Allergen-specific Immunotherapy (ASIT) in cats

Allergic diseases in cats present with clinically well-defined reaction patterns of uncertain aetiology. Besides head and neck dermatitis or facial pruritus, miliary dermatitis, eosinophilic granuloma syndrome and symmetrical alopecia, conjunctivitis, otitis and allergic asthma also can be seen.

Although allergic diseases are not lifethreatening the pruritus, respiratory distress and secondary diseases can lead to serious disorders. Even euthanasia may be considered. Veterinarians and cat owners often face allergic diseases in cats helplessly.

Avoidance of the allergens is the best therapy for allergic diseases. However, successful alteration of the husbandry conditions of affected animals is not practicable in many cases for various reasons. Pharmacological treatment using glucocorticoids and/or an additional palliative treatment - for better or for worse - is possible.

The allergen-specific immunotherapy (ASIT), also referred to as "hyposensitization", has been carried out since the 19. Century and is known as a promising therapy in many cases for various reasons. Intracutaneous and serological allergy tests can be performed following a tentative diagnosis.

The Fce-Receptor-Test® offers high specificity and sensitivity and therefore provides reliable results, particularly with regard to an allergenspecific immunotherapy.

A substantial factor for success also is the consistent execution/implementation of the treatment for a long period of time, even over years.

How does an allergen-specific immunotherapy (ASIT) work?

Allergen-specific immunotherapy involves the gradual adaption of the organism to rising allergen concentrations by subcutaneous injections in order to achieve an increased tolerance to the causing allergens and, consequently, to decrease the allergic reactions.

How is an allergen-specific immunotherapy (ASIT) prepared?

For ASIT, an aqueous allergen extract is used. The composition of the patientspecific ASIT is based on the results of serological or intracutaneous allergy tests.

Meanwhile allergic diseases in cats can be clearly diagnosed by serological allergy tests. The best time for taking a blood sample is when the patient shows clear symptoms, i.e. beginning approx. 4-6 weeks after first occurrence up to decay of the symptoms.

How to carry out the ASIT?

A well proven treatment protocol, which has been published in similar form many times, is used. Initially, the dosage is gradually increased on a weekly basis, then constant dose rates are injected subcutaneously. After reaching the maintenance dose the injections are applied in 2-4 week intervals. In veterinary medicine, the ASIT is recommended as at least 1 year lasting or even lifelong therapy since experience shows that recrudescence often develops after discontinuation of therapy.

A strict monitoring of the patients is also recommended in order to adapt the injection interval or dose rate if necessary.

What success rate can be expected?

In a retrospective study the data (patient histories) of 98 cats with allergic symptoms, treated with ASIT based on serological allergy test results were evaluated. After at least 1 year of treatment, questionnaires were sent to the attending veterinarians comprising questions to age, race, clinical symptoms, duration of the symptoms before initiation of the treatment, progression and success of the therapy.

Cats were represented in the ages between 1 and 17 years. The majority of the patients had been hyposensitized due to pruritus (70,4%) without or with simultaneous existing dermatitis. A small percentage of the cats showed allergic asthma (9,2%), otitis (7,1%) and/or conjunctivitis (13,3%).
Current studies show that a noticeable improvement was achieved in more than 72.4% of the patients. “Success of the therapy” was defined as “free of symptoms” or “clear improvement” of the symptoms (figure 1). Approximately each 7. patient (16.3%) showed no symptoms during the ASIT.

10.2% cats showed a slight improvement, however, a supportive drug therapy was necessary (topical and/or systemic therapy). In 17.4% of the patients the ASIT doesn't have any influence on the clinical symptoms, but none of the cats showed an aggravation.

By early diagnosis and allergen identification as well as rapid initiation of therapy within the first 2 years after occurrence of clinical symptoms, the success rate was increased to over 80% (figure 2). In animals with a case history of more than 6 years of symptoms before initiation of therapy, the success rate decreased to approx. 40% (figure 2).

No clear age-dependence was detected, but an influence of the number of allergens included into an ASIT could be seen. If the hyposensitization solution contained more than 11 allergens, the prospect of success decreased. However, even when an allergen extract with a composition of 10 different allergens was used for the treatment, 2/3 of the cats showed good improvement (figure 3).

The ASIT was consistently well tolerated by all animals. Over 66% of the patients responded with improvement within the first 8 weeks of treatment. This generally contributed to a good acceptance of this treatment form by the owners of the patients. Partly, however, the clear improvement of the symptoms occurred delayed. In 7.1% of the cats the success of the ASIT developed after at least 4 months treatment.

ASITs carried out by veterinary surgeons showed clearly better improvement than those accomplished by the owner of the cats (figure 4). 23.2% of the ASIT carried out by the owners failed, while only 9.5% of the cats treated by the veterinary surgeon did not improve.

Apprehensions that cats could tend to adverse reaction up to anaphylactic reactions could not be confirmed. In the present study, only very few of the patients (approximately 2%) suffered from side-effects, including swelling at the injection area or short-term deterioration of the clinical symptoms.

Prerequisite for a promising ASIT is a conclusive diagnosis as early as possible after appearance of the first clinical symptoms. An essential factor for the successful therapy is also the application of the ASIT be-times in the patient’s history. Similar to findings in dogs, this study shows that the success of the ASIT in cats depends on the duration of the therapy, the complete observance of the treatment plan, the injection intervals as well as on the individual medical attendance of the cat.