## 33 Increased Risk of Kawasaki Disease in Childhood Onset Allergic Diseases

兒童期的過敏疾病會增加川崎氏症的風險

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Background: A few observational studies with limited number of patients reported high prevalence of allergic diseases in Kawasaki disease (KD). However, the association between childhood onset allergic diseases and risk of KD is not clear. Our study is to perform a nationwide population-based case control study to investigate the risks of KD among children with allergic diseases in Taiwan

Methods: Data were from the Taiwan National Health Insurance Research Database. The study sample comprised 2748 children <18 year-old with newly diagnosed KD in 1996–2008 and 10656 non-KD controls who were frequency matched with cases on age, sex, and urbanization level. Odds ratios (ORs) and 95% confidence intervals (CIs) which indicate the association between the risk of KD and allergic diseases, including allergic conjunctivitis, allergic rhinitis, asthma, atopic dermatitis, and urticaria was estimated using unconditional logistic regression.

Results: Children with each of allergic disease had an increased risk of KD, the adjusted ORs of having KD were 1.77 for urticaria (95% CI=1.51-2.08), 1.38 for allergic rhinitis (95% CI=1.18-1.62), and 1.18 for atopic dermatitis (95% CI=1.03-1.34). Adjusted ORs increased with the number of comorbid allergic diseases, from 1.55 (95% CI=1.38-1.74) for those with only one allergic disease to 1.62 (95% CI=1.41-1.85) for those with at least two allergic diseases. Children with 2 or more times of associated medical visit per year had an increased risk of KD, the adjusted ORs of having KD were 2.92 for urticaria (95% CI=2.33-3.66), 1.45 for allergic rhinitis (95% CI=1.21-1.74), and 1.52 for atopic dermatitis (95% CI=1.27-1.83).

Conclusions: Childhood onset allergic diseases were at increased risk for KD, and the risk of KD increased with multiple comorbid allergic diseases and more frequent associated medical visits.

## 34 A Study on the Stress of Primary Caregivers of Children with Asthma

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Background: Asthma is a common chronic disease in children. In Taiwan, the prevalence of asthma has increased year by year. Because repeated asthma attacks are life threatening, the primary caregivers in families who have to take care of children with asthma may experience extremely high level of stress.

Methods: This study used qualitative research methods to conduct individual interviews and a focus group to collect data. A total of 18 primary caregivers were interviewed during the individual interviews, and another 12 of them were interviewed during the focus group.

Results: Based on the respondents' caregiver experiences, this study summarized the stress they experienced could be categorized as physiological, psychological, intellectual and social stress. It was found that the primary caregivers taking care of children with high severity of asthma paid more attention to household cleaning. The highest psychological stress faced by primary caregivers was that asthma attacks may be life threatening. The intellectual stress faced by many caregivers was drug safety. The familism of Chinese culture may create heavy caregiver stress for primary caregivers, and the unfriendliness of schools toward asthma care makes primary caregivers feel helpless about the obstacles faced by asthmatic children when they go to school.

Conclusions: Assisting caregivers in finding out accurate and effective problem-solving approaches can help children with asthma adapt to and control the disease. It is important to understand the coping strategies for caregiver stress. The research design of this study only helped understand the dimensions of caregiver stress, and it could not understand whether the primary caregivers of children with different levels of asthma severity face different amounts of caregiver stress. Future studies are advised to perform further investigation.