

## **Abstract**

**Title:** Prospective Randomized Double Blinded Study Comparing the Effects of 0.5% Ropivacaine and 0.5% Levobupivacaine in Ultrasound Guided Supraclavicular Brachial Plexus Block in Patients Undergoing Upper Limb Surgeries

**Department:** Anaesthesia  
**Name of Candidate:** Dr. Deepthy D Pillai  
**Degree & Subject:** M. D. Anaesthesia  
**Name of Guide:** Dr. Sajan Philip George

**Context:** Regional anaesthesia and in particular brachial plexus block, is very useful for patients undergoing upper limb surgeries. It offers sympathetic blockade, better postoperative analgesia and fewer side-effects compared to general anaesthesia. Supraclavicular approach provides a denser block to upper arm elbow and forearm. We propose to compare the effects of 0.5% Levobupivacaine with 0.5% Ropivacaine in terms of onset and duration of sensory and motor blockade and duration and effectiveness of post-operative analgesic effect

**Aims:** To compare the onset and duration of sensory and motor blockade and post-operative analgesic effect between 0.5% Levobupivacaine and 0.5% Ropivacaine in supraclavicular brachial plexus block in patients undergoing upper limb orthopaedic surgeries.

**Study design:** Prospective randomized double-blind study.

**Materials and Method:** After obtaining approval from the institutional ethics committee and informed consent, 80 consecutive orthopaedic patients for upper limb surgeries were included in the study. Patients were randomized into two arms based on computer generated random numbers. One arm received 25 ml 0.5% Levobupivacaine and other arm received 25 ml of 0.5% Ropivacaine under ultrasound guidance. Baseline hemodynamic parameters were recorded before the procedure. End of injection was taken as time 0, thereafter patients were monitored 5, 10, 15, 20, 25 and 30 minutes. Post operatively VAS scores were monitored 3,6,12 and 24 hourly and rescue analgesic injection Diclofenac 75 mg IV was given when VAS score was more than or equal to 4.

**Conclusion:** The onset of sensory and motor blockade and the duration of post op analgesia between 0.5% Ropivacaine and 0.5% Levobupivacaine were comparable.

**Keywords:** Ultrasound guided supraclavicular block, Ropivacaine, Levobupivacaine, upper limb surgeries, brachial plexus block, post-operative pain.