

Correspondence

A case of occupational asthma, rhinitis and urticaria due to sesame seed

Sirs, Reports of allergy, even anaphylaxis, due to ingested sesame (*Sesame indicum*) seeds have been published [1,2]. Sesame in cosmetic products and ointments has induced contact dermatitis [3]. We report a patient who was occupationally exposed to sesame seed dust. IgE-mediated asthma, rhinitis and also urticaria due to sesame seed were verified. Occupational allergy due to sesame has not been reported earlier.

The patient was a 26-year-old man, who started working as a baker about 5 years ago. During the last 2 years he was in charge of a mill, in which waste bread was ground for animal food. The dust concentration in the bakery was found to be as high as 22 mg/m³. The patient had earlier been well and had no history of atopy. He had smoked up to five cigarettes a day for 6 years. For 6 months he had rhinitis, cough and dyspnoea during workdays. He had no symptoms on his days off. He once had urticaria during the night after a workday. Before the investigations the patient had been on sick leave for about 2 months. He was symptomless and used no medication. His clinical status, chest and nasal X-ray and spirometric values were normal. There was no bronchial hyper-reactivity. Skin-prick tests with common environmental allergens gave positive reactions to birch and mugwort pollen. Tests with flours and storage mites were negative. Crushed sesame seeds were tested in a drop of water using the prick test technique. The test gave a positive reaction. Tests to 20 control patients were negative. There was no blood eosinophilia. Total IgE was 90 kU/l. Phadezym RAST for specific IgE was negative for flours, storage mites and alpha-amylase, but positive for sesame seed, 4.53 PRU (<0.35 limit of positivity). The diurnal peak expiratory flow (PEF) values varied between 590 and 560 l/min. A placebo provocation test (lactose dust) was negative. When the patient handled crushed sesame seeds for 30 min he immediately had an asthmatic reaction with a 24% fall in PEF (Fig. 1) and a 29% fall in FEV₁. Wheezing rales were heard. A marked nasal reaction, and also urticaria on the face, breast and hands were noted. On the next day the PEF values were on the same level as before the provocation test, and the patient was symptomless. Since quitting the work with sesame exposure, the patient has been well. The amount of specific IgE for sesame seed has decreased during 9 months without exposure to 3.96 PRU.

The seeds as well as the oil pressed from sesame are much used as food ingredients in the Orient and also in

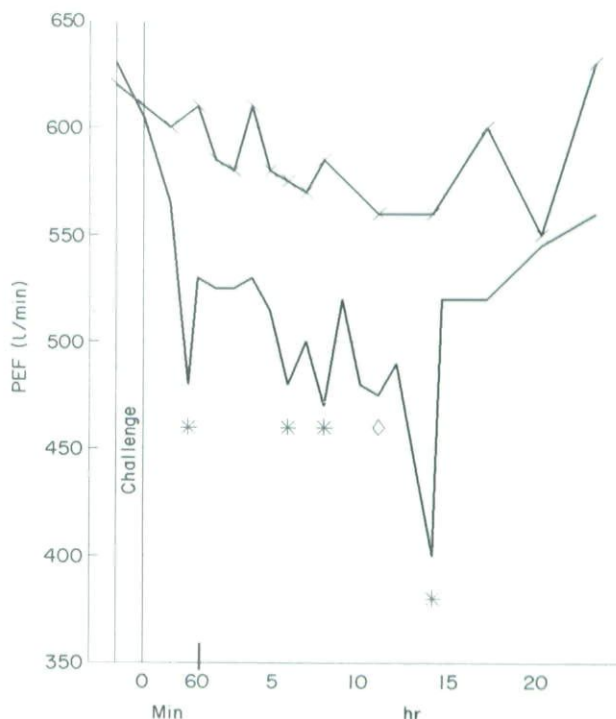


Fig. 1. Provocation tests with lactose powder (x) and crushed sesame seeds (—); rimiterol inhalation (*), peroral steroid (◇). The challenge time was 30 min.

China, Japan and Mexico. During the past few decades their use has spread also to U.S.A. and Europe [1,2]. Cases of food allergy due to sesame products have been reported after the ingestion of sesame seeds in various food products (halvah, breads, pretzels and crackers) and of sesame oil in salad dressing [1,2]. Specific IgE antibodies to sesame seed extract have been found. Nine antigens were identified by crossed electrophoresis [1].

Our patient was exposed by inhaling sesame seed dust. The allergic reactions, i.e. asthma, rhinitis and urticaria were IgE mediated according to the positive skin-prick tests and the positive Phadezym RAST with sesame. In our opinion sesame seeds should be added to the list of possible allergens in bakeries, together with flours, enzymes, storage mites and spices.

References

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- 3 Hayakawa R, Matsunaga K, Suzuki M, Hosokawa K, Arima Y, Shin CS. Is sesamol present in sesame oil? *Contact Dermatitis* 1987; 17:133-5.

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Sir, On behalf of The Allergen Nomenclature Subcommittee I would like to remind you about the existing nomenclature system. During the past few years the system has existed, but we have observed that there still are problems.

As an example the major allergen of cat is *Fel d I*.

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