



▼ POST GRADUATES ABSTRACTS

PG -04 : HEMI DIAPHRAGMATIC FUNCTION ASSESSMENT FOLLOWING ULTRASOUND GUIDED SUPRACLAVICULAR VERSUS COSTOCLAVICULAR BRACHIAL PLEXUS BLOCK-A RANDOMIZED OBSERVER BLINDED CLINICAL TRIAL

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Introduction: The costoclavicular approach to the brachial plexus block has shown to produce consistent blockade of all four terminal nerves of the brachial plexus. But the incidence of phrenic nerve paresis is unknown. Hence, we designed this study to analyse the hemi-diaphragmatic function following two different ultrasound guided techniques of the brachial plexus block namely Supraclavicular and Costoclavicular approach.

Methods: Forty patients posted for right upper limb surgery were randomized into two groups (Group SC: Supraclavicular, Group C: Costoclavicular).Total 20 ml of equal mixture of 0.5% bupivacaine and 2% Lignocaine with adrenaline were used by multi point subfascial injections. Ultrasound guided diaphragmatic excursion (normal and deep breathing, sniff test) and

Peak expiratory flow rate (PEFR) were measured before block and 30 minute after block.

Result: Number of patients who had $\geq 50\%$ reduction diaphragmatic excursion (Normal breathing; $P=0.018$, Deep breathing; $P=0.003$) and paradoxical movement on sniff test ($P=0.018$) were more in Group SC. While reduction in PEFR ($\geq 25\%$) were comparable ($P=0.058$). There was no incidence of block failure and respiratory compromise in either group.

Conclusion: Considering $\geq 50\%$ reduction in diaphragmatic excursion on deep breathing, incidence of phrenic nerve paresis was 5 % in ultrasound guided Costoclavicular approach while 45 % in Supraclavicular approach.