

Correlation between Immunoglobulin E (IgE) Sensitization of House Dust Mite and Shrimp Allergen

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ABSTRACT

Title. Correlation Between IgE Sensitization of House Dust Mite and Shrimp Allergen

Background. In the last 20-30 years, in developing country case of allergy is increasing. The range of increasing is 30-40% of the world population. Dust mite is one of the important sources of indoor allergens. Shrimp tropomyosin (Pen a 1) and dust mite Der p 10 and Der f 10 share about 81%. A known pan-allergen among many invertebrates is tropomyosin that has been shown to be a cross-reacting allergen of many arthropods. House dust mite and shrimp have related potential allergic (cross reaction).

Objective. To analyze the correlation between IgE sensitization of house dust mite allergen with shrimp allergen.

Method. The method used in this study was cross-sectional with 134 samples ages 6 to 12 years from two elementary schools in Yogyakarta region by random simple sampling. All children were tested with the Skin Prick Test against two shrimp and house dust mite allergens. The results show positive if there is an area of 3 mm induration exceeded the negative control.

Result. The results showed that from 134 children there were 25 children who showed positive SPT results for house dust mite allergen and 22 children have positive for shrimp allergen. 17 children have positive result for both allergens. The prevalence ratio (95% CI) value is 14,824 with the value of significance/p value < 0,001.

Conclusion. There is a correlation between IgE sensitization of house dust mite allergen and shrimp allergen.

Keywords. IgE sensitisation, allergens, house dust mite, shrimp, cross-reaction.