

HYPERBARIC BUPIVACAINE AND SUFENTANIL FOR SPINAL ANESTHESIA IN THE CAESAREAN SECTION: A COHORT STUDY

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Background: Spinal anesthesia (SA) is the gold standard for both elective and urgent Caesarean section. Hyperbaric Bupivacaine is the most used local anesthetic and Sufentanil is the most lipophilic and effective opioid, added as adjuvant in the intrathecal space. The aim of this study is to critically evaluate the quality and safety of SA as we usually perform it in our clinical practice.

Methods: In this prospective observational study we enrolled 347 full term pregnant women scheduled for elective Cesarean section under SA. The patients received different doses of hyperbaric bupivacaine 0.5% (8-12 mg), either alone or coadministered with intrathecal sufentanil (3-5 mcg). The population was divided in four groups: 1) bupivacaine <10 mg + sufentanil, 2) bupivacaine =10 mg, 3) bupivacaine >10 mg, 4) bupivacaine =10 mg + sufentanil. For each group we analyzed data regarding sensory block onset time at T10, intraoperative analgesia (episodes of pain scored >2 on NRS), incidence of failed SA, intraoperative need for hypnotics and iv opioids, maternal adverse effects (hypotension), neonatal outcomes (Apgar, PH and Base Excess) and postoperative analgesia (need for a rescue analgesic dose in the first 24 hours).

Results: The population was homogeneous in terms of age 34 ± 5.4 , BMI 29 ± 4.7 , $ASA \leq 2$ and operating time $43' \pm 12$ without surgical complications. There were 66 subjects in the first group, 109 in the second, 75 in the third and 97 in the last one. No significant difference was registered between groups considering onset time, incidence of failed SA, use of opioids, maternal and neonatal adverse effects and postoperative pain, while in groups 1 and 4 were observed less incidence of intraoperative pain (10-11% vs 27-23%, $p=0.008$) and less use of hypnotics (21-19% vs 39-28% $p=0.008$).

Conclusions: Sufentanil addition provided a better analgesia quality without increase of maternal and neonatal complications.