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Anesthetic Effect of Tiletamine, Zolazepam, Tramadol and Medetomidine Combination in Dogs

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Purpose: Anesthetic effects of tiletamine, zolazepam, tramadol and medetomidine combinations were evaluated for clinical application with less side effects of each anesthetic.

Materials and Methods: Cardiorespiratory and analgesic effects of three combinations were evaluated. Group I (TZT) consisted of 25 mg tiletamine (T), 25 mg zolazepam (Z), and 40 mg tramadol (T) per each milliliter. Group II and III included contents of group I and 100 μg (TZTM10), and 200 μg medetomidine (TZTM20), respectively. Six dogs of each group were intramuscularly treated with 0.1 ml/kg volume of anesthetic solutions. Heart rate, respiratory rate, arterial blood pressure, rectal temperature and response to clamping of interdigital space were measured.

Results: The anesthetic duration of these three combinations was about 50 to 70 minutes. Although dogs of group I responded to noxious stimulation, dogs of group II and III showed analgesic state for 23.3 ± 10.8 (range: 10 to 35) and 46.6 ± 6.8 (35 to 50) minutes, respectively. Cardiorespiratory changes were characterized by moderate hypertension, transient decrease of SpO_2 and bradycardia according to medetomidine doses.

Conclusions: It was considered that TZT combination was useful for restraint and non-painful simple procedures in dogs. TZTM10 and TZTM20 combinations could be used for simple surgeries, such as castration and ovarian hysterectomy. It is recommended to use TZTM combinations in healthy patients, because these combinations induce moderate cardiorespiratory effects.

Key words: tiletamine, zolazepam, tramadol, medetomidine, dog

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