

A Comparative Study of Intrathecal Midazolam vs Fentanyl Along with Hyperbaric Bupivacaine in Below Umbilicus Surgeries

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Abstract

Context: The addition of adjuvant like midazolam or fentanyl has further expanded the advantage of spinal anesthesia. **Aims:** The aim of the present study is to compare the efficacy of intrathecally administered midazolam and fentanyl in combination with hyperbaric bupivacaine with respect to the time of onset of sensory block; Duration of sensory block; Quality of intraoperative anesthesia; Duration of effective postoperative analgesia; Incidence of side effects. **Settings and design:** A comparative study. **Methods and materials:** The study was conducted in 120 ASA Grade I-II patients between age group 20–55 years posted for elective lower abdominal surgeries and gynecological surgeries. We have divided these patients into three groups. Group B – 40 patients received 3 ml (15 mg) intrathecal hyperbaric bupivacaine 0.5% and 0.5 ml of 0.9% normal saline. Group M – 40 patients received 3 ml (15 mg) intrathecal hyperbaric bupivacaine 0.5% and preservative free midazolam 1 mg (0.2 ml) and 0.3 ml of 0.9% normal saline. Group F - 40 patients received 3 ml (15 mg) intrathecal hyperbaric bupivacaine 0.5% and fentanyl 25 micrograms (0.5 ml). **Statistical analysis used:** *t*-test. **Results:** The patients studied across the groups did not vary much with respect to age, sex. The onset of sensory block was shortened in Group F (4.02 min) when compared to Group M (4.55 min) the two segment regression time was delayed in Group F (190.75 min) when compared to Group M (141.63 min). The addition of fentanyl 25 micrograms and midazolam 1 mg to hyperbaric bupivacaine gives better intraoperative comfort and postoperative analgesia than bupivacaine alone. The Group F (253.63 min) has more comfort and prolonged duration of analgesia than Group M (195.08 min). The Group M has more hemodynamic stability than Group F by fewer incidences of side effects like respiratory depression, hypotension, and bradycardia. The intraoperative comfort without significant hemodynamic changes is a welcome effect in immediate postoperative period in Group M. **Conclusions:** The addition of fentanyl and midazolam to bupivacaine gives better intraoperative comfort and postoperative analgesia than local anesthetic bupivacaine alone.

Keywords: Spinal anaesthesia; Midazolam; Fentanyl; Bupivacaine.

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