

SHORT COMMUNICATION

A Comparative Study of Effects of Sitting and Lateral Positions on Quality of Block during Induction of Spinal Anaesthesia in Patients Undergoing Cesarean Section

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<http://dx.doi.org/10.18049/jcmad/319a21>

Abstract

Introduction: In this study a comparison is done on all parameters of spinal anaesthesia effects after giving block in sitting and lateral positions. The aim of the study is to assess effect of posture on quality of spinal block in patients undergoing caesarean section and to compare sitting and lateral positions during spinal anaesthesia. **Materials & Methods:** A total of 40 parturients were divided into 2 groups. Group 1 received 2.2cc of hyperbaric bupivacaine in sitting posture and Group 2 received 2.2cc of hyperbaric bupivacaine in lateral posture. **Results:** There was no significant difference on the final level of block achieved at 45 minutes between both the groups and haemodynamic parameters, patient comfort and muscle relaxation were same in both the groups. **Conclusion:** It is technically easier to insert spinal needle in sitting position other than this, sitting position does not offer any other advantage.

Keywords: Cesarean Section Anaesthesia, Lateral Position Spinal Anaesthesia, Motor Block, Spinal Anaesthesia.

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Introduction

It has been a long known debate as to which position is better for a spinal anaesthesia.^[1] Of late many anaesthetists have preferred using sitting posture of giving spinal anaesthesia.^[2,3,4]

In this study a comparison is done on all parameters of spinal anaesthesia effects after giving block in sitting and lateral positions. This article aims at establishing the facts and a review of the basics related to giving a spinal anaesthesia. The aim of the study is to assess effect of posture on quality of spinal block in patients undergoing caesarean section and to compare sitting and lateral positions during spinal anaesthesia.

Materials & Methods

A total of 40 parturients were enrolled for the study. They were divided into 2 groups of 20 parturients each (cases and controls). Group 1 received 2.2cc of hyperbaric bupivacaine in sitting posture and Group 2 received 2.2cc of hyperbaric bupivacaine in lateral posture.

Exclusion criteria were: Patients of height more than 5.2 feet or < 5 feet, patients with multiple pregnancy, patients with polyhydramnios, and patients other than ASA grade- I.

Technique^[5,6]

Review of Pre Anesthetic Checkup was done in operation theatre, Nil per oral status checked. Procedure was properly explained to the patient. Intravenous access achieved with 18 Gauge cannula. Ringer lactate infusion started. Premedication with intravenous Ranitidine and Ondansetron was done. Table made level straight. Patient was kept in position desired for study (sitting or lateral). Spinal tap with Quincke 25g needle under aseptic precautions was given. Hyperbaric Bupivacaine injected over 20 seconds. Patient turned supine immediately. Oxygen with Hudson mask was started. Connection to pulse oximeter started.

Characteristics assessed^[5,6]

Height of block assessed by loss of pin prick at 1min, 5 min and 45 min, Pulse and systolic

blood pressure recorded at 0,1, 3, 5, 10,15, 20, 25, 30 and 35 minutes. Quality of motor block was assessed as – excellent, good, acceptable and poor. Quality of sensory block assessed by severity of pain as:

Excellent: No pain at all

Good: Mild bearable dragging pain

Acceptable: Moderate pain requiring analgesics

Poor: Severe pain requiring conversion to GA

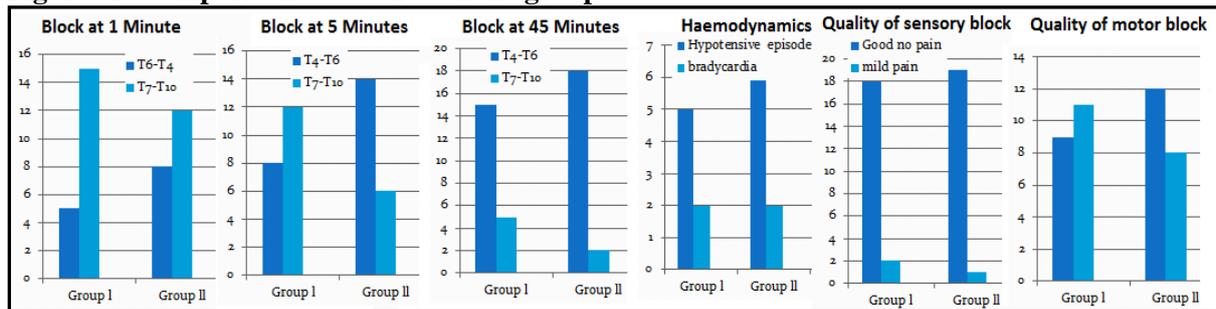
Results & Discussion

There was initial delay in the ascend of block at 1 minute and 5 minutes in group I. But there was no significant difference on the final level of block achieved at 45 minutes between the two groups. Hence haemodynamic parameters, patient comfort and muscle relaxation were same in both the groups tested. In both groups same number of hypotensive episodes was observed. There was no significant difference in

the parameters observed after providing anaesthesia in both the groups (Figure- 1).

Stephen P Hallworth et al.^[1] studied effect of posture and baricity on the spread of intrathecal bupivacaine for elective caesarean delivery in 150 patients and observed that in the lateral position, baricity had no effect on the spread of sensory levels for bupivacaine compared to the sitting position and motor block was significantly reduced with increasing baricity but in lateral position only. A Inglis et al.^[2] compared effects of right lateral and sitting positions during induction of spinal anaesthesia for caesarean section among 40 cases and found a faster onset of sensory block to the sixth thoracic dermatomal level (8 vs 10 min, in the lateral group, although onset time to T4 was comparable. There was no difference in maximum block height or degree of motor block.

Figure- 1: Comparison between both the groups



Conclusion

Haemodynamic stability is the same in both the groups. Quality of analgesia and muscle relaxation are same in both the groups. It is technically easier to insert spinal needle in sitting position. Other than this, sitting position does not offer any other advantage.

Conflict of Interest: None declared

Source of Support: Nil

Ethical Permission: Obtained

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