

Correspondence

Is cat-keeping the main determinant of new-onset adulthood cat sensitization?

To the Editor:

We read with interest the article from Olivieri et al¹ showing that acquiring a cat in adulthood increases the risk of new-onset sensitization to cat allergens. Similar studies had been performed in pediatric populations only so far. Despite this, other limitations to the study should be considered in addition to those already acknowledged by authors, in our opinion.

First of all, cat-keeping and allowing a cat in the bedroom should not be considered the main index of exposure to cat allergens and, consequently, the main risk factor for allergic sensitization. Dynamic distribution of the main cat allergen (Fel d 1) indoors is complex depending on Fel d 1 aerodispersion, sedimentation, and passive transport through clothes and other items. These variables determine a diffuse dispersion of cat allergen indoors.^{2,3} The ideal assessment of exposure to cat is the measurement of Fel d 1 as microgram per gram of dust because the threshold amount of Fel d 1 inducing sensitization in susceptible individuals is well established. However, in the absence of these data, we suggest a new, more realistic classification of possible modalities of exposure (Table I).

Our classification highlights the role of low/moderate levels of exposure to Fel d 1, since several studies have shown that moderate amounts of cat allergen are more likely to induce sensitization in comparison to higher amounts found with cat indoors. In our clinical experience, fewer than 50% of cat-allergic individuals reported direct cat exposure (at home or elsewhere), with the remaining individuals reporting indirect or no known cat contact (G. Liccardi, unpublished data). Moreover, we have shown in a previous study that the degree of allergic sensitization to cat allergen, assessed by the skin prick-test, is significantly higher in patients without direct cat contact than in patients with direct cat contact.⁴ We have recently demonstrated the role of the different modalities of exposure (see Table I) on the prevalence of allergic sensitization to several furry animals including cats.⁵

Second, the authors do not provide any information on the presence of dog at home and on the amount of dog-specific IgE in the sera of patients enrolled in the study. This is a crucial point because it is not realistic to separate the sensitizing role of cat and dog in “real life.” Indeed, their allergens not only share the same indoor environments but also exhibit a certain degree of cross-reactivity. In addition, animal “pan-allergens” lipocalins and serum albumin are shown to increase the risk of sensitization to both animals through a cross-reactive mechanism.⁶ All of these factors can explain the common clinical finding of cosensitization to cat and dog. Finally, we have suggested a possible predisposition to develop multiple sensitization to animal allergens (“allergic phenotype”).⁷

In conclusion, some other nonreported risk factors could explain the new-onset cat sensitization among adults also in the

TABLE I. Suggested modalities of exposure to cat and/or cat allergens (Fel d 1)

Direct domestic contact: patients with cat at home because of cat ownership*
Direct contact elsewhere: patients without cat at home but with close contact with cats outside the home (eg, at workplaces or in other settings)†
Indirect contact: patients who deny any direct exposure to cats but who can be indirectly exposed to cat allergens because they are in contact with cat owners (eg, through clothes or other items)‡
No contact: patients who deny any known direct or indirect exposure to cat and cat allergens§

*Higher levels of Fel d 1 indoors and direct exposure when patient is at home.

†Direct exposure might be similar to that of cat at home and the levels of Fel d 1 indoors relatively high through passive transport.

‡The levels of Fel d 1 indoors might be of sufficient magnitude to induce allergic sensitization in susceptible individuals and, in some cases, to trigger respiratory symptoms in already highly sensitized patients.

§In this case, the levels of Fel d 1 are likely to be very low or absent.

absence of a cat at home. This should be taken into account by susceptible individuals before acquiring a cat.

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