Selections from international journals

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J Allergy Clin Immunol. 2013;131(2):295-299.e27.
Atopic dermatitis: A practice parameter update 2012.

Schneider L, Tilles S, Lio P, Boguniewicz M, Beck L, Lebovidge J, Novak N, Bernstein D, Blessing-Moore J, Khan D, Lang D, Nicklas R, Oppenheimer J, Portnoy J, Randolph C, Schuller D, Spector S, Tilles S, Wallace D.

This parameter was developed by the Joint Task Force on Practice Parameters, representing the American Academy of Allergy, Asthma & Immunology (AAAAI); the American College of Allergy, Asthma & Immunology (ACAAI); and the Joint Council of Allergy, Asthma and Immunology. Since the last parameter on AD was published in 2004, there have been remarkable advances in the understanding of the genetics and pathophysiology of the disease. Hypotheses on the cause of AD must now include epidermal barrier defects, as well as immune dysregulation of both the innate and adaptive immune systems. AD is a complex inflammatory process, our understanding of which is constantly undergoing revision as more data become available on the role of IgE-bearing Langerhans cells, atopic keratinocytes, monocytes/macrophages, eosinophils, and mast cells and their interaction with IL-4–, IL-5–, and IL-13–producing TH2, regulatory T, and TH22 lymphocytes. There is a complicated interaction between these cells and their products and susceptibility genes and the host environment, which leads to the clinical findings that characterize AD. The major objective of this parameter is to improve the care of patients with AD. This should be accomplished by establishing boundaries for the evaluation and management of patients with this condition while reducing unwanted and unnecessary variation in treatment.

Allergy. 2013;68(1):27-36.
EAACI taskforce position paper: evidence for autoimmune urticaria and proposal for defining diagnostic criteria.

Konstantinou GN, Asero R, Ferrer M, Knol EF, Maurer M, Raap U, Schmid-Grendelmeier P, Skol PS, Grattan CE.

An autoimmune subset of chronic spontaneous urticaria is increasingly being recognized internationally, based on laboratory and clinical evidence that has accrued over the last 20 years. This evidence has been reviewed by a taskforce of the Dermatology section of the European Academy of Allergy and Clinical Immunology. Functional autoantibodies in chronic urticaria (CU) patient sera have been demonstrated against IgE and FcεRIα by basophil and mast cell histamine release assays and by basophil activation assays. Antibody specificity has been confirmed by immunoassay, but there is a poor correlation between functionality and immunoreactivity. Approximately 25% of CU patients have a positive basophil histamine release assay and show autoreactivity (a positive autologous serum skin test), whereas 50% are negative regarding both. Functionality of CU sera appears to be complement dependent on mast cells but not exclusively on basophils. Basophil activation by CU sera is predominantly restricted to IgG1 and IgG3 subclasses. Circumstantial evidence for CU being an autoimmune disease comes from an observed association with other autoimmune diseases, a strong association between serum functionality and HLA-DR4 haplotype and the good response of CU patients to immunotherapies. It was proposed that a study should be undertaken to prospectively validate potentially relevant clinical criteria (from the history, examination and routinely available clinical investigations) against a new 'gold standard' for the diagnosis of ACU (positive autoreactivity, functional bioassay and immunoassay) to define preliminary criteria sets for the diagnosis of ACU based on clinical and laboratory features with highest individual sensitivity and specificity.

Allergy Asthma Immunol Res. 2013;5(2):88-95.

Clinical predictors of primary immunodeficiency diseases in children.

Reda SM, El-Ghoneimy DH, Afifi HM.

PURPOSE: To promote awareness of primary immunodeficiency (PID), the "10 warning signs" of PID and an immunodeficiency-related (IDR) score were developed. However, their efficiency in identifying PID cases was not sufficiently evaluated in clinical practice. The objective of this study was to test the validity of the 10 warning signs and IDR score in identifying PID among children with recurrent infections at a tertiary pediatric hospital in Egypt. METHODS: A retrospective analysis of the medical records of 204 patients was performed. Of these patients, 92 had defined PID diseases and 112 were considered non-PID cases because investigations were inconclusive. RESULTS: Demonstrating two warning signs and an IDR score of 6 led to sensitivities of 94 and 66%, respectively, and specificities of 64 and 75%, respectively, in identifying PID cases. The strongest predictor of PID was family history that, if combined with the need for intravenous antibiotics, recurrent deep-seated infections, and failure to thrive, could identify 81% of PID patients. A family history of PID, sibling death, and/or parental consanguinity would predict 92% of combined immunodeficiencies, 92% of phagocyte defects, 87% of well-identified immunodeficiency syndromes, and 84% of antibody deficiency if the need for intravenous antibiotics is considered in the latter. CONCLUSIONS: The 10 warning signs and IDR score do not aid in an early diagnosis of severe PID. Educational campaigns should target pediatricians aiming to increase PID awareness and to address family history of PID, parental consanguinity, and previous sibling death as key predictors of PID in communities with a high prevalence of consanguineous marriages.

World Allergy Organ J. 2012;5(11):148-67.

Clinical Use of Probiotics in Pediatric Allergy (CUPPA): A World Allergy Organization Position Paper.

Fiocchi A, Burks W, Bahna SL, Bielory L, Boyle RJ, Cocco R, Dreborg S, Goodman R, Kuitunen M, Haahtela T, Heine RG, Lack G, Osborn DA, Sampson H, Tannock GW, Lee BW; on behalf of the WAO Special Committee on Food Allergy and Nutrition.

BACKGROUND: Probiotic administration has been proposed for the prevention and treatment of specific allergic manifestations such as eczema, rhinitis, gastrointestinal allergy, food allergy, and asthma. However, published statements and scientific opinions disagree about the clinical usefulness. OBJECTIVE: A World Allergy Organization Special Committee on Food Allergy and Nutrition review of the evidence regarding the use of probiotics for the prevention and treatment of allergy. METHODS: A qualitative and narrative review of the literature on probiotic treatment of allergic disease was carried out to address the diversity and variable quality of relevant studies. This variability precluded systematization, and an expert panel group discussion method was used to evaluate the literature. In the absence of systematic reviews of treatment, meta-analyses of prevention studies were used to provide data in support of probiotic applications. RESULTS: Despite the plethora of literature, probiotic research is still in its infancy. There is a need for basic microbiology research on the resident human microbiota. Mechanistic studies from biology, immunology, and genetics are needed before we can claim to harness the potential of immune modulatory effects of microbiota. Meanwhile, clinicians must take a step back and try to link disease state with alterations of the microbiota through well-controlled long-term studies to identify clinical indications. CONCLUSIONS: Probiotics do not have an established role in the prevention or treatment of allergy. No single probiotic supplement or class of supplements has been demonstrated to efficiently influence the course of any allergic manifestation or long-term disease or to be sufficient to do so. Further epidemiologic, immunologic, microbiologic, genetic, and clinical studies are necessary to determine whether probiotic supplements will be useful in preventing allergy. Until then, supplementation with probiotics remains empirical in allergy medicine. In the future, basic research should focus on homoeostatic studies, and clinical research should focus on preventive medicine applications, not only in allergy. Collaborations between allergo-immunologists and microbiologists in basic research and a multidisciplinary approach in clinical research are likely to be the most fruitful.