



STUDY FROM AEROBIOLOGY TO CLINICAL PROFILE OF THE PATIENTS OF THE AREA OF ALCÁZAR DE SAN JUAN (CIUDAD REAL, SPAIN)

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In this lecture, we present the summary of the study of patients allergic to Amaranthaceae from the area of the Hospital de Alcázar de San Juan. It is carried out an analysis from the aerobiology of these pollen in the atmosphere until its repercussion in the patients allergic to them. A regular study of patients with a clinical history, skin tests and specific IgE in serum will be carried out, but a more exhaustive analysis will also be carried out by means of an immunological study, relation relationship of symptoms with pollen and allergen levels and response to immunotherapy treatment.

On the one hand, the aerobiology of the Amaranthaceae, global distribution and data collected in volumetric spore traps of the Spanish Society of Allergology and Clinical Immunology from 1997 to 2016 is described, focusing on an important fact for the allergist: threshold levels of allergy to Amaranthaceae. Description of the aerobiology of Alcázar de San Juan, focusing on pollen g rains and allergens from Amaranthaceae from 2015 to 2016 and the correlation between both.

On the other hand, the analysis to be performed in monosensable patients to these pollens will be described. The analysis is not only focused on skin tests as classical studies, but also it is focused on a more detailed immunological study with cross-reactivities analysis with other pollens. In this case, cross reactivity between Amaranthaceae and Olea Europea, given the high percentage of patients allergic to these two pollens. For this purpose, a traineeship is carrying out at the University of Évora, in the Department of Biochemistry for the realization of Immunoblot with serum sample of selected patients monosensitive to Salsola kali, Olea Europea and patients with both sensitizations.

Finally, as a final part of the study, treatment effectiveness analysis of these patients is being carried out. It is performed on 15 patients with treatment and 8 control patients without it, and a analysis before and after the administration of immunotherapy with Salsola kali 100% by basophil activation test. These tests study the expression of CD63 and CD40L on the surface of activated basophils, cells involved in the allergic response, and inactivated after treatment, by reducing the expression of these surface markers. In summary, a complete study of the allergy to Amaranthaceae in the area of Mancha Centro Hospital will be carried out from the air to the blood analyses. To this end, a characterization of the aerobiology of the Amaranthaceae in the area and a characterization of the allergic profile of patients with respiratory symptoms due to allergy to Amaranthaceae is carrying out. And, as a final point, an analysis of the

effectiveness of treatment in patients by studying the cellular response before and after the intervention with 100% Salsola kali immunotherapy.