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Prevalence of High IgE Levels against Mites, Pollen, Fleas and Mould in Allergic Dogs and Cats

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LABOKLIN presents to you the results of an extensive retrospective study we conducted based on the results of allergy screening in 10,832 dogs and 1,872 cats. We are proud to have presented this study on March 7 at VetMadrid2020, one of the biggest veterinary congresses in Spain. Your trust in us and our work is what makes these studies possible, and so we are always eager to share the results with you.

We continously strive to improve and expand our research in order to contribute to scientific advancements in the field of allergic diseases. The clinical results of this specific study are detailed below:

Introduction

The estimated prevalence of canine atopic dermatitis is 10–15%[1], and that of feline non-flea hypersensitivity dermatitis is 12%[2] . The prevalence of flea infestation is 8% -21.1% in cats and 5.1% - 6.8% in dogs examined in veterinary clinics from Europe[3].
To the authors knowledge there is no existing study about the prevalence of seropositivity for IgE against pollen, mite, fungi, and fleas in allergic dogs and cats.

Objectives

Evaluation of the prevalence of seropositivity for IgE against four groups of allergens: pollen, mite, fungi, and fleas from serum samples of allergic dogs and cats.

Material and methods

This study includes 10,832 serum samples from dogs and 1,872 from cats received in 2018 in LABOKLIN. The ELISA test from Heska®, based on the FcεR1α receptor, was used for detecting IgE against fleas, mites, pollen and fungi.

Picture: Carmen Lorente

Results

89.83% of the samples from dogs and 69.44% of the samples from cats yielded positive results to at least one of the four groups of allergens.
In 14.08% and 33.31% of the positive samples high IgE levels were found against fleas in dogs and cats, respectively. 0.61% were exclusively positive to fleas in dogs and 6% in cats. 96.74%, 39,93% and 14.04% of dogs were positive against mites, pollen and fungi respectively. In cats, 89.23%, 41.54% and 7.15% of the positive samples showed high levels of IgE against mites, pollen and fungi, respectively.

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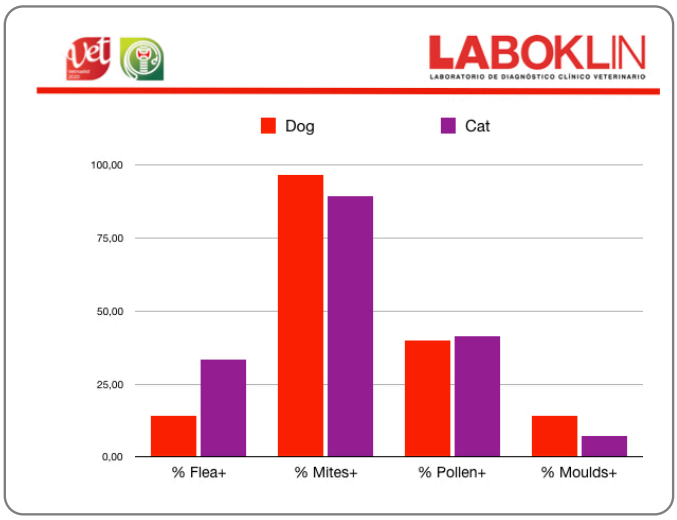
Concurrent positivity to mites and pollen was found in 48.23% of cats and 41.63% of dogs. Positivity to pollen without positivity to mites occurred in 4% of cats and 1.57% of dogs. Positivity to mites without positivity to pollen was found in 58.37% of dogs and 58.02% of cats. Of those samples that were positive to mould, 99% were also positive to mites in dogs and 89.25% in cats.

Discussion

Serological allergy testing is suitable to identified the offending allergens in animals clinically diagnosed as allergic[4]. The existence of sera with negative values for all allergen groups could be related to a false allergic characterisation of the animal, food allergy, treatment with glucocorticoids, seasonality, or a low IgE allergic animal (intrinsic cAD). The higher number of negative samples from in cats 30.56% compared to that in dogs 10.17% could represent a more challenging clinical identification of allergic cats, a higher prevalence of feline food allergy, or treatment with glucocorticoids.

The prevalence of flea hypersensitivity in this study was higher than what is described for flea infestation in the literature. This data confirm the critical role that flea infestations can play in allergic animals and the necessity to implement a good flea control program.

According to this study, mites can be considered the principal cause of environmental allergy in dogs and cats. More than 40% of the animals had concurrent high levels of IgE against pollen and mites. The exclusively hypersensitivity to pollen and moulds was anecdotic.



Picture: Carmen Lorente

Conclusions

- Control of fleas is mandatory in all clinical allergic patients.
- Mites are the most frequent offending allergens in environmental allergy in dogs and cats.
- Nearly half of the hypersensitive dogs and cats have concurrent high IgE against mites and pollen.

Bibliography

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