IMMOBILIZATION OF FELIDS USING ORAL DETOMIDINE AND KETAMINE

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Abstract

Orally delivered detomidine (0.5 mg/kg; Pfizer Animal Health, Pfizer, Inc., West Chester, Pennsylvania 19380, USA) mixed with ketamine (10 mg/kg; Fort Dodge Laboratories, Fort Dodge, Iowa 50501, USA) was found to reliably produce lateral recumbency within 15 min in domestic cats. Lateral recumbency lasted for approximately 60 min.[1] Cardio-pulmonary data indicate this regimen to be reasonably safe as well as effective. The adverse effects noted in domestic cats were salivation, occasional vomiting, and sinus bradycardia (D. Grove and E. Ramsay, unpublished data).

The above detomidine-ketamine regimen has been used in several exotic felids. Seven servals (*Felis serval*) were given 0.5 mg/kg detomidine and 10 mg/kg ketamine orally. Success of administration was considered <100% in five animals. All servals attained sternal recumbency but only six became laterally recumbent. Mean time (± SD) to sternal recumbency was 9.4 min (± 2.7 min) and mean time to lateral recumbency was 11.3 min (± 3.1 min). Three cats required supplemental administration of drugs (ketamine i.m. or isoflurane) before they were safe to handle. One serval, which became laterally recumbent in < 5 min, showed apnea and required endotracheal intubation and ventilation until reversal. Reversal of the servals with yohimbine was smooth and complete in most cats. One cat, which had received supplemental ketamine i.m., was beginning to spontaneously recover and became very excited following yohimbine administration. This excitement was controlled with i.m. diazepam.

An adult lion (*Panthera leo*; body wt. = 127 kg) receiving 0.5 mg/kg detomidine and 11.4 mg/kg ketamine orally showed mild ataxia at 16 min and became sternally recumbent at 28 min. This cat was quiet for darting and required only minor supplementation (50 mg tiletamine and 50 mg zolazepam i.m.) for safe examination. Use of approximately 0.37 mg/kg detomidine with 6.7 mg/kg ketamine in a litter of juvenile lions was less successful, in part due to the inability to separate the individuals being dosed and the littermates repeatedly stimulating (awakening) each other. These dosages were also lower than those found effective in domestic cats. One tiger (*Panthera tigris*; body wt. = 110 kg [estimated]) received 0.5 mg/kg detomidine orally as a premedication. This animal became sternally recumbent at 10 min and did not rise to be darted at 28 min post-detomidine administration.

The above data indicate that orally-delivered detomidine and ketamine is an effective method to sedate exotic felids. Administration of supplemental immobilizing agents is usually required to

achieve complete immobilization, for safe handling of dangerous animals.

LITERATURE CITED

1. Wetzel, R.W. and E.C. Ramsay. 1998. Comparison of four regimens for intraoral administration of medication to induce sedation in cats prior to euthanasia. J. Am. Vet. Med. Assoc. 213:243-245.