

Effect of Tramadol as a Preanesthetic Agent on Medetomidine and Ketamine Anaesthesia in Dogs

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Purpose: The purpose of this study was to find out the effect of tramadol as a preanesthetic agent on medetomidine and ketamine anesthesia in dogs

Materials and Methods: Twenty eighth adult mongrel dogs randomly divided into four groups, which had intravenous administration groups of non-treatment (control), 1 mg/kg (TRA1), 2 mg/kg (TRA2) and 4 mg/kg (TRA4) of tramadol for medetomidine and ketamine anesthesia. For the evaluation of tramadol premedicated medetomidine and ketamine anesthesia, the behavioral changes, the duration of surgical anesthesia, blood gas analysis (pH, pO₂, and pCO₂), heart rate, and systolic/diastolic pressure were measured during anesthesia.

Results: Tramadol pretreatment at a dose of 4 mg/kg significantly increased sedation degree when compared to control, TRA1 and TRA2 groups at 15 min after tramadol administration (p<0.05). The duration of surgical anesthesia was significantly increased compared to that of control by 4 mg/kg tramadol pretreatment (p<0.05). There were no significant differences of behavioral changes, blood gas changes (pH, pO₂ and pCO₂), heart rate, and arterial pressure among all groups.

Conclusion: Tramadol premedication at a dose of 4 mg/kg did not affect the cardiovascular system and recovery of anesthesia, but significantly increased the duration of surgical anesthesia with medetomidine and ketamine. Therefore, this study suggested that tramadol may be a useful preanesthetic agent for medetomidine and ketamine anesthesia in dogs.

Key words: tramadol, medetomidine, ketamine, dog.

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