Non ICB) is 0.80 ± 1.471 with a p value of 0.943 and was nil significant. The mean late post operative VAS score in Group ICB is 0.64 ± 1.470 and in Group Non ICB is 0.55 ± 1.184 with a p value of 0.955 and was also nil significant. **Conclusion:** Our study has concluded that a sole ultrasound guided supraclavicular block provides adequate anaesthesia of the operated forearm and does not increase the incidence of intraoperative tourniquet pain.

Key words: Brachial plexus block, Intercostobrachial block, Tourniquet , pain, analgesia