

Comparison of Intrathecal Bupivacaine, Levobupivacaine for Cesarean Section

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Introduction: Some investigators found a greater incidence of hypotension in patients receiving intrathecal hyperbaric solution than in patients receiving plain solution for cesarean section. In this study, we compared the effects of intrathecal hyperbaric bupivacaine 10 mg with intrathecal bupivacaine 11 mg and intrathecal levobupivacaine 11 mg, all with 10 µg of fentanyl, for cesarean section.

Methods: This prospective, randomized, double-blinded study was approved by the Ethics Committee. Ninety ASA I-II parturients undergoing elective cesarean section were enrolled. Group H received 10 mg of 0.5% hyperbaric bupivacaine plus fentanyl 10 µg, Group B received 11 mg of 0.5% bupivacaine plus fentanyl 10 µg and Group L received 11 mg of 0.5% levobupivacaine plus fentanyl 10 µg. SA was undertaken in right lateral position and spinal solutions were injected approximately 30-40 seconds. Sensory and motor block were assessed at 5 min intervals. Side-effects such as hypotension, nausea, pruritus, shivering, and headache were recorded.

Results: Demographic data were similar in the groups. The level of an absence of cold sensation, the level of pinprick analgesia and time to achieve sensory block to T4 level of Group H was significantly higher than Group B and Group L. The degree of motor block was comparable in all groups. The incidence of visceral pain was very minimal, rated as mild pain and only found in Group B. The incidence of hypotension was comparable as the following; Group H=67%, Group B=56%, Group L=50%. Other side effects such as nausea, vomiting, pruritus, shivering and headache were not statistically significant. Patient's satisfaction rated as very good and was not different between the groups.

Conclusion: The level of an absence of cold sensation, level of pinprick analgesia and time to achieve sensory block to T4 level were statistically higher in patients receiving hyperbaric bupivacaine than in patients receiving plain bupivacaine and plain levobupivacaine, while the differences were not statistically significant in all groups regarding effective surgical anesthesia, postoperative analgesia and side effects. Levobupivacaine appears to be virtually identical to bupivacaine.

Keywords: Spinal anesthesia, cesarean section, levobupivacaine, bupivacaine