Studies on the Cross Reactivity between Egg White and Chicken Meat
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Abstract

Food allergy caused by food allergen, is a hypersensitive reaction of a vital immune system, and is presently a social health problem. In general, subjects with high food specific IgE tend to suffer from food allergy mediated by IgE.

On the other hand, it has been reported that some subjects with positive IgE-RAST values against egg white also show positive for chicken meat. It is important to elucidate the cross reactivities between the several food stuffs for the prevention of their cross allergic reactions.

Previously, we proposed an in vivo assay system on the basis of the mouse anaphylactic reaction using the abdominal wall (AW method). Further, this system has been developed for identification system of the true allergen in foods by challenge with samples separated by the procedure of SDS-PAGE (sodium dodecylsulfate-polyacrylamide gel electrophoresis).

In this study, the cross-reactivity between egg white and chicken meat was evidenced by both in vitro (Western blotting technique) and in vivo (AW method) tests. Moreover, it was ascertained that a heating of chicken meat diminished both its allergenicity and the cross-reactivity to egg white.

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