



COMPARISON OF DEXMEDETOMIDINE AND BUPRENORPHINE AS ADJUVANTS TO BUPIVACAINE IN ULTRASOUND GUIDED BRACHIAL PLEXUS BLOCK (AXILLARY APPROACH)

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KEYWORDS :

BACKGROUND OF THE STUDY:

The brachial plexus block is a widely used peripheral nerve block for patients undergoing upper limb surgeries. Recently, the use of ultrasound-guided peripheral nerve blocks has increased, enhancing the quality of the blocks, thereby minimizing block failures and preventing complications related to the procedure, such as intraneural, intrathecal, and intravascular injections. Additionally, the inclusion of adjuvants in local anesthetics has contributed to extending the duration of pain relief.

Objectives Of The Study:

To compare the efficacy of dexmedetomidine and buprenorphine as adjuvants to bupivacaine in ultrasound guided axillary brachial plexus blocks in terms of onset and duration of the sensory and motor blockade, postoperative pain scores, their side effects and complications.

METHODS AND MATERIALS

Place Of Study- The Department of Anaesthesiology, KVG Medical college and hospital, sullia.

Study Design- This is a prospective, randomised double blinded study

Sample Size- Population of 60.

Study Duration- Conducted over a period of 18months.

Inclusion Criteria-

1. ASA I, ASA II and ASA III,
2. Patients aged between 20 to 60 yrs (who are willing to participate in the study.)

Exclusion Criteria-

1. ASA IV, ASA V and pregnancy
2. Patients with blood coagulation pathology,
3. Allergic to amide local anaesthetic agents,
4. Active infection at the site of injection
5. Alcohol or drug

60 ASA I, II and III patients posted for upper limb surgeries were randomly divided into

Group I : Dexmedetomidine 2ml (20mcg) added to 0.5% bupivacaine 18ml and

Group II : Buprenorphine 2ml (60mcg) added to 0.5% bupivacaine 18ml.

RESULTS:

Onset and duration of motor and sensory blockade, postoperative pain scores were recorded.

Onset of sensory and motor block are similar in both groups.

The duration of sensory and motor blockade are longer in group I than in group II.

Postoperative pain scores and PONV are reduced in both

groups.

	Group I	Group II
Sensory Onset	5.6 +/- 1.2	6 +/- 1.8
Motor Onset	7 +/- 3.6	7.7 +/- 4.2
Sensory blockade duration	870.65 +/- 52.7	710 +/- 60.4
Motor blockade duration	790 +/- 32.6	650 +/- 28.9

CONCLUSION

Ultrasound guidance for axillary brachial plexus blocks enhances the quality of the blockade with a reduced drug volume, accelerates the onset of the block, and reduces procedure-related complications. The addition of both dexmedetomidine and buprenorphine to local anesthetics prolongs the duration of sensory and motor blockade. However, this study indicates that dexmedetomidine is a more effective adjuvant to bupivacaine in ultrasound-guided axillary brachial plexus blocks.

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