

Letter to the editor

House-dust mite allergens in Italy and Spain

We read with interest the article by Sastre and colleagues recently published in *Allergy* (1), reporting levels of mite allergen in the homes of asthmatic people living in the metropolitan area of Madrid, Spain. They found undetectable allergen levels in 30 out of 36 samples (83%). In the other six homes where allergen levels were detectable Der p 1 was the most frequently found allergen.

We recently published a paper in *Allergy* (2) reporting levels of house-dust mite (HDM) allergen in 44 homes of nonallergic subjects in our city, Pavia, Northern Italy, which has a continental climate similar to that of Madrid, but a significantly higher altitude (655 vs. 70 m). We think it could be interesting to compare the results of these two studies.

In contrast to the Spanish study, we found detectable allergen levels in all samples, with the highest found on mattresses, where they exceeded the risk threshold level for sensitization (2 µg/g fine dust) in 86.4% of homes, and the threshold level for

elicitation of symptoms (10 µg/g fine dust) in 38.6% of homes. The predominant allergen in our study was Der f 1.

Both studies were performed between November and April. The methods used for dust collecting were similar (3), except for the sampling area in the living room which was wider in our study (4 m² vs. 1 m²). In both studies, Der p 1 and Der f 1 were measured by an ELISA method using monoclonal antibodies. A major difference was that the homes studied in Madrid belonged to asthmatic people, and ours were from nonallergic people: this could account for the differences in the percentage of samples with detectable allergen levels found in the two studies, since it is possible that the subjects of the Spanish study had already undertaken environmental measures for HDM avoidance (4). Thus we might suppose that the relatively low levels of allergens found in the Spanish study do not reflect the allergen levels before sensitization occurred.

Another explanation for the higher HDM levels in our study might be the difference in outdoor relative humidity of Pavia and Madrid during the winter months, possibly related to the different altitudes. Although the Spanish authors did not report any values, it is nevertheless likely that the humidity rate is higher in Pavia than in Madrid, which could have affected HDM growth and allergen levels.

The predominance of Der f 1 found in our data has already been reported in Italy and in other European countries with continental climates (Germany, Sweden, France) (5–7).

In conclusion, it seems that in regions and cities with continental climates there are many differences in the levels of allergen and species of HDM found in homes.

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