EFFECTS OF ORAL PREMEDICATION WITH RISPERIDONE AND TRAMADOL IN DOGS

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Anxious and vicious dogs are always a challenge for the practicing veterinarian, and also for the owners presenting them to the hospital, because they are difficult to be restrained for clinical examination and diagnostic/therapeutic procedures. Sedatives given orally have less or unpredictable effects and hence, the doctors skip oral medications and go directly for injectable drugs (Ramsay and Wetzel, 1998). Antipsychotic drugs could be used for the behavioral alterations in dogs which are aggressive and difficult to be controlled/ handled. Hypoactivity and ptosis were reported by (Tian *et al.*, 2014) in dogs following intramuscular injection of risperidone – an antipsychotic drug.Tramadol is a synthetic opioid used clinically as an oral analgesic drug. Clinical use of risperidone alone with tramadol, for oral premedication/sedation in dogs is not reported. From the field experiences it was observed that aggressive dogs become calm and controllable following oral administration of risperidone (personal communication by Dr. Dinesh P.T., Veterinary Surgeon, Animal Husbandry Department, Kerala).The present study was hence undertaken to find out the clinical effects of risperidone along with tramadol as oral premedicants in difficult – to – control dogs.

Materials and Methods

Ten apparently healthy dogs presented for spaying formed the subjects of study. Animals that were difficult to be handled/ controlled by the hospital staff, but could be handled by the owner, were alone selected for the study. Premedication – for midazolam – propofol anaesthesia, was done by oral administration of risperidone and tramadol. Risperidone syrup 60 ml (1 mg/ml.) was given orally at the dose rate of 0.5 mg/kg body weight, immediately followed by oral tramadol (50 mg tab) at the rate of 5 mg/kg body weight. The study drugs were taken in a syringe and given orally by the owner. After oral premedication, the animals were kept isolated in a room, for observation.

Results and Discussion

All animals exhibited salivation at 2.3 ± 0.50 minutes, which after oral administration of risperidone and tramadol stopped; after few minutes in all animals, followed by ptosis at 14.8 ± 1.8 minutes and nodding at 15.2 ± 1.9 minutes. The gait then became staggering in all animals, which was observed at 17.3 ± 1.8 min followed by dropping of head at 18.9 ± 2.4 min, all animals then assumed sternal recumbency at 21.9 ± 2.6 min. Two out of ten animals assumed lateral recumbency at 24 ± 0.5 min. Smooth handling was possible in all animals, following the effects of premedication. Animals in sternal recumbency tried raising their head when approached but those in lateral recumbency did not. The quality of sedation was graded as satisfactory in all animals.

Risperidone is a new second generation antipsychotic drug belonging to the class of benzisoxazoles as reported by Megens *et al.* (1994) also. Risperidone binds to serotonin type 2 (5-Ht2), dopamine D2 and adrenergic receptors with high affinity as also mentioned by Su *et al.* (2009). Tramadol is a synthetic opioid, rapidly absorbed orally and metabolized in the liver as narrated by Lewis and Hans, (1997) also. They have weak

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affinity to μ and δ opioid receptors, and analgesic activity is due to its major metabolite o-desmethyltramadol as also reported by Giorgi *et al.* (2009). Hypoactivity and ptosis were reported in dogs following intramuscular injection of risperidone loaded microspheres as also recorded by Tian *et al.* (2014). In the present study, hypoactivity, ptosis, nodding, staggering gait, dropping of head and sternal recumbency were observed one after the other in all the animals following oral premedication with risperidone and tramadol. There were no untoward effects – except salivation. Following oral premedication and the desired effects, all the animals could be approached and handled smoothly. Hence, the quality of sedation was judged as satisfactory. On the basis of the present study, it is concluded that the combination of risperidone and tramadol used is very much effective as an oral premedicant producing satisfactory sedation for difficult – to- control dogs.

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