

positive scratch test with the patient's own house dust was positive because of contamination with bat feces. Total serum IgE was elevated to 533 kU/l. CAP tests were negative to house-dust mites, *Chironomus*, cockroaches, and animal epithelia, but positive to the grain beetle *Sitophilus granarius* (class 3, 4.3 kU/l). CAP analyses of the larvae and skin of *T. molitor* and bat feces, performed in the Department of Clinical Immunology and Transfusion Medicine at the Karolinska Hospital in Stockholm, Sweden, were dose-related positive with 10, 15, and 81 kU/l, respectively.

In conclusion, occupational exposure to insects and Chiroptera is a frequent cause of allergic disease; laboratory workers are at particular risk of sensitization. For the first time, we describe a patient who was allergic not only to a bat but also to the mealworms it was fed. The question then arises of whether the positive skin test and CAP results with bat feces were due to the content of mealworm antigens in the feces. Unfortunately, the patient refused to undergo further tests; therefore, RAST-inhibition tests were not performed.

*Dermatologische Klinik
Universitätsspital
Gloriastr. 31
CH-8091 Zürich
Switzerland

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Occupational rhinitis/asthma to courgette

J. C. Miralles*, J. M. Negro, F. Sánchez-Gascón, M. García, A. Pascual

Key words: asthma; courgette; occupational; rhinitis.

● THE courgette (*Cucurbita pepo*) is a small, cylindrical marrow, with green skin and white pulp. It belongs to the *Cucurbita* family.

Many cases of occupational asthma due to

sensitization to vegetables, such as garlic (1, 2), French bean (3), and asparagus (4), have been described, although we have not found any case of rhinitis or occupational asthma caused by sensitization to vegetable marrow or courgette.

We present the case of a 26-year-old woman who had suffered from allergic rhinitis and bronchial asthma since childhood due to sensitization to moulds, dust mites, rabbit dander, and pollens.

Four years before referral to our section, she had started working in a warehouse specializing in fruits and vegetables, including courgettes. Her job was to pack these foods. When she started handling courgettes, she immediately suffered nasal-ocular pruritus, sneezing, and hydroporrhea, as well as dyspnoea and wheeze when she handled them for more than 3 h. In her job,

the patient was also in contact with peppers, beans, aubergines, lemons, and oranges, showing no clinical reference to these foods. She perfectly tolerated courgette when she ate it.

Cutaneous tests were done by the prick method with a standard battery of pneumoallergens (ALK-Abelló®) that gave a positive result for *Alternaria*, dust mites, rabbit dander, and olive, as well as *Parietaria*, mugwort, *Chenopodium*, and *Salsola* pollens.

We did cutaneous tests with food extracts (Aristegui®): nuts (almond, hazelnut, peanut, and pistachio nut), fruits (peach, apple, pear, strawberry, kiwi, banana, melon, pineapple, orange, and avocado), vegetables (celery and tomato), and paprika, with a positive result for hazelnut and peach, and negative result for the tests related to the other foods.

Later, some cutaneous tests were done with natural courgette, aubergine, pepper, bean, and lemon by the prick-prick method. These tests were positive for courgette and negative for the rest of the foods.

Subsequently, we detected specific IgE for vegetable marrow (*C. pepo*) by the CAP method (Pharmacia®), achieving a positive result of class 2.

A nasal provocation with courgette extract (Aristegui) was done, with a positive result shown by a fall of 57% of peak nasal inspiratory flow and by the appearance of sneezing (7) and moderate hydroporrhea. The patient refused to undergo bronchial provocation with courgette.

We present the first case of a worker suffering from occupational rhinitis and asthma due to courgette. She was sensitized to peach and hazelnut without clinical expression.

