**EDITORIAL**

**Atopic March to a Dead End or Does the Theory Really Have Legs?**

Sometimes, following the obvious path is in fact a fool’s errand. Atopy, from the Greek word for placelessness, refers to allergic hypersensitivity manifest in parts of the human body that are not in direct contact with the allergen. It seems logical that atopic dermatitis (AD) or atopic eczema, the preferred term of the World Allergy Organization, and its association with serum immunoglobulin E (IgE) levels and concentrations of IgE in affected skin would be related to other allergies and perhaps to asthma. Atopic (“strange”) dermatitis has been suspected to have a genetic predisposition, with families described as “wheezers and sneezers” with a triad of eczema, asthma, and hayfever symptoms.

Although the association between AD and other allergic conditions is well documented, the theorized “atopic march,” in which AD precedes the development of asthma, is less well established. Even more questionable is the notion that treating AD in its early stages can prevent other atopic manifestations (AMs). Hywel Williams, Foundation Professor of Dermato-Epidemiology at the Centre of Evidence-Based Dermatology at the University of Nottingham’s Queen’s Medical Centre’s NHS Trust and coordinating editor of the Cochrane Skin Group, exposed the “emperor’s new clothes” regarding 3-scientific “facts” that are most likely myths in origin and in the development of AD and the “atopic march” to asthma. In his “rostrum” in July 2006, he wrote about how epidemiology can be used to challenge (1) the alleged causative role of allergic sensitization in development of childhood asthma, (2) that early childhood exposure to infections such as measles is associated with an increased risk of eczema development, and (3) that children with AD progress to asthma. In a personal communication earlier this year, Dr. Williams advised that he still “hears of people going on about atopic march as if it is a foregone conclusion that eczema proceeds to asthma and hayfever.” He advised that he was not aware of any clinical trial that has evaluated the effectiveness of early aggressive treatment of AD as a means to prevent or mollify AMs such as food allergy, allergic rhinitis, allergic conjunctivitis, and asthma.

The theory that AD progresses to AM in an atopic march has been popularized by authors who are consultants to the manufacturers of drugs for AD and in BOGSAT (bunch of old guys sitting around talking) discussions. However, the theory of atopic march encountered a bump in the road when the Early Treatment Asthma (ETAC) study found that infants treated with cetirizine (Zyrtec) who had evidence of sensitivity to house dust mites, grass pollen, or both were less likely to develop asthma after 18 months of treatment with cetirizine compared with those treated with placebo (P = 0.005 for the dust mite comparison and P = 0.002 for grass pollen). The relationship of asthma- and grass pollen-sensitization persisted over the full 36 months of follow-up (P = 0.008).

Undeterred by the controversy surrounding causal relationships, Suh et al. in this issue of *JMCP* forge ahead with research to determine the economic outcomes associated with AD and AM. While this research informs us about the subsequent development of AMs in patients newly diagnosed with AD (i.e., that AD preceded AM), research with administrative claims data cannot inform us about causality (i.e., whether AD caused AM). In addition, the authors’ measurement of direct medical cost in patients with medical claims with diagnosis codes for AMs, including contact dermatitis, eczema, food allergies, allergic rhinitis, allergic conjunctivitis, and asthma, is subject to the limitations of claims databases. For example, in this research reported by Suh et al., an AM diagnosis code could have been a secondary diagnosis, perhaps unrelated to the primary diagnosis on the claim. It is healthy for readers to keep in mind that administrative claims were not intended to be used for research that implies accuracy and precision in coding for diagnoses and that administrative claims research necessarily suffers from the garbage in–garbage out (GIGO) syndrome. Administrative claims are used by providers and health plans for billing and payment purposes.

Yet, in our pursuit of specificity and sensitivity in this arena, atopic march may have some legs in that early wheezers with eczema may in fact progress to asthma. Sounds like a managed care opportunity.

**Frederic R. Curtiss, PhD, RPh, CEBS**

**JMCP Editor-in-Chief**

fcurtiss@amcp.org

**REFERENCES**


5. E-mail communication from Hywel Williams, MSc, PhD, FRCP. May 14, 2007.
Editorial