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A total of 8581 immediate type food allergy cases were reported by
The food labeling system for food allergens was introduced
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Abstracts
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2012 World Allergy Organization
Hong Zhao,
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Haiqi Li,
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survey and 16 (23%) completed at least part of the survey. Fifty-four percent
using IT.

Results:
Sixty-nine Canadian fellows-in-training were invited to complete the
and 16 (23%). Fifty-four percent of 13 respondents were in their first year of fellowship. Seven respondents (58% of 12 respondents) attended the
2010 CSACI fellow-in-training session and received the IT Training Manual. One respondent commented that it was “more information than we’ve had in all of our fellowship!” The same 7 respondents “somewhat liked” or “liked” the large group format, but felt that the experience could be improved in the future with the addition of case-based learning in smaller groups. One respondent commented that “as in intro, it was good in a larger setting.” All 7 respondents felt that their understanding of IT was positively impacted by the faculty-led session. Eighty-six percent of 7 respondents indicated that the Training Manual “somewhat impacted” to “very much impacted” their understanding of IT. One commenter stated that “it is the basis of my knowledge thus far.” Most respondents (86%) preferred the current paper booklet format of the IT Training Manual.

Conclusions:
The results of this pilot survey demonstrate that some fellows-in-training found the faculty-led session on IT and the IT Training Manual useful. Future studies will help to further elucidate the utility of these educational interventions.

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Immunotherapy (IT) Training in Canada: Current Experience of Fellows-in-training
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Background: Allergen immunotherapy (IT) is a key component of allergy practice of allergy. Canadian fellows-in-training have expressed concern that they receive inadequate exposure to IT in their training programs.

Methods: Canadian fellows-in-training in Allergy and Clinical Immunology (CSACI), were contacted via email to complete a pilot survey (using survey monkey), both quantitative (Likert scales) and qualitative, to assess their opinion on the faculty-led session on IT and the IT Training Manual.

Results: Sixty-nine Canadian fellows-in-training were invited to complete the survey and 16 (23%) completed at least part of the survey. Fifty-four percent of 13 respondents were in their first year of fellowship. Fifty percent of 12 respondents were internal medicine trained. Eighty-three percent of 12 respondents acknowledged exposure to IT during their training. Eighty percent of 10 respondents had previously written a prescription for IT; 71% and 43% of 7 respondents had written 1 to 5 prescriptions for allergen and stinging venom IT, respectively. Only 50% of 12 respondents felt comfortable prescribing IT. The most common reason cited was lack of experience; however, one respondent wrote that he/she would feel uncomfortable prescribing IT without using the standardized hospital IT form. Sixty-seven percent of 12 respondents had previously administered IT to a patient. Sixteen percent of 12 respondents felt uncomfortable administering IT due to lack of experience. Fifty percent of 12 respondents had treated a patient having an allergic reaction to IT and 100% of these same respondents felt “somewhat comfortable” to “very comfortable” in responding to an allergic reaction to IT. Seventy-five percent of 12 respondents agreed that a formal clinical rotation in IT would be helpful.

Conclusions: The results of this pilot survey demonstrate that Canadian fellows-in-training in Allergy and Clinical Immunology are not receiving adequate exposure and training in IT. Future studies will help to explore this subject in more detail.

INCIDENCE AND PREVALENCE OF FOOD ALLERGY

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Nationwide Survey of Immediate Type Food Allergy in Japan
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Background: The food labeling system for food allergens was introduced from April 2002 in Japan. To confirm the effectiveness of the system, we regularly conduct a nationwide food allergy survey every 3 years.

Methods: The survey was conducted in cooperation with over 1000 volunteer allergists in Japan at 2001, 2002, 2005 and 2008. We sent questionnaire to contributing doctors every 3 months based on the past survey system, and contributing doctors were asked to report immediate type food allergy cases seen by those doctors. In this survey, immediate type food allergy was defined as the patients who had developed symptoms due to food allergic reaction within 60 minutes after intake of offending food. The details of questionnaire consisted of age, sex, cause of food allergy, symptoms, CAP system, and type of onset.

Results: A total of 8581 immediate type food allergy cases were reported by the doctors. The most common offending foods were hen’s egg (39.0%), milk products (18.0%), wheat (9.4%), fruit (5.3%), crustacean (4.6%), peanuts (3.7%), fish egg, buckwheat and fish (3.6%). The most common clinical symptom was observed on skin (89.7%) followed by respiratory system (29.6%). Interestingly, the causes of food allergy were completely different from infancy (egg, milk, and wheat) to adulthood (wheat, crustacean and fruits). Anaphylactic shock was observed in 10.9% of the total reported cases. The cases of anaphylactic shock were due to hen’s egg (27.1%), milk products (21.4%) and wheat (18.1%). Eleven percentages of patients had been hospitalized.

Conclusions: We revealed the current condition of the immediate type food allergy cases seen in Japan recent decade. Based on these data, countermeasures against food allergy are ongoing in collaboration with the Ministry of Health, Labour, and Welfare in Japan in order to improve quality of life of patients.

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The Prevalence of Food Allergy in Children under 2 Years in Three Cities in China
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**Background:** To estimate the prevalence and clinical features of food allergy in children aged 0 to 2 years.

**Methods:** From January to February, 2009 and January to May, 2010, all well-infants and young children between the age of 0-2 years attending routine health visits at the Department of Primary Child Care, in Chongqing, Zuhai and Hangzhou were invited to participate the study. Parents completed questionnaires and all children were skin prick tested to a panel of 10 foods (egg, white, egg yolk, cow milk, soybean, peanut, wheat, fish, shrimp, orange and carrot). Based on the results of SPT and medical history, the subjects should undergo the suspected food elimination and oral food challenge under medical supervision. Food allergy was confirmed by the food challenge test.

