Evaluation of the tolerance of a dinotefuran–pyriproxyfen combination (Vectra Felis) after 7 repeated overdosed topical administration at 2 week intervals on kittens

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INTRODUCTION

The safety of ectoparasiticides in companion animals must be assessed on the target animal species and specifically on the most sensitive population (i.e. puppies, kittens, etc...). Overdoses and increased frequency of administrations are challenging situations that allow evaluating the tolerance of a product. This study was designed to assess the tolerance of a topical combination of dinotefuran- pyriproxyfen (Vectra®Felis, DP) when administered on kittens at up to 5 times the maximal recommended dose every two weeks for 12 consecutive weeks.

METHODS

This study was performed according to the principles of Good

Laboratory Practices. After at least 6 days of acclimatization, 40 purpose-bred kittens (7–8 weeks old, 590–1095 g BW at first application) were allocated to five groups (C, E, DP1, DP3, DP5). Kittens were administered DP excipient (4.5 mL, E) or DP at the maximal recommended dose (0.9 mL, DP1), 3 times the maximal dose (2.7 mL, DP3) or 5 times the maximal dose (4.5 mL, DP5). Treatments were applied topically, between the shoulders every 2 weeks for 12 consecutive weeks (D1, D15, D29, D43, D57, D71, D85). Kittens in the control group were untreated. Animals were subjected to a health assessment/detailed clinical examination prior to administration and every week post-treatment. This protocol has been previously approved by an ethical committee.

RESULTS

Only one female reacted to administration of excipient alone. Specifically transient observations (salivation, excessive licking and vocalization, increased activity level and/or excessive scratching) were observed shortly after administration (D29, 43, 57 and 71). All these findings were transient and of short duration. As compared to untreated animals and animals treated with excipient alone, no significant findings were observed at any of the tested dose-levels. The results of this study show that 7 repeated dermal administrations of DP, once every 2 weeks over 85 days, on the back of kittens was well tolerated both locally and systemically at 1X, 3X and 5X the highest recommended dose. Vectra Felis can be therefore safely applied on cats including kittens.

Number of reactions (nb of animals)	Untreated (C)	Excipient (E)	Vectra Felis 1x (DP1)	Vectra Felis 3x (DP3)	Vectra Felis 5x (DP5)
Dry skin (application rate)	2 (2)	46 (8)	33 (8)	47 (8)	45 (8)
Soft feces	0 (0)	7 (5)	4 (2)	7 (7)	7 (2)
Loose feces	21 (8)	7 (4)	7 (6)	7 (2)	27 (8)
Liquid feces	24 (6)	2 (2)	15 (8)	6 (5)	29 (6)
Decreased fecal output or absence of feces	8 (6)	12 (6)	11 (7)	10 (6)	17 (7)

Cross-reactivity between *Dermatophagoides farinae*, *Tyrophagus putrescentiae* and *Acarus siro* in dogs from UK with Canine Atopic Dermatitis

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INTRODUCTION

Mite allergens are highly related to Canine Atopic Dermatitis

(CAD). The most relevant species are *Dermatophagoides farinae* (House Dust Mite) and *Tyrophagus putrescentiae* and *Acarus siro* (Storage Mites). We have observed that more than 65% of our positive tested animals were positive to these three species simultaneously. The aim of this study was to investigate a possible cross-reactivity among these three species in dogs from UK with CAD.

METHODS

A positive serum pool against the three species was obtained by mixing sera from dogs with CAD that had high levels of specific-IgE against all these 3 mite extracts (Optical Density > 0.800) determined by PET-ELISA® (Alergovet, Madrid, Spain). Inhibition-ELISA for each species was carried out by coating wells with 1 µg of protein and starting all inhibition

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