

■ ELISA/ACT Biotechnologies LLC ■

# LRA by ELISA/ACT<sup>®</sup>

## CLINICAL PEARLS UPDATE#2

---

### *Asthma*

September 8, 2003

Dear Colleague:

**Asthma and related pulmonary pathologies cause suffering for 10-25 million Americans. Successful, comprehensive management using LRA by ELISA/ACT<sup>®</sup> tests and treatment plans is illustrated in the attached 'case report'.** Functional, *ex vivo* lymphocyte response assays (LRA by ELISA/ACT) offer the most advanced tests available for determination of the individual's responses to the widest available range of substances tested by any lab in the world.

We are grateful for the opportunity to be of service to you and your patients.

Sincerely,

***Russ Jaffe, MD, Ph.D., CCN, NACB***  
***Lab Director***

**Rance F, Micheau P, Marchac V, Scheinmann P. Food allergy and asthma in children. *Rev Pneumol Clin* 2003;59(2 Pt 1):109-113.**

Service de Pneumologie-Allergologie, Hopital des Enfants, 330, avenue de Grande-Bretagne, 31026 Toulouse Cedex. rance.f@chu-toulouse.fr

The links between food allergy and asthma are becoming more clear. The association of food allergy and asthma in the same child is unusual (less than 10% in atopic subjects). This association is, however, a sign of gravity leading to more severe manifestations of food allergy in asthmatic children. Compared with the non-asthmatic child, the asthmatic child has a 14-fold higher risk of developing a severe allergic reaction to the ingestion of food. The most commonly cited foods are fruits with a rind, cow's milk, and, of course, nuts. Epidemiological data established from methodologically sound studies should enable a definition of the current allergic environment. Formal diagnosis is established with standardized tests. Treatment is oriented toward prevention associating a restricted diet, asthma control, patient education, and prescription of an emergency first aid kit with epinephrine. Supplementary inquiries are needed to determine the outcome in children with food allergy and respiratory symptoms.

**While much atopic pathology appears to be primarily IgE (type I) mediated, a growing and important subset is due to delayed allergic reactions to foods, medications, and environmental chemicals. LRA by ELISA/ACT tests and optional treatment guide is uniquely able to specify each individual's reactive items using a functional, comprehensive, *ex vivo* method.**

**Host A. Frequency of cow's milk allergy in childhood. *Ann Allergy Asthma Immunol* 2002;89(6 Suppl 1):33-7.**

Department of Pediatrics, Odense University Hospital, University of Southern Denmark, Odense, Denmark. arne.hoest@ouh.fyns-amt.dk

**OBJECTIVE:** The primary objective of this review is to discuss the clinical features, diagnosis, natural history, and prognosis of cow's milk allergy in early childhood and its relationship to development of inhalant allergies.

**DATA SOURCES:** A review of 229 PubMed (National Library of Medicine) articles on cow's milk allergy (CMPA) for the years 1967 through 2001 was performed. In addition, references from other review articles have been included. This review represents a synthesis of these sources and the expert opinion of the author.

**STUDY SELECTION:** The expert opinion of the author was used to select the relevant data for this review.

**RESULTS:** The diagnosis of reproducible adverse reactions to cow's milk protein (CMP), i.e., CMPA, has to be confirmed by controlled elimination and challenge procedures. The incidence of CMPA in



infancy seems to be approximately 2 to 3% in developed countries. **Symptoms suggestive of CMPA may be encountered in approximately 5 to 15% of infants emphasizing the importance of controlled elimination/milk challenge procedures. Reproducible clinical reactions to CMP in human milk have been reported in approximately 0.5% of breastfed infants.** Most infants with CMPA develop symptoms before 1 month of age, often within 1 week after introduction of CMP-based formula. The majority has two or more symptoms from two or more organ systems. Approximately 50 to 60% have cutaneous symptoms, 50 to 60% have gastrointestinal symptoms, and approximately 20 to 30% have respiratory symptoms. Symptoms may occur within 1 hour after milk intake (immediate reactions) or **after 1 hour (late reactions)**. The prognosis of CMPA is good with a remission rate of approximately 45 to 50% at 1 year, 60 to 75% at 2 years, and 85 to 90% at 3 years. Associated adverse reactions to other foods develop in up to 50% and allergy against inhalants in 50 to 80% before puberty.

**CONCLUSIONS:** CMPA is the most common food allergy in early childhood with an incidence of 2 to 3% in the first year of life. The overall prognosis of CMPA in infancy is good with a remission rate of approximately 85 to 90%. In particular, gastrointestinal symptoms show a good prognosis. An early increased immunoglobulin E-response to CMP is associated with an increased risk of persistent allergy to CMP, development of adverse reactions to other foods, and development of asthma and rhinoconjunctivitis later in childhood.

**We find sustained remissions to be routine when best efforts are made to follow the treatment guide and LRA by ELISA/ACT tests results.**

