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Allergic contact dermatitis from mitomycin C

MITOMYCIN C is an alkylating agent administered by intravesical instillation to treat bladder carcinoma (1).

■ A 52-year-old woman with bladder carcinoma started treatment with intravesical instillation of mitomycin C in November 1996. Twenty-eight days

Possible sensitization through resorption from the bladder.

after the first course of treatment and 2 h after the fifth, she developed pruritus and localized dermatitis on the face, neck, and forearms.

Therapy was stopped and topical corticosteroids prescribed. Dermatitis resolved in a few days.

Patch tests performed with mitomycin C (0.01% pet and 0.1 µg/ml water) were positive after 72 h. Five control subjects were negative.

■ Localized dermatitis due to systemic absorption of mitomycin C after intravesical administration is possible. Skin test results showed a type IV reaction to mitomycin C, as in previous reports. Localized contact dermatitis was elicited by the minimum dose of mitomycin C on the patch (4, 5). The drug concentration and vehicles we used are considered nonirritant. Multiple intravesical administration (five courses) was required for sensitization. Antigen-presenting cells in the bladder wall have been implicated in delayed hypersensitivity to mitomycin C.

Key words: cancer; contact dermatitis; mitomycin C.

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Exercise-induced egg anaphylaxis

FOOD-DEPENDENT exercise-induced anaphylaxis (FDEIA), a form of physical allergy occurring in association with exercise, and characterized by collapse, upper respiratory tract obstruction, and/or urticaria/angioedema, is increasingly being reported in medical literature. There have been reports of FDEIA linked to the ingestion of shellfish, wheat, rice, celery, tomato, fennel, garlic, peach, grape, apple, hazelnut, walnut, and egg (1-3). We report a case of FDEIA in which both poultry and egg were the triggering foods.

A 15-year-old boy was seen in March 1995, because of recurrent episodes of general angioedema and urticaria, variably associated with asthma, hoarseness, or severe upper respiratory obstruction and collapse, since the age of 5 years. He did not suffer from seasonal or perennial respiratory allergy. The last episodes had all occurred in the afternoon during light to moderate

exercise, 30-60 min after eating poultry (roasted chicken or turkey) or eggs. Exercise without prior ingestion of these foods, as well as the ingestion of poultry and chicken not followed by exercise, did

This 15-year-old boy could tolerate chicken meat and hen's egg when at rest, but eating them before exercise resulted in severe anaphylaxis.

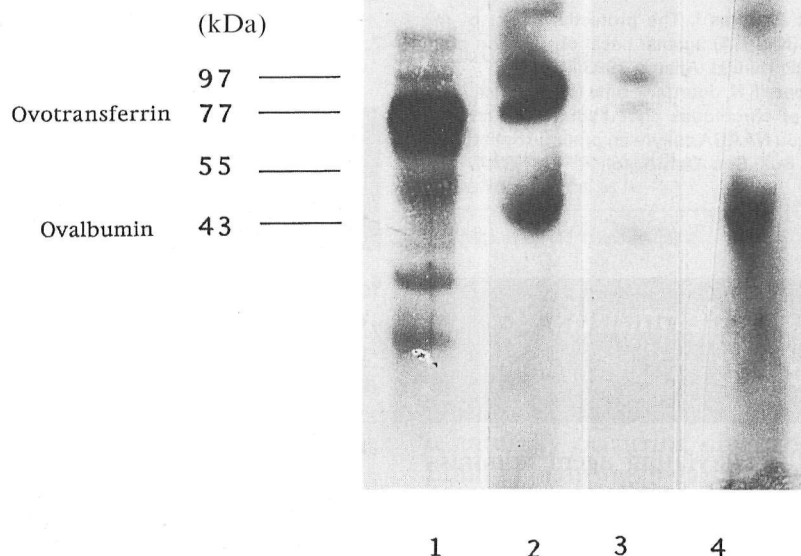


FIGURE 1. Immunoblotting and inhibition experiment with chicken-meat extract. Lanes 1 and 2) reactivity of A.F. serum to chicken-meat and egg-white extracts, respectively; lanes 3 and 4) reactivity of A.F. serum to same extracts after preincubation with chicken meat.

not cause any disorder. Egg white, egg yolk, chicken, turkey, corn, pea, soybean, and almond were strongly positive on skin prick test (SPT) (DHS) performed at our allergy center. Open oral challenges with increasing doses of boiled chicken (about 50 g over 3 h) and boiled egg (1 egg over 3 h) were negative. In view of the SPT results, the patient was advised to refrain from exercise for at least 3 h after every meal irrespective of the foods eaten; at last follow-up (March 1997), he had not experienced further anaphylactic episodes.

