

reactions in patients with spontaneous sensitization for star anise or 'celery-carrot-mugwort-spice syndrome' has been reported.

Oseltamivir is synthesized in a multi-step procedure from shikimic acid, which is extracted from the Chinese star anise fruit growing on the small evergreen *I. verum* tree native to Southwest China (2, 3). Star anise is one of the ingredients of the famous five spice powders used in Chinese cuisine. Star anise is utilized to substitute the more expensive European anise in bakery or for the production of anise liquors. Furthermore, star anise fruits are now frequently observed as decoration articles during winter time. According to certain reports, star anise seems to induce mostly allergic contact dermatitis (4).

It has been shown experimentally that antigen-specific IgE production will occur at least 2 weeks after initial antigen exposure (5). In our patient, we therefore suppose that intake of Tamiflu® led to a boosting of pre-existing plasma cells to secrete specific IgE, which finally induced anaphylaxis. In this setting, it is impossible to determine whether these IgE antibodies detected an epitope that is conserved during the synthesis of Oseltamivir from shikimic acid or recognize amounts of star anise components contained in the drug.

Up to 25% of the population in Europe suffers from atopy-associated diseases such as asthma, rhinoconjunctivitis, food allergy, urticaria, and atopic dermatitis. Atopic patients are predisposed to develop IgE-mediated anaphylactic reactions. Besides sensitization against Chinese star anise, our patient presents with the constellation of the so-called 'celery-carrot-mugwort-spice syndrome,' which also includes cross-allergy to anise (*P. anisum*) (6). Cross-allergies between star anise and the botanically unrelated European anise have not been observed (4).

To date, neither the frequencies of sensitizations against components of Chinese star anise nor Oseltamivir are known. It seems worthwhile to investigate whether star anise sensitization is associated with other pollen-food syndromes. This case suggests that a 'celery-carrot-mugwort-spice syndrome' could be a possible risk factor for

Oseltamivir-associated hypersensitivity reactions.

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Atopic eczema and indoor climate: results from the children from Lübeck allergy and environment study (KLAUS)

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Key words: atopic eczema; epidemiology; exposure; house dust mite; indoor climate.

The prevalence of atopic eczema (AE) has increased in the past decades, espe-

cially in western industrialized countries (1). Besides a genetic predisposition, several environmental conditions may play a role as a contributing cause for the development and possibly for the increase of AE.

The exposure to house dust mite (HDM) allergen belongs to these trigger factors. The development of the atopy patch test allowed to document the meaning and clinical relevance of HDM allergen for the development of AE (2). Several intervention studies could show that the reduction in the HDM allergen exposure, e.g. by encasement, is accompanied by a marked reduction in the clinical severity (3). Furthermore, it is well known that an unfavourable indoor climate including a high humidity and mould growth, which could be the consequence of isolation and low ventilation, is associated with a higher HDM load and consecutively a higher prevalence of allergic sensitization and respiratory allergy (4–7). Less is known on the association between an unfavourable indoor climate or indoor HDM allergen exposure and the occurrence of an AE. We, therefore, aimed at investigating these associations within a population-based study in preschool children.

A cross-sectional study was conducted during the compulsory school entrance examinations in Lübeck, Germany, in 2003.

Relevant data including information on wet areas or moulds on the walls were obtained by questionnaire. A dermatological examination was performed, assessing AE on a clinical basis. Allergen exposure to HDMs was measured on the child's mattress using the semi-quantitative rapid test Bio-Check Allergen Control (Dräger, Lübeck, Germany). For this purpose, the sampling pin was wiped over a surface area of 0.1 m²; for 60 s. Subsequently, five drops of extraction buffer were applied to start the autonomous immunoanalytical process. Results were read after 10 min. Using allergen specific antibodies (Der p 2 and f 2), the exposure was classified into four categories (0–3), which reflected concentrations of 119,

The prevalence of atopic eczema and moulds increases with the exposure to house dust mites.

812, 2710 and 8000 ng/g dust (geometric mean), respectively (8).

A nonresponder analysis was performed in a random subgroup asking for the motivation for nonparticipation and whether a doctor had diagnosed an atopic disease in the child. Furthermore, physicians of the public health department recorded the item 'eczema', which was used for an additional nonresponder analysis.

Finally, 606 children participated (response 30.3%). In the random group of nonresponders ($n = 518$), a history of a doctor ever diagnosing AE was given in 6.4% compared with 18.1% in the actual study group (18.1%, $P < 0.001$). The physicians who performed the compulsory school entrance examination diagnosed eczema in 3.8% of the KLAUS study population and in 2.5% of

the nonparticipating 1465 children (non-significant).

The four exposure categories (0–3) to HDM allergens revealed positive results in 19.7%, 37.5%, 18.2% and 24.7%, respectively. Present or prior wet spots or moulds on the wall were reported by 30.3% of the parents. The prevalence of these signs of an unfavourable indoor climate correlated significantly with the measured exposure to HDM allergen. Of the households in the lowest exposure category, 18.2% reported moulds, whereas that was the case in 44.0% of households in the highest allergen exposure (Fig. 1).

In 9.3% of the 606 children, an actual AE was diagnosed. Girls were affected more often (10.8%) than boys (8.0%). Figure 2 shows that the eczema prevalence increased significantly with

increasing category of HDM exposure from 4.9% to 13.9%. Furthermore, the eczema prevalence in households with visible moulds was significantly higher (12.8%) than in households without moulds (7.3%). According to the logistic regression analysis, visible moulds increased the risk for actual AE after adjustment for sex, maternal school education and parental eczema by 84% (OR: 1.84, CI: 1.003–3.360).

