

Clinical Comparative Study Comparing Efficacy of Intrathecal Fentanyl and Magnesium as an Adjuvant to Hyperbaric Bupivacaine in Mild Pre-Eclamptic Patients Undergoing Caesarean Section

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Abstract : Adequate analgesia following caesarean section decreases morbidity, hastens ambulation, improves patient outcome and facilitates care of the newborn. Intrathecal magnesium, an NMDA antagonist, has been shown to prolong analgesia without significant side effects in healthy parturients. The aim of this study was to evaluate the onset and duration of sensory and motor block, hemodynamic effect, postoperative analgesia, and adverse effects of magnesium or fentanyl given intrathecally with hyperbaric 0.5% bupivacaine in patients with mild preeclampsia undergoing caesarean section. Sixty women with mild preeclampsia undergoing elective caesarean section were included in a prospective, double blind, controlled trial. Patients were randomly assigned to receive spinal anesthesia with 2 mL 0.5% hyperbaric bupivacaine with 12.5 µg fentanyl (group F) or 0.1 ml of 50% magnesium sulphate (50 mg) (group M) with 0.15ml preservative free distilled water. Onset, duration and recovery of sensory and motor block, time to maximum sensory block, duration of spinal anaesthesia and postoperative analgesic requirements were studied. Statistical comparison was carried out using the Chi-square or Fisher's exact tests and Independent Student's t-test where appropriate. The onset of both sensory and motor block was slower in the magnesium group. The duration of spinal anaesthesia (246 vs. 284) and motor block (186.3 vs. 210) were significantly longer in the magnesium group. Total analgesic top up requirement was less in group M. Hemodynamic parameters were similar in both the groups. Intrathecal magnesium caused minimal side effects. Since Fentanyl and other opioid congeners are not available throughout the country easily, magnesium with its easy availability and less side effect profile can be a cost effective alternative to fentanyl in managing pregnancy induced hypertension (PIH) patients given along with Bupivacaine intrathecally in caesarean section.

Keywords : analgesia, magnesium, pre eclampsia, spinal anaesthesia

Conference Title : ICACCM 2015 : International Conference on Anesthesiology and Critical Care Medicine

Conference Location : London, United Kingdom

Conference Dates : September 25-26, 2015