It is important to emphasize that the patient began to present nasal-ocular effects as soon as she started working with fruits and vegetables in the warehouse, without the classic period of sensitization. We might speculate that the patient had become

A case of IgE-mediated sensitization to vegetable marrow.

sensitized to courgette when she ate it, although this sensitization did not appear at ingestion, as did sensitization to peach and hazelnut when she ate them. However, the sensitization to courgette did appear when she inhaled it in her working environment.

*Plaza Juan XXIII n° 3–7° E
30008 Murcia
Spain

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with FIE who had symptoms before any oral intake.

A 2770-g girl of 36 weeks' gestation was admitted because of prematurity and meconium aspiration. Upon admission, the baby was well with no evidence of fetal distress. At the eighth hour, occult blood was noticed in the stool; it contained red blood cells and polymorphonuclear leukocytes (PNL) but no eosinophils. Hb was 14.9 g/dl, Hct 42%; platelets 269 000/mm³. WBC was 46 800/mm³ with 12% eosinophils (5616/mm³). A systematic search for infections, metabolic diseases, immune deficiencies (including CD18

Enterocolitis at 8 h of age.

determination), and coagulation and bleeding disorders failed to disclose any disorder. On day 23 of admission, an allergy consultation was sought, until which the baby was intermittently fed cow's milk formula (Prematil-Milupa). IgE was 38 IU/ml. Specific IgE and skin prick tests for milk and soy were negative. FIE was considered to be a possibility, and the baby was switched to a whey protein hydrolysate formula (Pepti-Junior, Nutricia). Starting from day 8, the stool guiac test had been consistently negative. The WBC was 26 300/mm³ on day 10 and 11 200/mm³ on day 15 with 21% eosinophils (2352/mm³). At day 19, the

WBC was 11 200/mm³, but the eosinophils were 9% (908/mm³).

At 47 days of age, Hb was 11.1 g/dl, Hct 32%; WBC 9500/mm³ with 4% eosinophils (380/mm³). At 90 days of age, the infant weighed 4630 g. Repeat skin prick tests and milk-specific IgE were negative. An oral challenge with 1:1 diluted whole cow's milk, starting with 5 ml and doubling the amount every 30 min, was done. Five minutes after the fourth feeding, she vomited and the challenge was stopped. During the 24 h after the challenge, the baby had watery diarrhea six times (twice with occult blood), was irritable, and had poor oral intake. The results of the challenge are summarized in Table 1. At 48 h, the clinical findings were virtually absent.

FIE develops most frequently between 1 week and 3 months of age, and it is usually due to cow's milk- or soy-based formulas (1, 2). Although it is now well appreciated that allergen contact and sensitization do occur *in utero* (3), the effector mechanisms leading to allergy become operative only after postnatal re-encounter with the antigen. There is only one report suggesting that IgE-mediated cow's milk allergy occurred during the prenatal period (4). This case represents an example of a non-IgE-mediated reaction that probably started *in utero* and was evident already at birth prior to any oral intake. The diagnosis was later confirmed by

Intrauterine cow's milk sensitization

Ö. Kalayci*, A. Akpinarlı, S. Yigit, S. Çetinkaya

Key words: cow's milk; food-induced enterocolitis; neonate.

● FOOD-INDUCED enterocolitis (FIE) appears after the ingestion of an offending antigen. We present an infant

Table 1. Results of oral challenge with 1:1 diluted cow's milk at 90 days of age

	Before	Time after challenge			
		2 h	24 h	48 h	7 days
Hb g/dl	10.8	10.0	9.4	9.6	9.1
Hct (%)	32.5	30.2	28.2	26.3	27.4
WBC (mm ³)	11 500	9900	14 100	9900	7600
Platelet (mm ³)	460 000	508 000	468 000	440 000	476 000
Eosinophil (% WBC)	1	1	7	6	6
Eosinophil (absolute)	115	99	987	594	456
PNL (% WBC)	19	20	40	30	25
PNL (absolute)	2185	1980	5640	2970	1900
Stool guiac	–	Not available	++	–	–