

البحث الثالث

Does intrathecal midazolam improve hyperbaric bupivacaine– fentanyl anesthesia in elderly patients?

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Abstract:

Objective: To compare and to assess the efficacy and the safety of intrathecal midazolam and fentanyl when added to bupivacaine in elderly patients undergoing endo-urologic procedures .

Material and Methods: This prospective, randomized, double-blind study involved 60 ASA physical status II-III patients aged over 60 years scheduled for elective endoscopic urologic procedures under spinal anesthesia with hyperbaric bupivacaine 0.5% (5 mg.ml⁻¹). They were randomized into one of 3 equal groups of 20 patients each; control group (group C) to receive 7.5 mg hyperbaric bupivacaine 0.5% in a volume of 1.5 ml, fentanyl group (group F) to receive 7.5 mg hyperbaric bupivacaine 0.5% in a volume of 1.5 ml and 10 µg fentanyl (0.1 ml) while the third group is the fentanyl-midazolam group (group FM) to receive 7.5 mg hyperbaric bupivacaine 0.5% in a volume of 1.5 ml and 10 µg fentanyl (0.1 ml) plus 1.0 mg of midazolam (0.2 ml). Sensory and motor effects were assessed. Postoperative pain, sedation and adverse effects were also recorded.

Results: The three studied groups were comparable in demographic and clinical characteristics. They were hemodynamically stable. There was no significant difference between the 3 groups in the onset of sensory ($p=0.721$) and motor block ($p=0.342$), duration of motor block ($p=0.286$) and sedation score ($p=0.229$). Duration of sensory block was prolonged in group (F) compared to control group ($p<0.001$) and more prolonged in group (FM) compared to (F) group ($p=0.065$). Time to first request of rescue analgesic was significantly longer in (F) compared to (C) group ($p=0.033$) and in (FM) compared to (F) group ($p<0.001$). All patients reported excellent or good degree of satisfaction with anesthetic procedure ($p=0.547$).

Conclusion: Adjuvant Intrathecal midazolam resulted in intraoperative hemodynamic stability and safely potentiated postoperative analgesic effect of bupivacaine-fentanyl spinal anesthesia in elderly patients undergoing endo-urologic procedures.

Keywords: adjuvant, fentanyl, intrathecal bupivacaine, midazolam, spinal anesthesia