

A COMPARATIVE STUDY BETWEEN INTRATHECAL MAGNESIUM SULPHATE AND BUPRENORPHINE AS ADJUVANTS TO HYPERBARIC BUPIVACAINE FOR POST OPERATIVE ANALGESIA IN INFRAUMBILICAL SURGERIES

ABSTRACT

Background- Pain is a unique emotional experience, which is associated with actual or potential tissue damage. Postoperative pain management is necessary. Magnesium has advantages compared to other adjuncts to local anaesthetics in spinal anaesthesia. This study is designed to compare the effects of intrathecal magnesium sulphate with buprenorphine as adjuvants to bupivacaine.

Aim- To evaluate the onset, duration of sensory and motor block, quality and duration of postoperative analgesia of magnesium sulphate and buprenorphine given intrathecally with hyperbaric 0.5% bupivacaine in patients undergoing infraumbilical surgeries.

Material & Methods- 60 patients undergoing elective infraumbilical surgeries were randomly assigned into two groups of 30 patients each. They received 3ml of 0.5% hyperbaric bupivacaine mixed with either 0.5ml of 10% magnesium sulphate(50mg) or 0.5ml of buprenorphine(150µg). Onset, duration of sensory and motor block, duration of total analgesia and duration of effective analgesia were studied.

Results- The onset of sensory and motor blockade was prolonged in the magnesium group. The duration of sensory blockade, two segment regression of sensory block, and duration of total analgesia was prolonged in the buprenorphine group than magnesium group. The duration of effective analgesia was prolonged in the buprenorphine group than magnesium group.

Conclusion- The intrathecal administration of 150µg of buprenorphine with bupivacaine has a significant faster onset of sensory and motor blockade than magnesium sulphate. Intrathecal magnesium also significantly prolonged the time for first analgesic request, but to a lesser extent than buprenorphine. So, magnesium sulphate can also be used for prolongation of post operative analgesia.

Key words- Postoperative pain, Intrathecal, Buprenorphine, Bupivacaine, Magnesium sulphate