The use of only one Malassezia species is not sufficient to detect all patients with IgE antibodies to Malassezia in AEDS (atopic eczema/dermatitis syndrome)

Yeast species of the Malassezia genus are supposed to play an important role in the pathogenesis of AEDS. The aim of the study was to investigate the presence of IgE antibodies to different Malassezia species in AEDS to optimize detection of associated IgE antibodies.

Seventy-nine AEDS patients, negative to M. sympodialis, were tested for IgE antibodies to six other Malassezia spp. (ImmunoCAP® , Pharmacia Diagnostics AB). In this patient population, 20% (16/79) were found to have IgE antibodies to one or more of the tested Malassezia species and most frequently (69%, 11/16) to M. globosa.

The authors also observed that four patients had IgE antibodies to only one species, indicating the presence of more species-specific epitopes.

In conclusion the authors suggest a mixture of M. sympodialis, M. globosa, and M. restricta to provide a broad spectrum of allergens in the detection of Malassezia-specific IgE antibodies in patients with AEDS.

IgE antibodies specific for cross-reactive carbohydrate determinants (CCD-specific IgE) can be biologically active and mediate histamine release in vitro

The clinical relevance of IgE antibodies specific to cross-reactive carbohydrate determinants (CCDs) is controversial. Until now, according to the authors, no convincing experiments have been performed to test the biological significance of allergens that carry multiple carbohydrate epitopes.

In this study basophil of normal donors were sensitized with IgE antibodies from CCD-positive or CCD-negative sera from patients with tomato allergy. Tomato extract induced histamine release in basophils sensitized with all sera. Basophil sensitized with 4 of the 10 CCD-positive sera released histamine when exposed to all tested glycoproteins containing multiple carbohydrate epitopes, but not to the same allergens without those epitopes or to monovalent controls.

The authors draw the conclusion that approximately one third of CCD-positive sera from patients with tomato allergy have biological relevant CCD-specific IgE antibodies. Therefore they suggest that the claim that CCD-specific IgE is clinically irrelevant has to be reconsidered.

Decrease in serum IgE by anti-IgE therapy increases the threshold of clinical sensitivity to peanut in patients with severe immediate hypersensitivity reactions

Peanut-induced anaphylaxis造成 50 to 100 deaths per year in United States. Recently a new therapeutic strategy has been introduced where humanized monoclonal antibodies are used to block IgE binding to mast cells and basophils. In this study a double-blind, randomized, dose-ranging trial was performed in 84 patients with immediate hypersensitivity to peanut confirmed by double-blind, placebo-controlled oral food challenge. The patients received injections of anti-IgE in different doses every four weeks for four times.

The free serum IgE level decreased 88.7% in the group treated with the highest concentration of anti-IgE. This treatment was associated with a statistical significant (P<0.001) increase in the mean threshold of sensitivity to peanut at the final oral food challenge within two to four weeks after the fourth dose. The authors calculated that the treatment increased the threshold of the clinical sensitivity to peanuts from a level equal to approximately half a peanut to a level equal to almost nine peanuts. They believe that this effect should translate into protection against most unintended ingestion of peanuts. Furthermore the study clearly shows the relation between the IgE concentration and the clinical expression.