Selections from international journals

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Challenges of managing food allergy in the developing world.

Hossny E, Ebisawa M, El-Gamal Y, Arasi S, Dahdah L, El-Owaidy R, Galvan CA, Lee BW, Levin M, Martinez S, Pawankar R, Tang MLK, Tham EH, Fiocchi A.

Food allergy (FA) is currently a significant health care problem in the developing world. Widely varying study populations and methodologies, the use of surrogate markers such as self-report or hospitalization rates due to anaphylaxis rather than objective methods, limits robust estimation of FA prevalence in low income settings. Also, allergy is under-recognized as a clinical specialty in the developing world which compromises the chance for accurate diagnosis. In this review, most published data on food allergens from developing or low-income countries are displayed. The diagnostic challenges and limitations of treatment options are discussed. It seems that FA is an under-appreciated health care issue in the developing world, and accurate determination of its burden in low-income settings represents an important unmet need. Multicenter surveillance studies, using standardized methodologies, are, therefore, needed to reveal the true extent of the problem and provide epidemiological clues for prevention. Preventive strategies should be tailored to fit local circumstances in different geographic regions. In addition, studying the gene environment interactions and impact of early life microbiota on the expression of FA in developing communities would be worthwhile. Efforts and resources should be directed toward public health education and training of health care providers dealing with food allergic patients.

Allergy. 2019 ;74(Suppl. 107):5-17.

Keep the cat, change the care pathway: A transformational approach to managing Fel d 1, the major cat allergen.

Satyaraj E, Wedner HJ, Bousquet J.

BACKGROUND: Allergies to cats are the most common animal-origin allergy and affect approximately 1 in 5 adults worldwide. The prevalence of allergy to furry animals has been increasing, and allergy to cats is a major risk factor for the development of asthma and rhinitis. The diagnosis of cat allergy is now well established. The exact significance of component-resolved diagnosis in the diagnosis of cat allergy remains to be fully understood. Allergen avoidance is effective but often has a psychologic impact. Allergen immunotherapy is not well demonstrated. There is a need for innovative approaches to better manage cat allergens. Next-generation care pathways for asthma and rhinitis will define the place of cat allergen avoidance. METHODS AND RESULTS:
This manuscript, based on content presented at the European Academy of Allergy and Clinical Immunology Congress 2019, provides information on the prevalence and impact of cat allergies and the molecular biology of Fel d 1, the major cat allergen. DISCUSSION: The authors present the scientific basis of a novel care pathway that utilizes anti-Fel d 1 IgY antibodies to safely and effectively neutralize Fel d 1 after its production by the cat but before human exposure. CONCLUSION: Efficacy of a feline diet with an egg product ingredient containing anti-Fel d 1 IgY antibodies was demonstrated in vitro, ex vivo, and in vivo, and further validated by a pilot exposure study involving cat-allergic human participants.

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Development and initial validation of the Asthma Severity Scoring System (ASSESS).

Fitzpatrick AM, Szefler SJ, Mauger DT, Phillips BR, Denlinger LC, Moore WC, Sorkness RL, Wenzel SE, Gergen PJ, Bleecker ER, Castro M, Erzurum SC, Fahy JV, Gaston BM, Israel E, Levy BD, Meyers DA, Teague WG, Bacharier LB, Ly NP, Phipatanakul W, Ross KR, Zein J, Jarjour NN.

BACKGROUND: Tools for quantification of asthma severity are limited. OBJECTIVE: We sought to develop a continuous measure of asthma severity, the Asthma Severity Scoring System (ASSESS), for adolescents and adults, incorporating domains of asthma control, lung function, medications, and exacerbations. METHODS: Baseline and 36-month longitudinal data from participants in phase 3 of the Severe Asthma Research Program (NCT01606826) were used. Scale properties, responsiveness, and a minimally important difference were determined. External replication was performed in participants enrolled in the Severe Asthma Research Program phase 1/2. The utility of ASSESS for detecting treatment response was explored in participants undergoing corticosteroid responsiveness testing with intramuscular triamcinolone and participants receiving biologics. RESULTS: ASSESS scores ranged from 0 to 20 (8.78 ± 3.9; greater scores reflect worse severity) and differed among 5 phenotypic groups. Measurement properties were acceptable. ASSESS was responsive to changes in quality of life with a minimally important difference of 2, with good specificity for outcomes of asthma improvement and worsening but poor sensitivity. Replication analyses yielded similar results, with a 2-point decrease (improvement) associated with improvements in quality of life. Participants with a 2-point or greater decrease (improvement) in ASSESS scores also had greater improvement in lung function and asthma control after triamcinolone, but these differences were limited to phenotypic clusters 3, 4, and 5. Participants treated with biologics also had a 2-point or greater decrease (improvement) in ASSESS scores overall.
CONCLUSIONS: The ASSESS tool is an objective measure that might be useful in epidemiologic and clinical research studies for quantification of treatment response in individual patients and phenotypic groups. However, validation studies are warranted.

Ann Allergy Asthma Immunol. 2019 ;123(6):573-581.

Oral immunotherapy for multiple foods in a pediatric allergy clinic setting.

Eapen AA, Lavery WJ, Siddiqui JS, Lierl MB.

BACKGROUND: The increasing incidence of pediatric food allergy results in significant health care burden and family stress. Oral immunotherapy (OIT) can induce tolerance to peanut, milk, and egg. OIT for other foods, particularly multiple foods simultaneously, has not been thoroughly studied. OBJECTIVE: To summarize our experience with OIT for multiple foods in a pediatric allergy clinic setting. METHODS: Medical records were reviewed for patients undergoing OIT for multiple foods. Methods and outcomes of OIT were summarized. Outcomes were analyzed for correlation with baseline food allergen skin prick tests (SPTs) and specific IgE (sIgE) test results. RESULTS: Forty-five patients aged 1.5 to 18 years undertook OIT for up to 12 foods, including peanut, tree nuts, seeds, legumes, and egg. At the time of review, 35 patients were receiving daily maintenance dosing, 4 had completed OIT and were continuing to eat their foods 3 times weekly, and 6 had stopped OIT because of anxiety, inconvenience, or allergy symptoms. A total of 49% of patients had reactions during the up-dosing process, mostly oral itching (33%), perioral hives (40%), and abdominal pain (35%). There was no correlation of baseline skin prick test (SPT) and sIgE test results with reaction threshold for baseline food challenge, lowest dose causing reactions during up-dosing, or time to reach maintenance. Higher baseline sIgE level but not baseline SPT result was associated with an increased number of allergic reactions during OIT. Baseline SPT correlated with stopping OIT. CONCLUSION: A similar approach to that used for peanut OIT can be taken for nonpeanut foods and for multiple foods simultaneously. High baseline allergy test results are not a contraindication to OIT.