

EVALUATION OF THE SECONDARY TOXICITY OF COUMATETRALYL TO DOGS AND AN EXAMPLE OF RAT CONTROL IN A DOGS' BOARDING KENNEL

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The purpose of this study was (a) to evaluate the risk of secondary poisoning in dogs after ingestion of rats poisoned by coumatetralyl (Racumin®), a multiple dose rodenticide, in the laboratory, and (b) to demonstrate the suitability of a Racumin bait for rat control in dogs' boarding kennels by field trials.

Laboratory Trial

Method: 4-6 week old rats were fed with coumatetralyl-treated grain for 3 days. The bait was prepared according to the OEPP protocol and contained 375 mg/kg coumatetralyl. After three days, the rats were euthanased and then prepared as "rat-chow". For each dog, daily diets were prepared by mixing 100 g rat chow and 100 g Hill's maintenance diet. The average content of coumatetralyl in rats was determined.

10 beagle dogs (young adults, 10kg body weight) were fed with control rat-chow for 7 days, and then fed with coumatetralyl-poisoned rats for either 1 day or 3 consecutive days. Their daily food consumption was monitored throughout the study. To evaluate anticoagulant poisoning, blood clotting time (PT) was checked daily, and the dogs' health status was monitored at least twice daily.

Results and discussion: The animals receiving one poisoned rat displayed a moderate increase of PT time (<20 sec) after 48 hours, which declined rapidly. The animals receiving 3 poisoned rats displayed a marked increase in PT time (max 79 sec), after 4-5 days, but there was no need for treatment with vitamin K1. The PT value declined rapidly after its maximum (within 2 hours, PT was halved) and the dogs were healthy, without any clinical evidence of hemorrhages.

These results indicate that, under our experimental conditions, there is no risk of poisoning after ingestion of one poisoned rat by a healthy dog. After three daily ingestions, a very unusual situation, hemorrhagic disorders may occur. Although no such disorders were experienced, dogs which may have ingested poisoned rats should always be monitored.

Rat control in a dogs' boarding kennel

The palatability and efficacy of a Racumin® bait (paste bait containing 0.0375% coumatetralyl) was tested by treating rat infestations in a dogs' boarding kennel. The trials were conducted according to the BBA guidelines. The bait was packaged in 100 g and 10 g sachets, respectively, and was placed in bait stations or in hidden places. The infestation was assessed by a pre-baiting census using wheat and rolled oats.

The infestations were eliminated within one week. The rats consumed up to 1,000 g bait daily. No consumption was recorded during the further trial and the post-baiting census, respectively. Although sick rats were observed in the dogs pens, no sign of poisoning in the dogs was observed.

The results of this study indicate that the risk of secondary poisoning with coumatetralyl in dogs is very low after one ingestion, but the risk may increase after several successive daily ingestions. Practical experience shows that even in dogs' boarding kennels rat control is justifiable and effective with an anticoagulant rodenticide like coumatetralyl.