(8) N 25/3

THE RESTRAINT OF THE CAPE HUNTING DOG *LYCAON PICTUS* WITH PHENCYCLIDINE HCL AND KETAMINE HCL

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20-10-1973 Okaukuejo

INTRODUCTION

For the past 10 years phencyclidine hcl (Sernylan Parenteral, Parke-Davis) has been used as an immobilizing and anaesthetic agent for a wide spectrum of captive and free-ranging African carnivorous animals (Kroll, 1962; Campbell and Harthoorn, 1963; Pienaar et al, 1969; Ebedes, 1970; Harthoorn, 1970; Seal et al, 1970; Harthoorn et al, 1971; Keep, 1972; Ebedes, 1973). Smuts et al (1973) recorded the use of Ketamine hcl (Parke-Davis) for the field immobilization of large wild felines such as lion, Panthera leo, leopard Panthera pardus and cheetah Acinonyx jubatus. In a later publication, Smuts (1973) reported favourably on the immobilization and restraint of spotted hyaena Crocuta crocuta using a combination of ketamine and azaperone.

Phencyclidine hcl was probably first used by Kroll (1962) to immobilize a captive Cape Hunting dog Lycaon pictus. The animal was immobilized in 5½ minutes with a dose of 1 mg / kg. Seal et al (1970) immobilized 3 Cape Hunting dogs with 0,8 - 1,0 mg phencyclidine hcl. Although Ketamine hcl has been used extensively for the anaesthesia of domestic dogs, (Humphrey,,1971; Kaplan, 1972; De Young et al, 1972; and others) its use on the Cape Hunting dog has not been recorded previously. This paper is a report on the use of phencyclidine hcl and ketamine hcl on 6 captive Cape Hunting dogs kept in the Etosha National Park.

METHOD AND MATERIALS

The dogs were kept in captivity from the age of approximately one month to 10 months and because they were destined to be released in the wild it was necessary to restrain them to facilitate translocation, marking with ear-tags, weighing and innoculations against rabies, canine distemper, hepatitis and leptospirosis.

The Palmer Cap-Chur gun and 1 ml and 3 ml projectile darts were used for darting the dogs in the cage from distances of 3 to 5 metres. The darts were fired with green (low charge) ramsets. The darts were placed mainly in the muscles of the hindquarters.

Phencyclidine hydrochloride, 20 mg / ml (Sernylan Parenteral, Parke-Davis) and ketamine hydrochloride, 50 mg / ml (Ketalar, Parke-Davis) were used for the immobilization.

RESULTS

The results of the immobilization are given in the table.

Dog No. 2 took a long time to become immobilized and the reason for this was that he bled from the dart wound and it is suspected that a portion of the phencyclidine hcl was not absorbed into the bloodstream. Dog No. 1 received the largest dose and was anaethetised in 4½ minutes.

The three animals receiving 150 mg ketamine hcl (approximately 7 mg / kg) were satisfactorily anaethetised, recovered more smoothly and were on their feet sooner than the 3 animals injected with phencyclidine hcl. Mean immobilization time for phencyclidine 12 minutes 5 seconds

(n = 3); mean recovery time 2 hours 50 minutes. Mean immobilization time for ketamine hcl was 6 minutes 7 seconds (n = 3) and mean recovery time 1 hour and 5 minutes.

Salivation was present in all the animals. Several epileptiform convulsions lasting 10 - 15 seconds occured in dog No. 1 and these could have been as a result of the higher dosage of phencyclidine hcl. This higher dose also resulted in a longer recovery time.

The analgesia caused by both the drugs was satisfactory and no pain was apparent in any of the animals during the insertion of the ear-tags and the injection of the vaccines.[1.]

DISCUSSION

A comparison between the two drugs used for immobilizing Cape Hunting dogs is not justified because of the small numbers in the sample. Ketamine hcl however has a shorter recovery period than phencyclidine and is a useful drug for short immobilization procedures.

Footnote: 1.
Vaccines: Enduracell d-h, (canine distemper hepatitis vaccine - Norden Laboratories);
Lepto c-i, (leptospira canicola - ictero haemorrhagia baterin - Norden Laboratories);
Endurall - R, (Rabies vaccine - Norden Laboratories).

SUMMARY

Phencyclidine hcl and ketamine hcl were used as immobilizing agents on six captive Cape Hunting dogs. Both drugs were suitable and 3 dogs immobilized with ketamine hcl at a dosage rate of 7 mg / kg had shorter recovery periods.

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TABLE 1. PHENCYCLIDINE HCL AND KETAMINE HCL FOR RESTRAINING CAPE HUNTING DOG

No.	Sex	Weight Kg.	Phencyclidine mg.	Ketamine	Imm. Time	Temp. °C	Pulse per min.	Resp. per min.	Recovery Time
1.	M	25	30 1,2 mg / kg	-	4 min 30 sec	39	62	26	± 4 hours
2.	M	25	20 0,8 mg / kg	-	23 min	40,3	108	42	± 2 hours
3.	M	24	20 0,83 mg / kg	-	8 min 46 sec	39,4	74	28	2½ hours
4.	M	21,8	-	150 7 mg / kg	4 min 10 sec	39,5	118	26	1 hour 40 min.
5.	F	21,8	-	150 7 mg / kg	5 min 45 sec	39	90	52	45 min.
6.	F	22,7	-	150 7 mg / kg	8 min 25 sec	40,5	92	32	50 min.