Premedication with melatonin: a double-blind, placebo-controlled comparison with midazolam.

M Naguib and A H Samarkandi
Author Affiliations: *Department of Anaesthesiology, King Saud University, College of Medicine at King Khalid University Hospital, Riyadh, Saudi Arabia.*

Abstract

We have evaluated the perioperative effects of melatonin with those of midazolam in 75 women in a prospective, randomized, double-blind, placebo-controlled study. Patients were given sublingual midazolam 15 mg, melatonin 5 mg or placebo, approximately 100 min before a standard anaesthetic. Sedation, anxiety and orientation were quantified before, and 10, 30, 60 and 90 min after premedication, and 15, 30, 60 and 90 min after admission to the recovery room. Psychomotor performance was evaluated at these times also, using the digit-symbol substitution test (DSST) and the Trieger dot test (TDT). Patients who received premedication with either midazolam or melatonin had a significant decrease in anxiety levels and increase in levels of sedation before operation compared with controls. Midazolam produced the highest scores for sedation at 30 and 60 min after administration and significant psychomotor impairment in the preoperative period compared with melatonin or placebo. After operation, patients who received midazolam or melatonin premedication had increased levels of sedation at 30 min and impairment in performance on the DSST at 15, 30 and 90 min compared with controls. There were no significant differences between the three groups for anxiety levels or TDT performance after operation. Amnesia was notable only in the midazolam group for one preoperative event (entry into the operating room). Patient satisfaction was noted in the midazolam and melatonin groups only. We have demonstrated that melatonin can be used effectively for premedication of adult patients.

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The comparative dose-response effects of melatonin and midazolam for premedication of adult patients: a double-blinded, placebo-controlled study.

Naguib M, Samarkandi AH.

Source

Departments of Anesthesia, University of Iowa College of Medicine, Iowa City 52242-1009, USA. mohamed-naguib@uiowa.edu

Abstract

We designed this prospective, randomized, double-blinded, placebo-controlled study to compare the perioperative effects of different doses of melatonin and midazolam. Doses of 0.05, 0.1, or 0. 2 mg/kg sublingual midazolam or melatonin or placebo were given to 84 women, approximately 100 min before a standard anesthetic. Sedation, anxiety, and orientation were quantified before, 10, 30, 60, and 90 min after premedication, and 15, 30, 60, and 90 min after admission to the recovery room. Psychomotor performance of the patient was evaluated at these times also, by using the digit-symbol substitution test and Trieger dot test. Patients who received premedication with either midazolam or melatonin had a significant decrease in anxiety levels and increase in levels of sedation preoperatively compared with control subjects. Patients in the three midazolam groups experienced significant psychomotor impairment in the preoperative period compared with melatonin or placebo. After operation, patients who received 0.2 mg/kg midazolam premedication had increased levels of sedation at 90 min compared with 0.05 and 0. 1 mg/kg melatonin groups. In addition, patients in the three midazolam groups had impairment of performance on the digit-symbol substitution test at all times compared with the 0.05 mg/kg melatonin group. Premedication with 0.05 mg/kg melatonin was associated with preoperative anxiolysis and sedation without impairment of cognitive and psychomotor skills or affecting the quality of recovery. Implications: Premedication with 0.05 mg/kg melatonin was associated with preoperative anxiolysis and sedation without impairment of cognitive and psychomotor skills or affecting the quality of recovery.

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