Effect of intrathecally administered ketamine, morphine, and their combination, added to bupivacaine in patients undergoing major abdominal cancer surgery a randomized, double-blinded study

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Abstract:

Objective: Effective postoperative pain control reduces postoperative morbidity. In this study, we investigated the effects of intrathecal morphine, ketamine, or their combination with bupivacaine for postoperative analgesia in major abdominal cancer surgery. Study design: prospective, randomized, double blinded. Setting: academic medical center. Patients and Methods: Ninety ASA I-III patients aged 30-50 years were divided randomly into three groups: Morphine group (group M) received 10 mg of hyperbaric bupivacaine 0.5% in 2 ml volume and 0.3 mg morphine in 1 ml volume intrathecally. Ketamine group (group K) received 0.1 mg/kg ketamine in 1 ml volume instead of morphine. Morphine + Ketamine group (group K+M): patients received both 0.3 mg morphine plus 0.1 mg/kg of Ketamine in 1 ml volume intrathecally. Postoperative total morphine consumption, first request of analgesia, VAS, and side effects were recorded. Results: Total PCA morphine was significantly decreased in group M+K compared to groups M and K. Time to first request of analgesia was prolonged in groups M and M+K compared to group K (p˂0.001). VAS in group M+K was reduced from 2 till 24 hours and in group M at 12 and 18 hours postoperatively compared to group K, with an overall good analgesia in the three groups. Sedation was significantly higher in group M+K compared to group M till 6 hours postoperatively. No other side effects observed. Conclusions: Adding intrathecal ketamine 0.1 mg/kg to morphine 0.3 mg in patients underwent major abdominal cancer surgery reduced the total postoperative morphine consumption in comparison to either drug alone, with an overall good postoperative analgesia in all groups, with no side effects apart from sedation.

Keywords:

Intrathecal, Ketamine, Morphine, lower abdominal cancer surgery

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