



ATOPIC ECZEMA/DERMATITIS

PATTERNS OF FOOD SENSITIZATION IN A PAEDIATRIC ATOPIC DERMATITIS POPULATION.

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Introduction: The relationship between atopic dermatitis (AD) and food allergies has been established but mostly in a Western population. However, there is great geographic and ethnic variation in the prevalence and pattern of food allergies in AD patients that cannot be generalized for an Asian cohort.

Objective: This study aims to characterize the common food allergens encountered in children with AD in Singapore, and how they relate to age and severity of AD.

Methods: We retrospectively studied paediatric AD patients who had a skin prick test (SPT) done in the paediatric dermatology unit at KK Women's and Children's Hospital, Singapore, between 1 January 2012 and 31 October 2017. The SPT panel included cow's milk, soybean, egg white, egg whole, peanut, sesame seed, wheat, fish, shellfish and tree nuts.

Results: There were 497 paediatric AD patients with SPT done from 1 January 2012 to 31 October 2017. Food sensitization decreased with age ($p=0.000$) and increased with AD severity ($p=0.000$). The 5 most common allergens were egg (31.2%), peanut (18.3%), shellfish (12.7%), milk (12.7%) and wheat (4.0%). Under 2 years, egg sensitization dominated (53.4%), followed by milk (23.9%). In older children, shellfish (18.5%) and peanut (13.9%) were more commonly sensitized. Sensitisation to egg, peanut, cow's milk and wheat decreased with age and this was statistically significant, while shellfish sensitization increased with age ($p=0.000$).

Conclusion: Our study substantiates the co-relation between food hypersensitivities and AD severity, and its greater relevance in younger children. Like previous studies, egg and milk sensitization were most prevalent in early childhood. The main difference was our higher shellfish sensitization rates. Peanut sensitization was also unusually high in AD children given its low regional prevalence.

