

Abstract

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A randomized prospective placebo-controlled study of intravenous magnesium sulphate vs. metoclopramide in the management of acute migraine attacks in the Emergency Department.

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OBJECTIVE: The objective of this randomized, placebo-controlled, double-blind study was to determine the effectiveness of intravenous magnesium sulphate and intravenous metoclopramide in the treatment of acute migraine attacks in the Emergency Department when compared with placebo.

METHODS: Adult patients who presented to the Emergency Department with a headache that met International Headache Society (IHS) criteria for acute migraine were infused with either 10 mg of intravenous metoclopramide, 2 g of intravenous magnesium sulphate or normal saline over 10 min. At 0, 15, and 30 min, patients were asked to rate their pain on a standard visual analogue scale. At 30 min, patients were asked in a standard manner about the need for rescue medication. Adverse affects were also recorded. Patients were followed up by telephone within 24 h for any recurrence after discharge. The primary endpoint of the study was the difference in pain relief between the groups at 30 min. Of the 120 patients who met IHS criteria, seven were excluded from the study due to insufficient data. The number of patients, gender, age and initial visual analogue scale (VAS) scores were comparable between groups.

RESULTS: Each group experienced more than a 25-mm improvement in VAS score at 30 min. However, there was no significant difference detected in the mean changes in VAS scores for pain. **The rescue medication requirement was higher in the placebo group. The** recurrence rate in 24 h was similar between the groups.

CONCLUSION: Although patients receiving placebo required rescue medication more than the others, metoclopramide and magnesium have an analgesic effect similar to placebo in migraine attacks.

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