

Reply to: "Differences in Molecular Sensitization Profiles Between a Spanish and Latin American Mite Allergic Patients"

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J Investig Allergol Clin Immunol 2025; Vol. 35(5)

doi: 10.18176/jiaci.1092

Key words: Dust mites. Component-resolved diagnosis. *Dermatophagoides*. *Lepidoglyphus*. *Blomia*.

Palabras clave: Ácaros del polvo. Diagnóstico por componentes. *Dermatophagoides*. *Lepidoglyphus*. *Blomia*.

To the Editor:

We read with great interest the article entitled "Differences in Molecular Sensitization Profiles Between Spanish and Latin American Mite-Allergic Patients" by Calzada et al [1] and would like to address certain discrepancies regarding the seroprevalence of dust mite allergens in Spain. We believe that a more detailed clarification of these points could provide valuable insight for readers.

In the article, the authors reported that, globally, the most frequently recognized allergen was Der p 2 (79%), followed closely by Der p 1 (73%) and Der p 23 (69%). When the 2 populations were compared, patients from Spain were predominantly sensitized to Der p 2 (88.46%) and Der p 1 (83.84%), while Latin American patients were more frequently sensitized to Der p 23 than to Der p 1 and Der p 2. Notably, Der p 2 was directly associated with the presence of asthma in this cohort. We contend that these findings may reflect the specific patient population in Barcelona, Spain and may not fully represent the broader cohort of native dust mite-allergic patients across the country.

To further explore this issue, we conducted a study assessing molecular sensitization profiles in 3 regions of Spain with large mite populations: A Coruña, Castellón, and Tenerife. We recruited 153 patients seeking care at the allergy clinic for symptoms indicative of dust mite sensitization (50 from A Coruña, 50 from Castellón, and 53 from Tenerife). All participants provided informed consent, and the study was approved by the corresponding ethics committee. Skin prick

tests were performed using standardized extracts, while a commercial molecular panel (MADx) was applied to evaluate sensitization to specific mite molecules.

The demographic data from our cohort revealed that most participants were female (59.9%), with a mean age of 32.1 years and residing mainly in urban areas (75%). Among the participants, 73.2% had allergic rhinitis and 49% had asthma. Molecular analysis of mite allergens identified 6 major allergens (Der f 1, Der f 2, Der p 1, Der p 2, Der p 23, and Lep d 2), all with sensitization rates greater than 50%. Prevalence was greater than 40% for a further 3 allergens (Der p 21, Der p 5, and Der p 7). The highest prevalence was found for Der p 23 (83.7%), with an average of 17.4 kU_A/L, followed by Der p 2 (77.1%), with an average of 30.7 kU_A/L. Der p 1 ranked third, with a prevalence of 66.0% and a mean value of 16.0 kU_A/L. Among the minor allergens, Lep d 2 was present in 62.1% and Blo t 5 in 30.7% of patients. Notably, 8.5% (13 patients) were monosensitized to Der p 23.

Regarding allergen combinations, 58.8% of patients (90 individuals) recognized at least 3 key allergens: Der p 1, Der p 2, and Der p 23. The most common combination, seen in 23.52% of patients (36 individuals), included 6 allergens: Der p 1, Der p 2, Der p 21, Der p 23, Der p 5, and Der p 7. Interestingly, 100% of patients (15 individuals) under 18 years of age were sensitized to Der p 23 (Figure).

In terms of disease severity, a slightly higher prevalence of Der p 2 and Der p 23 was observed in patients with persistent allergic rhinitis than in those with intermittent allergic rhinitis. Conversely, Der p 1 was more prevalent among patients with intermittent allergic rhinitis (although this difference was not statistically significant). With respect to asthma, no significant differences were observed in the recognition of allergenic

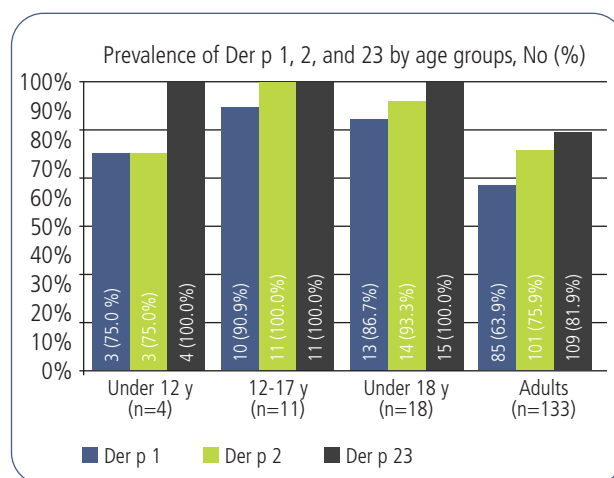


Figure. Percentage of dust mite allergens (Der p 1, 2, and 23) by age group.

molecules. However, 83.33% of patients with persistent asthma were sensitized to Der p 1, compared to only 26.67% of patients with intermittent asthma ($P < .001$).

Our findings revealed notable differences with those reported by Calzada et al [1], particularly in the predominance of Der p 23 as the major allergen in Spain, a result that aligns more closely with earlier studies [2-4]. Additionally, by focusing on regions with the large mite populations, this study provides a more comprehensive sensitization profile for dust mite allergy patients across Spain. Although no significant differences in allergen recognition or disease severity were observed, we noted that Der p 1 was more common in patients with persistent asthma, in contrast with the finding by Calzada et al of greater recognition of Der p 2 in this group. The discrepancy may be attributable to the high environmental allergen burden in Spain, which likely enhances allergen recognition, even among patients with milder disease. Moreover, a recent comparative study of respiratory allergy patients from Spain and Peru highlighted significant differences in allergen sensitization. The Spanish cohort demonstrated more pronounced sensitization to 6 key mite allergens, including Der p 23. Additionally, Spanish patients exhibited elevated serum IgE titers, particularly those with concurrent allergic asthma, indicating a higher overall degree of sensitization than their Peruvian counterparts [5].

In conclusion, we emphasize the importance of using a broader, geographically representative sample to more accurately capture the sensitization profile of dust mite allergy patients in Spain. Future studies should include larger samples from different areas to better elucidate regional variations in sensitization patterns.

Funding

DIATER Laboratories funded the serological tests with the aim of increasing knowledge of mite serodominance in Spain.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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■ Manuscript received March 31, 2025; accepted for publication April 7, 2025.

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