

البحث الاول

Comparison between the effect of intraoperative magnesium sulfate infusion and ketamine on postoperative pain after spinal anesthesia

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The Egyptian journal of anesthesia. July 2010. Vol 26 , no 3.

In view of the analgesic activity of magnesium and Ketamine, we compared the safety and analgesic efficacy of a low dose of intravenous magnesium administered after performance of spinal anaesthesia with that of low dose ketamine.

Sixty patients undergoing elective lower limb surgery under spinal anaesthesia were randomly assigned into 3 groups:

Group M: received IV magnesium sulfate 50mg/Kg followed by 8 mg/KG/hour infusion until the end of surgery.

Group K: received Ketamine 0.3 mg/ Kg/hour infusion until the end of surgery.

Group S: received saline infusion over the same period.

Postoperative pain scores and patient controlled analgesia consumption (PCA) were evaluated at 1, 6, 12, 24 and 48 hours after surgery. Serum magnesium was checked before and immediately after surgery.

The PCA consumptions were lower in group M and group K compared with group S at 1, 6, 12 and 24 hours ($p < 0.05$) with no difference between group M and group K ($p > 0.05$).

At 48 hours PCA consumption was lower with group M compared with group K and group S ($p < 0.05$).

The pain scores were lower in group M and group K compared with group S at 1, 6, 12, and 24 hours ($p < 0.05$) with no difference between group M and group K ($p > 0.05$).

At 48 hours there was no difference between the 3 groups ($p > 0.05$). At the end of the infusion, group K and group S had lower serum magnesium compared with preinfusion values ($p < 0.05$).

In the group M, a significant ($p < 0.05$) increase was observed between the pre and the post- infusion values.

Intraoperative low dose magnesium and ketamine infusion decreased postoperative visual analogue score (VAS) and morphine consumption in the first 24 hours after spinal anesthesia and the analgesic effects of magnesium prolonged to the second 24 hours.

Key words: magnesium sulphate , ketamine ,spinal anesthesia
