

## **TOLERANCE TO SPECIFIC IMMUNOTHERAPY WITH RETARDED REACTION EXTRACTS IN THE TREATMENT OF ATOPIC CANINE DERMATITIS**

José Luis González Arribas, Virginia Rodríguez Ponga, Eduardo Rollán Landeras.

Department of Animal Pathology II, Hospital Clínico Veterinario, School of Veterinary Science, UCM Madrid.

Specific hyposensibilization (immunotherapy, desensitization) has been successfully used in human medicine from the beginning of the past century. From the 60s onwards in the USA, and from the 80s in Europe, it has also been used in veterinary medicine. Currently, hyposensibilization constitutes a usual method in the treatment of dogs, cats and horses with atopy symptoms.

At present, there are mainly two types of allergen extracts used in specific immunotherapy in veterinary science. Water based extracts, normally used in the USA, and retarded reaction extracts, which have already been used in some European countries such as France or Holland (1,2). In Spain and in other European countries such as Italy, or Germany, up to this moment, only water-based extracts have been used in immunotherapy in pets.

The objective of this study has been to test the tolerance in a first phase and the effectiveness, in a second study, of allergen extracts adsorbed in dogs with atopic dermatitis.

For this study, we have worked with 42 dogs diagnosed with atopic dermatitis against environmental allergens. The diagnosis was based on history, clinical symptoms, positive in vitro allergy test results using 33 inhalant allergens (PET-ELISA, Alergovet) and positive skin tests (intradermic reaction) in those cases with a doubtful etiology (intradermic extracts I.D.R., Alergovet/CBF, Leti).

The average age of the animals was 4 years. 58% were male, and 42% female. The most common breeds were Yorkshire Terrier, West Highland White Terrier, Fox Terrier, Standard Poodle, and Boxer.

The dogs were treated with retarded reaction extracts (Alergovet), individually prepared with the allergen extracts that has tested positive in the diagnosis tests. The owners, who have previously been instructed in the administration method, administered the injections subcutaneously. This avoids misreading possible reactions that could appear had we been the ones to administer the treatment instead of the owners.

Each treatment consisted on three vials, with increasing concentrations of standardized allergens in Biological Units or in PNU. The injections were given on a weekly basis until the 12-13th injection, which were given after fifteen days, and, finally, on a monthly

basis, following the administration guidelines recommended by the laboratory that produce them. The total number of injections in the initiation treatment protocol was 15. In the maintenance treatments, injections were given on a monthly basis. At the beginning of the treatment biweekly control sessions were held, which turned into monthly sessions by the end of the treatment, in order to be able to follow possible secondary effects, both at a local and at a systemic level.

Immunotherapy with extracts adsorbed allows for a slower delivery of the allergens, a shorter administration phase, a wider span between injections and a lower number of injections (2,3).

In our study, we did not observe local reactions at the point of inoculation (such as the development of nodules or abscesses sometimes described in humans) after administering a total of 630 injections. Likewise, we have not observed systemic reactions such as urticaria, angioedema or anaphylactic shock in any of the cases.

The results of this prospective study show that the allergens of a retarded type adsorbed are safe, since they produce no local reactions at the point of injection, nor do they cause any systemic secondary effects. The administration protocol is shorter than the one followed in the use of water based extracts, and it therefore allows maximum dosage after only 15 weeks of treatment.

At present we have more than 80% of the patients following a maintenance treatment.

A priori, the fact that a high number of owners have requested a maintenance treatment could constitute a subjective proof of the effectiveness of the treatment, since, in our experience, the abandonment of immunotherapy takes place immediately if the owner has not observed an improvement in its pet after administering the initiation treatment. Once all the data has been collected and analyzed, we will proceed to a subsequent study to confirm the effectiveness of these extracts with this immunotherapy protocol.