Western blot analysis was performed. The patient's serum reacted to several proteins, ranging from 20 to over 90 kDa, in both chicken meat and egg blots. Serum preincubation with chicken-meat extract (2.5 mg/ml) or egg-white extract (5 mg/ml) caused the loss of only one band at 77 kDa (conalbumin/ovotransferrin) from egg-white and chicken-meat blots, respectively (Fig. 1).

Few cases of poultry meat allergy have been reported (4, 5); to our knowledge, this is the first case of both poultry- and egg-dependent EIA observed to date. Ovotransferrin was the cross-reacting allergen in this case; to date, the only known cross-reacting structure in egg and chicken is α -livetins (chicken serum albumin), which is mainly present in egg yolk, and which causes the so-called bird-egg syndrome (6).

The reasons why patients with FDEIA tolerate well the offending foods at rest are poorly understood; one hypothesis is that FDEIA represents the clinical expression of food allergy in patients whose immunologic reactivity is low and who need an additional trigger for their symptoms to appear.

Key words: chicken meat allergy; conalbumin; egg allergy; exercise-induced anaphylaxis.

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Allergic disease prevalence in Izmir

ONE CAN show the prevalence, the incidence, the course, and especially the results of a disease via epidemiologic studies, but comparison of the results of different investigations is important (1). This study was planned to determine the cumulative prevalence of allergic diseases in Izmir, the third largest city in Turkey.

■ The investigation included the children in 11 primary schools of Izmir, from three different socio-economic groups, and was conducted between October 1992 and June 1993. The number of students in all primary schools of Izmir was defined before the study, and the schools were divided into three different groups according to socioeconomic status. A total of 3600 questionnaire forms were given randomly to the students before their physical examination to be filled in by their parents first, and 3512 questionnaires were returned.

Our questionnaire included questions from the International Study of Asthma Allergies in Childhood (ISAAC) questionnaire for asthma (2),

The cumulative prevalences of asthma and other allergic diseases were 4.9% and 21.9%, respectively, in Izmir, which are representative of the population of the Aegean region of Turkey.

grunting; paroxysmal sneezing; watery and profuse rhinorrhea; itching of nose, palate; pharynx, and ears; itching, redness, and tearing of eyes; erythematous weepy patches on the cheeks, face, neck, wrists, and abdomen; and pruritus. Family history

Table 1. Age and sex of children

Ages (years)	Sex		Total
	Boys (%)	Girls (%)	
6–7	244 (7.8)	238 (7.5)	482 (15.3)
8–9	581 (18.4)	653 (20.7)	1234 (39.1)
10–11	511 (16.2)	712 (22.6)	1223 (38.8)
12–13	113 (3.6)	100 (3.2)	213 (6.8)
Total (%)	1449 (46)	1703 (54)	3152 (100)

of atopy was investigated in two groups: parents and siblings of patients and other relatives.

Comparisons between groups were performed with the chi-square test. For determination of the effects of each variable on the prevalence of these allergic disorders, logistic regression analysis was carried out. The results obtained for each allergic disorder were presented as odds ratio with 95% confidence interval (CI). The statistical analysis was made with the SSPS program.

■ A total of 3152 students, aged 6–13 years, were selected (Table 1). The differences between their ages were significant ($P < 0.05$). The cumulative prevalence of the questionnaire-based asthma was 4.9%. The attacks were provoked by infection in 3.2% and by an allergen in 1.7%. Moreover, 29 (0.9%) students had attended a medical center for bronchial asthma before our study. The cumulative prevalences of rhinitis, conjunctivitis, and atopic dermatitis were 6.3%, 7.2%, and 13.6%, respectively. In patients with questionnaire-based bronchial asthma, the allergic rhinitis ratio was 19.4% (odds ratio, 4.09; CI, 2.60–6.40), the atopic dermatitis ratio 40.9% (odds ratio, 5.01; CI, 3.52–7.14), and the allergic conjunctivitis ratio 11.0% (odds ratio, 1.68; CI, 0.96–2.91). The family history revealed bronchial asthma in 5.8%, allergic rhinitis in 11.6%, and atopic dermatitis in 9.1%. In 10.5%, there was history of atopy in the other relatives at the same time. In patients with questionnaire-based bronchial asthma, the ratio of history of atopy in parents and sibling was 40.9% (odds ratio, 1.86; CI, 1.32–2.63); in other relatives, it was 22.7% (odds ratio, 2.42; CI, 1.60–3.6). The allergic rhinitis ratio was 39.6% (odds ratio, 3.89; CI, 2.79–5.42), the atopic dermatitis ratio 24.6% (odds ratio, 2.95; CI, 1.98–4.37), and the bronchial asthma ratio 31.1% (odds ratio, 6.97; CI, 4.75–10.22), in their family. No statistical correlation was found between age, sex, socioeconomic status, food allergy, and smoking, but the prevalence of bronchial asthma was significant in atopic families ($P < 0.05$).

■ Many investigators have explored the prevalence of allergic disease and bronchial asthma in their

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