The results of this study indicate that an unfavourable indoor climate, especially a high humidity and visible moulds, which is known to be associated with allergic sensitization and respiratory allergy, also correlates with AE. A causal factor might be the corresponding higher exposure to HDM allergens, which itself was associated with higher eczema prevalence. Therefore, avoidance of such an unfavourable indoor climate might have an impact on the prevention of AE.

Dry skin is a major symptom and a pathophysiological basis of AE. Consequently, it was shown under experimental conditions that lowering air humidity is followed by increased skin roughness in patients with AE, but not in healthy controls (9). From the epidemiological perspective, data from the ISAAC study indicated that the prevalence of AE is negatively associated with the mean annual temperature and the indoor relative humidity (10). High humidity, on the other hand, is associated with increased exposure to mould and HDM (4, 6) and subsequent development of allergic sensitization (7) and clinical atopy (5), mainly respiratory atopy. House dust mite exposure is known as a triggering factor of AE. It was shown that reduction of the HDM allergen load is as effective as preventive and therapeutic measure in AE (3, 11). Furthermore, recent data indicate that specific immunotherapy with HDM allergen is effective in patients with AE (12). We have shown that visible moulds are associated with AE and a higher HDM allergen load. Epidemiological studies from Taiwan and New Zealand failed to correlate dampness or moulds with AE in school children (6–12 yrs.) and toddlers (3.5 yrs.), respectively (13, 14). In a large Finnish survey in students (18–25 years), however, a significant association between doctor's diagnosed AE and

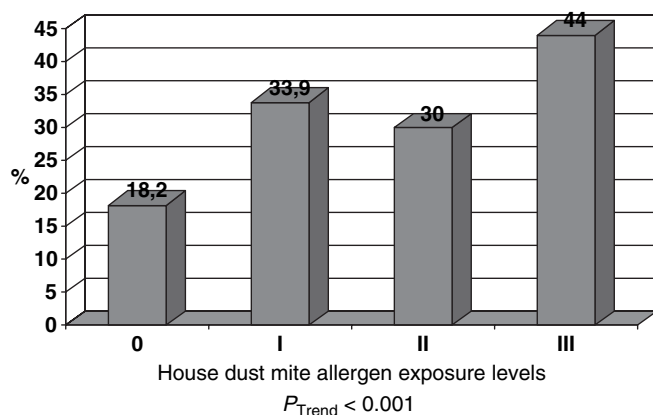


Figure 1. Relationship between prevalence of reported wet spots/moulds on the wall and measured house dust mite allergen exposure levels (0–III) in households of 606 school beginners.

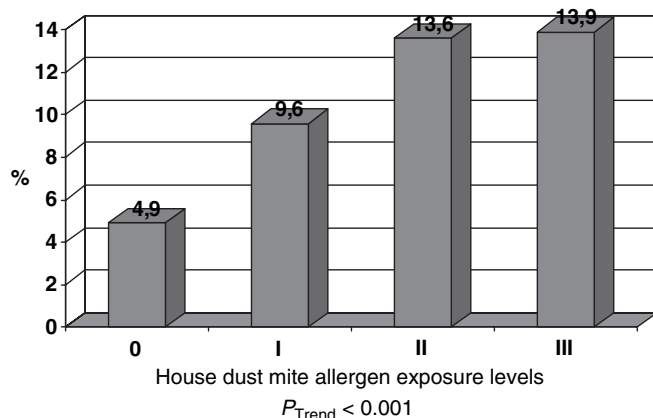


Figure 2. Relationship between prevalence of atopic eczema and measured house dust mite allergen exposure levels (0–III) in households of 606 school beginners.

visible mould, damp stains or water damage was reported (OR 1.29, 95% CI 1.06–1.56) (15).

The study is limited by self-reported exposure assessments, lack of data on sensitization to moulds or results of an atopy patch test, and a low response rate. Nonresponder analyses indicated that selection effects led to some over-estimation of the eczema prevalence. The associations described in the study, however, should not be influenced by selection bias, which would be introduced by a differential participation with respect to exposure and outcome.

Although this cross-sectional data have to be interpreted with caution, we have described a plausible association between an unfavourable indoor climate, HDM allergen exposure and AE, which may contribute to the evidence basis for further prevention strategies.

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Prevalence and alternative therapy methods for bee and wasp allergy in Van

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Key words: alternative therapy; complementary therapy; epidemiology; honeybee; hymenoptera allergy; insect allergy; systemic anaphylactic reaction; venom allergy; wasp.

Systemic allergic reactions to Hymenoptera stings have been reported in 1–4% of the whole population in various large studies (1). The frequency of insect allergy may be evaluated by anamnesis-based

Public awareness of the life-threatening potential of insect allergy is not sufficient in Van.

cross-sectional studies and/or skin-test results and specific serum IgE concentration assays (2). Most studies had been performed in developed countries (3–5), but there is no enough data in developing countries like ours. According to the Ministry of Agriculture and Rural Affairs reports, Turkey ranked as the fourth country in the world in terms of number of beehives and honey production, and annual honey production is increasing every year (6). Therefore, venom allergy is an important problem for our country. The aim of our study was to estimate, on the basis of an interviewer-administered questionnaire, the frequency of allergic sting reactions and the use of alternative therapy methods for it in our region. The study was carried out in 709 healthy people attending consecutively our University Hospital in Van to get a health report for driving licence, etc. 709 healthy clients were included in the study, and 564 (79.5%) of them were male and 145 (20.5%) were female. The mean age was