

DETECTING SPECIFIC IgE AGAINST ENVIRONMENTAL ALLERGENS: A COMPLEMENTARY TEST FOR THE DIAGNOSIS OF FELINE ASTHMA

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Introduction

The feline asthma syndrome is a chronic inflammatory disease which affects lower airways (bronchia and bronchioles) and which induces a temporary blockage of these airways. Its etiology is still not perfectly understood.

Methodology and materials

For the implementation of this study we have worked with six cats. Three cats were diagnosed with feline asthma and the other three were healthy and were used as control cats. Amongst the cats who were ill, two were Siamese and male, the third belonged to a Common European breed and was a female. They were 4, 8 and 14 years old. In order to confirm the allergic etiology of the syndrome, an in vitro serum test against inhalant allergens PET-ELISA was performed in the laboratory at Alergovet.

Results

The three sick cats presented respiratory symptoms that included the presence of a dry cough with a variable duration of between 3 weeks and one year. In all cases they underwent a radiological study. Two of the three cats presented a mixed bronchial to interstitial lung pattern, although predominately bronchial. The third did not present a clear bronchial pattern, but did have lung hyperlucidity and a slight flattening of the diaphragm. All cases underwent a cytological study of the sample obtained by tracheo-bronchial lavage, which evidenced predominance in the number of eosinophils with percentages ranging from 16% to 90%, and a macrophage percentage ranging between 10% and 47%. In all three cases the microbiological analysis of the samples turned out negative. These clinical findings were compatible with the diagnosis of feline asthma.

The serum test was positive in all three cats. The principal allergens identified were the following: Cat number 1: gramineae, common plantain, European privet, olive tree. Cat number 2: gramineae, European privet, olive tree, lambsquarters, oak, mugwort, dandelion, mix of trees *(1), daisy. Cat number 3: Common plantain, mix of trees *(1), nettle, wrightwort, penicilum. *(1) Mix of trees: Betula/Corylus/Ainus. The control cats did not show any increase in the levels of specific IgE reactive against inhalant allergens.

DISCUSSION

In the study in question we have demonstrated that the three cats diagnosed with feline asthma presented high levels of specific-allergen IgE, confirming the etiological allergy of this syndrome. On the other hand, a new field for the treatment of this asthmatic syndrome is

revealed, one based on immunotherapy. In conclusion, the in vitro serum test can constitute and alternative test for the diagnosis and treatment of feline asthma.

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