**Results:** There were 1,687 children recruited by the consent of their parents. Of 1,687 children approached, 1,604 (550 for Chongqing, 573 for Zuhai and 481 for Hangzhou) fulfilled the study criteria for diagnosing food allergy. 100 children were confirmed to have challenge-proven food allergy in 3 cities (40 for Chongqing, 33 for Zuhai and 27 for Hangzhou). The prevalence of food allergy in 0 to 2 years old children in Chongqing was 7.3%, in Zuhai was 5.8% and in Hangzhou was 5.5%. There was no significant difference in the prevalence of food allergy in children under 2 years among the 3 cities, and the average prevalence for food allergy in children under 2 years was 6.2%. Egg was the most common allergen, followed by cow milk.

**Conclusions:** The prevalence of food allergy in 0 to 2 years old children in China was 5.5% to 7.3%. There was no significant difference in the prevalence of food allergy in children under 2 years among the 3 cities. Egg was the most common allergen, followed by cow milk.

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494 Skin Sensitization to Carmine Before Onset of Systemic Allergy to Ingested Carmine

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**Background:** Allergic sensitization to food can occur through skin exposure. We investigated anaphylactic cases due to carmine, a food additive extracted from Dactylopius coccus. We screened all patients, who visited our department from January 2000 to December 2009, we identified 2 new such cases. Both had history of rash induced by certain cosmetics containing carmine. We further investigated previous case reports of carmine allergy, whether skin sensitization antedated food allergy or not.

**Methods:** Screening all patients, who visited our department from January 2000 to December 2009, we identified 2 new such cases. Both had history of rash induced by certain cosmetics containing carmine. We further investigated previous case reports of carmine allergy, whether skin sensitization antedated food allergy or not.

**Results:** Case 1: A 26-year-old woman visited our hospital because of anaphylaxis occurred within 5 minutes after ingesting a Japanese YOKAN (sweetened and jellied bean paste). IgE antibodies against common food allergens including beans and wheat were all negative. As the paste contains carmine, we tested specific IgE antibody, which was positive. She had been avoiding using certain cheeks and lips for 2 years, since they cause erythema. These cosmetics emerged as containing carmine. Abstaining from the food additive made her free from anaphylaxis. Case 2: A 30-year-old woman came to our hospital for dyspepsia, urticaria, and bilateral blepharedema, immediately after drinking Campari soda. Her past history was prominent, as she had 4 episodes of anaphylaxis in 4 years, requiring emergency transport twice. All anaphylactic episodes occurred in Italian restaurants when she drank cocktails, which might contain carmine in Campari soda. She had been also sensitive to certain rouges since several years before the first onset of anaphylaxis. It became clear that the rouges contained carmine. In literatures, we found 22 cases with allergy to ingested carmine. It is surprising that all cases were women (aged 25 to 52), while occupationally sensitized patients are predominantly men. As far as we could know, 85.7% of (6/7) mentioned cases had previous history of sensitization to cosmetics containing carmine.

**Conclusions:** In many cases with allergy against ingested carmine, the route of first sensitization was not via intestine but skin. This is similar to suspected peanut sensitization mechanism and might be a paradigm of food allergy. As allergic reaction to carmine mainly directed to impurities, using highly purified carmine is desired not only for foods but also for cosmetics.

495 Milk, the Most Commonly Undeclared Food Allergen Causing Unexpected Allergic Reactions in Sweden between 2004 and 2011

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**Background:** Allergy to milk proteins is a common allergic manifestation, especially among children. Different types of food products could be a risk factor for milk allergic individuals. According to the European Community Directive 2000/13/EC the list of ingredients shall include all the ingredients of the foodstuff, however with some exceptions. In 2003 Directive 2003/89/EC entered into force stating that milk and other ingredients, which are common elicitors of food allergic reactions, shall always be declared in the labeling.

**Objective:** To investigate which undeclared food allergen that most commonly has caused unexpected allergic reactions in Sweden between 2004 and 2011, ic., since 2003/89/EC entered into force, and to compile data regarding the reactions to this food allergen.

**Methods:** The medical care, school personnel and control authorities have since 1990 been encouraged to report allergic reactions to foods, which do not declare the ingredient causing the allergic reaction, to the Swedish National Food Administration. Also, the suspected foods have been provided for analyses. Food allergens, e.g. caseins (a group of milk proteins), were analyzed with Enzyme Linked Immunosorbent Assay and/or Rocket Immunoelectrophoresis.

**Results:** Forty-eight cases of unexpected allergic reactions to foods, in which the causing food allergen was detected, were reported between 2004 and 2011. The most commonly detected food allergen was milk (21) followed by peanut (9), egg (6) and wheat (5). The persons who suffered from unexpected allergic reactions to milk were all children or teenagers. Mild symptoms were reported as well as anaphylactic reactions. One death was most likely caused by an allergic reaction to bread contaminated with milk. The lowest doses eliciting allergic reactions were calculated to be 2 to 6 mg casein. The types of foods causing the reactions were chocolate, ready-made meals, meat products, sauces, bread and a vegetarian milk substitute. The unexpected allergic reactions to milk were caused by mislabeling in 7 cases and to contamination in 14 cases.

**Conclusions:** Although rare, allergic reactions to undeclared food allergens may occur. Milk was the most commonly undeclared food allergen causing allergic reactions in Sweden between 2004 and 2011.