

Complex interactions between host and environment in allergic diseases and the roles of integrative management

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Allergic and immunologic disorders are the consequences of complex interactions between host, allergens, and environmental factors. The environmental role in the development of allergic diseases has clearly been demonstrated. Impaired Th-2 responses to aeroallergens have been reported in asthmatic patients with helminthic infestation.¹ A decline in childhood infections and smaller family size are associated with the development of allergic diseases.^{2,3} According to the hygiene hypothesis, the increase in allergic disorders in the Western world is probably due to the skewing of the Th1/Th2 balance toward Th2 cytokines.⁴ Taken together, it is clear that medical therapy alone is ineffective in controlling allergic symptoms in the era of a worldwide allergy epidemic.

Since allergy management goes beyond drug prescription and requires a multidisciplinary approach, the emergence of integrative medicine, a combination of modern medicine and alternative therapy, is of particular interest in the treatment of allergic disorders. Holistic care in patients suffering from allergies has been practiced for many centuries in ancient cultures. Recently, several studies are being conducted to evaluate the scientific rationale behind traditional medical techniques. The scientific basis behind these techniques probably stems from the restoration of the Th1/Th2 balance in allergic patients. The major drawback of alternative medicine is that the supportive evidence is lacking or unproven; as a result, allergists trained in Western medicine may be ambivalent about adopting these recommendations in their clinical practice. Evidence-based research on these “ancient” methodologies would be valuable to convince modern-day allergists to integrate complementary

medicine into the management of patients with allergic disorders.

Several studies in this issue emphasize the environmental influences in allergies and autoimmune diseases. The beneficial role of moisturizers in alleviating symptoms of atopic dermatitis has been reviewed.⁵ Data from Mahidol University shows that *Trichinella papuae* infection could ameliorate the severity of dextran sulfate sodium-induced colitis in mice and reminds us once again that a germ-free environment may not always be a good thing.⁶ The derangement of the cytokine milieu because of a “too clean” environment could be relevant, not only in an inflammatory bowel disease, but also in other allergic disorders, although the involved cytokines may be different. A study from Tongji Medical College, China suggests that IL-17 may play a role in asthma pathogenesis since the percentages of Th17 T cells were found to increase both in asthmatic patients and in experimental mice.⁷ Researchers from Khon Kaen University demonstrates that the repeated sauna treatment may have a beneficial effect in patients with allergic rhinitis; improvement in sympathetic activity, peak nasal inspiratory flow, and lung functions was observed in this patient group.⁸ A study from Siriraj Hospital indicating that influenza vaccination reduces the chance of readmission in pediatric asthma confirms the complex interaction between host, pathogens and the development of allergic diseases.⁹ Maternal factors during pregnancy, as well as seasons and type of delivery, were significantly associated with cord blood IgE levels according to a study from Iran.¹⁰ These collective data encourage the holistic approach in the management of allergic disorder to ensure the satisfactory outcomes.

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