

Mites in Jakarta homes

HOUSE-DUST mites are an important source of inhalant allergens and play a definitive role in the pathogenesis of bronchial asthma and allergic diseases. Skin tests performed on our patients with bronchial asthma and allergic rhinitis yielded a positive reaction rate of 87% to *Dermatophagoides pteronyssinus*. Earlier analysis of the house dust taken from the living environments of our asthma patients revealed the presence of this species of dust mite. In addition, previous field studies performed in several dormitories in Jakarta, Indonesia, found this mite to be the most prevalent species. Other mite species found in this earlier study included *Glycyphagus destructor*, *Cheyletiella*

Dust mites, especially *D.*

farinae, *D. pteronyssinus*, and *B. tropicalis*, are very common in the homes of allergic patients.

erudetus, and *Swidasis* and *Tarsonemus* species (1). *D. farinae* or *Blomia tropicalis* (Blo t) were not found in the previous study.

B. tropicalis has become more recognized as an important allergen source in tropical and sub-

tropical areas of the world, such as South and Central America, the southern USA, and the Far East. *B. tropicalis* was detected in mattress and in floor-dust samples, reflecting a high concentration of allergen (2, 3).

A study of six indoor allergens in the homes in Singapore measured by specific immunoassays (for Der p 1, Der f 1, Bla g 1, Fel d 1, and Can f 1) and by fluorescent allergosorbent test (FAST) inhibition assays (for *B. tropicalis*) showed that the mite allergens Der p 1, Der f 1, and Blo t were the most prevalent allergens found. Of the group 1 mite allergens, Der p 1 was predominant. *D. pteronyssinus* and *D. farinae*, as well as *B. tropicalis*, were found in high concentration in mattresses and carpets (4). This was later confirmed via direct mite isolation and quantification (5).

Jakarta is situated in a tropical area located only 1500 km from Singapore. In view of the recent results of the Singapore study and the

similarity of climate and humidity between Jakarta and Singapore, we decided to re-examine the dust-mite profile of homes of allergic patients in Jakarta. Dust samples were collected from the bedroom, living room, and kitchen of 102 homes of bronchial asthma, allergic rhinitis, and other allergic patients in Jakarta and further identified and quantified by standard techniques. This preliminary communication reports the dust-mite fauna from the first 10 of 102 homes. Mites of the *Dermatophagoides* spp. were predominant, *D. farinae* (39.4% of total mites isolated) and *D. pteronyssinus* (25.4%) making up the majority of the counts. This was followed by *B. tropicalis* (14.1%). Other species of mites found included *Sturnophagoides* sp. (7.0%), *Tyrophagus putrescentiae* (4.2%), *Austroglycyphagus* sp. (1.5%), *Cheyletus* sp. (1.5%), and unknown (6.9%). Carpets were found to have the highest mite counts (240-320 mites/g) followed by bed mattresses (40-420 mites/g) and upholstered sofas (40-100 mites/g). During this study, the temperature range in the homes was 26-30°C, and the humidity range was 50-70%.

Quantification of more house-dust samples is currently underway. A further enzyme immunoassay study of the house dust used in this study to quantitate the presence of Der p 1, Der f 1, and Blo t is also underway. Preliminary data showed significantly higher levels of Der f 1 than Der p 1 (6).

In conclusion, dust mites are highly prevalent in Jakarta homes, *D. farinae* being the predominant species present, followed by *D. pteronyssinus*, and *B. tropicalis* and *D. farinae* might be as important as *D. pteronyssinus* in the sensitization of allergic patients in a tropical area such as Jakarta.

Key words: *Blomia tropicalis*, *Dermatophagoides farinae*, *Dermatophagoides pteronyssinus*, house dust mite; tropical area.

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Table 1. Results of allergenic test

Test procedure	Substance	Test reaction
Prick test	Pine nuts (native)	++
	Birch pollen	++
	<i>Dermatophagoides farinae</i>	++
Oral provocation test	Pine nuts (several, i.e., one teaspoonful)	Positive
	Tartrazine 100 mg	Negative
	3,4-Dihydroxy-cinnamic acid (caffeic acid) 100 mg	Negative
	2-Hydroxy-cinnamic acid (<i>p</i> -coumaric acid) 100 mg	Negative
	4-Hydroxy-3-methoxy-cinnamic acid (ferulic acid) 100 mg	Negative
	Na-salicylate 500 mg	Negative
	(<i>R</i>)- <i>p</i> -hydroxybenzoate (pHB) 500 mg	Negative
	Na-benzoate 500 mg	Negative
	Sorbic acid 500 mg	Negative
	Na-metabisulfite (cumulative 310 mg)	Negative

Anaphylaxis to pine nuts

YUNGINGER et al. (1) report on seven instances of anaphylaxis induced by food in patients between the ages of 11 and 43 years, all atopic, with some multiple anaphylactic episodes, after eating the suspected food (peanuts, four patients; fish, one patient; crab, one patient; pecan nuts, one patient). We describe a strange case of anaphylaxis induced by pine nuts in a patient with atopic inhalation diathesis.

In September 1995, after a meal of spaghetti and pesto sauce (olive oil, herbs, pine nuts, sardines), a 53-year-old man experienced angioedema, acute

dyspnea, and circulatory collapse for the first time. The patient was treated with intravenous injection of antihistamine as well as glucocorticoid. He was referred to us for identification of the allergen

A severe reaction in an atopic, 53-year-old man with birch-pollen allergy.

responsible for the anaphylactic reaction.

Skin prick tests were performed with seasonal and perennial inhalation allergens (Bencard Allergy Service, Munich, Germany) and native material of the suspected food. The implementation and evaluation of the prick tests were carried out in line with the guidelines of the EAACI (2). For birch pollen and house-dust mite (*Dermatophagoides farinae*), a positive test reaction was discovered twice, and rhinoconjunctivitis allergica saisonalis et perennialis was thus identified. There was a negative reaction to olive oil, tuna fish,

pistachios, basil, marjoram, oregano, black pepper, sardines, and various shellfish in the prick test, whereas the pine nuts were double positive.

Oral provocation tests were conducted with food colorings, antioxidants, and preservatives, which did not produce a reaction (Table 1). Finally, the patient was exposed to pine nuts: 10 min after being given a teaspoonful of pine nuts, the patient reacted with marked conjunctival inflammation, periorbital reddening, and itching. After he was given 4 mg Fenistil® (Dimetindenmaleat) and 200 mg Urbason® (methylprednisolone) intravenously, there was a reversal of symptoms. Serologic analysis for specific IgE antibodies (CAP, RAST FEIA, Pharmacia Company, Freiburg, Germany) was found to be strongly positive (class 4) for pine nuts.

Pine nuts are used in bread, pastries, and Italian-style meals. The kernels released from the hard shell can be consumed as a valuable nutrient, containing approx. 39% protein and 50% fat.

Halsey et al. (3) report on type I allergy to sunflower seeds. Immediate-type allergies to pine nuts are very rare. Only one case of systemic reaction to pine nuts was presented by Nielsen (4). On one occasion in September 1995, our patient suffered angioedema, acute dyspnea, and circulatory collapse, after consumption of spaghetti and pesto sauce (olive oil, herbs, pine nuts, sardines). On the basis of patient's history, RAST, skin test, and exposure, we were able to prove type I allergy to pine nuts, which caused the anaphylactic reaction.

Key words: anaphylaxis; food allergy; pine nuts.

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