

A Randomized Comparative Evaluation of Efficacy of Ultrasound Guided Costoclavicular and Supraclavicular Approaches of Brachial Plexus Block for Upper Limb Surgeries

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Abstract : Introduction: The costoclavicular approach, a modification to the infraclavicular approach, has been described for anesthesia for upper limb surgeries. Material And Methods: In this randomized and single-blind study, forty patients undergoing emergency/elective upper limb surgery were allocated to two groups. Group C and S received ultrasound-guided Costoclavicular block and Supraclavicular block, respectively, with 20 ml 0.5 % ropivacaine with 8 mg dexamethasone under strict asepsis. The primary outcome assessed was the total duration of sensory and motor block in the postoperative period. Secondary outcomes were to compare the time taken to perform the procedure, block characteristics in terms of onset of motor and sensory blockade, the efficacy of analgesia with respect to the time of administration of the first rescue analgesic dose with both the blocks and note the side effects pertaining to either of the blocks. Results: The mean total duration of sensory and motor blockade was longer in group C vs. group S ($p=0.002$ and 0.024 , respectively). The mean duration to perform a block in group S was more than in group C ($p=0.012$). The mean onset of sensory and motor Blockade Time in group S was more than in group C ($p<0.001$ and <0.001 , respectively). The mean duration to perform a block in group S was more than in group C ($p=0.012$). Conclusion: The costoclavicular approach is better than supraclavicular in terms of rapid execution, faster onset of sensory-motor blockade, prolonged postoperative analgesia and similar PONV and safety profile.

Keywords : costoclavicular, supraclavicular, ropivacaine, dexamethasone

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