Effect of Single Low Dose Ketamine on Postoperative Analgesia

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Background : Ketamine, an N-methyl-D-aspartate (NMDA) receptor antagonist, plays a role in preventive analgesia as it attenuates central sensitization. But its unfavorable side effect limits popularity. Aim of this study is to evaluate efficacy of single low dose ketamine in changing postoperative morphine consumption while reduce dose-related untoward side effect.

Method: Forty- two patients scheduled for open gynecologic surgery under general anesthesia were randomly assigned to receive 0.3 mg/kg bolus intravenous ketamine, or 3 ml isotonic saline at the end of operation in the recovery room. Postoperative intravenous patient-controlled analgesia (PCA) with morphine were provided to all patients. Morphine consumption was recorded at 1 hour and 24 hour postoperatively

Result : There was 21 patients in each group. Mean (SD) (mg) morphine consumption at hour 1 and hour 24 were not significantly different: 4.57 (3.28) vs 6.29 (2.76), p-value = 0.07 and 26(11.21) vs 26.19(10.05) , p-value = 0.95. There were no psychomimetic side effect in both group. Four patients in ketamine group and three patients in control group had nausea

Conclusion : Single low dose ketamine does not decrease postoperative morphine consumption. There is no serious side effect in this study.

Keywords: Ketamine, Preventive analgesia, NMDA receptor antagonist